### ISSN-2455-6300 November-2017, SPL ISSUE-11.1

#### **Chief Guest**

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INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

### ICICMEAP-2017

### ISSN-2455-6300 November-2017, SPL ISSUE-11.1

#### Message

Iam thrilled to welcome you interested by the global convention on revolutionary and advanced technology in Engineering being prepared at some stage in twenty first Nov 2017 via AERF Hyderabad. AERF is a camouflage wealth of know-how, innovation and generation that lies within. AERF in itself is a niche of possibilities to all aspiring engineers and researchers.

The activities inside the convention are targeted in the direction of researchers, practitioners, professionals, educators and college students to proportion their revel in, revolutionary ideas, problems, latest tendencies and future directions in area of Engineering and technological know-how and generation.

This convention is a completely unique forum for trade of modern ideas, technical information for technological advancements etc. on this evergreen field. It includes keynote address from Academicians and paper presentation by way of studies students. it is a rely of pleasure for us to welcome the individuals to this conference.

In a nutshell, the convention guarantees to transcend to a new and unprecedented stage of excellence. it's miles accordingly the zenith where generation and talent meets possibilities and steerage. it's far a milestone that one might now not dare to overlook. I desire ICICMEAP 2017 a grand fulfillment.

Dr. Dutta Maheshwar Principal, KMIT

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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#### Message

It offers me massive pride to be a part of this hosting crew of worldwide convention ON improvements IN COMPUTATIONAL method AND electronic software system ICICMEAP-2017. The conference intends to convey collectively scientists, engineers and practitioners from special disciplines to talk about concerns associated with numerous computation strategies in science and era. I take this opportunity to welcome all of the delegates of the convention. On behalf of complete ICICMEAP group, I would really like to thank all the authors, sponsors and keynote speakers for his or her guide and co-operation. The speedy improvement in technology and modifications in lifestyle impose various troubles in many nations. The convention ICICMEAP 2017 has been crafted to challenge the hurdles and we are lucky to have leading speakers to percentage their experience and perspectives to obtain clever solutions thru their innovation. i hope that the conference serves as a locus for interdisciplinary, a area for discourse and collaboration. I would love to explicit my appreciation to the organizing committee for their committed efforts to materialize the conference. i hope all of the contributors will have a fruitful and useful experience. subsequently, I congratulate HOD, university college, pupil representatives and participant for their efforts in organizing and collaborating in this conference and wish the convention all of the achievement.

# Dr.BOGGARAPU NAGESWARA RAO Professor Department of Mechanical Engineering, KLEF Vaddeswaram

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### **ICICMEAP-2017**

### ISSN-2455-6300 November-2017, SPL ISSUE-11.1

#### Message

It gives me an enormous satisfaction to be a part of the worldwide conference on revolutionary and advanced technologies in Engineering (ICICMEAP-2017). I strongly believe that this convention will offer tools and understanding to conquer massive issues performing in our enterprise and society by identifying modern thoughts and technology introduced by way of the researchers and students. The achievement of this conference will inspire us in introducing many more initiatives for revolutionary tendencies within the coming years. I desire the ICICMEAP-2017 a superb fulfillment.

Dr. D. Sucharitha Director-AERF

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### **ICICMEAP-2017**

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#### Message

I am pleased to know that Atharva College of Engineering is organizing "INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS (ICICMEAP2017)". The institution is creating a platform for the industrialist, professionals, researcher and students to share and express their views on Innovative and Advanced Technologies in Engineering. It is absolutely essential to nurture the innovative capabilities of students as they are the future of our country and in that context it is very relevant that Atharva College of engineering, Mumbai has organized this conference.

Dr. S. Chakradhar goud Princiapal, Sana Engineerign College

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

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## A STUDY ON CLOUD BASED INTERNET OF THINGS: CLOUDIOT

Paper ID - 1

**A paper presented by:**Babu S.M., Lakshmi A.J., Rao B.T. Department of CSE, KL UNIVERSITY, Vaddeswaram, India

## Abstract:

The Next Revolution in the era of computing will be changing in comparison to traditional desktop. Many objects surrounds the human users will be on the network in one form or in another form in the Cloud Computing and Internet of Things framework. Cloud Computing and Internet of Things are two different technologies, these are into our daily life. Most of the surveys discussed the literature work on Internet of Things and Cloud separately. This paper presents the need for integration of Cloud and Internet of Things, an agent-oriented and Cloud assisted on Cloud IoT paradigm which based upon the layered reference architecture. Reference architecture for agent-oriented vision and Cloud-assisted is proposed, a Cloud based IoT paradigm applications scenario is described that have been presented in the literature, and Finally identified and discussed about open issues and future directions.

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# SELECTIVE NOISE FILTERING OF SPEECH SIGNALS USING AN ADAPTIVE NEURO-FUZZY INFERENCE SYSTEM AS A FREQUENCY PRE-CLASSIFIER

## Paper ID - 2

# **A paper presented by:**Lakra S., Prasad T.V., Ramakrishna G. Department of CSE, KL UNIVERSITY, Vaddeswaram, India

## Abstract:

The paper relates to the filtering of a noise signal present in a speech signal. Specifically, the use of an Adaptive Neuro-Fuzzy Inference System (ANFIS) to classify the frequencies present in a speech signal into three fuzzy sets, that is, those for low frequencies, voice frequencies and high frequencies is discussed in this work. Following the pre-classification step, the low frequencies are filtered which comprise the noise component in the speech signal. The pre-classifier was applied prior to the use of various FIR/IIR filters for reducing the noise present in a speech signal. The paper presents the use of an ANFIS for pre-classification of frequencies in a speech signal followed by application of a noise filter to individual or multiple classes of frequencies. It provides evidence for substantial improvement in the quality of the speech signal.

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# DENTIFICATION OF IONOSPHERE ANOMALIES DURING INTENSE SPACE CLIMATE OVER A LOW-LATITUDE GNSS STATION.

## Paper ID - 3

A paper presented by:Sivavaraprasad G., Ratnam D.V., Padmaja R.S., Sharvani V., Saiteja G., Mounika Y.S.R., Harsha P.B.S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

Abstract: The operational accessibility of Global Navigation Satellite System is influenced by enormous scale anomalies of the ionosphere. The space climate occasions incite a few exceptional inconsistencies and cause the non-straight conveyance of ionospheric electron thickness. Observing of ionospheric reactions because of extraordinary space climate occasions assumes a key job in trans-ionospheric radio wave spread. In the present examination, a novel method dependent on wavelet change has been actualized for the investigation and discovery of ionospheric abnormalities during two serious space climate occasions that happened in 2013. The examinations have been completed utilizing the ionospheric detectable, Total Electron Content (TEC), got from the Global Positioning System (GPS) beneficiary situated at an Equatorial Ionization Anomaly district, KL University, Guntur, India (Geographic Lat.16.37°N, Geographic Long. 80.37°E). The impacts of geomagnetic storms (Sym-H  $\leq$  -100 nT) on the annovances of ionospheric TEC have been explored. The calculation of Continuous wavelet change has been utilized to examine and describe the nearness of ionospheric irregularities in the nearby time-scale plane. It can recognize spatial and worldly subtleties of ionospheric irregularity force during solid sun powered earthbound and geophysical occasions. It is seen that during the primary period of the geomagnetic storm that happened during 17 March 2013, TEC improved by 7 TECU, while a concealment of 10 TECU in the GPS-TEC can be seen during the fundamental period of the 29 June 2013 tempest.

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# IONOSPHERIC TIME DELAYS MODELLING BASED ON A MULTISHELL SPHERICAL HARMONICS FUNCTION APPROACH

## Paper ID - 4

A paper presented by:Ratnam D.V., Dabbakuti J.R.K.K., Sunda S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Ionospheric delay is the primary error in the practical presentation of worldwide route satellite framework (GNSS) beneficiary position and time assurance. An exact appraisal and displaying of the ionospheric time defer blunder can improve the general situating precision. Concerning the central and low-scope district, the ionosphere is activated by the tropical electrodynamics presenting huge scale spatiotemporal just as vertical slopes in the dispersion of electron thickness over the locale. The conventional work of ionospheric dainty shell models with single-shell approximations, which accept the electron thickness of ionosphere to be compacted to a slender layer at a fixed elevation over the earth, may not be proper for the low and central scope district. In this paper, a multishell estimate is proposed dependent on the circular music work and a thick system of GNSS trial absolute electron content (TEC) information over in India. Further, the exhibition of the proposed model is assessed; the ionospheric vertical defer estimation is improved by 24.13% when contrasted with the single-shell model. The outcomes might be helpful and show huge improvement with regards to ionospheric postpone demonstrating of satellite route frameworks in the low-scope locale

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# COMPACT DUAL-BAND HEX DECAGON CIRCULAR PATCH ANTENNA WITH DGS FOR KU BAND APPLICATIONS

# Paper ID - 5

A paper presented by:Kumar Naik K., Amala Vijaya Sri P., Yasasvini N., Anjum M., DattatreyaG.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The plan of hexadecagon round patch antenna for double band activity is introduced in this paper The proposed radio wire works at two resounding frequencies 13.65 GHz, 15.19 GHz with return loss of - 44.88 dB, - 55.83 dB, and increase 5.89 dBi, 7.22 dBi individually. An impedance transmission capacity of 911 MHz (13.04-13.95 GHz) and 1170 MHz (14.43-15.6 GHz) is watched for double groups separately the absconded ground structure (DGS) is considered for upgrade of increase. The proposed receiving wire VSWR is under 2 for double groups and it is appropriate for Ku band at satellite correspondence

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# ENHANCEMENT OF GAIN WITH COPLANAR ISOSCELES TRIANGULAR PATCH ANTENNA FOR DUAL-BAND APPLICATIONS

## Paper ID - 6

A paper presented by: Amala Vijaya Sri P., Srikanth G., Vamsi Krishna B., Kousalya K., Rama Lavanya S., Ooha K., Chaitanya R.P.S., Kalyan Kumar B., Srinivas K.Y., Kumar Naik K.,

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In this paper, a coplanar triangular fix patch antenna has intended to work at Ku-band applications. Four similarly molded isosceles triangular patches has been considered and two inset sustains has applied to the two triangular transmitting patches. The proposed radio wire has acquired double band frequencies at 15.1 GHz (for barrier framework) and 16.4 GHz (fixed connection between point to point and multiband frameworks) with return loss of -39.8 dB and -25.4 dB individually. The watched increase is 9.06 dB and 7.38 dB at two recurrence groups. The VSWR is under 2 dB for the proposed receiving wire. The proposed radio wire is helpful at Ku-band applications. The mimicked and estimated results are exhibited.

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# DESIGN OF IMPLANTABLE MONOPOLE INSET-FEED C-SHAPED PATCH ANTENNA FOR BIO-MEDICAL APPLICATIONS.

## Paper ID - 7

A paper presented by:Kumar Naik K., Amala Vijaya Sri P., Srilakshmi J. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

We propose an implantable monopole inset-feed C-formed fix with opening receiving wire to work at modern, logical and restorative (ISM) band application. The proposed reception apparatus has been structured with polyimide dielectric substrate ( $\epsilon r = 3.4$ ) adaptable material. This proposed reception apparatus has been reproduced with thought of muscle, skin, and fat tissues of human body electrical properties. This implantable conformal receiving wire works at 2.45 GHz with impedance data transfer capacity 201 MHz and return loss of -20.65 dB. We likewise present the particular retention proportion (SAR), the radiation design, and the VSWR of proposed recieving wire in this paper. This implantable reception apparatus is scaled down and biocompatibility and can be utilized in Bio-therapeutic applications.

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# METAMATERIAL INSPIRED TRI-BAND ANTENNA WITH SHORTING STUB AND SRR

## Paper ID - 8

A paper presented by:Prakash B.L., Madhav B.T.P., Lokesh T., Sri Y.R., Aditya N.V.D.S., Rao M.V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Two novel meta-material propelled anteenas are proposed in this paper which can be applied for Mobile Satellite Services (MSS), Airport reconnaissance radars, WIMAX and S - Band applications. Recieving wire 1 has two triangular split ring resonators and encouraged by Coplanar Wave Guide (CPW). In the wake of Modeling and Simulating antenna1, three recurrence groups 2.1~2.3GHz, 3.0~3.4GHz and 6.5~6.7GHz are acquired. To improve the qualities, radio wire 2 is proposed whose shape is adjusted by including two Complementary rectangular molded split ring resonators in the ground of antenna1. In the wake of Modeling and recreating recieving wire 2 it is seen that it upgrades the properties of radio wire 1 with improved qualities. Recieving wire 2 has radiation productivity of 0.998, front to back proportion of 1.0049 and pinnacle directivity is 1.17. © 2006-2017 Asian Research Publishing Network (ARPN).

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# STUDY OF PATHLOSS FOR 61 GHZ WAVE D2D COMMUNICATIONS IN INDOOR ENVIRONMENT

## Paper ID - 9

A paper presented by:Cheerla S., Venkata Ratnam D., Meghana S.R, Vishnu Varma V.M.S., Altaf Hussain S.K., Jaya Sai Sravanth K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The present paper manages device to-device (D2D) correspondence for millimeter wave and its exhibition in indoor remote correspondence application. The 61 GHz Industrial Scientific and Medical band is considered for check of connection perceivability and way misfortune conduct. Observable pathway (LOS) blockage is the serious issue in indoor remote correspondence as the sign gets constricted when the LOS way goes over any impediment. To beat this issue, directional radio wires are utilized through which the bearing of engendering can be redirected. While choosing such non-viewable pathway (NLOS) way, the transmission way should offer moderately lesser lessening. The yield of this work would be helpful for recognizable proof of NLOS ways by utilizing pillar exchanging instrument for D2D correspondence.

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# AN EFFICIENT METHOD TO INCREASE THE NETWORK THROUGHPUT USING INTERFERENCE CANCELLATION APPROACH

## Paper ID - 10

A paper presented by:Suneela B., Krishna Rao E.V., Sri Kavya K., Kotamraju S.K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Now a days, high information rates are creating colossal for numerous administrations including diverse nature of administrations (QoS) because of enormous number of clients bolster which in goes inquires about to require more exertion on structure and the board of remote correspondence framework for past years. In future, remote system will be the regular decision particularly, utilizing Multi-Input Multi-Output (MIMO) innovation. A solitary radio wire channel which interfaces sender-beneficiary pair is just supplanted by MIMO direct in existing framework which has a few impediments in number of reception apparatuses for each Access Point (AP). Because of both hypothetical and trial estimations, obstruction is viewed as increasingly unsafe by utilizing customary remote systems which prompts focus on the investigation of dropping methodology for impedance. From this investigation, multi-branch impedance wiping out strategy is effectively applied for multi client MIMO framework which brings about low-intricacy numerous criticism. Moreover, Rayleigh blurring channels with way misfortune blurring sets up the causes because of separation based sign weakening and moderate sign blurring discourage the sign transmission in part because of arbitrary items. Information streams tally and level of balance expands prompts exponential unpredictability which requires Maximum Likelihood Detection (MLD) and Sphere Decoder (SD). Reenactment aftereffects of MF-MB-SIC calculation is contrasted and MF-SIC and regular strategies like ML which portrays execution of the proposed framework is higher than traditional techniques

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# MOBILE AIDED TRILATERAL IMPROVED LOCALIZATION BY ADOPTING RANDOM WAY POINT PATTERN

## Paper ID - 11

A paper presented by: Akram P.S., Ramana T.V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Confinement plays a conspicuous in WSNs. It is basic in such a case that one hub contains data gathered from physical element to move and the area of other hub which is intended to get isn't known then the data assembled gets pointless. The fundamental thought in limitation includes setting GPS in every single hub in the system to know its area. It brings about increment of cost. In addition the proficiency of GPS isn't Satisfactory in observing indoor applications. In restriction, the separation between hubs is fundamental which will be determined by utilizing RSSI technique. RSSI is received in a considerable lot of the limitation calculations on account of its minimal effort and effortlessness. In extending, Classical Trilateral calculation is considered yet it results separation mistakes because of unsteadiness in equations. The proposed portable supported Trilateral strategy brings about expanding the system lifetime, diminishing the hour of estimation, improving the sign quality other than limiting the vitality utilization of hubs. In this technique the versatile hub moving in arbitrary way accumulates the data of neighboring hubs which will be further valuable in Trilateral least condition strategy to confine the obscure hubs position. In this strategy the separation computations are performed by portable hub bringing about the minimization of vitality utilization and separation blunder related with neighboring hubs. Therefore the proposed versatile helped technique delivers the best outcomes in the event of sign quality and life time of system when contrasted with past Classical Trilateral strategies

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# ANALYSIS AND MODELLING OF GPS-TEC LOW LATITUDE CLIMATOLOGY DURING THE 24TH SOLAR CYCLE USING EMPIRICAL ORTHOGONAL FUNCTIONS

## Paper ID - 12

A paper presented by:Dabbakuti J.R.K.K., Venkata Ratnam D. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The Total Electron Content (TEC) is a fundamental segment portraying the transient and spatial attributes of the ionosphere. In this paper, an experimental symmetrical capacity (EOF) model is developed by utilizing ground based Global Navigational Satellite System (GNSS) TEC perception information at the Bangalore International GNSS Service (IGS) station (geographic – 13.02° N, 77.57° E; geomagnetic scope 4.4° N) during an all-inclusive period (2009–2016) in the 24th sun based cycle. EOF model can be deteriorated into base capacities and its comparing coefficients. These decayed modes very much spoke to the impact of sun based and geomagnetic movement towards TEC. The initial three EOFs modes establish about 98% of the absolute fluctuation of the watched informational collections. The Fourier Series Analysis (FSA) is done to portray the sun oriented cycle, yearly and semi-yearly conditions by regulating the initial three EOF coefficients with sunlight based (F10.7) and geomagnetic (Ap and Dst) files. A positive connection (0.85) of arrived at the midpoint of every day GPS-TEC with found the middle value of day by day F10.7 emphatically underpins those time-shifting attributes of the ionosphere highlights relies upon the sun oriented action. Further, the legitimacy and dependability of EOF model is checked by contrasting and the GPS-TEC information, and standard worldwide ionospheric models (International Reference Ionosphere, IRI2016 and Standard Plasmasphere-Ionosphere Model, SPIM). The exhibitions of the standard ionospheric models are set apart to be generally better during High Solar Activity (HSA) periods when contrasted with the Low Solar Activity (LSA) periods

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# PERFORMANCE EVALUATION OF LINEAR TIME-SERIES IONOSPHERIC TOTAL ELECTRON CONTENT MODEL OVER LOW LATITUDE INDIAN GPS STATIONS

## Paper ID - 13

A paper presented by:Dabbakuti J.R.K.K., Venkata Ratnam D.Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Exact exibibiting of the ionospheric Total Electron Content (TEC) is a primary part of Positioning, Navigation, and Timing (PNT) administrations deliberate for the Global Navigation Satellite Systems (GNSS) applications just as Earth Observation System (EOS), satellite correspondence, and space climate estimating applications. In this paper, direct time arrangement demonstrating has been done on ionospheric TEC at two distinct areas at Koneru Lakshmaiah University (KLU), Guntur (geographic 16.44° N, 80.62° E; geomagnetic 7.55° N) and Bangalore (geographic 12.97° N, 77.59° E; geomagnetic 4.53° N) at the northern lowscope district, for the year 2013 in the 24th sun powered cycle. The impact of the sun oriented and geomagnetic movement on occasional motions of TEC has been researched. Results affirm that the connection coefficient of the assessed TEC from the straight model TEC and the watched GPS-TEC is around 93%. Sunlight based action is the key part that impacts ionospheric every day arrived at the midpoint of TEC while occasional segment uncovers the regular reliance of TEC. Moreover, it is seen that the impact of geomagnetic movement part on TEC is diverse at both the scopes. The precision of the model has been evaluated by looking at the International Reference Ionosphere (IRI) 2012 model TEC and TEC estimations. Additionally, the nonattendance of winter peculiarity is noteworthy, as controlled by the Root Mean Square Error (RMSE) between the direct model TEC and GPS-TEC. Despite what might be expected, the IRI2012 model TEC clearly neglected to anticipate the nonappearance of winter abnormality in the Equatorial Ionization Anomaly (EIA) peak district. The end result of this work will be treasured for enhancing the ionospheric nowthrowing fashions under one-of-a-kind geophysical conditions.

Keywords:GNSS, TEC, Modelling, IRI, India

# INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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# ANALYSIS OF SCATTERER ROD RADIUS IN 2D PHOTONIC CRYSTAL STRUCTURE-BASED CHANNEL DROP FILTER USING INP MATERIAL

# Paper ID - 14

A paper presented by:Chhipa M.K., Radhouene M.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Channel drop filter is designed and simulated in this paper using two-dimensional photonic crystal structure by the use of photonic crystal ring resonator. The filter is optimized for the telecommunication wavelength 1531nm. The filter is designed using Indium Phosphide (InP) dielectric material with refractive index 3.16. The number of rod are 21 and 20 in Z and X directions respectively with lattice constant 540nm and the dielectric rods in air structure having radius 0.01µm. In this paper the scattered rod radius analysis is done by increasing and decreasing their radius. In this way shift in resonant wavelength is achieved. The design filter gives 100% dropping efficiency with good quality factor at 1531nm resonant wavelength for CWDM communication systems, just because of 20nm wide spacing the filter could have application for CWDM system and not for DWDM system. Further analysis is done by replacing circular scattered rods by elliptical rods and improvement in quality factor is analysed. The design and analysis are done by FDTD method and the photonic band gap is calculated by the PWE bend solver. The structure is minimized in size about 123µm 2. Such kind of device could be useful for CWDM optical communication networks and PICs.

**Keywords:** Resonator filters, Optical filters, Optical ring resonators, Indium phosphide, Q-factor, Photonic band gap

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#### ICICMEAP-2017

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## A SLOTTED CPW-FED MONOPOLE ANTENNA FOR X-BAND APPLICATIONS

## Paper ID - 15

A paper presented by:Sundar P.S., Krishna T.V.R., Kumar K.S., Naik K.K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

A miniaturized coplanar waveguide (CPW)-fed slotted monopole antenna is presented. The proposed antenna has small size, exquisite radiation traits and circularly polarization. Slotted monopole antenna surrounded via higher and lower ground plane sections that are interconnected with the aid of the microstrip line. These monopole antennas require a relatively large ground-plane shape that can be of several configurations generally in the shape of a square, rectangle, circle, or ellipse. In this paper, an especially small wideband monopole antenna is presented for X-band applications.

Keywords: Coplanar Wave Guide, slotted monopole antenna, circularly polarization

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#### ICICMEAP-2017

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# NEMATIC SMECTIC-C (N-SMC) TRANSFORMATION IN 60.09 AND 60.010 LC COMPOUNDS THROUGH BIREFRINGENCE

# Paper ID - 16

A paper presented by:Sunil Babu K., Venkateswara Rao A., Pardhasaradhi P., Madhav B.T.P., Pisipati V.G.K.M.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

There are several techniques available to obtain the parametric order in nematic liquid crystals (LCs). However, many of these techniques are not useful in case of cholesterics and smectics. Hardly any data is available in these smectic phases regarding orientational order parameter 'S.' For measuring the value of order parameter 'S' some authors explored the method of de Gennes. The order parameter 'S' value can be directly obtained from NMR, diamagnetic suitability, diamagnetic anisotropy, optical birefringence etc. The birefringence is calculated from the refractive indices as ne – no. A method due to Kuczynski et al. is used in this case for obtaining the order parameter 'S' by delta n (value at 0K).

Keywords: Liquid crystals, S-parameter, birefringence

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#### ICICMEAP-2017

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# COMPARATIVE ANALYSIS OF DIFFERENT RAIN ATTENUATION PREDICTION MODELS AT VISAKHAPATNAM AND HYDERABAD REGIONS

# Paper ID - 17

A paper presented by:Philip B.J., Kumar K.S., Sri Kavya K.C., Susmitha C., Rao C.N., Vasu S., Madhulika A.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Rain attenuation prediction models primarily developed from the parameters of the temperate climatic regions rather than the worldwide parameters. The performance of these models for the tropical climatic region are measured and evaluated at Hyderabad and Visakhapatnam located in tropical region and for different frequencies is carried out. These prediction models have the main input, the geographical location, the frequency of the signal used and the amount of rainfall at that location. By applying these models at different geographical locations, attenuation of the link for percentage of the time and with multiple frequencies in the Ku band range i.e., 10.99 GHz to 14.2 GHz are predicted. The comparison is done for different frequencies for same model and same region and for different models for same frequency and same region. These comparisons lead to the conclusion of the highest and the lowest predicted attenuation and which model is predicting higher and which is lower for two regions and how the prediction models differ from others. These findings can help the system engineer to design the link budget for different applications over earth to space point to point links. Here the variations of the predicted attenuation from different models are examined and the range of variations are presented.

Keywords: prediction models, rain attenuation, climatic regions.

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#### ICICMEAP-2017

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# EVALUATION OF EFFECT OF TROPOSPHERE RAIN ON RADIO LINK IN TROPICAL ENVIRONMENT

## Paper ID - 18

A paper presented by:Immadi G., Venkata Narayana M., Suraj Y., Nara Simha Rao N.M.V.L., Naveen Chowdary P.S.V.S., Emmanuel Raju M. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Rain has deleterious impact on satellite signal propagation above Ku-band due to scattering and absorption. Numerous Empirical and Non-empirical models are evolved based on measured statistics to estimate the rain attenuation. The day wise, monthly and yearly analysis for 3 years of data is performed in Vaddeswaram. Of the available models, for the tropical region, ITU-R model which uses bulk recorded database clearly underestimates the value. In this paper different attenuation models like ITU-R, RH, SAM and Moupfouma are studied and the results are compared with measured values and examined to determine the suitable model for one of the tropical regions Vaddeswaram, A.P. It is observed that the average attenuation is around 13.5dB in a year and Moupfouma model is best suited for this region.

Keywords: Troposphere rain, tropical regions, radio link

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# IONOSPHERIC FORECASTING MODEL USING FUZZY LOGIC-BASED GRADIENT DESCENT TECHNIQUE

### Paper ID - 19

A paper presented by: Venkata Ratnam D., Vindhya G., Dabbakuti J.R.K.K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Space weather phenomena cause satellite to ground or satellite to aircraft transmission outages over the VHF to L-band frequency range, particularly in the low latitude region. Global Positioning System (GPS) is primarily susceptible to this form of space weather. Faulty GPS signals are attributed to ionospheric error, which is a function of Total Electron Content (TEC). Importantly, precise forecasts of space weather conditions and appropriate hazard observant cautions required for ionospheric space weather observations are limited. In this paper, a fuzzy logic-based gradient descent method has been proposed to forecast the ionospheric TEC values. In this technique, membership functions have been tuned based on the gradient descent estimated values. The proposed algorithm has been tested with the TEC data of two geomagnetic storms in the low latitude station of KL University, Guntur, India (16.44°N, 80.62°E). It has been found that the gradient descent method performs well, and the predicted TEC values are close to the original TEC measurements.

Keywords: Total Electron Content (TEC), GPS, Fuzzy logic, forecasting.

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#### ICICMEAP-2017

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## APPLICATION OF NN-PSO TECHNIQUE FOR IONOSPHERIC SCINTILLATION FORECASTING MODEL

## Paper ID - 20

A paper presented by:Sridhar M., Venkata Ratnam D., Padma Raju K., Sai Praharsha D., Saathvika K.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The forecasting and modelling of ionospheric scintillation effects are crucial for precise satellite positioning and navigation applications. In this paper, a Neural Network model, trained using Particle Swarm Optimization (PSO) algorithm, has been implemented for the prediction of amplitude scintillation index (S4) observations. The Global Positioning System (GPS) and Ionosonde data available at Darwin, Australia (12.4634° S, 130.8456° E) during 2013 has been considered. The correlation analysis between GPS S4 and Ionosonde drift velocities (hmf2 and fof2) data has been conducted for forecasting the S4 values. The results indicate that forecasted S4 values closely follow the measured S4 values for both the quiet and disturbed conditions. The outcome of this work will be useful for understanding the ionospheric scintillation phenomena over low latitude regions.

**Keywords:** Ionospheric scintillations, Global Navigation Satellite System, Neural networks, Particle swarm optimization

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#### ICICMEAP-2017

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## A RECONFIGURABLE DUAL-POLARIZATION ANTENNA WITH BEAM SWITCHING CHARACTERISTICS FOR S-BAND APPLICATIONS

## Paper ID - 21

A paper presented by: Ajay Babu M., Madhav B.T.P., Mohan Reddy B., Divya Chaitanya R., Satish T., Anilkumar T

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A simple polarization and beam switching reconfigurable antenna is presented in this paper. The circular patch with annular slot is used as the radiating element. The circular metallic conductor positioned below the substrate with the air dielectric acts as the ground plane for the antenna. The proposed antenna is intended to operate at 2.4 GHz band with switchable polarization capability. Four PIN diodes have been placed diagonally covers the corresponding switch ability and moreover the proposed antenna provides the beam switching characteristics. The proposed circularly polarized reconfigurable antenna is designed and simulated in ANSYS Electronics Desktop HFSS package and studied several parameters such as return loss, gain, axial ratio, current distributions etc.

Keywords: Dual polarization, Ansys HFSS, beam switching.

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#### ICICMEAP-2017

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## DUAL BAND NOTCH MIMO ANTENNA FOR ULTRA-WIDEBAND APPLICATIONS

## Paper ID - 22

A paper presented by:Prakash B.L., Madhav B.T.P., Sai Parimala B., Sravya T., Anilkumar T.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

A two-element multiple-input multiple-output antenna is presented in this paper. A pair of rectangular patch elements with staircase truncations at the patch-feed interconnection serves as the planar monopole radiating element for this design. The defected ground structures are realized with T-shaped stub etched with L-shaped and meandered slots form the ground plane of the antenna. These DGS procedures and arc-shaped slot and a split ring slot yields the dual band notch characteristics at 4.21 GHz-5.16 GHz, 7.84 GHz-8.63 GHz in a spectrum of 2.109 GHz-11.05 GHz. The far-field distributions at various frequencies and ECC value below 0.5 across the band confirms the concept of polarization diversity.

Key words: polarization diversity, MIMO, DGS, UWB.

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#### ICICMEAP-2017

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## A NEW CPW ANTENNA WITH PRINTED STAIRCASE SERRATED FOR UWB Paper ID - 1

## Paper ID - 23

A paper presented by:Subbareddy V., Madhav B.T.P., Prathyusha S., Gopi Janardhan G., Kalpanath N., Venkateswara Rao, M. Ratnam D. V Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

A novel compact coplanar slot antenna designed for UWB applications and presented in this paper. A slot antenna with CPW feed approach is applied which goes more correctly not like antennas having microstrip feed line feeding and main to progressed bandwidth in the antenna. The contemporary antenna shape is included with serration in the radiating detail, which intern improved the bandwidth. Design and evaluation of the proposed antenna is totally finished in Ansys Electronics Desktop (AED) tool. The bandwidth of this antenna stages from 1GHz to 11GHz with a go back loss up to-40 dB at 2.6 GHz. The simulation effects of radiation styles, go back loss, advantage are provided on this paintings. A contrast between antenna with serrations and antenna without serrations has additionally been achieved and the effects are also supplied.

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#### ICICMEAP-2017

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## KOCH FRACTAL MONOPOLE SLOT ANTENNA WITH PENTAGONAL SHAPE FOR MULTIBAND APPLICATIONS

### Paper ID - 24

A paper presented by:Ramkiran D.S, Madhav B.T.P., Anusha B.L, Bhargavi T.L., Reddy L.V, Yashwanth P, Anilkumar T.Sujatha M.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In this paper, a compact monopole multiband antenna is supplied. A microstrip line fed pentagon formed monopole detail is served as radiating patch on this antenna. The slots are made inside the patch in Pentagonal-Gasket-Koch (PGK) structure. The performance of antenna with one-of-a-kind fractal iterations is studied. The base antenna shape effects multiple resonating modes, where because the consecutive antenna iterations are contributing a a couple of wideband reaction. The proposed radiating shape reveals the more than one wideband 1.432-three.064 GHz, 5.02-7.189 GHz, nine.302-15.579 GHz, 16.831-20 GHz. The PGK fractal slot iterative structures incorporated in pentagon monopole antenna is studied in phrases of other parameters such as peak benefit, radiation performance and proves to be beneficial in various multiband packages such as DCS, LTE 2600, WLAN and radiolocation, mobile applications.

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## IONOSPHERIC GENERAL ELECTRON CONTENT SHORT-TIME PERIOD FORECASTING OVER A LOW-LATITUDE GLOBAL NAVIGATION SATELLITE TV FOR PC SYSTEM STATION

## Paper ID - 25

A paper presented by:Sivavaraprasad G, Ratnam D.V, Parthasarathi P Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The prediction and forecasting of ionospheric delay at equatorial and low-latitude regions is an essential contribution for enhancing the worldwide positioning system services. In this study, hybrid vehicle-regressive integrated shifting average (ARIMA) models are implemented based on wavelet transform (WT) and empirical mode decomposition (EMD) for 1 h ahead forecast of ionospheric overall electron content material (TEC). The performance of ARIMA and hybrid fashions, WT and EMD in mixture with ARIMA (WARIMA and EARIMA) is evaluated in the course of diverse seasons and March geomagnetic storm situations in 2013 and 2015. The proposed fashions are proven with empirical global TEC models and effects display that the EARIMA has much less mistakes measurements in comparison with ARIMA and WARIMA fashions. The EARIMA ionospheric forecasting model may be beneficial for growing an early warning ionospheric space weather system over low latitudes.

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#### ICICMEAP-2017

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### LMD–DFA FOR IONOSPHERIC SCINTILLATION DETECTION

Paper ID - 26

A paper presented by:Tadivaka R.V., Paruchuri B.P., Miriyala S., Koppireddi P.R., Devanaboyina V.R. habibulla Khan

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The overall performance and measurement accuracy of worldwide navigation satellite device (GNSS) receivers is greatly stricken by ionospheric scintillations. Rapid amplitude and phase variations in the acquired GPS signal, known as ionospheric scintillation, affects the monitoring of indicators by GNSS receivers. Hence, there may be a need to analyze the tracking of various sports of the ionosphere and to expand a novel approach for mitigation of ionospheric scintillation effects. A method based on Local Mean Decomposition (LMD)– Detrended Fluctuation Analysis (DFA) has been proposed. The GNSS facts recorded at Koneru Lakshmaiah (K L) University, Guntur, India were considered for analysis. The service to noise ratio (C/N0) of GNSS satellite tv for pc automobiles were decomposed into numerous product features (PF) the use of LMD to extract the intrinsic features in the signal. Scintillation noise became eliminated by way of the DFA set of rules with the aid of deciding on a suitable threshold. It become located that the overall performance of the proposed LMD–DFA became higher than that of empirical mode decomposition (EMD)–DFA.

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## IONOSPHERIC TIME DELAY FORECASTING MODELS PERFORMANCE EVALUATION FOR LOW-LATITUDE STATIONS USING GPS OBSERVATIONS.

## Paper ID - 27

A paper presented by:Sivavaraprasad G., Venkata Ratnam D. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Ionospheric delay is one of the primary atmospheric outcomes at the performance of satellite tv for pc-based totally radio navigation structures. It limits the accuracy and availability of Global Positioning System (GPS) measurements, related to important societal and safety packages. The temporal and spatial gradients of ionospheric overall electron content material (TEC) are driven by means of several unknown priori geophysical conditions and solarterrestrial phenomena. Thereby, the prediction of ionospheric postpone is challenging in particular over Indian sub-continent. Therefore, the ideal short/long-term ionospheric postpone forecasting model is vital. Hence, the reason of this paper is to forecast ionospheric delays by means of thinking about everyday, monthly and seasonal ionospheric TEC versions. GPS-TEC facts (January 2013–December 2013) is extracted from a multi frequency GPS receiver established at K L University, Vaddeswaram, Guntur station (geographic: sixteen.37°N, 80.37°E; geomagnetic: 7.44°N, 153.Seventy five°E), India. An assessment, in phrases of forecasting capabilities, of three ionospheric time delay fashions - an Auto Regressive Moving Average (ARMA) version, Auto Regressive Integrated Moving Average (ARIMA) version, and a Holt-Winter's version is supplied. The performances of these models are evaluated via blunders measurement evaluation in the course of each geomagnetic quiet and disturbed days. It is located that, ARMA version is efficiently forecasting the ionospheric postpone with an accuracy of 82-94%, that is 10% more superior to ARIMA and Holt-Winter's fashions. Moreover, the modeled VTEC derived from International Reference Ionosphere, IRI (IRI-2012) model and new worldwide TEC version, Neustrelitz TEC Model (NTCM-GL) have as compared with forecasted VTEC values of ARMA, ARIMA and Holt-Winter's models all through geomagnetic quiet days. The forecast consequences are indicating that ARMA version might be useful to installation an early caution device for ionospheric disturbances at low latitude regions.

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## INDUCED IONOSPHERE VARIABILITY OF GNSS STATIONS OVER LOW-LATITUDE DURING 24TH SOLAR MAXIMUM PERIOD

## Paper ID - 28

A paper presented by: Venkata Ratnam D., Sivavaraprasad G., Latha Devi N.S.M.P. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Global Positioning System (GPS) is a remote sensing tool of area climate and ionospheric variations. However, the interplanetary area-based drifts in the ionospheric irregularities purpose fundamental ranging mistakes in the GPS alerts. The dynamic variability of the lowrange ionosphere is an vital chance to the satellite-primarily based radio verbal exchange and navigation ranging systems. The have a look at of temporal and spatial versions within the ionosphere has caused new investigations in modelling, nowcasting and forecasting the ionospheric variations. Hence, in this paper, the dynamism inside the everyday, month-tomonth and seasonal variability of the ionospheric Total Electron Content (TEC) has been explored in the course of the sun maximum length, January-December 2013, of the twenty fourth solar cycle. The spatial and temporal variations of the ionosphere are analysed the use of the TEC values derived from 3 Indian low-latitude GPS stations, specifically, Bengaluru, Guntur and Hyderabad, separated by 13-18° in range and seventy seven-eighty one° in longitude. The observed regional GPS-TEC variations are in comparison with the anticipated. Higher percent deviations are discovered in the course of equinoctial months than summer over EIA stations, Guntur and Hyderabad. GPS TEC variations are hyped up for the duration of dawn hours for all of the seasons over Bengaluru. It has also been determined that tremendous storm impact (enhancement of TEC) is observed for the duration of the main phase of the March storm, 2013 (March sixteen-18, 2013) even as each high quality and negative storm consequences (depletion of TEC) are registered throughout the principle section of the June typhoon, 2013 (June 28-30, 2013) at Bengaluru and Guntur, respectively. IRI-2012 model has slightly huge discrepancies with the GPS-VTEC compared with the IRI-2007 version at some stage in the June storm, 2013 over Guntur station. This evaluation highlights the importance of upgrading the IRI models because of their discrepancies throughout quiet and disturbed states of the ionosphere and growing an early caution forecast gadget to alert approximately ionosphere variability.

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# SUPERVISED CLASSIFICATION OF BREAST CANCER MALIGNANCY USING INTEGRATED MODIFIED MARKER CONTROLLED WATERSHED APPROACH

## Paper ID - 29

A paper presented by:Rajyalakshmi U., Koteswara Rao S., Satya Prasad K. and Koteswara Rao S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Worldwide information inform that most breast cancers occupies second position inflicting mortality amongst ladies. Symptomatic detection of the disease in its early stage is crucial for treatment to assist the internists and radiologists in their diagnosis. In the proposed module, nuclei places are acquired the usage of Hough Transform. Nuclei Segmentation of the preprocessed Hematoxylin and Eosin stained breast most cancers histopathological images is done the use of Proposed Modified - Marker Controlled Watershed Approach (MMCWA). Small constant Structuring Element (SE) size eliminates respective vibrant and dark info in the course of opening and last morphology & massive SE length gets rid of massive contour info of the enter picture. So, inside the proposed MMCWA, through the use of weighted variance method, the adaptive Structuring Element size of the SE map is acquired to defend all info within the image. A overall of 20 features, consisting of 5 form based features and 15 texture capabilities have been extracted for classification using Decision Trees, SVM and KNN classifiers. Algorithmic performance assessment is completed and proved that the proposed integrated MMCWA affords higher results than the traditional marker controlled watershed. The proposed module became educated with ninety six pictures and examined over 24 pics taken from the virtual database.

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# FRACTAL SLOTTED UWB MONOPOLE ANTENNA WITH AN ASYMMETRIC LIQUID CRYSTAL POLYMER OBEYING NOTCH BAND CHARACTERISTICS

## Paper ID - 30

A paper presented by: Madhav B.T.P.,Ram Kiran D.S., Alekhya V., Vani M., Avinash T., Sreekanth P., Anilkumar T, Ram Kiran Das Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

An development of the fractal antenna is made to beautify its gain and bandwidth. In this paper, a relative look at of the fractal antenna which is happy with the aid of the CPW is completed. The antenna that we proposed changed into designed and simulated the use of HFSS. Using the fractal concept and CPW-feed method the compact length and the ultra wideband impedance matching is obtained. The very last dimensions of the designed antenna measure 36.4mm x 40mm x 1.53mm.A low-value FR-4 substrate is used on this design. The UWB characteristic of the antenna tiers from 3.137GHz-11.4332GHz with a notch band from 3.7716 GHz to 4.07 GHz. The designed antenna is particularly used for the UWB pulse based totally trans-receiving programs.

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## DOUBLE-DIPOLE RECONFIGURABLE ANTENNA WITH K15 NEMATIC PHASE LIQUID CRYSTAL MATERIAL

## Paper ID - 31

A paper presented by:Madhav B.T.P., Sreenivas Rao D., Supraja K., Tejaswini A., Phanikumar A., Nagarjunareddy A., Sai Prakash R., Meena Kumari A.N, Sreenivasarao. D. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper, the have a look at is achieved on frequency reconfigurable antenna for wi-fi applications. The tuning of the antenna is performed by changing its powerful electrical period. The proposed antenna structure consists of two dipoles. By connecting and disconnecting the slots, lengths of the coplanar strips of the dipoles can be various .Therefore antenna may be operated in each multi-band and wideband frequencies. The effects plotted after simulations advise that the designed antenna is able to preserving its operating frequency over a number of 1.5GHz to eight GHz. This frequency reconfigurability carried out symmetrically on the 2 dipoles enhances the overall advantage of the antenna from 3dB to 5dB at a couple of bands over different combinations referred to in this paper.

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## OPTIMIZED NOTCH BAND MONOPOLE ANTENNA WITH LIQUID CRYSTAL POLYMER

## Paper ID - 32

A paper presented by:Madhav B.T.P., Rama Krishna T.V., Sindhu B., Nikhita B., Harshitha G., Prudhviraju B.H., Meena Kumari A.N, Rama Krishna. T. V Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

## Abstract:

An Ultra Wideband (UWB) antenna with single and dual notch bands is presented in this work by taking liquid crystal polymer as the substrate material. The proposed antenna comprises two L-shaped open ended slots with a defected ground structure. By changing the radii of circular discs and length of slots in the ground plane, single band and dual band notch characteristics are achieved. It operates from 2.9 GHz-9.8 GHz frequencies and has a size of 22 X 26 mm<sup>2</sup>. This antenna gives Omni-directional radiation pattern with a gain of 3.85 dB. It can be operated at different frequency bands i.e.; 3.3-3.8-GHz WI-MAX, 5.15-5.85 GHz WLAN frequencies and C-band frequencies for satellite communication.

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

### ISSN-2455-6300 November-2017, SPL ISSUE-11.1

## ENHANCING AUTHENTICATION FRAMEWORKS FOR SECURITY IN BIOMETRIC SYSTEMS

### Paper ID - 33

A paper presented by:S. BALAJI , Dr. Habibullah Khan ,Dr. M. Janga Reddy , Dr. M. Gurunadha Babu

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Because of demonetization by Indian government as of late, there is requirement for security upgrade in biometric frameworks present everywhere throughout the nation.. Although the trouble of programmed unique finger impression coordinating has been broadly contemplated, is all things considered, not a completely tackled issue. In this paper, an altogether blend approach is embraced to address a portion of the constraints of existing unique mark coordinating frameworksTo address the issue of fragmentary prints acquired from little measured sensors, a unique finger impression mosaicking plan has been created. The proposed strategy builds a composite unique mark design from fractional unique finger impression pantomime by utilizing iterative control point calculation that decides the makeover parameters relating the two impressions. To reduce the impact of non-direct contortions in unique mark pictures on the coordinating procedure, a normal twist imitation has been proposed. Single biometric frameworks perform individual discovery dependent on a solitary wellspring of biometric data and are influenced by inconveniences like loud sensor information, non-comprehensiveness and absence of uniqueness of the picked biometric trademark and powerlessness to circumvention. A portion of these issues can be mitigated by utilizing multimodal biometric frameworks that union proof from different biometric sources. Strategies to consolidate unique mark in grouping with the other biometric attributes of a subject (viz., iris, face and mark) are displayed. To improve client comfort, a learning strategy has been utilized to register client explicit parameter in a multi biometric framework, in arrangement blend frameworks, as introduced in this paper, are probably going to be more trustworthy and solid than frameworks that depend on a single wellspring of data. Utilizing aliveness identification strategies, a dependable acknowledgment of perished fingers or shot appearances can be built up. Keywords: BIOMETRICS, Enhancement, Matching, SIKP Operator, Multimodal Biometrics, Aliveness, Detection, FAR, FRR

INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### **ICICMEAP-2017**

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## FUSION BIOMETRIC SYSTEM DEVELOPMENT FOR ATM MACHINES

## Paper ID - 34

A paper presented by:S. Balaji Professor,Dr. M. Janga Reddy , Dr. Habibullah Khan , K. Mounika Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

To improve security in ATM's another strategy is proposed utilizing Biometrics for getting to cash in ATM machines. This paper presents combination of three biometric qualities, i.e., iris, face and unique mark, at indistinguishable score level plan utilizing weighted entirety of score procedure. The highlights are gotten from the pre-prepared pictures of iris, face and unique mark. These highlights of a question picture are contrasted and those of a list picture to acquire coordinating scores [1]. The individual scores created in the wake of coordinating are passed to the combination module. This unit comprises of three significant advances i.e., standardization, age of likeness score and combination of weighted scores. The last score is then used to proclaim the person as Authenticate or Un-Authenticate with Secret Key Analysis.

**Keywords:** Biometrics, Fusion, ATM, Human Visual System, IRIS, Score, Multi biometric systems

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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## MEMS BASED BIO SENSOR DESIGN AND ANALYSIS FOR TB DETECTION

Paper ID - 35

A paper presented by: K. Srinivasa Rao ; Sateesh Jasti

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Selectivity, exactness and quick reaction are the difficulties in current sensors; there is an immense necessity of increasingly rearranged structures. In this paper, we have structured, and recreated MEMS based bio sensor for recognizing Tuberculosis (TB) utilizing FEM apparatus. Contrasting and traditional methods, the proposed plan is increasingly strong, solid, cost successful, extremely quick and profoundly touchy. Two sorts of incitation procedures are examined, and capacitive system gives exact results.

Keywords: <u>Anti-gens</u>, <u>Anti-body</u>, <u>actuation techniques</u>, <u>Cantilever</u>, <u>MEMS/NEMS</u>, <u>Tuberculosis (TB)</u>

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

## ICICMEAP-2017

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## L-C META MATERIAL STRUCTURE TUNING FOR ANTENNA APPLICATIONS

Paper ID - 36

## A paper presented by:<u>N. Devi Susmitha ; S. Sowmya ; P. Saleem Akram ; T. Venkata</u> <u>Ramana</u>

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The tunable meta-materials have unique intermittent properties which empower them to create various results when they are utilized in radio wire application. Components like electronically tunable and precisely tunable are the usable ones when managing these structures. When all is said in done the length of the stick by means of and hole between the patches of these occasional structures are changed to change the impedance of the structure which thus changes the receiving wire the manner in which it works and creates different yields each time they are exposed to tuning. This time the meta-material is intended for different measurements and the impacts it will cause on radio wire are outlined through the mimicked outcomes.

Keywords: Inductance , capacitance, operating frequency, energy band gap

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## ICICMEAP-2017

## ISSN-2455-6300 November-2017, SPL ISSUE-11.1

## **OPERATING FREQUENCY OF ANTENNA TUNING USING METASURFACES**

Paper ID - 37

A paper presented by:<u>B. Ravikanth ; P. Saleem Akram ; V. Ashlesha ; T. Venkata Ramana</u> Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Metasurfaces can deliver different results when utilized in antenna applications. Particularly they can permit chosen band of frequencies while ignoring others because of this property they are utilized as channels some time these structures are additionally utilized in planning the enhancers as they can reinforce the sign if the plan of metasurface is made with a similar band as antenna. In view of this we will structure a metasurface and spot it as the ground plane and keeping in mind that shifting the elements of the metasurfaces we will consider how it will change the working frequencies of the radio wire. A microstrip fix radio wire is considered for the examination reason which will for the most part works at 3.39GHz. and furthermore, the metasurface structure will be planned with air filled and dielectric filled by differing its metallic fix size and the stature of stick and the progressions happens in the reception apparatus execution will be considered and delineated.

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#### ICICMEAP-2017

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## COMPUTATION EFFECTS ON TROPOSPHERE FOR KU BAND DOWN LINK SIGNAL IN TROPICAL REGIONS

## Paper ID - 38

A paper presented by:Govardhani.Immadi, M. Venkata Narayana, Sarat K Kotamraju, K.Ch.Sri Kavya, S.V.N.S. Maneesha, K.Ravali, Ch.Sravani Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The electromagnetic sign from the satellite while making a trip down to the earth should go through different layers of the climate like troposphere, stratosphere, ionosphere and so on. These layers won't go about as a straightforward layer however rather they give a few hindrances in the way of the sign travel and changes the attributes of the sign. With the progressions in innovation the clients are not in any way trading off in utilizing the applications like information applications, web applications, concurrent sound video moves, and so forth. which brings about abundance utilization of the regular recurrence groups. Along these lines, the advanced applications are likely to be structured at higher recurrence range for example Ku, Ka and V groups. The impact of the layers for the most part relies on the recurrence of the sign. As we are managing the frequencies over 10 GHz the ionosphere goes about as a straightforward layer however the troposphere impact the sign qualities. In this paper, we will dissect and process the tropospheric debilitations like constriction because of downpour and tropospheric shines for the geological territory of K L University, Vaddeswaram situated at  $16.44^{\circ}$ E scope and  $80.62^{\circ}$ N longitude.

**Keywords**: Frequency Congestion, Impairments, Tropospheric Scintillations, Rain Attenuation, Beacon Signal

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#### ICICMEAP-2017

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## USE OF SPLIT RING RESONATORS TO NOTCH UNWANTED FREQUENCIES FOR QUAD BAND FILTENNA IN MEDICAL APPLICATION BANDS

## Paper ID - 39

A paper presented by:B T P Madhav, M Vamsi Krishna Chaitanya Reddy, M Venkateswara Rao, C Mohan Krishna, P Chandan Raj, G Jaya Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper exhibits a novel multi band dismiss channel utilizing complimentary split ring resonators. Here the proposed reception apparatus was structured utilizing Ansys HFSS programming. This multiband dismiss channel constrict frequencies at 2.67 GHz, 3.5 GHz, 6.6 GHz, 9.1 GHz and 11.3 GHz. This multiband dismiss channel is utilized to upgrade the data transfer capacity and improve the arrival misfortune with the assistance of complimentary split ring resonators on the ground plane. The SRR is a typical structure to actualize meta-material properties. The SRR comprises of concentric metallic plates scratched on a dielectric surface which is utilized to expand the recurrence weakening trademark and thusly setting these SRR at wanted position prompted increment of transfer speed from 0.1232 to 0.1561. The band reject channel is inclined to recurrence contortions which are expelled by the complimentary split ring resonators. The split ring that was taken in the paper indicated a decent increment in the data transfer capacity yet so as to expand the transmission capacity more we picked to take an another complimentary split ring resonator over the first split, which expanded the transfer speed more. The proposed band stop channel reception apparatus attributes are utilized for restorative application, the for example, electrocardiogram.

Keywords: Band Reject Filter, Complimentary Split Ring resonator (CSRR), Filtenna.

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## COMPACTNESS OF ULTRAWIDE BAND ANTENNA WITH BAND-NOTCHES AT WIMAX AND WLAN BANDS

## Paper ID - 40

A paper presented by:J. Chandrasekhar Rao, N. Venkateswara Rao, M. Jyothsna, M N Jyothirmayee, R. Akhil, Anda. Manasa Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

A circular disk-shaped formed monopole ultra-wideband (UWB) radio wire having a little region of 26 x 31 x 1.6 mm3 was proposed in this paper. The radio wire imprinted on FR4 material of permittivity 4.4 and stature of 1.6mm. Microstrip line having a width of 3mm is utilized to energize radio wire. The band-indent from 3.2 to 3.7 GHz is accomplished by consolidating C-shape opening having a length of 28 mm on the emanating patch. Two even C-modelled strips are set close to the sustaining line edges to accomplish another indent at 5 to 6 GHz. The proposed receiving wire is working in the entire ultra-wideband from 2.4 to 11.8 GHz while dismissing electromagnetic obstruction from WiMAX and WLAN frameworks. The mimicked outcomes, for example, S parameters, VSWR, radiation designs, current conveyances, and addition shows that the reception apparatus is well fitting for remote convenient gadgets.

Keywords: Band-Notched Characteristics, Monopole Antenna, Ultra-wideband (UWB)

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## EQUAL SPLIT WILKINSON POWER DIVIDER DESIGNING USING GENESYS

## Paper ID - 41

## A paper presented by:<u>Vasujadevi Midasala</u>; <u>S Nagakishore Bhavanam</u>; <u>Nageswaramma</u> <u>Odugu</u>

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

By and large in radio innovation we will in general need latent gadgets. Power dividers are best inactive gadgets. Power dividers are utilized to part the power and include the power. At the point when move of attractive fascination control is required in b/w 2 ports through the transmission line these power dividers square measure utilized. By utilizing power divider we will in general will just unbelievable a quarter wave lines on single composed circuit board. This is minimal effort and utilized as simple splitter and combiner. The recurrence utilized in this gadget is 2.4GHz. By utilizing Genesys code we will in general will mimic power dividers and the rendition is 2014.03.

Keywords— Wilkinson Power Divider (WPD), Port, Genesys

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## SYNCHRONIZATION OF TIME FOR WIRELESS NETWORKS USING ZIGBEE AND ZYNQ FPGAS

## Paper ID - 42

A paper presented by:M.Vishwanath , Himani Goyal and Habibulla Khan Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The most recent decade has seen monstrous increment of remote systems for various applications in portable correspondence, web, and modern robotization. The cutting-edge remote hubs will be utilized continuously applications, for example, auto route, distributed computing and specially appointed information systems and so on. These applications need exact time synchronization to work appropriately. In this paper, the time synchronization between two remote hubs is accomplished utilizing novel system. The fundamental guideline is to intermittently synchronize checks running in two unique hubs through remote correspondence conventions. Every hub comprises of one ZigBee module working at 2.4 GHz ISM (Industrial, Scientific and Medical) band radio and Zynq Configurable System on Chip (C-SOC) stage. In light of the ZigBee correspondence the Field Programmable Gate Array (FPGA) running constant clock with goals of 10 nano seconds is synchronized through programming. The modules created in this test are FPGA ongoing counter, External Trigger interface module and UART correspondence. To approve the created strategy another Spartan 3E FPGA produced trigger heartbeat is utilized. The time synchronization mistake is among the two remote hubs is examined and plotted utilizing Matlab. The outcomes exhibited decrease of time synchronization mistake up to 10 smaller scale seconds. The work is intended to be reached out towards acknowledging different systems for further improvement in the time synchronization.

Keywords: time synchronization, wireless networks, FPGA, Zynq, C-SOC, UART, ZigBee.

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#### ICICMEAP-2017

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## VARIATIONAL MODE DECOMPOSITION FOR MITIGATION OF IONOSPHERIC SCINTILLATION EFFECTS ON GNSS SIGNALS

## Paper ID - 43

A paper presented by:G. Sivavaraprasad, R. Sree Padmaja, and D. Venkata Ratnam, Senior Member, IEEE

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This letter tends to the issue of ionospheric scintillation effects for the global navigation satellite system (GNSS) signals. Serious scintillations degrade the signal force underneath the blur edge of the GNSS beneficiary, bringing about disappointment of the situating and navigational administrations. A strong strategy is required for the estimation and mitigation of such ionospheric scintillation impacts. Henceforth, in this letter, the application of an adaptive signal decomposition technique based on variational mode disintegration (VMD), in combination with the detrended vacillation investigation (DFA) technique, is accounted for. VMD-DFA viably breaks down the GNSS signal influenced by ionospheric scintillations into a number of intrinsic mode functions and provides a threshold for the detection and mitigation of scintillations noise. Monte Carlo recreation results demonstrate that the proposed algorithm is superior and reliable for eliminating the amplitude scintillation effects compared to the complementary ensemble empirical mode decomposition method The utilization of the proposed calculation on both manufactured (Cornell shine model) and constant estimated GNSS information acquired from GNSS programming route collector at Rio de Janeiro, Brazil, has demonstrated its probability in relieving the ionospheric amplitude scintillation effects.

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#### ICICMEAP-2017

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## FREQUENCY SELECTIVE SURFACE BASED SPIRAL FRACTAL MONOPOLE ANTENNA

### Paper ID - 44

A paper presented by:B. T. P. Madhav, M. Sai Charishma, P. Kavya, A. Sai Kumar and K. Supriya

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper, a novel spiral fractal monopole antenna is intended to work in the correspondence band applications. The performance characteristics like bandwidth, gain and radiation patterns are improved by placing frequency selective surface beneath the antenna structure. A fundamental model with closed loop ground is intended to work at various frequencies according to the fractal structure. The basic model is changed with deflected ground structure in the monopole fractal configuration to enhance the bandwidth characteristics. Bandwidth is enhanced by double when compared with base model and an impedance bandwidth of 118% is achieved from the modified structure. The FSS is used as a reflector in the modified structure. The FSS is used as a reflector in the modified structure. The FSS is used as a reflector in the modified structure as well as placing of FSS is clearly shown with FEM based HFSS tool. The designed model is fabricated on FR4 substrate and measured results are furnished along with simulation results for validation purpose. The measured results from ZNB20 vector analyzer are in good agreement with simulation results of HFSS.

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#### ICICMEAP-2017

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## DUAL BAND ELEVATED ANTENNA ANALYSIS ON A SILICON BASE

Paper ID - 45

A paper presented by:SSS Kalyan, Sarat K Kotamraju, K Ch Sri Kavya Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this article, we have proposed a dual band elevated antenna and it has been analyzed using three different techniques which are slot ratios, silicon base and shorting posts. It has been seen that as the width of one of the slot is varied with respective to other there is a shift in resonant frequency as well as improvement in bandwidth, but when the same analysis is done with the other slot the performance is changed leaving gain parameter. In addition to performance is also analyzed using silicon material in which usage of silicon improved the impedance match. Also, the position of the shorting post is varied and studied the return loss characteristics. Variation of the shorting posts away from feed element enhanced the return loss and reduced the gain.

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## DESIGN AND ANALYSIS OF MICROSTRIP CIRCULAR PATCH ANTENNA ARRAY

## Paper ID - 46

A paper presented by: Venkata Narayana M., Immadi G., Muppa H., Nagisetty M., Konda H.V.R.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## **Abstract:**

This article analyses the design of microstrip circular patch antenna array which is intended with a frequency of 2.5GHz, and its major application in wireless communications. By using this array, we can obtain high. From a basic antenna having circular patch, some new elements are introduced to get linear array. These linear arrays are used to obtain high gains. For the antenna shown here, the achieved gain is 5.21dB, return loss (VSWR) is  $\leq$  -10 dB. The antenna array was agitated by uniform microstrip line feed method. An analysis was done considering 1x4 array. It is designed that gain increases at a cost of Bandwidth.

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## OPTIMIZATION AND DESIGN OF PHASED ARRAY ANTENNA USING KA BAND FREQUENCY

## Paper ID - 47

A paper presented by:Immadi G., Dr., Venkata Narayana M., Maalika C.K., Ireesha D.S.L.N.V.P., Swetha Sai K., Akhil Chakravarthy V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this article we have proposed a phased array antenna in grid arrangements. The most frequent problem in antenna arrays is occurrence of side lobes. Due to side lobes the energy is being wasted. In this article the mathematical model of rectangular, triangular grids has been studied. We have noticed the optimization inside lobe level using many techniques like Taylor, Chebyshev, Kaiser, Hamming and Hann models. For this to be proved we have plotted the elevation pattern and observed directivity patterns for those grid arrangements using rectangular array pattern. By modifying the spacing between the elements, number of elements, steering angles, side lobe elimination level we have proposed that Chebyshev technique is the best among those techniques we have verified in order to eliminate side lobe levels. We plotted directivity and calculated gain and peak side lobe level by using those techniques.

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# REAL TIME NEONATE MONITORING SYSTEM USING ARDUINO BASED ON IOT

## Paper ID - 48

A paper presented by:Narayana M.V., Dusarlapudi K., Uday Kiran K., Sakthi Kumar B. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In the present paper, a special monitoring system is developed to take care the health condition of the Infants. We have used an Arduino Uno board for implement this work. An Arduino board is interfaced with the GSR sensor, MQ135 sensor, Pulse rate sensor and AM2315 sensor. The emotions of the Infant are recognized by the GSR sensor, CO gas & smoke concentrations are recorded and analyzed using MQ135 sensor. The heartbeat of the infant is continuously recorded and monitored using pulse rate sensor. The temperature and the moisture content are monitored using AM2315 sensor. The alert message is sent to the doctors and parent whenever infant condition is recognized as abnormal.

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#### ICICMEAP-2017

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## UTILIZING EXTENDED KALMAN FILTER FOR POSITION ESTIMATION OF GPS RECEIVER

## Paper ID - 49

A paper presented by:N. Durga Indira, K. Sony, Sanam Nagendram, P. Ravi Teja, G. Hima Tej, E. Prasanna Kumar

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This article gives an alternate way of estimating position in a GPS beneficiary, influencing utilization of stretched out Kalman to channel. Uses of Least Squares Method (LSM) and Extended Kalman Filter (EKF) in GPS position estimation are incorporated and thought about. Trial comes about demonstrate that Extended Kalman Filter provides an exact and stable estimation than LSM does. Besides, noteworthy change in position exactness and precision can be seen.

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## DESIGN OF A CIRCULARLY POLARIZED MICROSTRIP ARRAY ANTENNA FOR C-BAND APPLICATIONS

## Paper ID - 50

A paper presented by:Sundaraiah, G. Hima Sailaja, T. Vaasudeva Reddy, D. Gayatri, S. Sindhu Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

### Abstract:

This article provides a circularly polarized microstrip antenna array for space communications. The designed antenna array can obtain high gain, high directivity and low return loss. The array is of 8 elements which are fed by a coaxial feed technique. To broaden the input matching bandwidth, a pair of symmetric slots is used in each antenna array. To obtain the circular polarization, truncated corners are made on the patch. The results show that the gain is 14.801dB with 10dB return loss ranging from 5.63GHz to 5.76 GHz. The complexity of the antenna array is reduced as the number of elements is reduced to 8 and gain is enhanced by 6.414dB.

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## ANALYSIS OF LEACH AND PEGASIS ENERGY EFFICIENT PROTOCOLS

## Paper ID - 51

A paper presented by:Pakam Sundaraiah,K Sri Kapardi, Ch Jaya Lakshmi, K Srinivas, M V Uday Kumar

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Data acquisition from the surroundings without human involvement is a critical research point. This issue can be resolved by WSN (Wireless Sensor Network) which is more advantageous and takes out the wired system. The WSN is deployed with advanced sensors, which are compact in size and are less expensive. For effective data transmission among nodes, some nodes are selected as hubs, which are small and differ from each other. These hubs are selected based on how effectively the energy is consumed. The directing conventions, therefore, must guarantee less energy utilization. Though grouping of data utilizing stationary hubs is simple, assembling data from portable hubs is troublesome. This issue is resolved by the protocol conventions like LEACH and PEGASIS that work extraordinarily for stationary hubs, but problem occurs in deciding protocol which is best suitable for a certain application. This paper presents a detailed review over the concepts of LEACH and PEGASIS and determines which protocol is more efficient in gathering information and ensures less loss of information.

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## COMPACT CPW FED DUAL BAND ANTENNA USING LIQUID CRYSTAL POLYMER FOR AUTOMOTIVE APPLICATIONS

## Paper ID - 52

A paper presented by:B.T.P. Madhav, T.V. Ramakrishna, G. Pavan Kumar, M. Keertan, A. Alekhya, T. Anilkumar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this article, a compact dual band antenna is proposed which is designed on a Liquid Crystal Polymer substrate. The rectangular ring-shaped radiating element fed with coplanar waveguide feed is used in this structure. A metallic conductor is placed behind the antenna for reducing the backward radiation thus increasing the gain of the antenna. These structural elements make the antenna operating in the dual bands at 2.5 GHz and 8.5 GHz center frequencies and the maximum gain of the antenna being 7.85 dB which makes the antenna to be useful in automotive applications.

**Keywords**: Liquid Crystal Polymer, Dual Band Antenna, Reflector, Automotive Applications, Vehicular Band.

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## INVESTIGATION OF MODIFIED SUSPENDED ROUND FIX RECEPTION APPARATUS STACKED WITH A SQUARE FIX FOR LTE RADAR APPLICATIONS

## Paper ID - 53

A paper presented by:Sowjanya B., Govardhani I., Saikiran V., Triveni Y.L., Sushma N., Rehana S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper a reversed suspended roundabout fix radio wire stacked with a square space with working recurrence at 2.7 to 2.9 GHz for LTE Radar band application is structured. The radio wire structure comprises of a round fix, square opening is stacked on the focal point of the fix and a roundabout space which is utilized to give the coaxial feed. Various openings with various shapes will impact the exhibition of a reception apparatus. A square opening is stacked in the roundabout fix to get full radiation from the radio wire. The radio wire is feed with coaxial test nourishing to improve the band width and increase. The re-enactment is finished by utilizing HFSS programming. Diverse reception apparatus parameters like addition, directivity, return misfortune, radiation design in azimuthal and height planes, current conveyances are investigated by utilizing the recreation. The proposed radio wire can give minimal effort, high addition radiation execution and it is reasonable for LTE applications.

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## STRUCTURE OF CIRCULAR MICRO STRIP PATCH ANTENNA ON VARIOUS THUNDEROUS FREQUENCIES FOR 5 G WIRELESSES CORRESPONDENCE UTILIZING MATLAB

## Paper ID - 54

A paper presented by:Raghavendra Rao P., Satyanarayana S., Aditya L., Sai Krishna M.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Moved RF correspondence Systems require low profile, lightweight, high get and essential structure radio wires to ensure relentless quality, transportability, and high viability. A fix gathering contraption is very fundamental being developed using a customary scaled down scale strip produce system. It contains a fix of metallization on a grounded dielectric substrate. They are low profile, lightweight accepting wires, generally suitable for flying and flexible applications. Fix getting wires have grown widely in the midst of a years prior, and a significant parcel of their limitations have been survived. The coordinating patch can take any shape, yet indirect game plans are the most commonly used. In our examination we are interested round fix gathering contraption traces. The objective of this model is to examination the delayed consequences of different patches for different dielectric constants.

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## PLAN OF RECONFIGURABLE UWB FILTENNA WITH BAND-NOTCH QUALITIES

### Paper ID - 55

A paper presented by:Sreenivasa Rao D., Govardhani I., Yaswanth Reddy N., Srinija K., Divya V., Ajith Reddy D.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

We propound the plan of a filtenna with band dismissal area for an Ultra-wide band (UWB). To actualize band indent attributes, the filtenna is sustained with  $50\omega$  microstrip feed line and U formed space are bound together with the structure. To evacuate the electromangnetic impedance by remote neighbourhood (WLAN), one band indent is actualized within the framework. By changing the U shape space structure parameter, the band score is acquired. The filtenna planned is of 36mm x 39.3mm measurements. The filtenna is planned in High Frequency Structure Simulator (HFSS) to watch its exhibition and results.

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# EFFICIENT EXAMINATION OF T-INTERSECTIONS UTILIZING PLASMONIC MIM WAVEGUIDE

#### Paper ID - 56

A paper presented by: Vishwanath M., Habibulla Khan Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Metal-encasing metal (MIM) plasmonic waveguide-based intersections are considered and numerically broke down utilizing recreations are applied to improve control move procedure. The improvement in the transmission spectra of the structure and expand the band width utilizing both the techniques. The diverse T-intersections has been planned with zero reflection at the wavelength of 1550-nm with 70-nm protector width. All reproductions of the T-intersections have examined by utilizing full-wave recreation programming apparatus (CST-Microwave studio).

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## STRUCTURE AND RE-ENACTMENT OF COUPLED CANTILEVER SENSORS FOR PATHOGEN LOCATION

#### Paper ID - 57

A paper presented by:Siddaiah N., Jayadev P., Prasad G.R.K., Siva Kumar K., Srinivasarao K.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this work the coupled cantilever sensors were proposed for recognition of different bio analytes. Material improvement and eigen recurrence examination was performed in FEM toll. The reenactments were performed with different materials like semiconductors, encasings and polymers. From the covers most extreme eigen recurrence of 1. 3527e6 Hz was gotten for Silicon carbide with and without applied outside burden. The most extreme thunderous recurrence of 7. 4105e6 Hz from polysilicon and most noteworthy recurrence of 2486. 3Hz from PDMS polymer. The capacitances for all materials were estimated and reasonable materials were improved for coupled cantilever sensors.

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## STRUCTURE AND EXAMINATION OF WEIGHT SENSORS UTILIZING PIEZO RESISTIVE DETECTING INSTRUMENT

#### Paper ID - 58

A paper presented by:Siddaiah N., Karthikeswar A., Nikesh K.N.V., Satyanarayana D., Naimisha S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Weight sensor assumes a vital job in lessening the detecting zone utilizing MEMS innovation. In this proposed work, the Piezo resistive weight sensor was structured and investigated the utilizing COMSOL Multiphysics FEM instrument. The planned structure is well suitable to reduce the cost and overhaul the affectability of the weight sensor with piezo resistive detecting component. In this paper the peizoresistors with polysilicon the stomach is of Silicon Nitride. In the proposed structure, the selectivity and affectability are upgraded by improving linearity between the obstruction change and inplane worries along the proposed structure.

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## STRUCTURE AND INVESTIGATION OF THERMOELECTRIC GENERATORS FOR HANDHELD ELECTRONIC CONTRAPTIONS

### Paper ID - 59

A paper presented by:Siddaiah N., Akhilanand K., Rohith Mithra C., Srikanth B., Bhavani P.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Thermoelectric generators are engaging for their ability to explicitly change over warmth essentialness into electrical imperativeness, with no moving parts. This innovation has been utilized to create thermoelectric generators for specific applications viz, space, military, and so on. These thermoelectric generators produce electric power from the natural and humanmade impacts, for example, heat from exhaust, body heat, and so on. In this work, we are going to plan and reproduce a thermoelectric generator module in COMSOL Multiphysics 5.2 programming and investigated the electrical, warm and mechanical attributes of the proposed mo2del. The result of this examination is to dissect the show ideal power yield with the different temperature ranges for electronic devices.

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## A G-FORMED POLARIZATION RECONFIGURABLE MONOPOLE RECIEVING WIRE FOR WLAN APPLICATIONS

### Paper ID - 60

A paper presented by:Sreenivasa Rao D., Govardhani I., Dharma Teja C., Sri Sahitya A., Sri Valli B., Kyathi Sri M.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In this paper a G-Shaped Polarization Reconfigurable Antenna is proposed. The radio wire can switch among left hand roundabout polarization (LHCP) to right hand roundabout polarization (RHCP) for 5.3-5.8Ghz remote neighborhood organize frameworks. Two stick diodes are utilized two switches between LHCP to RHCP which are set in the ground plan. The recreated impedance transfer speed for LHCP and RHCP arrangements at 5.8 GHz are around 490 MHz and 420 MHz.

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### BOW-TIE SLOT ANTENNA FOR WLAN/WIMAX COMMUNICATION SYSTEMS

Paper ID - 61

A paper presented by:Pardhasaradhi P, Madhav B.T.P.,Vineel M, Meghanadh Sai K, Sharmada M.R., Rahul M,Venkateshwara Rao M Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A tie recieving wire dependent on a space design in a solitary metal sheet on slender substrate of 0.2 mm is found in this article. The radio wire is built from two opened right-edge triangles bolstered by a coplanar waveguide transmission line. The topology is straightforward and very simple to tune to arrive at the best possible qualities in the wake of mounting on a supporting structure. The fundamental built tie radio wire and changed recieving wire comprises of precious stone formed openings has been investigated through ANSYS EM apparatus both the adaptation in free-space and the rendition for use on a block divider. Estimations show great concurrence with re-enactments. The two adaptations spread the WLAN (2.4 GHz, 3.65 GHz) and WiMAX (2.3 GHz, 2.5 GHz, and 3.5 GHz) spectra, with a general impedance transfer speed of 1.79 GHz (57.7%) and 1.46 GHz (49.7%), individually. The radiation of the reception apparatus is bi-directional with most extreme additions of 6.30 dB and 5.09 dB for the free-space and block divider forms separately.

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## RECURRENCE RECONFIGURABLE DOUBLE BAND RECEPTION APPARATUS FOR REMOTE CORRESPONDENCES

#### Paper ID - 62

A paper presented by:Baburao Dhanade Y., Sreelakshmi K., Bora P., Mudliar M., Madhav B.T.P.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

A conservative recurrence reconfigurable radio wire which might switch between four double band states is exhibited under this article. All the double groups together spread PCS (1.85-1.95 GHz), WIMAX (3.41-3.99 GHz, 2.93-3.58 GHz, 3.06-3.73 GHz), GPS (1.59-1.62 GHz, 1.54-1.58 GHz), WLAN (2.24-2.55 GHz), 5G correspondence (4.56-4.82 GHz). The radio wire transmitting component comprises of a rectangular ring with two stubs on either side of the feed line. Two RF PIN diodes are utilized as changes to change the present stream way to accomplish the reconfigurability. The recreated outcomes are associating great with the deliberate outcomes. The proposed recieving wire can be utilized in the remote handheld gadgets.

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#### FLAG SHAPED STUB COMPACT DUAL BAND MIMO ANTENNA

Paper ID - 63

A paper presented by:P. Saleem Akram,Polaiah Bojja, M. Venkata Krishna Reddy, T. Dhanush Rao,Y.V.S.Prajith, S.V. Sarma Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this paper we plan a conservative double band MIMO recieving wire with measurement  $36 \times 22 \times 1.6$  mm3. This proposed reception apparatus for the most part made out of three components in which two uniform monopole reception apparatuses are arranged over the substrate and banner modelled stub is set underneath the substrate which goes about as ground plane to the receiving wire. This banner modelled stub is situated to invalidate the shared coupling and to improve confinement between the receiving wire components. As referenced over the banner modelled stub presents one additionally coupling way and this coupling way offset the first coupling way produced between the MAs. The indicated reception apparatus works under two data transmissions lower band (2.5-2.84 GHz) just as upper band (6.77-9.13 GHz) attributable to the cuts and openings that are arranged close by banner formed stub. Those cuts and spaces incite certain resonances and simultaneously indents out the essential receiving wires band. The incorporation of banner modelled stub alongside cuts and spaces prompts the isolation(S21) underneath - 9dB level over the lower band and beneath - 17dB level upper band. In spite of better confinement and little size.

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## ULTRA WIDEBAND MIMO ANTENNA WITH WIMAX BAND NOTCH CHARACTERISTICS

#### Paper ID - 64

A paper presented by:B T P Madhav, T Sai Santosh, M Venkateswara Rao, S Sai Manikanta, K B V Srinivas, J Hanumath Sastry Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A tale UWB MIMO recieving wire having single dismissal band is proposed in this article. This venture is meant to dismiss the recurrence at WIMAX band with the assistance of shorting stubs set at flip side of recieving wire. A complimentary split ring resonator is joined on the serrated fix to accomplish indent attributes at WIMAX band (3.6-4.9 GHz). The reception apparatus has an increase of 5.4 dB and having greatest return loss of - 35 dB at 3.1 GHz. The deliberate impedance, connection coefficient and e field dispersion of the proposed recieving wire is too investigated by with assistance of industrially prepared apparatus ANSYS HFSS 17.

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#### METAMATERIAL INSPIRED VIVALDI ANTENNA

#### Paper ID - 65

A paper presented by:B T P Madhav, V Subbareddy, M Venkateswara Rao, Y N Mahalakshmi, Shaik Hasanjama, 6Chaluvadi,N V S Renuka, M V V Rameswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A metamaterial propelled Vivaldi reception apparatus which is having a format of unit cells has been proposed in this article. A design of having 1-2-4 metamaterial unit cell is joined at the Vivaldi reception apparatus locale at top and flip perspective on the recieving wire. The proposed radio wire shows a most extreme addition of 14db and spreads ultra-wideband district with greatest return loss of - 33db.and 98 percent of radiation proficiency. The proposed reception apparatus is planned utilizing industrially prepared device ANSYS electromagnetic work area. Relative examination to the proposed model has been done cycle savvy. The proposed recieving wire works at ultrawide band applications. The expansion of increase of practically 13% to the fundamental Vivaldi reception apparatus has been seen in the proposed work.

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## LOGIC BASED KALMAN FILTER AND VEHICLE RATE SENSOR IN OPTIMIZING DIFFERENTIAL GLOBAL POSITION SYSTEM

### Paper ID - 66

A paper presented by: A.Sampath Dakshina Murthy\*, S.Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

GPS and all the more extraordinarily DGPS have increased wide acknowledgment as navigational instrument. The restrictions are signal obstruction, slow updates and generally low exactness. A sensor combination strategy dependent on fluffy rationale upgraded Kalman channel has been proposed for improving the exhibition of DGPS. The job of fluffy rationale is to improve the abilities of the Kalman channel with the goal that the position can be found precisely .Experimental examinations have been done for the exhibition of the new method .The central perception is that the followed way of the FLKF is accurate. The Experimental arrangement is utilized to change if the direction set by the Kalman channel is pursued .The general outcomes are exceptionally promising .The proposed technique has effectively utilized fluffy rationale for the regions of vulnerability.

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## ELECTROENCEPHALOGRAM SIGNAL ANALYSIS USING WAVELET TRANSFORM

### Paper ID - 67

A paper presented by: P.S.Kiran, S.K.Rao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

EEG is the portrayal of electrical sign that stream through synaptic vibes of the nerve cells of neurons in the cerebral cortex of mind. At the point when many nerve cells in the cerebrum energize all the more rapidly, the resultant over action prompts seizure, that which can be recorded by EEG. This paper proposes a cutting edge system to identify the seizure exercises on the EEG information of human subjects utilizing wavelet change method and least standardization. The EEG signals are examined by playing out the approach on five arrangements of mind accounts dependent on their individual conditions. Results exhibited a superior examination of seizure and non-seizure sets of EEG accounts utilizing an oversimplified procedure.

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## NOTCH BAND MONOPOLE ANTENNA WITH DEFECTED GROUND STRUCTURE

#### Paper ID - 68

A paper presented by:Raghava Yathiraju, P Pardhasaradhi, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A Novel round monopole radio wire with surrendered ground structure is proposed to score 2.6-3 GHz band of versatile broadband administrations. An even half circle molded strip is fused in the roundabout fix component and a triangular opening is set in the absconded ground structure of the proposed model. Half circle molded radio wire with indent band qualities is structured, recreated in ANSYS HFSS 3D EM full-wave reenactment programming and portrayed as far as the arrival misfortune, VSWR, impedance transfer speed, far-field radiation examples and increase. The structure models are upgraded and prototyped on FR4 substrate for estimation approval.

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#### CPW MONOPOLE ANTENNA WITH DUAL BAND CHARACTERISTICS

#### Paper ID - 69

A paper presented by:Jayalakshmi S., Khan H., Madhav B.T.P. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A coplanar waveguide (CPW) sustained monopole receiving wire is planned and it is examined by a  $\pi$ -modelled space and a Jerusalem cross structure for L band, 2.4-2.484 GHz, 5.15-5.35 GHz, and 5.725-5.825 GHz Wireless LAN band and 5.25-5.85 GHz WiMAX correspondence applications. By changing the states of the openings on the fix, two unique structures are assessed and near outcomes, for example, reflection coefficient, VSWR, increase and radiation design are investigated. Parametric examination is done to watch the varieties in working groups and Band width of the radio wire. Radiation effectiveness chart mirrors the productivity of structured recieving wire as for a specific recurrence. The proposed radio wires give great radiation design which makes it appropriate for multi band remote correspondence frameworks.

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#### DEVELOPMENT OF PHASED ARRAY ANTENNA FOR C-BAND APPLICATIONS

#### Paper ID - 70

A paper presented by:Tej D.R., Sri Kavya K.Ch., Kotamraju S.K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Staged clusters are steady reception apparatuses and whose direct is appropriate for the development of various structure which befit us to get translated and similarly incredible plans while the most punctual development yet extensively sensible. This methodology gives efficient, with a decrease of thickness and little report reception apparatus which has the limit of protecting raised accomplishment in an enormous recurrence range. A structure put design of staged exhibit reception apparatus is set up using "Ansoft-High Frequency Structure Simulator" recurrence scope. Subtleties of recreated results are exhibited and talked about. Quarter wave transformer and power divider are utilized to encourage the components. Upgrade in increase, directivity and better return misfortune execution are gotten upon the use of RT-Droids substrate since Low dielectric steady substrates are typically perfect for higher radiation. The staged exhibits are planned to perform at a recurrence of 7 GHz. Through this plan we get high gain with improved directivity and insignificant lacks, which is especially relevant for C band usage like long separation radio correspondences, medicinal, and different remote applications

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## COMPUTATION OF ATTENUATION DUE TO RAIN FOR KU BAND FREQUENCIES

#### Paper ID - 71

A paper presented by:Immadi G., Venkata Narayana M., Kotamraju S.K., Sarvani T.S.S.P., Manasa T

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### **Abstract:**

Nowadays we are watching an ascent in phantom blockage for the most part because of expanded use of remote advancements. This lead to possess higher band frequencies for effective correspondence. As a major aspect of this, recieving wires working at Giga Hertz frequencies are being planned and actualized for satellite correspondences. Be that as it may, the microwave signals are encountering loss of sign quality when meddled with different layers of the environment, precipitation, mists and so forth. Here the significant impedance is because of downpour thus a model which can evaluate signal constriction must be created. This can be measured utilizing customary strategies like physical displaying and exact demonstrating utilizing relapse procedure for a considerable length of time of information. This ascents unpredictability in the count of lessening brought about by downpour. Taking care of such enormous information is very troublesome and it is likewise a tedious procedure. Downpour drop appropriation supplanted this difficult work with disentangled investigation for a particular district. Initial, an appropriate dispersion model is chosen for the locale and constriction is determined utilizing Mie dissipating for all round downpour drops, considering a significant piece of it is because of its size. This is trailed by condition displaying utilizing MATLAB. This trial is led at KL University found 16.440 East and 80.600 North.

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## ANALYSIS OF PROPAGATION PARAMETERS FOR FADE MITIGATION

#### Paper ID - 72

A paper presented by:Kavya K.C.S., Kotamraju S.K., Charan B.S.S.S.D., Phanindra K., Srinivas B., Narendra Kumar N.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Signal constriction is the significant purpose behind the loss of sign in certain areas. There are numerous air factors that reason debasement of the sign. In summer the lessening is for the most part because of glitters in troposphere. Haze is the significant explanation behind the constriction in the winter season. Where as in rainstorm it is because of rain and cloud. The profundity of this constriction absolutely relies upon the recurrence of the sign. On the off chance that the sign recurrence is more prominent than 10GHz, debasement of the sign is more. This work manages the constriction of the sign because of downpour. This investigation is helpful to actualize the reasonable blur moderation method. Blur relief systems are valuable in getting the sign with no misfortune. In any case, appropriateness of the blur relief method fluctuates from locale to district. The investigation is accomplished for the Beacon information got at K L University, Vaddeswaram found 29.08m above ocean level with Latitude - 16.46' N and Longitude – 80.54' E.

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## HIGH CORRECT AND POWER EFFICIENT ECG-BASED PROCESSOR FOR PREDICTING VENTRICULAR ARRHYTHMIA

## Paper ID - 73

A paper presented by:Siri Vennela G., Hari Kishore K., Raghuveera E. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Plan of a very incorporate and excessive exact electrocardiogram (ECG) for expectation of ventricular arrhythmia making use of an association of unmistakable ECG capabilities. The versatile procedures for the discovery and the depiction of the P-QRS-T waves have been researched to dispose of the fiducial focuses. Various databases of the heart flag chronicle from the physioNet applied as an approval set to evaluate the execution of the processor. The reenactment comes about finished in light of use indicated coordinated circuit (ASIC). The trendy characterization precision became found to be 87% at the out-of-take a look at approval facts. The design of the proposed ESP changed into carried out utilizing CMOS Technology. It merits pronouncing that the proposed ESP is the radical ASIC usage of an ECG-based totally processor that is utilized for the forecast of ventricular arrhythmia.

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## MITIGATION OF IONOSPHERIC SCINTILLATION EFFECTS USING MULTIFRACTAL DETRENDING FLUCTUATION ANALYSIS

## Paper ID - 74

A paper presented by:Ravi Kumar M., Sridhar M., Puneet C., Navya Sri S., Rahul C.H., Venkateswarlu I.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Global Navigation Satellite System (GNSS) employs signal processing strategies, together with spread spectrum techniques, to collect and song satellite signals. Considering their more than one programs in diverse crucial sectors, it's far important to preserve the accuracy and integrity of GNSS structures. Ionospheric scintillations taking place because of small-scale non-uniform electron density structures gift inside the ionospheric layer cause signal fading and section delays that reduce the efficiency of the receiver. In this paper, a new set of rules turned into implemented to lessen scintillations, with the aid of combining the features of complementary ensemble empirical mode decomposition (CEEMD) with Multifractal detrending fluctuation evaluation (MF-DFA). The ionospheric Total Electron Content (TEC) and scintillation records recorded at Koneru Lakshmaiah (K L) University, Guntur in the course of the year 2013 were investigated. It is determined from the results that the mitigation performance of CEEMD – MF-DFA is more desirable than wavelets and detrending fluctuation (DFA) techniques.

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## DESIGN AND SIMULATION OF LOW ACTUATION VOLTAGE RF MEMS SHUNT CAPACITIVE SWITCH WITH SERPENTINE FLEXURES & RECTANGULAR PERFORATIONS

#### Paper ID - 75

A paper presented by:Jayavardhani K., Noureen Fathima S.K., Bhima Sankar K., Kavya Sri K., Sunithamani S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

This paper affords the design and simulation of RF MEMS shunt capacitive switch with low actuation voltage, low insertion loss and excessive isolation. Actuation voltage relies upon at the parameters like air hole, spring consistent and actuation vicinity. In this design, we have proposed a serpentine meander shape to reduce the spring constant of the beam for this reason reducing actuation voltage. The rectangular perforation is used to reduce the squeeze film damping via reducing the mass of the switch. The proposed switch has attained a low actuation voltage of 4.5V for a displacement of zero.84µm. The air gap among the beam and the dielectric is 1µm. This radio frequency (RF) MEMS shunt switch is designed and simulated the usage of COMSOL Multiphysics five.2. The RF performance of the shunt switch is analysed in Ansoft HFSS 13 and the consequences show that the return loss became approximately -thirteen.50 dB at 20GHz in the OFF nation and -eight.5 dB at 18 GHz in the ON country. An excessive isolation of -36.00 dB became performed in the OFF country at a frequency of 5GHz and a low insertion loss is received. The effects display that the switch is appropriate for wireless programs working inside the frequency variety from 5 to 20GHz.

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#### STUDY AND EVALUATION OF NOVEL RF MEMS SWITCHED CAPACITOR

Paper ID - 76

A paper presented by:Vikas K., Sunithamani S., Yagnika M., Siva Krishna S., Avanthi S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In this paper we've got designed and analyzed shunt capacitive fixed-constant RF MEMS switch to preserve low actuation voltage. The pull -in voltage of the proposed transfer is 7.7V for two um air gaps. The electromagnetic analysis for the designed structure is, go back loss is -23dB in the variety of one-forty GHz, insertion loss is -zero.04dB at a frequency variety of one-forty GHz and isolation is - 38.5dB received at a frequency of 23.Five GHz. Mechanical evaluation for the designed shape is also executed the usage of FEM tool.

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## DESIGN TECHNIQUE FOR WIDEBAND FM RECEIVER THE USAGE OF RTL-SDR AND RASPBERRY PI

## Paper ID - 77

A paper presented by:Satya Narayana P., Syam Kumar M.N.V.S., Keerthi Kishan A., Suraj K.V.R.K.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Software described radio replaced majority of hardware modules like mixers, filters, modulators and demodulators etc., with Software blocks inside the subject of radio electronics and conversation. In this a few or all the functionalities are Configurable the use of this software carried out on technology like FPGAs, DSPs and many others. Owing to loss of ease in enforcing and reconfiguring huge hardware modules, we pass directly to implement an adaptable communication system with the assist of SDR, as it could be without problems configured to paintings with huge range of frequencies. We locate diverse SDR transceiver modules which may be interfaced with digital computer and aided with firmware like GNU radio, SDR shark, and so on., permitting us to assemble blocks with the assist of constructed in additives that decode and method the obtained information and convey required output. In requirement of implementing a fee-effective, compact sized and transportable device, we use a processing unit supplying sufficient computational power to perform sign processing tasks that is Raspberry pi. Here we are going to implement a low value SDR communication machine that seize, technique and visualize the Wide Band Frequency sign.

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

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## NEURAL COMMUNITY PRIMARILY BASED INDOOR LOCALIZATION THE USAGE OF WI-FI OBTAINED SIGN POWER

### Paper ID - 78

A paper presented by: Cheerla S., Venkata Ratnam D., Teja Sri K.S., Sahithi P.S., Sowdamini G.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Indoor localization of receiver is the key detail of development of Location Based Services (LBS) for wi-fi programs in present days. Estimation of accurate region is the key issue. Various positional estimation techniques like Angle of Arrival, Time of Arrival has sure boundaries for localization. Received Signal Strength (RSS) primarily based indoor localization schemes also can be used to estimate the location of receiver. In this paper Neural Network based algorithms like Nonlinear Autoregressive (NAR) and Nonlinear Autoregressive with External Input type (NARX) had been used to estimate the placement of the receiver in Library Block of KLEF, Vaddeswaram, India. From our results it's miles evident that NARX is having higher performance when compared to NAR. The a success location rate for NARX is set 0.35 and the usual deviation of positional blunders is also low. © 2018, Institute of Advanced Scientific Research, Inc. All rights reserved.

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

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## ANALYSIS OF RSS PRIMARILY BASED ROUTE LOSS MODEL FOR COOPERATIVE LOCALIZATION

#### Paper ID - 79

A paper presented by:Cheerla S., Venkata Ratnam D., Saivamsi Y., Kundana P.V., Vaishnavi S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

The position estimation of receiver is one of the primary requirement in wireless verbal exchange networks. The accuracy of Global Positioning System (GPS) is suspected for indoor environment because of extreme attenuation traits of radio indicators. As a end result, the indoor localization schemes gained extra interest. There are unique indoor localization schemes together with Angle of Arrival (AOA), Time of Arrival (TOA), Finger printing and Triangulation. In this paper, the conventional Weighted least rectangular algorithm is used to estimate the unknown cell consumer (client node) based totally on Received Signal Strength (RSS). In this paper, the direction loss exponent is used to decide the distance among the cell person and the anchor node. The errors dimension evaluation is performed for the validation of effects. This algorithm is wide relevant in wi-fi networks for overcoming the inaccuracies in an city surroundings.

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#### **COMPARATIVE ANALYSIS OF HIGH SPEED CARRY SKIP ADDERS**

Paper ID - 80

A paper presented by:Babu C.N., Naga Siva Sai P., Priyanka C., Hari Kishore K., Bindu Bhargavi M., Karthik K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this paper we in comparison a excessive speed deliver skip adders by considering parameters together with area, LUT'S, put off, energy. When compared to standard CSKA and different adders. Here in this venture in first stage CSKA designed by way of the use of multiplexer as pass good judgment so via the use of this velocity receives accelerated via skipping of bring. So here vicinity receives extended with the intention to lessen region any other hybrid variable latency carry skip adder(Brent-kung adder) is designed .Right here electricity utilization additionally receives reduced, pace gets multiplied, however a few delay is produced right here to conquer that we followed a every other approach referred to as Kogge-Stone adder right here so it reduces the critical path put off. In Kogge-stone adder changed into designed to lessen strength consumption that's Sklansky adder which reduces energy Consumption. This is executed in Xilinx ISE 14.7 and power changed into analyzed using Xilinx power analyzer.

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## RSS BASED WI-FI POSITIONING METHOD THE USAGE OF RECURSIVE LEAST SQUARE (RLS) ALGORITHM

## Paper ID - 81

A paper presented by: Cheerla S., Ratnam D.V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Due to rapid increase in call for for services which depends upon exact location of devices results in the improvement of numerous Wi-Fi positioning structures. It could be very difficult to find the accurate role of a device in indoor surroundings due to extensive improvement of systems. There are many algorithms to determine the indoor location however they require high priced software program and hardware. Hence receiving indicators energy (RSS) based totally algorithms are applied to find the self-positioning. In this paper Newton-Raphson, Gauss Newton and Steepest descent algorithms are applied to find the accurate location of Wi-Fi receiver in Koneru Lakshmaiah (K L) University, Guntur, Andhra Pradesh, India. From the effects it's far obtrusive that Newton -Raphson technique is better in offering correct position estimations.

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## DESIGN OF FREQUENCY RECONFIGURABLE ANTENNA WORKING IN KA BAND

#### Paper ID - 82

A paper presented by:Siddhanth Sahu N., Mohith B., Nikhil G., Sri Kavya K.C., Kotamraju S.K.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this examine of reconfigurable antenna era is presented. The critical applications that may be used with the reconfiguring techniques, analyzing the history of this generation in quick literature survey is examined. A specified record on the approach historical past information are specified, reviewing the specific reconfigurable additives, which can be utilized in an antenna to adjust its functionality and production. These reconfigurable antenna strategies are divided with a exceptional type technique and explain whichever mounted on the bodily adjustments of the reconfigurable antenna radiating elements, or on the combination of varactors, photoconductive components, PIN diodes, or at the characteristic of materials and so on. The designed covers the Fixed-Satellite (space-to-Earth), Mobile satellite tv for pc 19.7GHz to twenty.2GHz applications.

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## FAIR ACCESS AND COEXISTENCE ON THE SHARED CHANNEL FOR WIRELESS LTE-U AND WIFI

#### Paper ID - 83

A paper presented by:Varakumari S, Prabu A V, Gopiram K, Venkatesan S Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

LAA is the third Era Organization Project/'s (3GPP) exertion to manage activity of LTE in the Wi-Fi groups. It uses a convention known as listen-before-to-talk (LBT), mandatory in some European countries, to harmonize with other Wi-Fi gadgets in a comparative band. LTE (Long Term Evolution) development goes up against fast data organizations and a creating number of mobile phones outfitted with Wi-Fi get to limit. To address this difficulty, the third Era Association Undertaking (3GPP) began a concentrate thing (SI) assessing LTE advances of combination in a comparative band without a 5 GHz license. Since Wi-Fi and LTE are formed initially to work in absolutely one of a kind, unlicensed and approved gatherings, it is difficult to achieve this simultaneousness for these two opposite get to developments. Thus, 3GPP presents the Tune in before Talk (LBT) part to ensure the plausibility of the combination of both get to propels in that band. This IS contains LBT based Assisted Access License (LAA) remembering equipment for perspective on load-based gear (LBE) and Frame Based Equipment (FBE) that can be intended to battle with the Wi-Fi based contact instrument to a sensible access on the mutual channel. In this paper, figure the exhibition of two recently proposed 3GPP medium access control (MAC) and Wi-Fi-based instruments under half breed situation with dissimilar parameter setups. The assessment is helped out through reproductions and the considered presentation parameters are fairness index (FI) and access openings acquired after multi-rivalries on the mutual channel.

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# A BEAM STEERING RECONFIGURABLE LINEAR PHASED ARRAY ANTENNA FOR SATELLITE COMMUNICATION AND KA BAND COMMUNICATION USING GRAPHING TECHNIQUE

#### Paper ID - 84

A paper presented by:Kalyan, S., Sri Kavya, K., Kotamraju, S.K Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this work, at first a straight staged cluster reception apparatus working at 11.7GHz is planned and introduced. The transmitting components of the planned recieving wire associated with Stick diodes to accomplish reconfigurability as far as recurrence. The planned reception apparatus can reconfigure to 2.4/5.3 GHz frequencies utilizing diagramming technique and can serve remote applications. Return misfortune, gain attributes and shaft controlling execution of the reception apparatus is examined at the thunderous frequencies everything being equal. Various topologies accomplished various outcomes and the decision of topology relies upon the client's application. The proposed radio wire is structured utilizing HFSS programming. The planned straight exhibit can guide its principle pillar roughly 80 on either side of 00, with variety in periods of the feeds headed to the reception apparatus transmitting components.

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# A NEW TECHNIQUE FOR POINTING ACCURACY OF CASSEGRAIN ANTENNA IN SATELLITE NETWORKING APPLICATIONS

#### Paper ID - 85

A paper presented by:Devika, S.V Karki, K., Kotamraju, S.K., Sri Kavya, K.C., Rahman, M.Z.U.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

The measure of pointing blunder (beam squint) assumes a definitive job in keeping up high information connect for satellite correspondence. Receiving wire pointing blunders cause a lessening in pick up just as an expansion in obstruction to neighbouring satellites. Because of the confined shaft width in high increase receiving wires, exact pointing is required. In this paper, the pointing blunder for 1.5m Cassegrain receiving wire (ground station antenna) is determined concerning its basic relocations (for the most part Feed Dislodging and Auxiliary Reflector Interpretation). Likewise, the effect of these basic avoidances on receiving wire parameters, for example, top addition, stage mistake, and sidelobe level is assessed. The outcome shows that directing mistake may ascend toward 1.6 degrees for one inch dislodging of structures. At last, 75% of addition misfortune is remunerated by utilizing mobile feed and Sub reflector.

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## TIME SERIES CALCULATION OVER SOUTH INDIAN REGION FOR OPTIMIZING THE PERFORMANCE

#### Paper ID - 86

A paper presented by: John Philip, B., Kotamraju, S.K., Sri Kavya, K.C., Madhumitha, R., Pavan Kumar, A.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Downpour weakening is the predominant factor in earth space interfaces over 10 GHz. Constriction time arrangement is energetic in testing and utilizing the Adaptive Fade Mitigation Techniques (AFMT) in earthspace joins. As the exploratory information of lessening time arrangement was not bounteously accessible for each area, time arrangement generator models are created dependent on the climatological parameters and the elements of the downpour. These models are approved and all around utilized in mild districts. In this paper, Improved Maseng Bakken model and Van de Kamp two example model are recreated for tropical district and are approved, particularly for south Indian locale. The weakening time arrangement produced by the Upgraded Maseng Bakken model and Van de Kamp two example model are contrasted and the deliberate reference point information got from GSAT-10 satellite at KL College, Green Fields, Vaddeswaram situated at 16.44° N, 80.62° E. also, found that the lessening time arrangement produced from Improved Maseng Bakken Model and Van de Kamp Two Example Model intently concurs with the trial information for constriction level under 3dB and differ at weakening level more noteworthy than 3dB. In this way, the models are helpful to create lessening time arrangement in the tropical district, for low constriction occasions.

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## CLOSE COMPLEX HYBRID OPTIMAL DETECTOR FOR SPATIAL MODE OF MODULATION

#### Paper ID - 87

A paper presented by:Rajani Kumari, P., Chenna Kesava Reddy, K., Ramesh, K.S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In our past work most extreme throughput in multi stream MIMO is broke down by defeating the bury recieving wire impedance. To moderate the Bury recieving wire impedance spatial regulation can be utilized. Spatial Modulation (SM) supported MIMO frameworks are the developing MIMO frameworks which are low mind boggling and vitality effective. These frameworks also utilize spatial measurements for transmitting data. In this paper a low mind boggling detector dependent on coordinated channel is proposed for spatial tweak to accomplish close to most extreme probability execution while maintaining a strategic distance from comprehensive ML search since MF based detector shows a significant diminished multifaceted nature since initiated transmitting reception apparatus and regulated adequacy stage adjustment group of stars are evaluated independently. Reproduction results show the exhibition of the proposed technique with ideal ML detector, MRC and ordinary coordinated channel strategies.

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## PHASED ARRAYS BEAM POINTING ACCURACY FOR SATELLITE COMMUNICATIONS

#### Paper ID - 88

A paper presented by:Kavya, K.C.S., Kotamraju, S.K., Naveen Kumar, B., Mounika, M.D.N.S., Singh, S., Sidda, A.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Staged exhibits are used as a piece of both radar and correspondence systems. These staged clusters are commonly utilized in many applications since they can cover long separation. Staged exhibit generally implies an electronically glance through clusters. Even more starting late, staged exhibits are finding use in correspondence structures such in satellites, and for ground-based SATCOM. A staged exhibit is a framework that utilizations huge number of individual receiving wire segments each with stage control. The straight plan of segments is considered for the exhibit. The stage control allows the example of recieving wire radiation guide to be separated electronically to follow targets or to keep up exchanges to continue interface. The ability to outline distinctive simultaneous shafts suggests that the radar can simultaneously follow different targets. The shaft pointing mistake lies on various factors for example in the event that we are attempting to call attention to the bar specifically heading there might be an extremely little variety in the bar, and this causes the bar pointing blunder. The pointing blunder depends on after using shifters i.e., mechanized or simple, examining edge, bits used for stage moving and scattering between the segments. Here we are attempting to diminish the directing mistake all together toward steer the bar to the ideal edge. The pointing blunder diminishes with increment in number of segments, increment in number of bits utilized for creating stage states and increment in dividing.

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## RADIATION CHARACTERISTICS CALCULATION BY USING WAVEGUIDE SLOT ARRAY FOR SATELLITE TRACKING RADAR SYSTEM

### Paper ID - 89

A paper presented by:Prasad, G.R.K., Babu, P.S.S., Khan, H., Niak, K.K Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this paper, the examination of limited mass of standard X-band coplanar waveguide space clusters has been completed. Little slanted spaces from broadside can't be obliged for their full length, as the thin divider measurement is littler than  $\lambda$  g/2. In any case, the various openings of varieties of essentially potential lengths are considered and got the whole and distinction designs. The information is introduced in the aftereffects of waveguide opening exhibits for satellite following radar frameworks.

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# A NOVEL TECHNIQUE TO ACHIEVE HIGH PERFORMANCE BY INTEGRATING THE RECONFIGURABLE DEVICES WITH THE HELP OF SLOW CHANGING KEY TECHNIQUE

Paper ID - 90

A paper presented by:Murali A., Hari Kishore K., Rama Krishna C.P., Kumar S., Trinadha Rao A. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

## Abstract:

Systems administration and correspondence frameworks are intended to perform information tasks to acquire information uprightness in verified states. Thus, Square Figure and Hash Capacity assume a significant job in giving the information respectability and security. Authenticated Encryption (AE) is a strategy that performs both encryption and validation with single calculation and Helps accomplishing fast execution objective in FPGAS. For security purposes, AES-GCM circuits are used in huge numbers of the applications. Key-blended system is portrayed with VPNs(Virtual Private Networks).

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## A NOVEL TECHNIQUE FOR DETECTION AND FILTERING OF REGION WISE RANDOM VALUED IMPULSE NOISE

### Paper ID - 91

A paper presented by:Suresh Kumar N., Pavan Kumar K.V.K.V.L., Preetham Reddy C.S., Tirumalasetty V.R., Suman M.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Finding an random valued impulse noisy (RVIN) pixels in a picture dependent on nearby areas and a nonlinear kind weighted middle based channel is exhibited in this paper. As RVIN is totally not quite the same as the regular impulse noise (IN) or basically simply salt and pepper noise (SPN), subsequently the traditional clamor recognition and separating systems fall flat. The proposed new technique depends on the location of a few areas (based on similarity) in the undermined picture there subsequent to recognizing the commotion in those districts independently so as to protect the edge subtleties. Deviation between the dark levels is utilized to distinguish the uproarious pixel. Upon the identification of the loud pixel a novel weighted middle channel dependent on the difference is applied on it. Abstract and target examination is done on barely any standard test pictures for confirmation of the proposed techniques. The reenactment results show the proposed clamor location and sifting plans performs well.

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# SIMULATION AND DESIGN OF MEMS BASED SENSOR FOR FAST DETECTION OF PD

## Paper ID - 92

A paper presented by:Prasad G.R.K., Srinivas Babu P.S., Siddaiah N., Srinivasa Rao K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper, we have proposed a novel structure in Smaller scale Level to identify Parkinson\'s Malady at beginning period. We have planned the proposed structure utilizing FEM device i.e Comsol Multi-Material science by using capacitive activation procedure. The Recreations are done on capacitive based miniaturized scale structure by changing the evidence mass of the material. It is seen that PTFE material of the evidence mass with silicon legs by giving explicit measurements are demonstrating best enhanced outcomes. This outcomes shows high affectability, high unwavering quality and cost adequacy of the proposed PD Sensor

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## A COMPUTERIZED HARM APPRAISAL FILE TO EVALUATE HARM FOR CALAMITY THE EXECUTIVES UTILIZING SATELLITE PICTURES

## Paper ID - 93

A paper presented by:Siva D., Sunithamani S., Bojja P. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Catastrophic event negatively affects the social and physical framework of a nation or locale. Utilization of logical apparatuses in reacting to debacles normal or generally has consistently been the support of calamity reaction. Satellite imaging and investigation is at the bleeding edge of that innovation which can convey front line data and ongoing mapping to help in salvage, alleviation and restoration. Evaluating the harm caused during a catastrophe can help in having an all encompassing perspective about the harm depicted by a specific picture. To help in this evaluation, the creators have planned a Damage Assessment Index (DAI). The proposed file is approved by contrasting the outcomes and that of concentrates that are accessible in the writing.

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# PLAN AND EXECUTION EXAMINATION OF A NON-VOLATILE MEMORY CELL

## Paper ID - 94

A paper presented by:Vasudha M., Pravallika B.S., Kiran C.S., Subhani P., Rakesh Chowdary G., Prakash M.D., Kishore K.H., Ramakrishna T.V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper is utilized to comprehend the plan and structure of a non-volatile memory cell. Charge infusion was improved by decreasing the compelling oxide thickness of the entryway dielectric. Metal/Al2O3/SiN/SiO2/Si structure was intended to decide the charge catching properties. High programming and eradicating speed just as huge move of the edge voltage with high perseverance were acquired by downsized measurements.

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## ECG SIGNAL PROCUREMENT AND EXAMINATION FOR VERSATILE HEART MONITORING INSTRUMENTS

### Paper ID - 95

A paper presented by:Prasad K.V., Prasad G.R.K., Kranthiveer D., Sowmya D., Nikesh M., Sailesh T.V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Atrial Fibrillation (AF) is a genuine heart issue which may bring about death toll, if appropriate move or care isn't made in time. Right now accessible heart checking gadgets will detect the electrical action of our heart by utilizing different arrangements of cathodes set at different areas on our body, yet they all have one basic inconvenience, those tests should have been associated with a PC or to whatever other gadget that demonstrations like an oscilloscope for further translation by the cardiologist. The proposed adaptation of convenient heart observing gadgets is furnished with brilliant calculation and with profoundly sharpened sensors. This gadget goes about as some assistance for both injured individual and cardiologist in observing the working of heart, being convenient in size this gadget slashes the ideal opportunity for taking ECG readings and produces a digitalized yield which is anything but difficult to dissect. The proposed model has been executed utilizing deft strategy in order to redress the mistakes that happen at different stages and to deliver a high precession gadget that screens the working of heart successfully. The Same proposed configuration is mimicked utilizing FEM apparatus COMSOL Multiphysics and the outcomes are corelated with the gotten outcomes from calculation. The dislodging affectability acquired from reproduction is 9.7. The standard R-R time interim saw to be 0.6-1.2 seconds.

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## FPGA EXECUTION OF DES CALCULATION UTILIZING DNA CRYPTOGRAPHY

Paper ID - 96

A paper presented by:Murali Krishna B., Khan H., Madhumati G.L., Praveen Kumar K., Tejaswini G., Srikanth M., Ravali P.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

DNA Cryptography is the developing cryptanalytic innovation in the field of data security. Utilizing this Cryptanalytic innovation which includes in DNA Cryptography improves the security level to shield data from assailants. Anyway every one of those techniques which are proposed before stayed hypothetical ideas for improving security. Moreover, Traditional Cryptographic techniques have a few bad marks, for example, size of the info, computational speed and cost. To defeat these issues this proposed paper depicts in insight regarding the headways that are made in the DES Algorithm (Data Encryption Standard) utilizing DNA cryptography. Also, this paper represents about the DES calculation's encryption and unscrambling process which pursues symmetric key framework pursued by DNA cryptography. Out of two organizes in the proposed system, in first arrange the Cipher is created utilizing ordinary DES calculation, the key that is utilized to deliver figure is produced by utilizing incomplete reconfiguration and later the key is likewise scrambled utilizing sham key. In second stage this scrambled key and figure is exposed to DNA processing pursued by the protein structure i.e., the figure is appeared as proteins which is unbreakable. This cryptographic procedure is structured and reproduced utilizing Xilinx ISE and focused on Zed board. The investigation of the outcomes underwrite that the proposed calculation is safe from assaults, solid and hearty for transmission of data.

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## DESIGN OPTIMIZATION OF REVERSIBLE EQUALITY SAVING NEW FULL VIPER/FULL SUBTRACTOR

## Paper ID - 97

A paper presented by:Kumar P.K., Rao P.P., Kakarla H.K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The broadly utilizing CMOS innovation actualizing with irreversible rationale will hit a scaling limit past 2020 and the significant restricting element is expanded power dispersal. The irreversible rationale is supplanted by reversible rationale to diminish the power scattering. The gadgets executed with reversible rationale entryways will have interest for the up and coming future processing innovations as they expends less power. Reversible rationale has applications in Low Power VLSI, Quantum Computing, Nanotechnology and Optical registering. This paper proposes the structure of an ideal flaw tolerant Full snake/Full subtractor. For this rationale circuit input equality and yield equality is same henceforth it is called equality safeguarding circuit. The proposed strategy requires less multifaceted nature, less equipment, least number of doors, least number of trash sources of info and least number of consistent contributions than existing techniques.

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# FPGA EXECUTION OF CRYPTOGRAPHIC FRAMEWORKS FOR SYMMETRIC ENCRYPTION

### Paper ID - 98

A paper presented by:Noorbasha F., Manasa M., Gouthami R.T., Sruthi S., Priya D.H., Prashanth N., Rahman M.Z.U. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this proposed work, actualized a cryptographic framework for symmetric encryption and hamming code for blunder location and remedy. Symmetric key is utilizing same copy information for example key information for both encryption and decoding. In this encryption and unscrambling process hamming code which is utilized to check the one piece mistake assuming any. Scrambling a message should be possible by providing a message alongside the key while the procedure of unscrambling should be possible by passing the key alongside the resultant yield so as to get the first message. For this procedure AES calculation was embraced. The first 8-piece information is 1's supplemented and it will be swapped dependent on the select lines and swapped information is XOR'ed with the first information at long last the scrambled information and encoded information i.e.16-bit information. To get unique message information the Swapped information is XOR'ed with the scrambled information which is decoded information.

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## STRUCTURE DESIGN OF BANDGAP REFERENCE CIRCUITS

## Paper ID - 99

A paper presented by:Narasimhanayak V., Lokesh V., Chaitanya V., Feroz M., Soundarya D., Sai Krishna V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this instructional exercise, the plans of different band-hole references, with an accentuation on specialized issues that caused genuine issues. Useful arrangements are appeared for issues, and a strategy is appeared for taking care of issues. Specific consideration is given to format issues, fire up circuit issues, motions, DC yield voltage blunders, tempco mistakes, and PC demonstrating issues.

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## DESIGN AND INVESTIGATION OF T-MOLDED MENDOR STRUCTURE FOR CPW MEMS SWITCHES

## Paper ID - 100

A paper presented by:Tulasi S.K., Prasad G.R.K.,Siva Kumar M., Bharath Kumar Reddy A.,Giridhar Y., Ajay Reddy C.V., Supriya P. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper a novel plan of band stop channel with tunable transmission capacity and tunable resounding recurrence is proposed Using Comsol Multiphysics and HFSS. Band stop channel depends on Defected Ground Structure. By utilizing fine and coarse tuning strategies, reasonableness of thunderous recurrence is accomplished, by activation of MEMS shunt switches the transfer speed of channel is tuned. To build data transmission, the electrical length between the DGS structure should increment. To increment thunderous recurrence of the channel the switches will be progressively impelled. Contingent upon the imperfection structure DGS structures give dismissal of certain recurrence band. Building up a MEMS transmission line MEMS shunt switches will incite in the DMTL results a moderate wave impact. The impact of the DGS is lesser, when the stature of switch shaft is little which brings about lesser addition misfortune.

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## RF MEMS BASED TUNABLE CPW BAND PASS CHANNEL INCORPORATING INTERMITTENT ROUND SPACE CELLS

## Paper ID - 101

A paper presented by:Ganesh G.V., Srinivasa Rao K., Pavansai Prasad N., Goutham Krishna K., Sravani T., Hemeema K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

#### Abstract:

The paper exhibits the plan, reenactment and investigation of a Bandpass channel dependent on the occasional roundabout openings and switches on the either sides of configuration utilized for tuning. The principle favourable position of utilizing CPW innovation is, it very well may be reached out to work at amazingly high recurrence (100 GHz or more) and great circuit disengagement (in excess of 60 dB) can likewise be accomplished. The fundamental goal of this methodology is to accomplish a bandpass channel which can without much of a stretch incorporate with microwave planar circuits to have a high recurrence band and a wide data transfer capacity. The proposed plan of the gadget is for all intents and purposes actualized utilizing coplanar waveguide structure by putting RF MEMS connect turns on either side of the structure. The bandpass channel is of ease and the planned bandpass channel has a region of 31\*53  $\mu$ m2 what's more, data transmission of 15GHz. The structure can be worked inside the recurrence scope of 20-40 GHz and can be changed from K band of recurrence to Ka band of recurrence through tuning with the assistance of switches. It performs with a draw in voltage of 29.132V and exchanging time of 0.230  $\mu$ S.

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## IMPROVED DISPATCH OFF-CATCH TESTING UTILIZING BIST PLAN

Paper ID - 102

A paper presented by:Bharadwaj M., Kishore H.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Presently days, chip structuring has become increasingly intricate and afterward the transistor size had been diminished to nanometre level. The planning of the chip is taking such a long time and to test, it would take a lot more years. In this way, so as to diminish the testing time circuit is made to test itself making it conceivable to individual test which is worked inside the chip. Worked in individual test is structure which can test itself and lessen the testing time. In any case, there are a lot more challenges in proceeding with the procedures. One among is the progress flaw. Here, we present a thought to beat the change issue in the bist by utilizing the flaw age of the progress design strategies. They are LOC (Launch OffCapture) and LOS (dispatch offshift) techniques. And furthermore, we are executing the improved dispatch off capture strategy in the bist. Work is finished by the Xilinx 14.5 Version.

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## STOCHASTIC KEY AGE SYSTEM IN CRYPTOGRAPHY APPLICATIONS THROUGH HALFWAY RECONFIGURATION

## Paper ID - 103

A paper presented by:Murali Krishna B., Madhumati G.L., Khan H. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Advancement of savvy electronic gadgets, which incorporates with ongoing patterns in remote correspondence, motivates people to utilize brilliant gadgets as a piece of their everyday life. Cryptography sets up a protected channel for information correspondence among sender and beneficiary among keen gadgets. In the present situation data security has turned into a dominating issue. Cryptography is process which encodes the message with a few changes alongside key produces figure and decodes the first message by performing reverse activity on figure. It utilizes stochastic key age instruments to upgrade the security. This paper displays a halfway reconfigurable key age components appropriate in cryptography applications which assumes an essential job in information security. A few key age strategies like proposed Runtime Polynomial Change through multiplexer, Jitter based arbitrary number, Fibonacci LFSR.., are multiplexed in runtime and in part reconfigurable with, particular key size to create various pseudo irregular numbers. Except if programmer secure the abilities about unwind figure and a system for key unscrambling it is troublesome recover the first message. Breaking probability is less because of pseudo arbitrary key age instrument in DNA structure reasonable for DNA Cryptography applications. DNA structure has four nucleotides which are named as An (Adenine), C (Cytosine), G (Guanine) and T (Thymine) are the components existing in DNA structure. Because of its evolvable nature, FPGA's are appropriate for wide assortment of uses which can arrange in runtime to execute hand crafts and needs. Arbitrary number age procedures are planned utilizing Verilog HDL, incorporated in Xilinx mimicked with ISIM test system and Implemented on Zync FPGA engineering.

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## VERILOG EXECUTION ON CRYPTOGRAPHY ENCRYPTION AND DECODING OF 8 PIECE INFORMATION UTILIZING ECC CALCULATION

## Paper ID - 104

A paper presented by:Prasad G.R.K., Vivek T., Phani Rohith B., Yashwanth Y. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Information is to be put away and traded among sender and beneficiary without association of outsiders. For this situation, security assumes a urgent job in transmission and gathering of information. Security is about insurance of information by averting unapproved access to frameworks sites and databases. Headways are occurring day by day to take care of security related issues and issues. To give high security to clients the idea of cryptography develops. Cryptography is utilized for encryption and unscrambling of information to convey secretly. This approach guarantees that no unapproved individual approaches encoded information over the vehicle of transmission. The procedure of encryption and decoding is performed at the transmitter and beneficiary sides of the two closures so data remains totally wanted during the transmission. Through Cryptography and its systems, we guarantee protection, privacy and honesty of information that is traded among sender and beneficiary. We performed Cryptography and its techniques(Encryption and Decryption) by composing Verilog code.

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## EXECUTION EXAMINATION OF THROUGH SILICON BY MEANS OF'S (TSV'S)

## Paper ID - 105

A paper presented by: Tulasi S.K., Siva Kumar M., Amruthalakshmi P., Akhila M., Teja M., Mohan Shankar G.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

At present, the 3-D IC reconciliation uses Through Silicon Vias (TSV's) and it expanded gigantic vitality. The structure of the TSV made out of Cu, disengaging liner and the silicon substrate. The segregating liner is incorporated sign TSV to avoid signal spillage from TSV to the silicon substrate. In the traditional TSV structures, Sio2 is used as a segregating liner because of its material similarity with the silicon substrate. To difference to that few analysts had revealed the issues of Sio2. Because of the high dielectric consistent to such a degree, that it realizes expanding of postponement. In this way, Sio2 isn't suitable for tip top applications. In this paper, we used polymer liner as segregating liner instead of Sio2. We reenacted the presentation investigation for both regular and proposed TSV structures by shifting range and tallness of TSV. The proposed TSV structure reproduction shows better outcomes contrasted with regular TSV structure.

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## A MINIATURIZED SCALE LEVEL ELECTROSTATICALLY INCITED CANTILEVER AND METAL CONTACT BASED ARRANGEMENT RF MEMS SWITCH FOR MULTI-BAND APPLICATIONS

### Paper ID - 106

A paper presented by:Lakshmi Narayana T., Girija Sravani K., Srinivasa Rao K. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper, a miniaturized scale level electrostatically activated cantilever and metal contact-based arrangement RF MEMS Switch is structured and broke down utilizing Finite Element Method Tool. The structured switch is recreated, and the presentation is confirmed over the recurrence run 0.8–20 GHz. In examination, it is seen that the presentation of the RF MEMS Switch is chosen by the activation voltage, inclusion misfortunes, confinement misfortunes and dependability. The switch planned in this paper accomplished a steady inclusion misfortune of -0.08 to -0.14 dB, disengagement misfortunes of -58 to -20 dB. This work additionally focused on the cantilever activation voltage, and it is diminished to 3.55 V by utilizing less weight polymer material like Poly Tetra Fluoro Ethylene (PTFE). The arrangement metal contact based electrostatically determined exchanging is made in Microstrip Transmission line utilizing cantilever structure related with gold contact material. The structured RF MEMS switch is best in the plan and usage of reconfigurable specialized gadgets like microstrip based recieving wires and RF channels.

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## SIMILAR EXAMINATION OF CORDIC CALCULATION AND TAYLOR ARRANGEMENT DEVELOPMENT

## Paper ID - 107

A paper presented by:Manasa M., Noorbasha F., Sudheshna C.L., Santhosh M., Naresh V., Rahman M.Z.U.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Lately, control utilization and the region proficiency has become a test in structuring Very Large Scale Integrated Circuits (VLSI). CORDIC (Coordinate Rotational Digital Computer) has turned out as its answer in performing trigonometric basic capacities due to the way that utilizations just shifters and adders. In this article, CORDIC possibility is displayed as it discovers its applications in numerous streams like Communication, Digital Signal Processing and Image preparing, edge pivot in hyperbolic, straight and roundabout organize frameworks, Vector change, logical adding machines, Robotics. The inactivity of Taylor arrangement development to register sine/cosine points is likewise talked about. The Xilinx execution of CORDIC is reproduced and the diagram of its applications in current time is introduced. The proposed paper clarifies the exhibition of CORDIC with the disposal of sine hinder in the underlying stages as the sine of the littler points is irrelevant.

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## SIMILAR EXAMINATION OF MEMS CAPACITIVE WEIGHT SENSOR FOR DISCOVERY OF TREMORS IN PARKINSON'S ILLNESS

## Paper ID - 108

A paper presented by:Prasad G.R.K., Siddaiah N., Preeti M., Rao K.S., Bhavitha E., Babu P.S.S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper, we are proposing a novel high touchy, increasingly dependable structure for an accelerometer sensor with silicon material which distinguishes the resting tremor (proceeds with tremor or Pill moving tremor) of a patient experiencing Parkinson's Disease. The fundamental tremor recurrence is from 3Hz to 7Hz. The Proposed structure is reenacted utilizing COMSOL Multi Physics 5.0 CAD instrument and results are contrasted and the diverse molded proof mass with various materials of a moving piece of sensor. The base scope of Eigen recurrence that the proposed structure got 2.3572Hz and the most extreme range is 8.679Hz with a relocations of 1.04 $\mu$ m to 2.74  $\mu$ m. It is apparent that now a days just the clinical based tests are the ordinary tests to distinguish the seriousness of the tremor for Parkinson's Disease according to the UPDRS. In this paper we are proposing the new approach to recognize the resting tremor of Patient which is the underlying indication of the Parkinson's Disease. It is obvious from the outcomes that the Silicon material for verification mass gives the best affectability esteems when contrasted with every one of the materials of polymers. The capacitive incitation method is proposed in this paper to distinguish the yield capacitance and voltage since it gives high affectability and exactness and unwavering quality.

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## PLAN AND MODEL EXAMINATION OF DIFFERENT SHAPE CANTILEVER BASED SENSORS FOR BIOMOLECULES RECOGNITION

### Paper ID - 109

A paper presented by:Siddaiah N., Prasad G.R.K., Asritha K., Hanumanthu P.V., Anvitha N., Chandra Sekhar T.N.V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Small scale electro Mechanical Systems (MEMS) have a wide scope of uses for the most part in natural viewpoints. Micro cantilevers are MEMS gadgets which are utilized for the discovery of various bio molecules and pathogens. This paper exhibits the plan, investigation, and reproduction of MEMS based micro cantilevers of different geometries to examine their affectability. The fundamental point of this paper is to propose a best reasonable geometry among the three geometries taken which will have a superior affectability when contrasted and different geometries proposed. The material which shows most extreme avoidance in both of the three shapes is considered to have the most noteworthy affectability. The logical model of the cantilever bar will be broke down and the procedure of its development will be talked about. The adjustments in the uprooting of a cantilever pillar as for the adjustment in its shape for the equivalent applied included mass per unit zone is signified. The most delicate material is considered as the one which gives greatest avoidance for a most extreme eigenfrequency with load and without load by thinking about every one of the geometries. By watching the recreations and results, we have noticed that, out of the considerable number of materials utilized in the re-enactment, Silicon has the most noteworthy affectability and out of the considerable number of shapes, geometries were taken, single leg roundabout cantilever without load displays the greatest diversion and greatest eigen frequency.

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## PROGRESSIVELY EVOLVABLE EQUIPMENT PROGRAMMING CO-PLAN BASED CRYPTO FRAMEWORK THROUGH INCOMPLETE RECONFIGURATION

### Paper ID - 110

A paper presented by:Murali Krishna B., Madhumati G.L., Khan H. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Cryptography sets up a safe channel for information correspondence among sender and recipient. These days, a huge number of online exchanges occur in seconds all through the world like exchanging, banking, internet business, and long range interpersonal communication and so on., trades information among clients. Advancement in web prompted increment in number of programmers, digital assaults over system, arrange security has become a significant issue in present time information assurance has gotten critical, with the end goal that an unbreakable encryption innovation ought to be structured so as to give security to the information. This paper displays a module in cryptosystem is in part reconfigurable (PR) in run time which fills two needs. One module for dynamic key age instruments and second module for opposite change obstruct in Data Encryption Standard (DES) and move columns hinder in Advanced Encryption Standard (AES) cryptography methods which assume an imperative job in information security. Another methodology with Deoxyribonucleic Acid(DNA)structure have four nucleotides which are named as An (Adenine), C (Cytosine), G (Guanine) and T (Thymine) are the components existing in DNA instrument is applied on both figure and key are consolidated and transmitted along a direct in protein structure which improves the security. Run time evolvable equipment like, Field Programmable Gate Array (FPGA) engineering and its conduct changes progressively with fractional reconfiguration are appropriate for wide assortment of utilizations which can arrange to actualize specially crafts and needs. Encryption Techniques are structured utilizing Verilog HDL, integrated in Xilinx recreated with ISIM test system and actualized on Virtex FPGA engineering. Dynamic keys and reconfigurable modules are produced by stacking

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Partial piece streams from CF Card are designed to FPGA by giving directions in sequential Terminal through Micro Blaze Processor

## STRUCTURE AND MODEL EXAMINATION OF ROUNDABOUT CANTILEVER SENSOR FOR EARLY RECOGNITION OF PARKINSON'S AILMENT

### Paper ID - 111

A paper presented by:Prasad G.R.K., Siddaiah N., Srinivas Babu P.S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Appearance of Micro-electromechanical framework (MEMS) in the most recent decade has been huge and consistently developing. MEMS are an extending and quickly developing innovation with a broad scope of uses. Microcantilevers are MEMS gadgets, utilized for recognition of powers in Micromechanical Sensors. Bio-MEMS assumes essential job in discovery of various parameters identified with Disease. The early location of Parkinson's Disease with MEMS sensors is presently the most recent and exact strategy. The basic tremor or pill moving tremor recurrence for Parkinson's Disease is 3Hz - 8Hz. The vibrations from the finger impels the mobile piece of the proposed structure, which moves the round part. At the free end, the diversion of the rectangular smaller scale cantilever is little when it is applied some power and henceforth the rectangular shape cantilevers have poor affectability. This paper gives the general investigation of a solitary and twofold leg roundabout formed cantilever based mass sensor in micrograms run, which identifies the seriousness of the Parkinson's Disease. The guideline of the paper is to propose a most appropriate geometry of round formed cantilevers which will have a superior affectability of 4% change when contrasted with rectangular cantilever working in static mode. For single cantilever the most extreme pressure is 1  $\times$  106 N/m2, and for twofold cantilever it is 1.23  $\times$  106 N/m2. The potential created for single cantilever is -  $6.91 \times 10$  V to 10volts and for twofold cantilever it is 0 to 10volts. The capacitance estimated for single cantilever is  $1.49 \times 10-32$  and for twofold cantilever is  $8.02 \times 10-37$ .

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## INDIAN CLASSICAL DANCE CATEGORIZATION WITH ADABOOST MULTICLASS CLASSIFIER ON MULTIFEATURED FUSION

## Paper ID - 112

A paper presented by:Kumar K.V.V., Kishore P.V.V., Anil Kumar D. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Extricating and perceiving complex human developments from unconstraint online video grouping is a fascinating errand. In this paper the muddled issue from the class is moved toward utilizing unconstraint video successions having a place with Indian old style move structures. Another division model is created utilizing discrete wavelet change and nearby twofold example (LBP) highlights for division. A 2D point cloud is made from the neighborhood human shape changes in consequent video outlines. The classifier is encouraged with 5 sorts of highlights determined from Zernike minutes, Hu minutes, shape signature, LBP highlights, and Haar highlights. We additionally investigate numerous component combination models with early combination during division organize and late combination after division for improving the characterization procedure. The separated highlights input the Adaboost multiclass classifier with names from the relating melody (tala). We test the classifier on online move recordings and on an Indian traditional move dataset arranged in our lab. The calculations were tried for precision and accuracy in recognizing the move stances

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## ONGOING PROGRESSES IN SUBSURFACE EXAMINATION WITH QUADRATIC RECURRENCE ADJUSTED WARM WAVE IMAGING

## Paper ID - 113

A paper presented by:Subhani S., Suresh B., Babu K.R., Lakshmi K.S., Subbarao G.V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Warm wave imaging utilizes warm reaction over the animated surface for location of peculiarities underneath the outside of the test object which requires the arrangement of different present preparing approaches on extricate fine subsurface subtleties. These subsurface subtleties show up at different minutes relying upon their profundity and size. Extraction of these reasonable subtleties with low hub and worldly goals gave by warm imagers against different clamors is a measure of significance in warm wave imaging. Capacity of non stationary warm wave imaging to investigate the subsurface subtleties inside a solitary experimentation at low powers bringing about picking up the enthusiasm for utilizing it inspired the ongoing exploration to fuse different new handling modalities planned to remove fine subtleties alongside this incitement instrument. This paper features the utilization of different post preparing modalities to remove subsurface subtleties utilizing experimentation extended a glass fiber fortified plastic example with implanted Teflon additions to mimic de-overlay like deformities experienced with composites.

**Keywords:** Glass Fiber Reinforced Plastic (GFRP), Principal Component Analysis (PCA), Thermal Wave Imaging, Chirp

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## TRILL Z CHANGE BASED IMPROVED RECURRENCE GOALS FOR PROFUNDITY RESOLVABLE NON STATIONARY WARM WAVE IMAGING

## Paper ID - 114

A paper presented by:Suresh B., Subhani S., Vijayalakshmi A., Vardhan V.H., Ghali V.S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper proposes a novel post handling methodology to upgrade profundity goals in recurrence adjusted warm wave imaging utilizing tweet Z change. It investigates the phantom zooming highlight of the proposed methodology to improve profundity goals and approves it through the experimentation continued a carbon fiber strengthened plastic and mellow steel examples. Further, deformity recognition ability of the proposed methodology has been contrasted and that of the other contemporary modalities by taking the imperfection sign to commotion proportion into thought

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## MULTI GOALS BASED UPGRADED SUBSURFACE INVESTIGATION IN WARM WAVE DISCOVERY AND RUNNING

## Paper ID - 115

A paper presented by:Ravipati J.L., Vijayalakshmi A., Chandana B., Sai Krishnakanth K., Subhani S.K., Sridhar W., Subbarao G.V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

As of late presented recurrence balanced warm wave imaging (FMTWI) cooks these requirements by giving total profundity output of the article by adjusting the improvement. So as to recover imperfection signature autonomously a novel wavelet change (WT) based post preparing technique has received. it has the capacity to hone the time and recurrence portrayal of a sign by dispensing the recurrence segments at various focuses in the time recurrence plane. it is tentatively approved over carbon fiber strengthened polymer utilizing FMTWI and contrasted and existing customary stage investigation.

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## RURAL THE BOARD THROUGH REMOTE SENSORS AND WEB OF THINGS

### Paper ID - 116

A paper presented by:Navulur S., Sastry A.S.C.S., Giri Prasad M.N. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Agribusiness assumes a noteworthy job in many nations and there is an enoromous requirement for this industry to become "Shrewd". The Industry is currently moving towards horticultural modernization by utilizing present day keen innovations to discover answers for powerful usage of rare assets there by meeting the regularly expanding consumtion needs of worldwide populace. With the coming of Internet of Things and Digital change of provincial territories, these innovations can be utilized to remotely screen soil dampness, crop development and take preventive measures to distinguish crop harms and dangers. Use manmade reasoning based examination to rapidly dissect operational information joined with outsider data, for example, climate administrations, master prompts and so on., to give new bits of knowledge and improved basic leadership there by empowering ranchers to perform "Savvy Agriculture". Remote the board of rural exercises and their mechanization utilizing new advances is the region of center for this examination movement. A sun oriented fueled remote administration and mechanization framework for farming exercises through remote sensors and Internet of Things including, an equipment stage dependent on Raspberry Pi Micro controller arranged to interface with a client gadget and got to through the web organize. The information assortment unit includes a lot of remote sensors for detecting horticultural exercises and gathering information identified with agrarian parameters; the base station unit containing: an information lumberjack; a server; and a product application for handling, gathering, and sending the information to the client gadget. The client gadget ex: portable, tablet and so forth can be associated with a web arrange, whereby an application stage (versatile application) introduced in the client gadget encourages in showing a rundown of remote sensor gathered information utilizing Internet of Things and a lot of intensity catches.

**Keywords:** Agriculture, Android Automation, Internet of things, Micro Controller, Raspberry Pi, Wireless sensors, Remote management

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## MULTIMODAL PICTURE COMBINATION UTILIZING CURVELET AND HEREDITARY CALCULATION

## Paper ID - 117

A paper presented by:Gattim N.K., Rajesh V., Partheepan R., Karunakaran S., Reddy K.N. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Combination of medicinal pictures of various modalities consistently have the focal points in proficient restorative conclusion. Attractive reverberation picture (MRI) and Computed tomography (CT) are twp such modalities which are commonly intertwined. The current combination methods like wavelet change have demonstrated to be great in restorative picture combination. In any case, they have neglected to hold certain quality as for the first. In this paper, one such endeavor is made by consolidating the well known Curvelet change (CTr) with Genetic Algorithm (GA). The presentation of the proposed technique is assessed as far as PSNR and MSE while melding MRI and CT of mind. The outcomes plainly referenced that the Curvelet and the GA-CTr blend have preferred combination qualities over the WT.

Keywords: Multimodal image fusion using curvelet and genetic algorithm

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## A RE-PRODUCTIVE CALCULATION TO IMPROVE PICTURE RECUPERATION IN COMPACTED DETECTING

## Paper ID - 118

A paper presented by:Jaya Lakshmi R., Subba Rao G.V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In this paper, we study the Compressed Sensing (CS) picture recuperation issue. The conventional strategy partitions the picture into squares and treats each square as an autonomous sub-CS recuperation task. This frequently brings about losing worldwide structure of a picture. So as to improve the CS recuperation result, we propose a nonlocal estimation step after the underlying CS recuperation for de-noising reason. The nonlocal estimation depends on the notable nonlocal implies (NL) separating that exploits self-comparability in pictures. We figure the nonlocal estimation as the low-position network guess issue where the low-position lattice is shaped by the nonlocal comparability patches. A proficient calculation, Extended NonLocal DouglasRachford (E-NDLR), in view of Douglas-Rachford parting is created to take care of this low-position improvement issue obliged by the CS estimations. Exploratory results exhibit that the proposed ENDLR calculation accomplishes huge execution upgrades over the cutting edge in CS image recovery.

Keywords: Image Recovery, Algorithm, Reconstruction, Compressed Sensing, NDLR

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## ON THE EXHIBITION QUALITIES OF IMPLANTED STRATEGIES FOR RESTORATIVE PICTURE PRESSURE

## Paper ID - 119

A paper presented by: Vallabhaneni R.B., Rajesh V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In the ongoing occasions Defense Radar and Medical innovation utilized picture preparing as a helpful instrument for investigation of data contained in the pictures. In this paper the system of concentrating the examination on the area of intrigue (ROI) and applying diverse pressure strategies on the ROI and outside ROI for considerable pressure. The outcomes displayed in this paper furnished magnificent execution with the proposed methodology in which SPIHT and the HAAR are included for division, pressure and further combination. Further the presentation demonstrated its exhibition when contrasted and the other two strategies as far as different picture measurements

Keywords: ROI, SPIHT, HAAR, DWT, Medical Image Processing

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## INDIAN OLD STYLE MOVES MUDRA CHARACTERIZATION UTILIZING HOG HIGHLIGHTS AND SVM CLASSIFIER

## Paper ID - 120

## A paper presented by:Kumar K.V.V., Kishore P.V.V.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Advanced comprehension of Indian old style move is least contemplated work, however it has been a piece of Indian Culture from around 200 BC. This work investigates the conceivable outcomes of perceiving traditional move mudras in different move shapes in India. The pictures of hand mudras of different traditional moves are gathered from the web, and a database is made for this activity. Histogram of arranged (HOG) highlights of hand mudras input the classifier. Bolster vector machine (SVM) groups the HOG highlights into mudras as instant messages. The mudra acknowledgment recurrence (MRF) is determined for every mudra utilizing graphical UI (GUI) created from the model. Well known element vectors, for example, SIFT, SURF, LBP, and HAAR are tried against HOG for exactness and quickness. This work helps new students and move excited individuals to learn and comprehend move frames and related data on their cell phones.

**Keywords:** Indian classical dance mudras HOG features SVM classifier Mudra recognition frequency Scale invariant feature transform

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# FIRE RECOGNITION UTILIZING PC VISION MODELS IN OBSERVATION RECORDINGS

## Paper ID - 121

A paper presented by:Prasad M.V.D., Sree G.J., Gnanendra K., Kishore P.V.V., Anil Kumar D.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

CC cams are all over and in this work, we investigate these sensors capacity and the relating calculations to identify fire. The two disadvantages that brings up issues on the exhibition of fire location calculations are: (1) Ambient lighting that veils the fire for shading highlight based identification and (2) Sizeable item development close to the fire for dynamic change based calculations. This paper tends to these issues with cc camera recordings of fire in indoor and open air situations under the two hazardous conditions. We test models on shading, outline subtraction, back ground displaying with Gaussian Mixture Models, Independent segment examination, Geometric-Independent segment investigation (GICA). A 4-parameter factual model checks the nature of the proposed calculation. Results show the possibility of the proposed calculation is taking care of the over two issues for fire discovery.

**Keywords:** Fire detection, fire segmentation, indoor and outdoor fires, geometric independent component analysis

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## STRUCTURE AND IMPROVEMENT OF COMPUTERIZED REASONING FRAMEWORK FOR CLIMATE ANTICIPATING UTILIZING DELICATE REGISTERING SYSTEMS

## Paper ID - 122

A paper presented by:Bojja P., Sanam N.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The principle point of this paper is to conquered the downsides of LIDAR which are nonlinearity in climatic material science dependent on factual displaying and assessment. In any case, displaying is demonstrated to be an effective strategy to gauge climate parameters by utilizing various kinds of Soft Computing Techniques, for example, Neural Networks, Fuzzy Logic and Probability Theory which are appropriate to these meteorological procedures for expectation of a significant climate parameter that is temperature. Plan and advancement of various sorts of Soft Computing Techniques approaches in a horticultural frameworks dependent on target of anticipating the temperature (one day ahead determining of temperature from chose meteorological information) and tried utilizing eighty years past information (meteorological information) and to assess the various kinds of Delicate Computing Techniques which delineates that the exhibition. The outcomes are done utilizing MATLAB programming

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## MIND TUMOR IDENTIFICATION UTILIZING MEAN MOVE GROUPING AND GLCM HIGHLIGHTS WITH EDGE VERSATILE COMPLETE VARIETY DENOISING METHOD

## Paper ID - 123

A paper presented by:Vallabhaneni R.B., Rajesh V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The paper introduces a programmed mind tumor recognition strategy in clamor adulterated pictures. The Denoising of the picture is executed utilizing Edge Adaptive Total Variation Denoising Technique (EATVD). The system is utilized to safeguard the edges during the time spent Denoising picture. When the clamor is expelled from the picture, the picture is sectioned utilizing mean move bunching. The portioned parts are sent to dim level co-event network for include extraction. The highlights are utilized by multi class SVM to distinguish the tumor in the pictures. The progression pursued concentrates the tumor with expanded accuracy in loud pictures.

Keywords: Tumour, Denoising, Multi class SVM, GLCM, EATVD and noisy images

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## A SURVEY ON BIO-ROUSED CALCULATIONS FOR STEERING AND CONFINEMENT OF REMOTE SENSOR SYSTEMS

## Paper ID - 124

A paper presented by:Rajendra Prasad C., Bojja P. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

As of late, improving the system execution alongside expanding the vitality productivity and correspondences adequacy a few analysts centered around remote sensor systems (WSNs). In view of the practices of creatures, similar to ants, bumble bees, schools of fish certain calculations are acknowledged and henceforth these calculations are known as Bio-Inspired Algorithms(BIA). The frameworks utilized for taking care of enormous scale systems, manage the cost of dynamic nature, and evade asset choking influences, heterogeneity, unattended activity, or vigor. This paper presents BIA in the field of WSN, by giving the ideas of these personal conduct standards in which these new approaches figured it out. The paper will depict present bio-enlivened frameworks in WSNs and inspect their impact on WSNs and development. We will likewise have displayed a thorough survey of as of late proposed bioroused frameworks, conventions, and instruments.

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## EFFECTIVE VERSATILE SEPARATING METHODS FOR THORACIC ELECTRICAL BIO-IMPEDANCE EXAMINATION IN SOCIAL INSURANCE FRAMEWORKS

## Paper ID - 125

A paper presented by:Mirza S.S., Rahman M.Z.U. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Examination of Thoracic Electrical Bio-Impedance (TEB) encourages the heart stroke volume in abrupt heart failure. In a clinical situation TEB signal experiences with different physiological and non-physiological ancient rarities. As these ancient rarities are nonstationary we propose versatile separating strategies to improve TEB signals. So as to quicken the separating capacity we utilize variable advance size procedures instead of fixed advance size. This prompts information variable LMS (DVLMS), blunder variable LMS (EVLMS), time variable LMS (TVLMS) and step variable LMS (SVLMS) calculations. In light of these calculations, different sign upgrade units (SEUs) are created and tried on genuine TEB segments. Once more, so as to lessen the quantity of calculations during the sifting procedure we propose half and half methods dependent on cut calculation (CA). Utilizing these cut methods different SEUs are created and tried on TEB parts. To guarantee the ability of these calculations, four examinations were performed to channel the various kinds of relics, for example, sinusoidal clamor (SN), breath commotion (RN), muscle clamor (MN) and cathode clamor (EN). Among the systems SVLMS based SEU performs better in the sifting procedure. The sign to clamor proportion improvement (SNRI) for this calculation is determined as 26.5842 dB, 9.6537 dB, 9.9270 dB and 10.3334 dB separately for SN, RN, MN and EN. The SNRI for the cut adaptation of SVLMS is determined as 24.1710 dB, 8.1952 dB, 9.0804 dB and 9.3770 dB for similar clamors separately. As CA diminishes the quantity of calculations, a tad decline in SNRI is decent. Thus, the cut adaptation of SVLMS based SEUs are progressively appropriate in TEB sifting continuously human services observing frameworks.

Keywords: <u>Adaptive Filtering</u>; <u>Artifacts</u>; <u>Cardiac Arrest</u>; <u>Clipped Algorithms</u>; <u>Signal</u> <u>Enhancement</u>; <u>Thoracic Electrical Bio-Impedance</u> INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC</u>

#### **APPLICATION PROCESS**

#### **ICICMEAP-2017**

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## DYNAMIC IMPERATIVE BASED MULTI-COURSE ARRANGING AND MULTI-DETERRENT EVASION MODEL FOR UNMANNED ETHEREAL VEHICLES

## Paper ID - 126

A paper presented by:Prathyusha K., Sastry A.S.C.S., Chaitanya Suman M. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Unmanned Aerial Vehicles (UAVs) are the flying vehicles which work also, move without human controller. Preceding the advancement of UAVs, Kept an eye on Aerial Vehicles (MAVs) were being used. Later to defeat the bad marks of MAVs, UAVs were presented. Some noteworthy focal points of UAVs over MAVs are it is more affordable, secure and portable. Two significant issues in UAVs are: - crashes and hindrances. Obstruction shirking models can be either static or dynamic and crash happens because of variable formed hindrances. Customary static UAV models are not effective against polygon hindrance shapes with dynamic obstructions. In this proposed model, a novel dynamic hindrance shirking model with dynamic steering calculation is proposed. The entire procedure of obstruction location and shirking model can be isolated into two sub-stages, those are: - 1) Sensing and location stage, 2) Avoidance stage. In the detecting and location stage, the framework assembles significant data about nature and identifies whether an obstruction is available in the way or not. Customary course arranging and obstruction/impact shirking models, for example, Optimized direction model, Geometric model, Force field model and Bearing point based model have confinements, those are:-. Constrained hub limit, static setup of each way, static way arranging technique, hard to recognize polygon molded snags. In this paper, we have proposed another dynamic steering calculation for dynamic obstruction evasion and way arranging was executed for UAVs. Test results show that the proposed model has high computational effectiveness as far as powerful obstruction identification, directing development, way arranging time and search space contrasted with customary UAV impediment recognition models.

Keywords: UAVs, Path planning, search space, obstacle detection.

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## USAGE OF SC-FDMA AND OFDMA BASED UPLINK AND DOWNLINK RESOURCES IN LTE-A NETWORK ASSISTED GADGET TO DEVICE COMMUNICATION FOR EFFECTIVE RANGE MANAGEMENT

## Paper ID - 127

A paper presented by:Rama Krishna , A. S. N. Chakravarthy and A. S. C. S. Sastry Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

Expanding information traffic requests high information rates. Gadget to gadget correspondence (D2D) fundamental cell arrange improves the range use, subsequently builds the general cell throughput if we take appropriate consideration on two perspectives. Initial one is physical asset square (PRB) distribution among D2Ds and cell arrange clients (CEs) and the second one is impedance staying away from between PRB sharing CE and D2D with controlled transmission control. A proficient distribution of both uplink (UL) and downlink (DL) PRBs all the while at once for D2D hidden LTE-A cell organize alongside a productive power control system is proposed in this paper. To effectively utilize the range, which obliges progressively number of D2D, we share SC-FDMA based UL and OFDMA based DL, LTE -A PRBs all the while. During PRB portion high need is given to the UL PRBs for D2D correspondence and there after DL PRBs are distributed, if no UL PRBs are free or sign to impedance and commotion proportion (SINR) is high on UL PRB, as top to normal control proportion (PAPR) is low for UL when contrasted with DL. The propose technique utilizes relative reasonable (PF) planning calculation for PRB designation to ensure at any rate cell or D2D correspondence to be proceeded with acknowledged decency in most dire outcome imaginable. Proposed control instrument evades the obstruction brought about by PRB sharing sets successfully. Recreation results shows that the proposed PRB allotment and power control strategies improves the general cell site throughput.

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# SUBSURFACE DETAIL COMBINATION FOR PECULIARITY DISCOVERY IN NON-STATIONARY WARM WAVE IMAGING

## Paper ID - 128

A paper presented by:Suresh, B; Subhani, Sk; Ghali, V S; Mulaveesala, R Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

Subsurface irregularities in genuine objects show their marks at various occurrences in postpreparing subtleties, contingent upon their profundity and size. This unscrambled data may not investigate the entirety of the subtleties in a solitary picture to encourage an entire field subsurface examination prompting a couple of subtleties being missed in translation, which requests the combination of unscrambled subtleties into a solitary picture. This paper proposes a wavelet-based information combination methodology to install the entirety of the subsurface subtleties into a solitary picture to encourage total subsurface investigation. The proposed identification methodology has been tentatively confirmed with a carbon fiber-strengthened plastic example utilizing quadratic recurrence regulated warm wave imaging (QFMTWI).

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## QUANTITATIVE IMPERFECTION PERCEPTIBILITY IN QUADRATIC RECURRENCE TWEAKED WARM WAVE IMAGING

### Paper ID - 129

A paper presented by:Md M Pasha1, B Suresh ,K.Lasya ,M.Bindu ,Sk.Subhani , W.Sridhar , G.V.Subbarao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

Location and estimation of highlights of subsurface irregularity with least number of estimations and further preparing is a basic issue in warm wave imaging. Different preparing methods like relationship, Hilbert stage and Fourier change are utilized. These modalities catches the article reaction after invigorated by a twittered optical vitality at low outline rates and further utilization of heartbeat pressure towards accomplishing this objective will open new roads for upgraded utilization of assets and spare camera life time also. Like radar this diffusive wave wonder can be separated additionally prepared and utilized for investigation of profundity and state of subsurface peculiarities in an assortment of materials. A quantitative affirmation for this location wonder is to be built up so as to guarantee the presentation of this methodology went for its mechanical dependability and application. This undertaking centers around this issue by qualifying the proposed methodology through its likelihood of recognition for identification quality also, viewpoint proportion confirmation.

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## EXECUTION OF DYNAMIC SHAPE MODELS IN TRAIN MOVING STOCK PART DIVISION ON FAST VIDEO INFORMATION

## Paper ID - 130

A paper presented by:Ch. Raghava Prasad &P.V.V. Kishore |M.L. Dennis Wong Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Moving stock assessment is performed to distinguish the deformities during train developments at speeds <30 kmph. In this investigation, this procedure was mechanized utilizing PC vision models. Parts on a moving train were fragmented utilizing four kinds of dynamic form level set models: Chan–Vese (CV), CV-based morphological differential slope (CV-MDG), CV with shape priors (CV-SP), and CV with shape invariance (CV-SI). CV level sets with shape invariance model empowers the alteration of form as per scale, pivot, and area of the shape earlier item in the moving stock casing. Train moving stock video information were caught at a fast of 240 fps by utilizing a games activity camera with 52° wide edge focal points. The level sets yielded ideal division results contrasted and customary division strategies. The presentation markers of portioned parts from the proposed four calculations are basic similitude record quantify and top sign to-clamor proportion (in dB). An aggregate of 10 sections were removed from a bogie by utilizing the proposed models and contrasted against the ground truth models with test the presentation of the strategies. The train had 15 traveler vehicles with 30 intruders. Besides, the models were tried under different lighting conditions for five trains. The CV shape invariance model yielded increasingly effective divisions both subjectively and quantitatively.

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## PC VISION BASED TRAIN ROLLING STOCK EXAMINATION

Paper ID - 131

A paper presented by: P.V.V.Kishore, C.Raghava prasad

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

Train Rolling stock assessment includes visual perception of the moving train around 30Kmph to discover faulty bogie parts. A train mentor proceeds onward several intruders comprising of wheels, suspension and other restricting equipment. The strength of the bogie chooses the wellbeing of the train. Railroad staff play out the moving stock assessment physically bringing up issues on dependability. Here we propose to utilize PC vision calculations for extraction and restricting flawed bogie parts from working parts. A widepoint rapid camera catches the moving train without movement antiques. The goal is to utilize a solitary shape before control the level set capacity for object division. Here we show the bogie part division with one shape earlier model for the whole length of the train. Experimentation on comparable train intruders under various lighting tests the heartiness of the level set useful with single shape earlier. The proposed calculation handles topological spatial misshapenings of the bogie parts in the video adequately. Fragmenting flawed parts with non-deficient shape priors makes the calculation free of imperfection limitation in the bogie part. This clever thought of PC vision based moving stock assessment utilizing rapid video can decrease human mistakes and help in building up a crewless moving stock assessment. Further, the proposed work can be reached out for early recognition and counteractive action of rail mishaps because of travel part disappointments.

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# BLOSSOM DIVISION WITH LEVEL SETS DEVELOPMENT CONSTRAINED BY SHADING, SURFACE AND SHAPE HIGHLIGHTS

## Paper ID - 132

A paper presented by:Syed Inthiyaz B.T.P. MadhavP.V.V. Kishore Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

This work proposes a pre-educated Chan vese based level sets calculation. Pre data incorporates objects shading, surface and shape combined highlights. The point is to utilize this calculation to section bloom pictures and concentrate important highlights that will help is grouping of botanical substance. Shape pre-data displaying is dealt with physically utilizing development picture handling apparatuses. Neighborhood parallel examples highlights cosmetics surface pre-data and Red, Green and Blue shading channels of the article give shading pre-data. All pre-characterized object data is intertwined to for high measurement subspace characterizing object attributes. Testing of the calculation on bloom pictures datasets show a bounce in data content in the subsequent division yield contrasted with different models in the classification. Division of blossoms is significant for acknowledgment, arrangement and quality evaluation to regularly expanding volumes in flower markets.

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## PLAN AND DEVELOPMENT OF A MULTIOBJECTIVE COST FUNCTION FOR ROBUST VIDEO WATERMARKING USING WAVELET TRANSFORM

### Paper ID - 133

A paper presented by:Amir M.U. Wagdarikar, Ranjan K. Senapat Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

Watermarking is the way toward covering the mystery message into interactive media sources, for example, sound, picture, and video. As opposed to other steganography, video watermarking is primarily centered around the power of the framework. In this paper, we propose the multi objective cost work for video watermarking. At first, the spread picture (video outline) is oppressed into cost work calculation. At that point, the cost capacity is recently planned and created by different destinations, for example, power, vitality, edge, inclusion, and brilliance. Along these lines, the wavelet change is applied to the first casing that gets a wavelet coefficient-based video outline. All the while, the mystery message is divided into twofold pictures utilizing the bit plane procedure. As indicated by the cost worth, the message bit is implanted into the wavelet coefficients in the installing stage. In the extraction stage, the mystery message is recovered. At long last, the trial results are approved, and execution is investigated utilizing measurements, connection coefficients, and top to-flag clamor proportion (PSNR). From the outcomes, it very well may be demonstrated that the proposed strategy achieves 98.19 dB PSNR and 1.00 relationship coefficient incentive to give better strength of the framework.

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# POWERFUL IMAGE EMBEDDED WATERMARKING USING DCT WHAT'S MORE, LISTLESS SPIHT

## Paper ID - 134

A paper presented by:J. L. Divya Shivani and Ranjan K. Senapati Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### **Abstract :**

This paper introduces a DCT-based (DCT: discrete cosine change) drowsy set dividing in various leveled trees (SPIHT) advanced watermarking method that is strong against a few normal assaults, for example, trimming, separating, honing, commotion, reversal, differentiate control, and pressure. The proposed method is made further hearty by the fuse of the Chinese leftover portion hypothesis (CRT) encryption strategy. Our plan is contrasted and the as of late proposed CRT-based DCT procedure, CRT-based spatial space watermarking, and DCT-based entomb square connection methods. Broad recreation tests show better strength in like manner picture controls and, simultaneously, the proposed system effectively makes the watermark perceptually imperceptible. A superior Tamper Assessment Function (TAF) estimation of 2–15% and a superior Standardized Correlation (NC) is accomplished contrasted with a portion of the above strategies. Specifically, the proposed strategy shows better strength on pressure assaults at moderate to higher pressure proportions. It is conceivable to keep up the subtlety and low TAF for different esteems by multiplying the limit of the watermark.

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# SHAPE BASED IMAGE RETRIEVAL UTILIZING LOWER ORDER ZERNIKE MINUTES

## Paper ID - 135

A paper presented by:G. Sucharitha, Ranjan K. Senapati Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### **Abstract :**

Shape is one of the huge highlights of Content Based Image Retrieval (CBIR). This paper proposes a solid and fruitful shape include, which is in view of a lot of symmetrical complex snapshots of pictures known as Zernike minutes. For shape arrangement Zernike minute (ZM) is the prevailing arrangement. The spiral polynomial of Zernike minute delivers the quantity of concentric hovers dependent on the request. As the request expands number of circles will increments, because of this the neighbourhood data of a picture will be overlooked. In this paper, we presented a novel strategy for spiral polynomial where neighbourhood data of a picture given significance. We prevailing to separate the nearby highlights and shape highlights at a low request of polynomial contrasted with the condition of conventional ZM. The proposed technique gives a preferred position of a lower request, less perplexing, and lower measurement highlight vector. For increasingly comparative pictures we locate that basic Euclidian separation around zero. Proposed technique tried on a MPEG-7 CE-1 shape database, Coil-100 databases. Analyses exhibited that it is outflanking fit as a fiddle of an article in the picture and decreased the recovering time and multifaceted nature of figuring's.

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## **COMPUTER VISION BASED DANCE POSTURE EXTRACTION USING SLIC**

Paper ID - 136

A paper presented by:K.V.V. Kumar, P.V.V. Kishore , A.S.C.S. Sastry , D. Anil Kumar , E.Kiran Kumar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

## Abstract :

Indian Cultural move presents are portioned utilizing two calculations and their presentation is evaluated quantitatively. An informational index of different move presents are caught under controlled situations. The picture dataset comprises of 100 move mudras of kuchipudi move presents. Marker controlled Watershed and super pixel based straightforward direct Iterative grouping (SLIC) calculations are proposed to achieve the division task. The aftereffects of both the calculations show that SLIC based super pixel division outflanks the watershed calculation. Further, the consequences of the division can be utilized for grouping of different Indian move structures.

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## AN HYBRID FEATURE SELECTION TECHNIQUE CLASSIFY GLAUCOMA FROM FUNDUS IMAGES

## Paper ID - 137

A paper presented by:M. Nageswara Rao , Dr. M. Venu Gopala Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Glaucoma is the subsequent driving reason for visual deficiency around the world. It is described by a slow loss of visual capacity to prompt visual impairment. Another element related with glaucoma is high weight in the eye, changes in the structure of the Optic Nerve Head (ONH) and Retinal Nerve Fiber Layer (RNFL) thickness. The flow investigate about programmed discovery of glaucoma has been created. The investigation was created in an alternate way, where the distinction can be seen from various territories including the utilization of the highlights, strategies of division, include extraction systems and techniques for order. In this paper we propose half breed include determination strategy utilizing cuckoo search. The proposed strategy produces better arrangements rather than arbitrary arrangements in standard CS calculation. The Random timberland, Sacking and Boosting are utilized as classifiers. Exploratory results show that the proposed strategy accomplishes better execution.

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## PERFORMANCE OF ACTIVE CONTOUR MODELS IN TRAIN ROLLING STOCK PART SEGMENTATION ON HIGH-SPEED VIDEO DATA

## Paper ID - 138

A paper presented by:<u>Raghava Prasad</u>, <u>P.V.V. Kishore</u> Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Moving stock assessment is performed to recognize the imperfections during train developments at speeds <30 kmph. In this examination, this procedure was robotized utilizing PC vision models. Parts on a moving train were portioned utilizing four kinds of dynamic form level set models: Chan-Vese (CV), CV-based morphological differential slope (CV-MDG), CV with shape priors (CV-SP), and CV with shape invariance (CV-SI). CV level sets with shape invariance model empowers the change of form as indicated by scale, pivot, and area of the shape earlier article in the moving stock edge. Train moving stock video information were caught at a rapid of 240 fps by utilizing a games activity camera with 52° wide edge focal points. The level sets yielded ideal division results contrasted and customary division strategies. The exhibition markers of fragmented parts from the proposed four calculations are auxiliary closeness list gauge and pinnacle signal-to-commotion proportion (in dB). A sum of 10 sections were removed from a bogie by utilizing the proposed models and contrasted against the ground truth models with test the presentation of the techniques. The train had 15 traveler vehicles with 30 intruders. Moreover, the models were tried under different lighting conditions for five trains. The CV shape invariance model yielded increasingly proficient divisions both subjectively and quantitatively.

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## A REVIEW OF APPLICATION OF FUZZY CONTROLLER IN SUGAR INDUSTRY

Paper ID - 139

A paper presented by:<u>Hasane Ahammad Shaik</u>, <u>Yogesh Misra</u>, <u>Polaiah Bojja</u> Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The Fluffy rationale is tolerant of imprecision, vulnerability, incomplete truth, and guess. By utilizing delicate registering we attempt to consolidate knowledge in the framework. The possibility of fluffy rationale was imagined in its present structure by Zadeh's 1965 paper on fluffy sets. Frameworks dependent on fluffy rationale are getting progressively famous in modern computerization. In this examination paper creator contemplated traditional procedures of mechanization and different uses of fluffy rationale in mechanical procedures.

*Keywords:* Fuzzy Logic, Probabilistic Fuzzy System, Steam and Fuel Economy, Sugar Quality.

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## ADAPTIVE SPEECH ENHANCEMENT TECHNIQUES FOR COMPUTER BASED SPEAKER RECOGNITION

## Paper ID - 140

A paper presented by:Jyoshna Girika, Md Zia Ur Rahman Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Extraction of high goals discourse signals is significant errand in every single down to earth application. During the transmission of wanted sign numerous commotions are sullied. The Least Mean Square (LMS) calculation is an essential versatile calculation has been generally utilized in numerous applications as an importance of its effortlessness and vigor. In down to earth utilization of the LMS calculation, a significant parameter is the progression size. It is well realized that if the union pace of the LMS calculation will be quick for the progression size is quick, however the downside is consistent state mean square blunder (MSE) will raise. On the opposite side, for the little advance size, the relentless state MSE will be little, however the combination rate will be moderate. In this manner, the progression size gives a tradeoff between the combination rate and the relentless state MSE of the LMS calculation. Make the progression size variable as opposed to fixed to upgrade the presentation of the LMS calculation, that is, pick enormous step size values during the underlying union of the LMS calculation, and utilize little advance size qualities when the framework is near its relentless state, which results in Normalized LMS (NLMS) calculations. In this procedure the progression size isn't consistent and changes as indicated by the mistake signal right then and there. So as to improve the nature of the discourse signal, decline the mean square mistake and expanding sign to commotion proportion of the sifted sign, Weight Normalized LMS(WNLMS), Error Normalized LMS(ENLMS), Unbiased LMS (UBLMS) calculations are being presented as quality factor. These Adaptive commotion cancellers are contrasted and regard to Signal to Noise Ratio Improvement (SNRI).

Keywords: LMS, ENLMS, SNRI, UBLMS

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## ATMOSPHERIC DISPERSION OF PM2.5 PRECURSOR GASES FROM TWO MAJOR THERMAL POWER PLANTS IN ANDHRA PRADESH, INDIA

## Paper ID - 141

A paper presented by: Venkata Bhaskar Rao Dodla , China Satyanarayana Gubbala, Srinivas Desamsetti

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Fine particulate issue (PM2.5) prevalently includes sulfates and nitrates, which results from sulfur dioxide (SO2) and nitrogen oxide (NOx) gases that are radiated from exorbitant modern exercises and transport frameworks. PM2.5 is known to influence respiratory wellbeing in people. Coal-terminated warm power plants are a significant wellspring of SO2 and NOx gases. Assessment of the scattering qualities of these antecedent gases from the power plants would help comprehend the helplessness. Meteorological conditions that beat the area would impact the scattering qualities. In this study, scattering of SO2 and NO from two significant coal-terminated warm power plants in Andhra Pradesh, India have been examined utilizing an incorporated displaying approach of the Advanced Research Weather Research and Forecasting (ARW) model also, Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) model. Meteorological conditions are gotten at 3-km goals utilizing the ARW model and scatterings of SO2 and NO is registered utilizing the HYSPLIT model for the four periods of winter, summer, storm and post-rainstorm. Forward directions delivered by the HYSPLIT model appear diurnal varieties and scattering designs show regular varieties demonstrating the impact of meteorological conditions. Scattering attributes show high scattering in winter because of quiet and stable air conditions to immaterial in summer season because of more grounded breezes and higher barometrical flimsiness. The examination sets up the convenience of coordinated meteorological and scattering models for the assessment of contamination scattering.

Keywords: Particulate matter; Dispersion; Power plants; ARW model; HYSPLIT.

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## DIAGNOSIS OF LUNG CANCER BASED ON BLOOD VESSEL COUNT USING IMAGE PROCESSING TECHNIQUES FROM CT IMAGES

## Paper ID - 142

A paper presented by:N. Suresh, K. Rajesh Babu, K. Rajesh Babu, C. Vaishnavi, R. Sravani Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

As of late picture preparing methodologies are comprehensively used as a piece of therapeutic Zones for picture change in earlier area and relieving stages, where time factor is fundamental for finding the irregularity issues in the pictures, especially in various development tumors, for instance lung malady chest harm, etc nature of picture and precision is focus components of the assessment, picture quality evaluation and furthermore change are depending upon the improvement arrange where low pre-handling techniques is used in perspective on middle channel with particular Gaussian standards. An improved locale of object of intrigue is used as a basic foundation of highlight extraction. Contingent upon general includes a standard assessment is made in this investigation. Major distinguished highlights for an accurate pictures assessment are pixel rate and cover naming. It is bit by bit done in our paper and we have depicted a technique for recognizing the irregularity in the lung with the assistance of vein check.

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# SELFIE CONTINUOUS SIGN LANGUAGE RECOGNITION USING NEURAL NETWORK

## Paper ID - 143

A paper presented by: G. Anantha Rao, P. V. V. KishoreA. S. C. S. Sastry, D. Anil Kumar, E. Kiran Kumar

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This works objective is to bring communication through signing nearer to ongoing usage on versatile stages with a video database of Indian gesture based communication made with a portable front camera in selfie mode. Pre-sifting, division and highlight extraction on video outlines makes a gesture based communication include space. Fake Neural Network classifier on the sign include space are prepared with feed forward nets and tried. ASUS advanced mobile phone with 5M pixel front camera catches persistent sign recordings containing by and large of 220 casings for 18 independent signs at a casing pace of 30fps. Sobel edge administrator's capacity is improved with morphology and versatile thresholding giving a close to consummate division of hand and head partitions. Word coordinating score (WMS) gives the exhibition of the proposed strategy with a normal WMS of around 90% for ANN with an execution time of 0.5221 seconds during grouping. Completely epic technique for executing gesture based communication to put gesture based communication acknowledgment frameworks on advanced mobile phones to make it a constant utilization application.

**Keywords:** Indian sign language Sobel adaptive threshold Morphological differencing Artificial neural networks Word matching score

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## IMPLEMENTATION OF C-DEC PROTOCOL ALONG WITH SECTORIZATION CONCEPT FOR WIRELESS SENSOR NETWORKS

## Paper ID - 144

A paper presented by:Habibulla Mohammad and A.S.C. Sastry Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This works objective is to bring communication through signing nearer to ongoing usage on versatile stages with a video database of Indian gesture based communication made with a portable front camera in selfie mode. Pre-sifting, division and highlight extraction on video outlines makes a gesture based communication include space. Fake Neural Network classifier on the sign include space are prepared with feed forward nets and tried. ASUS advanced mobile phone with 5M pixel front camera catches persistent sign recordings containing by and large of 220 casings for 18 independent signs at a casing pace of 30fps. Sobel edge administrator's capacity is improved with morphology and versatile thresholding giving a close to consummate division of hand and head partitions. Word coordinating score (WMS) gives the exhibition of the proposed strategy with a normal WMS of around 90% for ANN with an execution time of 0.5221 seconds during grouping. Completely epic technique for executing gesture based communication to put gesture based communication acknowledgment frameworks on advanced mobile phones to make it a constant utilization application.

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## PERFORMANCE ANALYSIS OF TOTAL VARIANT TECHNIQUES FOR EFFICIENT SEGMENTATION OF MEDICAL IMAGES

## Paper ID - 145

A paper presented by:<u>Ramesh Babu Vallabhaneni</u> and <u>V. Rajesh</u> Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Denoising medicinal pictures is frequently required for proficient finding of the illnesses. All out Variance (TV) is utilized as a model of fractional differential condition to recognize the detached loud locales in the picture. In the proper way, the TV has been altered to different forms. In this investigation, a presentation examination of versatile TV, middle separating and altered TV is performed, cerebrum MRI of a patient exposed to tumor is considered for denoising process. Later the equivalent is fragmented to have an unmistakable vision of the tumor divide. The recreation is completed in MATLAB utilizing picture handling tool kit. The assessment is completed utilizing execution measurements like PSNR.

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## COMMUNICATION PROTOCOL SECURITY IN INDUSTRIAL CONTROL SYSTEMS TO PROTECT NATIONAL CRITICAL INFRASTRUCTURE

## Paper ID - 146

A paper presented by:Rajesh L, Penke Satyanarayana Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

National basic infrastructures(NCI) are urgent for any country to endure. They are characterized divisions for each country. Some of them are atomic offices, Oil and Gas processing plants, control age and transportation, water supply, transportation, space and protection and so on. NCI are spine of each nation's prudent, wellbeing and riches improvement. Mechanical control frameworks are being utilized for observing and controlling the different procedures in these segments. Models are SCADA (supervisory control and information obtaining) frameworks in Oil and Gas areas, Distributed control systems(DCS) in control segment. As these frameworks are associated with corporate systems and upper layer organizing for information examination and introduction, they are under security vulnerabilities. It is required to ensure these ICS frameworks for sheltered and secure activity of NCI divisions. Different zones are distinguished where security vulnerabilities are exhibited, and correspondence convention is one of the influenced territories. It is required to create alleviation intends to forestall correspondence convention vulnerabilities. In this paper we commentator existing techniques and proposed new strategies to be actualized.

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## COMPUTATIONAL INTELLIGENCE SURVEY ANALYSIS FOR ADVANCED MODELLING AND DEVELOPMENT OF INTELLIGENT CONTROLLER BASED ON WIRELESS SENSOR NETWORKS FOR INDUSTRIAL APPLICATION

## Paper ID - 147

A paper presented by:N. MerrinPrasanna, Polaiah Bojja Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Remote sensor systems (RSNs) are frameworks of scattered independent contraptions ought to be recognize or screen physical or natural standards pleasantly. Remote Sensor Networks go up against more challenges, primarily brought about by correspondence disillusionments, storing and computational prerequisites and compelled vitality notorieties. Guidelines of essential assessment insight have been viably used as a piece recently years to address various challenges, for instance, data aggregation and blend, essentialness careful directing, task booking, security, perfect association, and limitation. CI (Intelligence Computational) gives flexible segments that show clever lead in amazing and irregular conditions like WSNs. CI accomplishes versatility, independent lead, and generosity topology with various tasks, correspondence frustrations, and circumstance changes. In any case, Wireless Sensor Networks engineers are commonly not absolutely careful capability of CI computations offer. Be that as it may, on the opposite side, CI examine creators not happy with each and every real issue and unnoticeable necessities of WSNs. This befuddles endeavors and improvement irksome. This record is to important fissure and urges joint exertion to give various offers unequivocal prolog to Wireless Sensor Networks and their properties. A wide outline of CI uses to various issues in WSNs from various examine alludes domains and creation settings are displayed in this record. Moreover, a talk on inclinations and deterrents of CI figurings over standard WSN game plans is publicized. Likewise, ordinary appraisal of CI counts is presented for using the IC's in WSNs.

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## UAV SHORTEST PATH PLANNING& COLLISION-FREE PATH:A REVIEW

Paper ID - 148

A paper presented by:K.Prathyusha, A.S.C.S.Sastry, K. Sreenivasa Ravi Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Unmanned Aerial Vehicle (UAV) is named as elevated vehicle that doesn't fortify a human administrator. One of the difficult themes in UAV is Path arranging and impact shirking. More advance in the advances the way getting ready for UAV is developing a lot quicker for finding the ideal ways. The capacity to create a productive way from a given introductory point to a last goal progressively conditions is as yet perhaps the greatest test in UAV. The issue is to discover way from source to goal of UAV in a moving space with dynamic hindrances. UAV needs to arrive at the objective situation by most brief way by maintaining a strategic distance from impact with impediments by finding ideal crash free way from source to goal point. This examination is a study which centers around presenting various calculations for building up a way arranging in a UAV. Correlation of various calculations was accomplished for finding the most brief way, advancement, Impact free way. Results for the overview should be possible utilizing MATLAB Software, C++ and Java programming language. UAV is for the most part actualized in various applications like military, regular people, marines, horticultures.

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## ADVANCED POST PROCESSING MODALITIES IN QUADRATIC FREQUENCY MODULATED THERMAL WAVE IMAGING

## Paper ID - 149

A paper presented by:K.RajeshBabu, Valicherla Vaishnavi, ChillaYamini, Kanchanapalli Sri Vaishnavi, Medaswi Raavi, G V Subbarao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Dynamic thermographic assessment proposed for recognition of subsurface inconsistencies in sensible items present the subtleties at various cases relying upon the profundity and size of the abnormality. Later past saw a huge development in the use of various non stationary incitement strategies and sign handling modalities fundamentally to improve profundity goals of subsurface absconds. Ordinarily in practical articles, deserts exist at various profundities requests incitements comprising of a lot of frequencies and further high goals handling modalities. Quadratic recurrence adjusted warm wave imaging, is one of best incitement components oblige these requirements by giving a band of frequencies and encourages the discovery of deformities with improved profundity examining because of more vitality with low frequencies notwithstanding profundity goals. This commitment features examination of different post handling instruments utilized for imperfection discovery and measured regarding sign to clamor proportion investigation in this proposed technique.

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## AN EFFECTIVE DESIGN AND IMPLEMENTATION OF SOFTWARE DEFINED RADIO SYSTEM

### Paper ID - 150

A paper presented by:Sk.Masthanbasha, Habibulla khan Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

A radio receiver is a tool that choices up the preferred signal from the several signals propagating at that point thru the environment, amplifies the favoured signal to the required level, recovers from it authentic modulating sign and ultimately shows it within the favoured manner. This define of functions that should be finished suggests that the essential difference between receivers of diverse types is in the way wherein they demodulate the received sign and this in flip will depend on the sort of modulation employed at the transmitter. The 2d fundamental difference is the method of showing the acquired indicators. In this paper, Software Radio System become designed, applied and the effects of capacity channel disturbances had been analysed and compensated.

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## BANDWIDTH ENHANCED ANTIPODAL VIVALDI ANTENNA FOR WIDE BAND COMMUNICATION APPLICATIONS

## Paper ID - 151

A paper presented by:G. V. Krishna, B. T. P. Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

To layout excessive bandwidth and high benefit compact antipodal Vivaldi antenna which may be applied for current communique systems specifically for navy verbal exchange systems. Methods/Analysis: Antipodal Vivaldi antenna is designed with flared elements on both sides of the substrate. Top side patch detail is oriented closer to left side and bottom facet defected ground dependent detail is orientated closer to proper facet. Finite detail technique primarily based HFSS-15 is used within the layout and simulation. The simulated EM-Results of the return loss, VSWR, radiation styles and discipline distributions are analysed and optimized antipodal Vivaldi antenna is designed with parametric evaluation. Fire resistance PCB substrate material with dielectric consistent four. Four is used as substrate to prototype the antenna version and measured effects are analysed for validation on ZNB 20 vector network analyser. Findings: In this work a singular antipodal Vivaldi antenna is designed to function among L to KU-band verbal exchange and programs. The proposed antenna modal such as a special type of tapered slot edge structure inside the layout which more advantageous the bandwidth of the antenna. To convert antenna into a wide band model, a few changes are done by placing slotted sections on the floor and patch elements. Antenna is displaying 15 GHz large bandwidth and impedance bandwidth of extra than 65%. The proposed antenna is showing VSWR of two:1 ratio in the working band and top realized gain of seven dB. Omni directional radiation sample with peak directivity of five dB is attained with the current model. Wideband characteristics with tremendous advantage grouping this antenna in to numerous communique programs in S, C, X, Ku-bands. Novelty/Improvement: Novelty with respect to defected floor based flared element and big bandwidth are advancements inside the modern design. Both patch and floor structures are designed in a manner to beautify the bandwidth in addition to advantage which is effective in verbal exchange packages. Field distributions with fantastic radiation traits are making this version as appropriate candidate for destiny communique structures.

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## FLOWER IMAGE SEGMENTATION: A COMPARISON BETWEEN WATERSHED, MARKER CONTROLLED WATERSHED AND WATERSHED EDGE WAVELET FUSION

## Paper ID - 152

A paper presented by:Syed Inthiyaz, B. T. P Madhav, P. V. V. Kishore Kumar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Watershed Transformation is one of the effective gear for image segmentation. Watershed transformation primarily based segmentation is commonly stated marker controlled segmentation. This paper proposes a new approach of picture segmentation that includes histogram equalization and photograph smoothening strategies with the Prewitt or sobel side detection operator. The results while as compared with the previous method, suggests that this will gain more correct segmented effects and can lessen the over segmentation effect.

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# ANALYSIS OF FADING EFFECTS BECAUSE OF IONOSPHERIC SCINTILLATIONS THE USAGE OF MODERN GNSS SIGNALS FOUND AT A NORTHERN LOW LATITUDE STATION

## Paper ID - 153

A paper presented by:M. Sridhar, D. V. Ratnam Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The most important hazard to Global navigational gadget's signal availability, accuracy, and processing is the signal fading brought about because of ionospheric scintillations. In this paper the triple - frequency records of GPS signal accrued at Koneru Lakshmaiah University, Guntur, India is processed to investigate the signal fading characteristics of GPS sign bands. Ionospheric scintillation parameter known as fade period is calculated the usage of GPS C/N0 measurements. It is determined that maximum fade duration is ready 90 sec. It is evident that the L5 signal fading depth is low in comparison to L1 and L2 alerts. The outcome of this paintings could be beneficial for developing inter-frequency assisting algorithms used in sign tracking and reacquisition in future GNSS receivers.

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## DETECTION AND OVERALL PERFORMANCE EVALUATION OF WORMHOLE ASSAULT IN MANET THE USAGE OF DELPHI APPROACH

### Paper ID - 154

A paper presented by: Ayushree, Sandeep Kumar Arora Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Security is one of the primary trouble within the Mobile Adhoc Network (MANET) mainly as for the dimensions and complex nature of the device. The precept purpose of protection problems in MANET is that there may be no physical connection between the nodes. This paper gives the impact of wormhole assault and discloses the way to provide protection to the packets with the assist of Delphi technique. By applying Delay Per Hop Indicator (DELPHI), nodes which are the chargeable for wormhole assault can be removed with the aid of hop count number technique and AODV routing The metrics used for calculating network presentation are packet loss, throughput and end to end put off, which gives the higher Quality of Services.

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# ANALYSIS OF OUTAGE OPPORTUNITY, THROUGHPUT IN HYBRID COGNITIVE RADIO NETWORKS WITH AND WITH OUT TRANSCEIVER IMPAIRMENTS

## Paper ID - 155

A paper presented by:C. S. Preetham, M. Siva Ganga Prasad, T.V. Rama Krishna, Ch. Abhinav, R. Monica and K. Harshitha

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Cognitive radios in wi-fi networks is the green way of sensing and accessing the spectrum dynamically. In this paper we analyze the outage possibility and ability of hybrid community model in cognitive radios thinking about transceiver impairments. Every bodily tool has hardware impairments which degrades the overall performance of the system. Majority of technical contributions in wi-fi communications overlook transceiver impairments, assuming ideal hardware. Transceiver impairments like IQ imbalance, section noise and so forth. Have extra impact on system overall performance. A hybrid overlay/underlay transmission scheme has been proposed. This transmission technique takes the effect of transceiver impairments into attention and reveals the first-rate channel; first-rate relay and satisfactory relay electricity. In this we expand a simulation test model to assess the overall performance and outage opportunity of hybrid model thinking about transceiver impairments. The manuscript provides how the effect of hardware impairments can be modeled. The manuscript additionally provides the analysis of the proposed hybrid cognitive radio version with the assist of a case take a look at, which considers various realistic aspects.

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## CIRCULAR MONOPOLE SLOTTED ANTENNA WITH FSS FOR HIGH GAIN APPLICATIONS

### Paper ID - 156

A paper presented by:B. T. P. Madhav, A. V. Chaitanya, R. Jayaprada, M. Pavani Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

A coplanar waveguide experience wideband antennas are designed with slots at the radiating detail and stubs on floor aircraft. Proposed version 1 showing notch band traits at desired frequencies (3.5-4.5 GHz, 7.Five-eight GHz) and version 2 is designed to perform within the extremely-wide band place. To beautify the gain traits of the proposed fashions incorporated a mushroom established like frequency selective surface as reflecting device under the antenna structure. By setting FSS shape a stable advantage of 7dB is attained from model 1 and 5dB in model 2. The experimental effects of the proposed huge band antenna of version 1 are in desirable correlation with the simulated outcomes from HFSS.

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## RAIN FEE DEPTH VERSION FOR VERBAL EXCHANGE HYPERLINK DESIGN THROUGHOUT THE INDIAN LOCATION

### Paper ID - 157

A paper presented by:Aravind Kilaru, Sarat K Kotamraju, Nicholas Avlonitis, K.Ch. Sri Kavya

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

A examine on rain statistical parameters including one minute rain depth, feasible variety of minute occurrences with respective percentage of time in a 12 months has been evaluated for the reason of communique hyperlink layout at Ka, Q, V bands in addition to at Free-Space Optical communication hyperlinks (FSO). To recognize feasible outage length of a communique links because of rainfall and to analyze rainfall sample, Automatic Weather Station (AWS) rainfall information is analysed due its adequate presence across India. The climates of the examined AWS areas vary from desert to cold weather, heavy rainfall to variable rainfall areas, cyclone effective regions, mountain and coastal areas. In this manner a complete and impartial image of the rainfall facts for Indian area is evaluated. The analysed AWS information offers insight into every year accumulated rainfall, most hourly accumulated rainfall, suggest hourly accrued rainfall, quantity of wet days and number of wet hours from 668 AWS locations. Using opportunity density function the one minute rainfall measurements at KL University is incorporated with AWS measurements for estimating range of rain occurrences in terms of 1 minute rain intensity for annual rainfall gathered between 100 mm and 5000 mm to give an perception into possible one minute accumulation sample in an hour for complete analysis of rainfall impact on a communication link for design engineers. So that low availability communications hyperlinks at better frequencies can be converted into a reliable and economically feasible communique links for imposing.

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## MULTIUSER DETECTION OVER GENERALIZED-K FADING CHANNELS WITH LAPLACE NOISE

## Paper ID - 158

A paper presented by:Srinivasa R. Vempati1, Habibulla Khan, Anil K. Tipparti Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Combined effect of fading and shadowing degrades the overall performance of more than one get admission to wireless verbal exchange systems. The presence of impulsive kind non-Gaussian noise in conjunction with inters image interference and a couple of get admission to interference further worsens the gadget overall performance. Methods: This paper gives a multiuser detection method for direct collection-code division more than one accesses structures over generalized-K fading channels in presence of impulsive noise modeled by means of Laplace distribution. Maximal ratio combining receive range method is likewise incorporated to mitigate the results of simultaneous presence of fading and shadowing. An M-decorrelator is proposed to robustly stumble on the binary section shift keyed symbols. Performance of proposed M-decorrelator is evaluated through computing the average opportunity of mistakes. Findings: The proposed M-decorrelator plays higher within the simultaneous presence of fading, shadowing and impulsive noise while as compared to least squares, Huber and Hampel M-estimator based detectors.

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## **RECOGNITION OF DELAY FAULTS IN CLUSTER BASED FPGA USING BIST**

Paper ID - 159

A paper presented by:Nidamanuri Sai Charan, Kakarla Hari Kishore Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper discussed approximately the increasing complexity of Field-Programmable Gate Array (FPGA) in locating postpone faults using BIST approach. It is a main project for FPGA for highest troubles shoot textual content and postpone circuit fast. Built-in-self-test method is a easy solution in comparison with expensive take a look at device for the automated transmission. Herein, the erection designed for the detection of put off faults within the 2nd coefficient of FPGA resources Digital Signal Processing (DSP) block, FPGA board interconnects, Look-Up-Tables (LUT) and and many others. The authors suggest complete plan diagnose Bister to improve the effectiveness of the manage good judgment, which diagnose all CLB 2 x three BIST are faulty. The universal technique for the simulation has been executed through tool Xilinx FPGA Vertex FPGA. The results show a tremendous improvement over previous techniques

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## PGA BASED WIRELESS ELECTRONIC SECURITY SYSTEM WITH SENSOR INTERFACE THROUGH GSM

## Paper ID - 160

A paper presented by:B Murali Krishna, G.Rakesh Chowdary, G.Chandra Vardhan, K Siva Ram, P.Sai Kishore, G.L.Madhumati, Habibulla Khan Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

### Abstract:

The superior development of contemporary technology innovation and Cell smartphone, eager technique for dwelling has ended up being a noteworthy part in the present length of human lifestyles. Tremendous growth in wi-fi communication has enabled the researchers to apply wireless portable private devices consisting of Wi-Fi-UART, ESP8266 (IOT), Bluetooth, ZigBee, GSM, GPRS, statistics card and other wireless sensor networks to append with custom programs to control far flung appliances. In this paper we advise a wi-fi electronic protection gadget with contact sensor interface via GSM. It is relevant to banks, faculties, schools, home and commercial appliances. Home mechanization, which is controlled with the aid of utilising Android superior cell. The domestic apparatuses that need to manipulate is related to relays linked with GPIO ports of the FPGA board which are activated and deactivated thru commands in serial communique (UART) from cellular. Status of the appliances despatched thru SMS via GSM SIM 900A module to a predefined numbers programmed in device. The primary goal of domestic computerization is to assist impeded and old matured individuals in order to empower them to govern home apparatuses and caution them in some brief instances for that reason. Design is synthesized on Xilinx Platform Studio (XPS)-Embedded Development Kit (EDK) and implemented on Spartan-3E FPGA.

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## DUAL BAND NOTCHED PLANAR PRINTED ANTENNA WITH SERRATED DEFECTED GROUND STRUCTURE

## Paper ID - 161

A paper presented by:K V L Bhavani, Habibulla Khan, D Sreenivasa Rao, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

A low profile published antenna with defected floor shape (DGS) is presented on this work. Initially a square patch radiating element is constructed on one facet of the substrate and the alternative end of the substrate etched with serrated shape DGS. Three special iterations are examined on this paintings by way of converting the wide variety of serrated edges on the floor plane. To improve the benefit of the designed antenna fashions a frequency selective surface is placed below the antenna shape as a reflecting floor. The typical performance characteristics of the proposed antenna fashions are simulated the usage of industrial electromagnetic tool HFSS. Optimized proposed antenna model is fabricated on FR4 substrate and measured outcomes are as compared with simulation outcomes for validation.

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## DESIGN OF A NONVOLATILE 8T1R SRAM CELL FOR INSTANT-ON OPERATION

## Paper ID - 162

A paper presented by: Mounica jagu, Ganesh G.V

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Now-a-days, Energy intake is the principal key factor in Memories. By switching the circuit in off mode and with an lower voltages, results in lower in an electricity dissipation of the circuit. Compared to DRAM SRAM'S are in the main used because of their statistics preserving capability. The important gain of using SRAM's in place of DRAM'S is that, they're imparting speedy power-on/off speeds. Hence SRAM's are more preferred over DRAM's for higher on the spot-on operation. Generally SRAM's are categorised in to two kinds namely risky and non-volatile SRAM's. A non-unstable SRAM permits chip to acquire overall performance factors and additionally provides an repair operation in an effort to be enabled by an repair sign to repair the information and also strength-up operation is carried out. This paper describes about novel NVSRAM circuit which produces higher "on the spoton operation" in comparison to preceding techniques utilized in SRAM's. In addition to ordinary 6T SRAM middle, we're using RRAM circuitry (Resistive RAM) to provide better instantaneous-on operation. By evaluating the performance factors with 8T2R and 9T2R, 8T1R design plays the great inside the Nano meter scale. Thus this paper provides higher performances in strength, strength, propagation delay and place elements compared with other designs.

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## A NOVEL APPROACH FOR ERROR DETECTION AND CORRECTION USING PREFIX-ADDERS

## Paper ID - 163

A paper presented by:B. Naga Jyothi, K.S.N.Murthy, K.Srinivasarao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The variable latency speculative Han-Carlson adder is a newly proposed adder to carry out high speed arithmetic operations. Han-Carlson adder offers correct effects with error detection while compared to other adders like Kogge-Stone adder. In this paper, wide variety of parallel prefix adders can be sub divided into variety of levels and perform mathematics operations. By the usage of the Xilinx 14.2 software program, the layout of Kogge-Stone adder and Han-Carlson adder is developed. This paper specializes in the implementation and simulation of 8-bit, sixteen-bit Kogge-stone adder and Han-Carlson adder based totally on Verilog code and in comparison for his or her overall performance in Xilinx. When in comparison to different adders the delay performance for Han Carlson adder is less and it reduces the complexity. It is concluded that the proposed adder is better in phrases of computational delay. By the use of Brent-Kung and Kogge-stone adder the parallel prefix Han-Carlson adder also be proposed.

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## NANO -DISPERSED FE3O4 LIQUID CRYSTAL COMPOUND IMAGE ENHANCEMENT UTILIZING ADVANCED HISTOGRAM EQUALIZATION TECHNIQUE

#### Paper ID - 164

A paper presented by:J Sivasri, B T P Madhav, MC Rao, RKNR Manepalli Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The combination is carried on fluid crystalline (LC)p-decyloxy benzoic corrosive (100BA) and p-undecyloxy benzoic corrosive (110BA) with 0.5wt % and1wt% for Fe3O4 nano particles scattering. The readied tests are portrayed by various spectroscopic procedures like X-beam diffraction (XRD), Scanning Electron Microscopy (SEM), Fourier Change Infra-Red (FTIR) and Differential Scanning Calorimeter (DSC). Textural judgments of the blended mixes are recorded by utilizing Polarizing Optical Microscope (POM) joined with a hot stage and camera. The outcomes show that the scattering of Fe3O4 nano particles in 100BA and 110BA displays NC stages as same as the unadulterated 100BA and 110BA with decreased clearing temperature true to form. Further, the nematic warm run is expanded in both 100BA and 110BA with Fe3O4 nano particles scattering. Watchwords: Synthesis, POM, DSC, Nano-scattering, XRD, FTIR and SEM

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## COMBINATION AND CHARACTERIZATION OF CITRATE CAPPED AU NANO PARTICLE DISPERSION IN LIQUID CRYSTALLINE COMPOUNDS

#### Paper ID - 165

A paper presented by: R K N R Manepalli, M Tejaswi, M C Rao, G Giridhar, B T P Madhav, V G K M Pisipti

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In the present paper amalgamation and portrayal are continued citrate topped Gold (Au) nano particles scattered in Liquid Crystalline p-n-Hexyloxycyanobiphenyl (6OCB) compound. We have revealed citrate topped Au nano particles are blended by concoction decrease strategy which is having an expansive scope of uses and drastically impacts the birefringence properties of 6OCB when scattering with low focus. The Polarizing Microscopy (POM) method is utilized to quantify the stage change temperatures. Further portrayal is done by different spectroscopic procedures like X-beam Diffraction Studies (XRD), Scanning Electron Microscopic examinations (SEM), Ultra Violet Visible (UV) spectroscopy. Textural judgments of the incorporated mixes are recorded by utilizing POM associated with a hot stage and camera. The outcomes indicated that the scattering of citrate topped Au and in 60CB show nematic stage as same as the unadulterated 60CB with somewhat decreased clearing temperature true to form. Further, the birefringence anisotropy of 60CB with scattered citrate topped Au nano particles increments by 14%. It is discovered that the birefringence anisotropy just as direction request parameter of 60CB increments with scattered citrate topped Au nano particles

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## CHIRP Z CHANGE BASED UPGRADED RECURRENCE GOALS FOR PROFUNDITY RESOLVABLE NON-STATIONARY WARM WAVE IMAGING

### Paper ID - 166

A paper presented by:B Suresh, S Subhani, A Vijayalakshmi, VH Vardhan, VS Ghali Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

This paper proposes a novel post handling methodology to upgrade profundity goals in recurrence balanced warm wave imaging utilizing peep Z change. It investigates the phantom zooming highlight of the proposed methodology to upgrade profundity goals and approves it through the experimentation continued a carbon fibre fortified plastic and mellow steel examples. Further, deformity identification capacity of the proposed methodology has been contrasted and that of the other contemporary modalities by taking the imperfection sign to commotion proportion into thought

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## NOVEL COMPACT OPTICAL CHANNEL DROP FILTER FOR CWDM OPTICAL NETWORK APPLICATIONS

#### Paper ID - 167

A paper presented by:Mayur Kumar Chhipa, Massoudi Radhouene, Ashutosh Dikshit, S. Robinson, Bhuvneshwer Suthar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Channel drop channel is planned and mimicked in this paper utilizing two dimensional photonic precious stone structures by the utilization of novel plan of photonic gem ring resonator. The oddity in the structure is about its planning parameters as well as the ring resonator structure. The channel is advanced for the media transmission wavelength 1511 nm. The channel is structured utilizing Aluminium Gallium Arsenide (AlGaAs) dielectric material with refractive file 3.40. The quantity of bar are 21 and 20 in Z and X bearings separately with grid consistent 540 nm and the dielectric poles in air structure having range 0.01µm. The structure channel gives 99% dropping productivity with great quality factor around 192 at 1511 nm thunderous wavelength for CWDM correspondence frameworks. The structure and examination is finished by FDTD strategy and the photonic band hole is determined by the PWE band solver. The structure is limited in size about 123µm2 Such sort of gadget could be valuable for CWDM optical correspondence systems and Photonic Integrated Circuits.

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## IMPROVED DROPPING PROFICIENCY IN TWO-DIMENSIONAL PHOTONIC PRECIOUS STONE BASED CHANNEL DROP CHANNEL FOR COARSE WAVELENGTH DIVISION MULTIPLEXING APPLICATION

### Paper ID - 168

A paper presented by:Mayur Kumar Chhipa, Massoudi Radhouene, Savarimuthu Robinson and Bhuvneshwer Suthar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

We study the two-dimensional photonic gem (PC) square grid structure to plan a channel drop channel. The channel drop channel (CDF) is planned utilizing a PC ring resonator structure as a result of its better reaction. The variety in the state of scattered poles causes the move in thunderous wavelength and furthermore shows an improvement in quality factor just as dropping effectiveness. The dropping effectiveness is improved from 92.7% to 99.5% for a specific wavelength at 1531 nm, which is particularly utilized in media transmission. The planned CDF structure is helpful for coarse wavelength division multiplexer. The size of the gadget is little, so these gadgets can assume a significant job in optical correspondence systems and photonic incorporated circuits

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## SCHIFF BASE LIQUID CRYSTALLINE COMPOUNDS WITH DISPERSED CITRATE CAPPED GOLD NANO PARTICLES

#### Paper ID - 169

A paper presented by: M. Tejaswi, M.C. Rao, R.K.N.R. Manepalli, B.T.P. Madhav, P. Pardhasaradhi

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In this paper, 20  $\mu$ l citrate topped Gold (Au) nano particles are scattered in Schiff base Liquid Crystalline mixes 60.0m (m = 7 and 9) and portrayals are done to watch the progressions happened with the scattering of nano particles in Liquid Crystalline mixes. The Polarizing Microscopy (POM) procedure is utilized to gauge the stage progress temperatures. Differential Scanning Calorimeter (DSC) is utilized to decide the change temperatures and enthalpy esteems. Further portrayal is completed by Scanning Electron Microscopy (SEM). The nematic change temperature is diminished by 1 °C with the scattering of citrate topped Au nano particles into the Liquid Crystalline mixes. Picture handling method of textural examination is likewise done to distinguish the factual parameters of the pictures and their change temperatures.

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## CEREBRUM TUMOR DETECTION USING MEAN SHIFT CLUSTERING AND GLCM FEATURES WITH EDGE ADAPTIVE TOTAL VARIATION DENOISING TECHNIQUE

### Paper ID - 170

A paper presented by:Ramesh Babu Vallabhaneni and V. Rajesh Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

The paper exhibits a programmed mind tumour recognition method in clamour debased pictures. The De noising of the picture is actualized utilizing Edge Adaptive Total Variation De noising Technique (EATVD). The procedure is utilized to save the edges during the time spent De noising picture. When the commotion is expelled from the picture, the picture is sectioned utilizing mean move bunching. The fragmented parts are sent to dark level co-event framework for highlight extraction. The highlights are utilized by multi class SVM to identify the tumour in the pictures. The progression pursued concentrates the tumour with expanded exactness in boisterous pictures.

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## U-SLOT NOTCH BAND MIMO ANTENNA TO REDUCE POLARIZATION DIVERSITY FOR WIRELESS APPLICATIONS

### Paper ID - 171

A paper presented by:S. Lakshmi narayana, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this investigation, we are showing U space indent band MIMO reception apparatus with polarization decent variety method. Polarization assorted variety is accomplished by setting two sets of monopoles symmetrical to each other. We utilized octagonal formed space receiving wire and differential sustaining component. We embedded openings which are in the state of curves to dismiss the Wireless Local Area Network (WLAN) band. For successful dismissal of required band we embedded U formed spaces in bolstering lines of port 3 and 4. The equivalent should be possible on port 1 and 2 thus the parameters identified with port 1 and 2 will be affected however port 3 and 4. The proposed model is accomplishing differential reflection coefficient of >-10dB over the dismissal from 5 and 6 GHz. Because of differential nourishing system low cross polarization and port to port disconnection of higher than 40dB is gotten in working scope of radio wire. Despite the fact that the receiving wire is structured more than 3-11 GHz, this is appropriate for 6-9 GHz.

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## SMALLER EBG CONTROLLED ANTENNA WITH DEFECTED GROUND CONFIGURATION

### Paper ID - 172

A paper presented by:M.S.S.S. Srinivas, T.V. Ramakrishna, B.T.P. Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this letter, a conservative crisscross formed cut rectangular micro strip fix radio wire with round surrendered ground structure (DGS) is intended for remote applications. The test encouraged radio wire comprising of a crisscross formed cut, double T-moulded cuts on either sides of a rectangular fix, and roundabout free weight moulded deserted ground plane is enhanced. The radio wire had the option to produce three separate resonances to cover both the 2.45/5.28-GHz WLAN groups and the 3.5-GHz Wi MAX groups while keeping up a little in general size of mm . The arrival misfortune impedance data transfer capacity esteems are improved essentially for three resounding frequencies. The planned receiving wire is portrayed with better radiation designs and conceivably stable addition around 4–6 dBi over the working groups. Great understanding was acquired among estimations and reproductions.

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## A CPW BOLSTERED MONOPOLE RECEPTION APPARATUS WITH UNI PLANAR EBG AND RHOMBIC CSRR DISPLAYING MULTIBAND ATTRIBUTES

Paper ID - 173

A paper presented by: A N Meena Kumari, B T P Madhav, K L Yamini Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this book, the plan and investigation of a minimized coplanar waveguide (CPW) encouraged multiband monopole antenna stacked with electromagnetic band gap structures (EBG) is introduced. By putting split ring resonators (SRR) the proposed receiving wire study stretched out for working over the recurrence scope of Bluetooth/IMT–E (2.4-2.484/2.5-2.65 GHz), (WLAN 802.11 gathering with 5 distinctive recurrence ranges 2.4 GHz, 3.6 GHz, 4.9 GHz, 5 GHz, 5.9 GHz) for individual remote correspondence frameworks. Other recurrence groups past Ultra-Wideband 11.73 – 12.75 GHz are utilized for RADAR and fixed satellite correspondence frameworks are likewise secured under the planned receiving wire model. The presentation of Uni planar EBG structure in mix with Rhombic SRR brought about noteworthy lessening of surface waves, accordingly giving an expansion in increase of proposed receiving wire contrasted and straightforward monopole.

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## RECURRENCE RECONFIGURABLE SLOPE MOULDED UWB RADIO WIRE WITH PIN DIODES

#### Paper ID - 174

A paper presented by:K L Yamini, B T P Madhav, T Anusha Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this book a conservative UWB recurrence reconfigurable radio wire with incline shape utilizing PIN diodes is exhibited. This reception apparatus comprises of two rectangular patches and DGS in the ground plane. Here these two rectangular patches are associated by utilizing PIN diodes which are the key factors for accomplishing recurrence re configurability. The ON and OFF condition of diodes here empowers and debilitates diverse recurrence band indents and subsequently re configurability is accomplished. This radio wire is intended for multi band like WLAN, Wi-Fi, GSM, Wi-MAX, GPS and Bluetooth. The reception apparatus structure proposed has VSWR beneath 2 and S11 not exactly - 10db. The proposed reception apparatus may have applications in remote innovative frameworks for multi band application.

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## SERRATED ROUNDABOUT FRACTAL COPLANAR WAVE MANAGE NOURISHED RADIO WIRES FOR WIDEBAND AND ULTRA WIDEBAND APPLICATIONS

#### Paper ID - 175

A paper presented by:D S Ramkiran, P Siddaiah, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

An examination of ultra wide band coplanar waveguide sustained receiving wire is exhibited comprising of a fractal emanating patch. The impedance match of the ideal radio wire is distinguished by the quantity of unit cells that are utilized in structuring of the fractal fix by inserting the two rectangular fixes in the ground plane. The impedance and transmission capacity of the fractal emanating patch is improved which makes it reasonable for the UWB applications. Geometry of proposed receiving wire is changed to get the radio wire parameters which brings about breaking down the presentation of each adjusted antenna. Simulated results represent that the manufactured reception apparatus displays required VSWR level, radiation qualities and the arrival misfortune in the UWB recurrence go. The reception apparatus that is structured works in the recurrence run of 4-11GHz.The VSWR of the radio wire is between 0-2 in the working recurrence of the receiving wire. The receiving wire estimations are 14x18x1 mm3 individually.

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#### SMALLER ROUND OPENING WIDEBAND MONOPOLE RECEIVING WIRE

Paper ID - 176

A paper presented by:V Subba reddy, M Siva ganga Prasad, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this paper, a minimal opened roundabout monopole reception apparatus with spike formed openings inserted in it is exhibited. Likewise, the proposed radio wire has ground length constrained to 33% of substrate length. This ground is given on the rear of the reception apparatus geometry to energize the receiving wire by micro strip line feed. An opened round fix component will be accomplished by subtracting 45 degrees turned square fix of 12mm x 12mm, and afterward by legitimate scaling. In this examination the geometry is scaled independently by 60%, 40%, 20%, lastly the resultant is acquired by joining them. This last geometry offers a ultra wide band activity. The general size of the radio wire is 30mm×32.4mm×1.6mm including limited ground encouraging component. The receiving wire works in the recurrence run from 2.5-15GHz covering FCC characterized UWB band with over 130% impedance data transfer capacity. Stable omni-directional radiation designs in the ideal recurrence band have been gotten. Estimated information decently concur with the recreated outcomes.

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## CIRCULATION ARCHITECTURE MULTIPOINT TRANSMISSION LTE-ADVANCED FEMTOCELL NETWORKS IN 5G NETWORKS

### Paper ID - 177

A paper presented by:K.R.R.Mohan Rao, Nazma shaik Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Until this point, however encouraging, a current cell advances consider to advance, within the sight of incredible requests over the forthcoming years. 5G and related innovations can address some of key destinations, for example, better information rate, improved limit, decreased idleness, and higher help quality. This paper presents a novel decentralized RAN's design with to a great extent reliance on LTE-An innovation. The proposed plan underpins some unmistakable systems administration includes that together improve the presentation of both the LTE and RAN's focal system. This engineering contrasted with that of the exemplary PTP backhaul configuration improves flagging overhead, handoff capacity, by and large system throughput and dormancy, nature of administration backing and information rate for clients' possibility needs.

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## MODERATION OF IONOSPHERIC SCINTILLATION EFFECTS ON GNSS SIGNALS USING VARIATIONAL MODE DECOMPOSITION

### Paper ID - 178

A paper presented by:G. Sivavaraprasad, R. Sree Padmaja, D. Venkata Ratnam Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

This letter tends to the issue of ionospheric glimmer consequences for the worldwide route satellite framework (GNSS) signals. Extreme glitters corrupt the sign force underneath the blur edge of the GNSS recipient, bringing about disappointment of the situating and navigational administrations. A powerful system is required for the estimation and moderation of such ionospheric sparkle impacts. Subsequently, in this letter, the utilization of a versatile sign decay system dependent on variational mode deterioration (VMD), in mix with the detrended change investigation (DFA) strategy, is accounted for. VMD-DFA adequately breaks down the GNSS signal influenced by ionospheric glimmers into various inherent mode works and gives a limit to the identification and moderation of glitters commotion. Monte Carlo reproduction results exhibit that the proposed calculation is unrivaled and solid for taking out the abundancy glimmer impacts contrasted with the integral gathering observational mode decay technique. The use of the proposed calculation on both engineered (Cornell glitter model) and ongoing estimated GNSS information acquired from GNSS programming route beneficiary at Rio de Janeiro, Brazil, has demonstrated its possibility in relieving the ionospheric plentifulness glimmer impacts.

Keywords: <u>Robustness</u>, <u>Algorithm design and analysis</u>, <u>Noise measurement</u>, <u>Receivers</u>, <u>Estimation</u>, <u>Global navigation satellite system</u>

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## RECURRENCE SELECTIVE SURFACE BASED SPIRAL FRACTAL MONOPOLE ANTENNA

#### Paper ID - 179

A paper presented by:B. T. P. Madhav, M. Sai Charishma, P. Kavya, A. Sai Kumar and K. Supriya

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this article, a novel winding fractal monopole reception apparatus is intended to work in the correspondence band applications. The presentation qualities like data transfer capacity, increase and radiation designs are improved by setting recurrence particular surface underneath the radio wire structure. An essential model with shut circle ground is intended to work at different frequencies according to the fractal structure. The essential model is adjusted with redirected ground structure in the monopole fractal design to improve the transmission capacity qualities. Transfer speed is improved by twofold when contrasted and base model and an impedance transmission capacity of 118% is accomplished from the changed structure. The FSS is utilized as a reflector in the changed structure. The FSS is utilized as a reflector in the altered fractal reception apparatus to improve the increase attributes. The total radio wire investigation with alterations in the structure just as setting of FSS is unmistakably exhibited with FEM based HFSS instrument. The proposed model is created on FR4 substrate and estimated results are outfitted alongside reproduction results for approval reason. The deliberate outcomes from ZNB20 vector analyzer are in great concurrence with reproduction aftereffects of HFSS.

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## PLAN AND DEVELOPMENT OF ARTIFICIAL INTELLIGENCE SYSTEM FOR WEATHER FORECASTING USING SOFT COMPUTING TECHNIQUES

### Paper ID - 180

A paper presented by:Polaiah B, S Nagendram

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

The principle point of this paper is to beaten the disadvantages of LIDAR which are nonlinearity in climatic material science in light of factual demonstrating and assessment. In any case, displaying is demonstrated to be a fruitful strategy to figure climate parameters by utilizing various kinds of Soft Computing Techniques, for example, Neural Networks, Fuzzy Logic and Probability Hypothesis which are appropriate to these meteorological procedures for forecast of a significant climate parameter that is temperature. Plan and improvement of various sorts of Soft Computing Techniques approaches in a horticultural frameworks dependent on goal of anticipating the temperature (one day ahead estimating of temperature from chose meteorological information) and tried utilizing eighty years past information (meteorological information) and to assess the various sorts of Delicate Computing Techniques which portrays that the presentation. The outcomes are completed utilizing MATLAB programming.

**Keywords:** artificial neural networks, fuzzy logic, temperature forecasting, LIDAR, nonlinearity

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## STUDY AND EXECUTION EXAMINATION OF VARIOUS CEREBRUM TUMOUR DIVISION APPROACHES FOR RESTORATIVE APPLICATIONS

### Paper ID - 181

A paper presented by:S. Sreedhar Babu, Polaiah Bojja, Ranjan K. Senapati Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Therapeutic Image is one of the most basic field in Image Processing. Chipping away at this field is an eager errand just as trying and tumor division from a medicinal picture is the diligent undertaking. Throughout the decades scientists experienced impressive advancement to section the tumor. Scientists created different techniques to explain the carcinoma. Various division strategies, for example, limit based, district based, grouping based division and so on have been applied for this reason. Seeing the present unmistakable quality in this territory, we gather all the explanatory data notwithstanding a concise examination. In this paper, we involved different picture division strategies, various sorts of existing calculations dependent on certain parts of mind MRI pictures and finally we finished with a short dialog of a couple of difficulties for our future work.

**Keywords:** Carcinoma, Clustering, Edge, Histogram, Layer, Neural Network, Region, Terrain, Threshold, Segmentation

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## CPW-FED TRIANGULAR SERRATED SLOT ANTENNA FOR WIDEBAND APPLICATIONS

#### Paper ID - 182

A paper presented by:K V L Bhavani, Habibulla Khan, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

A serrated square space receiving wire for wideband tasks is proposed in this paper. Coplanar waveguide encouraging is utilized in this structure with a wideband tuning stub. The proposed serrated square opening radio wire is working between 1 to 20 GHz with colossal data transfer capacity. The serrated reception apparatus is built from square space receiving wire which is working at multiband. By setting serrated tuning stub, a normal rectangular space multiband radio wire is changed over to wideband reception apparatus. Nitty gritty investigation of plan, examination are displayed in this article.

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## A COMPACT CPW-FED MONOPOLE ANTENNA UTILIZING SLOTTED CSRRS FOR UWB APPLICATIONS

### Paper ID - 183

A paper presented by: A Phani Raju, B T P Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this paper, the plan and investigation of a reduced coplanar waveguide-sustained ultra wideband pentagon reception apparatus are displayed. To accomplish ultra wideband execution, two changes are presented. The first is to expel a little fan point on each side of the ground plan, and the subsequent one is to adjust the sharp of the fix in the width. The ideal measurements can be accomplished by a parametric investigation. The reception apparatus configuration shows an exceptionally wide working data transfer capacity of 16.7 GHz with an arrival misfortune superior to anything 10 dB in the recurrence run from 4.46 GHz to 21.14 GHz. The addition of the proposed radio wire is 6.3 dBi. This reception apparatus design will be helpful for UWB indoor application as it is anything but difficult to create and incorporate with RF hardware. All reenactments in this work were completed by utilizing the electromagnetic programming CST.

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## EXECUTION AND MONITORING OF ECG ACQUISITION SYSTEM AND PHYSIOLOGICAL PARAMETERS USING MATUINO

#### Paper ID - 184

A paper presented by:K R R Mohan Rao, K Raghavarao, Ch J Gayathri Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

This task manages an incorporated versatile gadget which screens the organic parameters, for example, internal heat level, stickiness, pulse and ECG consistently is introduced in this paper. MATUINO demonstrates Matlab interfaced with Arduino which is utilized for ongoing examination. Presently one of the main advancements in telemedicine is continuous checking of heart issue and giving them a superior treatment at that specific unexpected of time. This paper helps in picturing different parameters checking, watching constant qualities on pc utilizing Matlab GUI and in versatile utilizing android application. If there should be an occurrence of crisis conditions we built up an android application in portable for making a call and message to the doctors predefined number and on the off chance that any issue emerges because of system, at that point we can likewise call to different specialists utilizing contact picker which was created in the application and a ringer will signal when esteems gained is more noteworthy than edge. The created framework comprises of Arduino UNO, remote transmission gadget, Android application and for showing the parameters LCD is interfaced. The sensors will be interfaced to an Arduino UNO and Matlab helps for continuous examination. As information will be gotten remotely for security reason a login page will be made once it is gotten to continuous information of the patient can be envisioned in portable utilizing android application

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## SUBMARINE TO SUBMARINE PASSIVE TARGET TRACKING

Paper ID - 185

A paper presented by: V.LakshmiBharathi, S.KoteswaraRao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In oceanic condition, observation assumes a significant job. The point of this paper is to follow the objective despite the fact that the range estimations are not accessible. Adjusted gain points just expanded Kalman channel (MGAEKF) is utilized for bearing and rise target following. The numerical demonstrating and recreation have been completed. It is demonstrated that MGAEKF calculation viably tracks the objective in submerged condition

**Keywords:** Stochastic theory, statistical signal processing, applied statistics, estimation theory

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## SUBMARINE TO SUBMARINE ANGLES-JUST PASSIVE TARGET TRACKING

### Paper ID - 186

A paper presented by: V.LakshmiBharathi, S.KoteswaraRao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In sea condition, reconnaissance assumes a significant job. The point of this paper is to follow the objective despite the fact that the range estimations are not accessible. Altered gain edges just broadened Kalman channel (MGAEKF) is utilized for bearing and height target following. The numerical displaying and reproduction have been completed. It is demonstrated that MGAEKF calculation adequately tracks the objective in submerged condition.

**Keywords:** Stochastic theory, statistical signal processing, applied statistics, estimation theory

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## UTILIZATION OF KALMAN FILTER FOR DUNKING SONAR UNDERWATER TARGET MOTION ANALYSIS

## Paper ID - 187

A paper presented by:T.Vaishnavi Chandra, S.KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In submerged, dunking sonar creates submerged objective range and bearing estimations and a similar data is conveyed to a helicopter for further handling. The commotion defiled estimations are handled to assess target movement parameters utilizing on the web Extended Kalman Filter. These appraisals are valuable to discover weapon present parameters and afterward to discharge the weapon on to the objective. Results acquired in reenactment are displayed.

Keywords: Dunking sonar, target motion analysis, Extended Kalman filter

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## MOVING TARGET FOLLOWING UTILIZING GPS HELPED SONOBUOY

Paper ID - 188

A paper presented by:T.Vaishnavi Chandra, S.KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

In submerged condition, Sonobuoy gets target data as acoustic vitality and procedure the information to get range and bearing estimations. Stretched out Kalman channel is utilized to process these clamour debased estimations. This data about target movement parameters is imparted to the plane by methods for a ultra-high recurrence connection and plane discharges the weapon on to the objective. Results acquired in recreation are exhibited.

Keywords: Global positioning system, sonobuoy, target motion analysis, stochastic processing, statistical stochastic

processing

Global positioning system, sonobuoy, target motion analysis, stochastic processing, statistical stochastic

processing

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## IDENTIFICATION OF IONOSPHERIC ANOMALIES DURING INTENSE SPACE WEATHER OVER A LOW-SCOPE GNSS STATION

#### Paper ID - 189

A paper presented by:Sivavaraprasad G, D.Venkata Ratnam, Sree Padmaja R, Sharvani V, Saiteja G, Mounika, YSR, Babu Sree Harsha P

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

The operational accessibility of Global Navigation Satellite System is influenced by enormous scale abnormalities of the ionosphere. The space climate occasions incite a few exceptional inconsistencies and cause the non-direct conveyance of ionospheric electron thickness. Observing of ionospheric reactions because of outrageous space climate occasions assumes a key job in trans-ionospheric radio wave engendering. In the present investigation, a novel system dependent on wavelet change has been actualized for the examination and discovery of ionospheric inconsistencies during two extreme space climate occasions that happened in 2013. The examinations have been done utilizing the ionospheric discernible, Total Electron Content (TEC), got from the Global Positioning System (GPS) beneficiary situated at an Equatorial Ionization Anomaly locale, KL University, Guntur, India (Geographic Lat.16.37°N, Geographic Long. 80.37°E). The impacts of geomagnetic storms (Sym-H  $\leq$ -100 nT) on the annovances of ionospheric TEC have been explored. The calculation of Continuous wavelet change has been utilized to contemplate and portray the nearness of ionospheric peculiarities in the nearby time-scale plane. It can recognize spatial and fleeting subtleties of ionospheric peculiarity force during solid sun powered earthly and geophysical occasions. It is seen that during the principle period of the geomagnetic storm that happened during 17 March 2013, TEC improved by 7 TECU, while a concealment of 10 TECU in the GPS-TEC can be seen during the primary period of the 29 June 2013 tempest. The variety in the power of ionospheric TEC oddities during storm time has been identified and contrasted with the force of the space climate occasions estimated through sun oriented and geomagnetic lists (F10.7, Sym-H, IMF Bz and IEF Ey).

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### MULTISPECTRAL IMAGE FUSION UTILIZING INTEGRATED WAVELETS

#### Paper ID - 190

A paper presented by:D. Bhavana, V. Rajesh, CH. Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Combination of noticeable and IR pictures is expected to blend input pictures into a melded picture that is anticipated to be a higher instructive for human or machine sense when contrasted with any of the info pictures. Because of this preferred position, Image combination methods have indicated more noteworthy accomplishments in remote detecting, therapeutic imaging, and visual sense applications. True to form, traditional systems like straightforward averaging combination, select greatest, select least calculations shows debased execution. The ringing tone given inside in the combined picture can be turned aside utilizing wavelets with move invariant property. The proposed combination method requires sub-band disintegration utilizing 2D-Discrete Wavelet Transform (DWT) so as to hold both spatial and ghastly data. An ideal variation of the daubechies wavelet family has been favoured tentatively for improved combination results. The Daubechies wavelets family is utilized to separate the pictures into detail data and rough data. The detail data from one picture can be infused into another picture utilizing various procedures and distinctive combination rules. It has been reasoned that picture combination utilizing wavelets with more prominent degree of deterioration indicated unrivalled execution.

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# EXECUTION OF PLATEAU HISTOGRAM EQUALIZATION TECHNIQUE ON THERMAL IMAGES

### Paper ID - 191

A paper presented by:D. Bhavana, V. Rajesh, K. Kishore Kumar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

Contrast improvement is a significant stage in uncooled warm pictures as uncooled warm pictures are low-differentiate pictures. Histogram balance is the generally utilized strategy for differentiate improvement of pictures. Strategies/Statistical Analysis: The proposed strategy for differentiate upgrade depends on level histogram balance. It saves every one of the advantages of old-style histogram evening out however doesn't broaden the complexity of foundation enormously24. Level histogram evening out strategy is one of the complexity upgrade methods where the pels check is restricted to a beginning esteem characterized dependent on histogram properties. Discoveries: In looking at the aftereffects of proposed differentiate improvement framework, the picture has been essentially upgraded without upgrading the foundation dim levels and the commotion and, in this manner, expanding the brilliance safeguarding and collected a progressively common improvement. Applications/Improvements: The proposed strategy on warm pictures gives a decent upgrade, which is hard to accomplish with conventional Histogram adjustment method on warm pictures. The proposed calculation is tried on crude pictures, increase amended pictures, and Gain and Offset redressed pictures and accomplished good outcomes.

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## A NEW PIXEL LEVEL IMAGE FUSION METHOD DEPENDENT ON GENETIC ALGORITHM

## Paper ID - 192

A paper presented by:D. Bhavana, V. Rajesh

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

To propose another combination strategy for joining optical and IR pictures and approve the proposed method with the current procedures utilizing entropy as an assessing measure. Techniques/Statistical Analysis: In this paper we propose another pixel level combination strategy utilizing Continuous Genetic Algorithm (CGA) utilizing Heuristic crossover for proliferation. Discoveries: Pixel level Fusion strategies are computationally less perplexing and combine rapidly. The proposed methodology is applied on multispectral pictures which are utilized in applications like multispectral face acknowledgment, Medical imaging, Remote Sensing and so on. The proposed calculation requires less memory space and has less computational intricacy. End/Improvements: An expansion in the entropy of the combined picture demonstrates that there is an increment in the general data content. The proposed method is actualized on a lot of visual and warm pictures and an expansion in the entropy estimation of the melded picture is watched.

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#### IOT BASED HOME AUTOMATION UTILIZING FPGA

Paper ID - 193

A paper presented by:Azeem Mohammad Abdul, B. Murali Krishna, K.S.N. Murthy, Habibulla Khan, M. Yaswanth, G. Meghana and G.L. Madhumati Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Internet of Things (IOT) had numerous applications in a few spaces; it additionally walks into shrewd homes. Controlling machines with IOT can be effectively done utilizing Smart telephone through Android applications. Home mechanization is one of the significant in everyday applications. Because of hurried advancement in innovation, Wireless Fidelity (Wi-Fi) has carried progressive change than contrasted with Wired LAN correspondence. Existing remote specialized gadgets, for example, Bluetooth, ZigBee and NRF24L01 and so on are restricted to short run. IOT utilizes Wi-Fi to trade information remotely for enormous separations utilizing Internet. IOT module (ESP8266) is utilized to control the home modern machines in remote territories anyplace on the planet. Sequential Communication trades the information among FPGA and IOT module. Home apparatuses are controlled utilizing FPGA which gets directions in sequential correspondence from IOT Module through advanced cell application. Contrast with existing home computerization; IOT based home robotization can refresh gadget status with E-Mail alarms and furthermore in web with IP address which can be secret word secured. Because of its high accuracy and advanced mobile phone innovation helps for physically tested and senior residents.

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## DYNAMICALLY RECONFIGURABLE SMART TRAFFIC SYSTEM FOR ACCIDENT RESCUE OPERATION

Paper ID - 194

A paper presented by:B Rajitha, B. Murali Krishna, Sri Ram, Habibulla Khan, G.L. Madhumati

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Road mishaps are a significant reason for death and wounds causing inability all through the world in both the created and creating nations. Avoidance of mishap hushes up inconceivable however it tends to be decreased by appropriate plan and control. To improve the unwavering quality of open vehicle, this investigation proposes a Smart Traffic Control System (STCS). The principle idea of STCS is to control ongoing traffic stream by recognizing the crisis vehicle from different vehicles (green sign) at remote mishap area to reach so as to medical clinic with the assistance of Vibration Sense Message Alert System (VSMAS). In proposed framework, every vehicle incorporates VSMAS situated inside the vehicle which detects the vibrations past the limit level. At the point when the vehicle impacts, the data of remote area is refreshed to Emergency Service Centre (ESC). ESC associated with city traffic database consequently sends crisis vehicle to mishap spot. In the way of crisis vehicle from origin to clinic through remote mishap area, green sign and crisis signal are refreshed to limited traffic course. Traffic signal postponements of the intersections will be displayed dependent on crisis vehicle development constrained by ESC. RFID is appended to each traffic intersection for estimation of clog for smooth development of crisis vehicle. The model was inspected with different successions of contributions to research centrel which shows test results on Spartan3E FPGA.

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### SOIL PROPERTIES EVALUATION BASED ON GEOSPATIAL: A MODAL STUDY

### Paper ID - 195

A paper presented by:G. S. Sarma, SS. Asadi, S. Lakshmi Narayana Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

The dirt quality is standing out for the most recent few years due to the informal and spontaneous water system rehearses that are bringing a heap issue. Current industrialization practices, for example, synthetic enterprises and unpredictable utilization of manures in farming action containing dangerous substances add to the natural debasement. Such anthropogenic exercises constantly bring about the consumption of soil quality, decay of soil quality, pollution of drinking water and different wellbeing perils. Thus, there is have to examine in a thorough manner about the dirt quality issues in the catchment territory. The present examination is an endeavour made to dissect the physio-synthetic parameters and to create the Soil Quality Index. The dirt examples gathered at the foreordained areas are broke down for physio-compound parameters for the age of characteristic database. In view of the examination results spatial circulation maps of chosen soil quality parameters to be specific Bulk Density, Dampness content, Organic matter, C%, pH, EC, Ca, Mg, SO4, Nitrate, Phosphorus, Potassium and Texture are readied utilizing bend fitting strategy in GIS programming. The physio-substance investigation properties and calculation of SQI are useful in the gathering of soil tests into superb, great, poor, very poor and unfit. The spatial circulation of SQI produced in the present examination will be of a lot of utilization for the organizers in the administration and observing of land assets.

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## FORMATION OF WEB BASED DECISION SUPPORT INFORMATION SYSTEM FOR EVALUATION OF TOPOGRAPHIC CHARACTERISTICS USING REMOTE SENSING AND GIS AND VISUAL BASIC PROGRAMME.

### Paper ID - 196

A paper presented by:G. S. Sarma, SS. Asadi, S. Lakshmi Narayana Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The present examination is expected to set up the Topographical qualities small scale level getting ready for maintainable advancement of study region in this computerized topical map has arranged in particular, Land use/Land cover, Geomorphology, waste system, Transport organize, and so forth utilizing satellite symbolisms on ARC/INFO GIS stage. This comprises the spatial database and to make data framework for small scale level improvement. The examination is a piece of Nellore region. The present examination brought about data framework for small scale level arranging of normal assets with a degree to build up the further by giving the data vital about the assets. This framework is easy to use and numerous choices can be made by the client as per his decision. The Decision Support System created here can additionally fill in as a copy to other investigation regions.

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## EVALUATION OF HIGH GAIN 4X4 SQUARE PATCH ANTENNA ARRAY FOR WIRELESS APPLICATIONS

#### Paper ID - 197

A paper presented by: V. Appala Raju, B.T.P. Madhav, P. Raghavendra Rao, Amrit Mukherjee

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

To design a high increase square fix exhibit patch, that can be applied in the correspondence modules to improve the framework execution. The exhibit execution will rely upon the quantity of components, geometry of the cluster and weighting vector utilized in the plan. From exhibit factor, we focused on the gathering component of the cluster with solid capacity of geometry. Techniques/Analysis: Advanced cluster radio wires by and large utilize the planar structure for its various points of interest. In this way, a planar square fix 4X4 exhibit radio wire is proposed to work at 2.4 GHz (IEEE 802.11b) WLAN correspondence application in this paper. Quarter wave transformers are been utilized in the plan to accomplish impedance coordinating of 50 ohms. Discoveries: An impedance data transfer capacity of 20% is accomplished from the proposed structure. The proposed cluster patch is demonstrating acquire than 13 dB, productivity over 80% with great impedance coordinating and radiation qualities. Oddity/Improvement: Planar structure with basic structure is the oddity in this model. The improvement in the increase and directivity is opening the extra applications in the correspondence band and giving potential approaches to long separation correspondence.

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## DESIGN OF CMOS RF FRONT-END OF LOW NOISE AMPLIFIER FOR LTE SYSTEM APPLICATIONS INTEGRATING FPGAS

#### Paper ID - 198

A paper presented by:Mahesh Mudavath, K Hari Kishore, D Venkat Reddy Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

This investigation depicts a CMOS RF front end for long haul advancement framework applications in a TSMC 0.18im procedure, this work use Receiver Architecture including Source Inductive Degeneration LNA in concurring with LTE framework standard for the inside recurrence of 2.4GHz. The difficulties of circuit configuration depend on low power, low commotion figure and high increase. The most significant parameters of collector frontend circuit are Gain, commotion figure and linearity. The circuit displays a decent exchange off among low clamour, high increase and gives progressively switch confinement which is essential in LNA design. Complete recreation investigation of the circuit brings about focus recurrence of 2.4 GHz with 38.5 dB Voltage Gain, 2.2dB Noise Figure (NF), EP3 of-6.063dBm, 1 - dB Compression Point of-17.13dBm, 50 Q input impedance, 3dB Power Bandwidth of 450MHz, 11.2dB Power Gain (S21), High Reverse Isolation (S12) = 60 dB, Input Return Loss (Sn) =1 ldB, Power Dissipation of 2.7mW at 1.2V power supply.

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## DESIGN AND IMPLEMENTATION OF 8X8 MULTIPLIER UTILIZING 4-2 COMPRESSOR AND 5-2 COMPRESSOR

#### Paper ID - 199

A paper presented by:K Hari Kishore, K Akhil, G Viswanath, N Pavan Kumar Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

#### Abstract:

In this paper, an 8x8 multiplier is acknowledged by utilizing 4-2 and 5-2 blowers. Lowcontrol fast 4-2 blowers and 5-2 blowers are widely used for numerical acknowledge. Both the blower's circuits that is the 4-2 blower circuit and 5-2 blower circuit inside comprise of the rationale doors for example the XOR and XNOR entryways. 4-2 blower circuit has been planned uses a pristine fractional item decrease design that successively lessens the most extreme yield new style of number needs less assortment of MOSFET's contrasted with Wallace Tree Multipliers. The 4-2 blower utilized is made from rapid and comprises of rationale doors XOR and XNOR entryways and transmission entryway principally based electronic gadget. The customary postponement and exchanging vitality additionally called as power-defer item (PDP) is separated with the 5-2 blower implemented with 4-2 Compressors and keeping in mind that not blowers, and is prove to possess least deferral and PDP. Recreations are performed by abuse Xilinx ten.1 ISE.

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## A FPGA IMPLEMENTATION OF ON CHIP UART TESTING USING BIST TECHNIQUES

## Paper ID - 200

A paper presented by:P Bala Gopal, K Hari Kishore Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

A Universal Asynchronous Receiver Transmitter (UART) is typically executed for offbeat sequential correspondence, for the most part utilized for short separation interchanges. It permits full duplex sequential correspondence connect and is utilized in information correspondence and control framework. These days there is a necessity for on-chip testing to defeat the item disappointments. This paper focuses on the presentation of Built-in individual test (BIST) for UART to beat the over two limitations of testability and information honesty. The 8-piece UART with BIST module is coded in Verilog HDL and combined and reproduced utilizing Xilinx XST and actualized on SPARTAN 3E FPGA. Results show that this model dispenses with the requirement for costly analysers and subsequently it can lessen the advancement time and cost.

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## COMBINATION AND CHARACTERIZATION OF THIOL – CAPPED SILVER NANOPARTICLES AND THEIR IMPACT ON LIQUID CRYSTALS

### Paper ID - 20

A paper presented by:K. Sivaram, M.C. Rao, G. Giridhar, M. Tejaswi, B.T.P. Madhav, V.G.K.M. Pisipati, R.K.N.R. Manepalli Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Combination and portrayal of Liquid Crystalline p-n-decyloxy benzoic corrosive (100BA) compound with thiol-capped Ag nanoparticle scattering was done by substance decrease technique. The Polarizing Microscopy (POM), Differential Scanning Calorimeter (DSC) strategy are utilized to gauge the Glass change temperature (Tg) and dissolving temperature (Tm) of the readied tests. Spectroscopic strategies like X-beam Diffraction spectrometric examines (XRD), Scanning Electron Microscopic examinations (SEM), Ultra-Violet Visible (UV) spectroscopy, Fourier Transform Infra-Red Spectroscopy (FTIR) were additionally completed on to the examples. Textural conclusions of the integrated mixes are recorded by utilizing POM associated with a hot stage and camera. The outcomes demonstrated that the scattering of thiol-topped Ag nanoparticles in 100BA displayed NC stages as that of the unadulterated 100BA with decreased clearing temperature true to form. The request parameter is assessed from birefringence anisotropy information without considering any inside field model to fluid precious stone atom and with scattered thiol-topped Ag nanoparticles. It is discovered that the birefringence anisotropy just as orientational request parameter of 100BA expanded with scattered 1 wt% thiol-topped Ag nanoparticles.

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## ELECTRICAL CHARACTERISTICS OF DOUBLE GATE FINFET UNDER DIFFERENT MODES OF OPERATION

## Paper ID - 202

A paper presented by: Chandra K., Kishore K.H.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

CMOS scaling has given the improvement of VLSI industry for its scaling down of gadgets just as increment in the working velocity to the detriment of intensity dissemination. The three measurements of VLSI industry speed, zone and power are interlinked to one another to such an extent that one measurement must be undermined for another measurement to have better worth relying upon which specific application to be focused on. Further scaling of cmos is beyond the realm of imagination in light of material and procedure innovation limits. Due to second arrange impacts winning in CMOS analysts are searching for elective trade for CMOS which conquers the subsequent request impacts existing in CMOS scaling and give very less power dissemination. Presently a day's capacity dispersal is vital parameter due to scaling down of gadgets an element called transportability came in to picture where battery is fundamental necessity. The battery innovation has not advanced as much as the VLSI innovation as developed throughout the years which has left no alternative for the planners to structure the gadgets which expend less power and give more battery life which is the most essential prerequisite from client perspective. In such manner FINFET is seen as one of the correct substitute for CMOS to plan the applications which are focused to have low power postpone item. FINFET electrical qualities are plotted under various methods of activity and spillage flows are looked at for N-Type and P-type FINFETs, and inferred that back entryway biasing decreases spillage flows.

Keywords: FinFET, MOSFET, 32 nm Technology, Power, Speed

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## PREDICTION OF THEORETICAL LIMIT FOR TEST DATA COMPRESSION

Paper ID - 203

A paper presented by:Rooban S., Manimegalai R.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Decrease in time for testing high volume of test information can be practiced through test information pressure. The quantity of pins accessible in Automatic Testing Equipment (ATE) assumes a significant job in choosing the feasible pressure proportion. Number of stick constrains the greatest number of sweep chains stacking in parallel. One of the technique to defeat this stick impediments and to accomplish expanding pressure level is applying progressively number of sweep chains that diminishes the volume of test information which should be encoded in the pool of test vectors. In any case, sequentially applying more experiments expands the testing cost. This expanded test cost invalidates every one of the advantages of the accomplished test information pressure. In this paper, a Probability based Entropy Dependent Predictive Technique (PEDPT) for imagining the most amazingly worthy information pressure and the testing cost of a given sweep configuration, is proposed. This will allow the planner to pick suitable system dependent on structure contemplations, the information accessible, computational eccentrics and the accomplished pressure rate.

**Keywords:** Circuit faults, Entropy, Testing, Testdatacompression, Encoding, Pins, Faultsdiagnosis

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## PERFORMANCE ANALYSIS OF 6TRANSISTOR SINGLE BIT ADDER ELEMENT

## Paper ID - 204

A paper presented by:Pavan Kumar K.V., Sravanthi G.L., Suresh Kumar N., Prabhakar V.S.V. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education

Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper encases a 2T MUX to lessen the transistor include in single piece snake component to 6. It utilizes HEP-1 device in MENTOR GRAPHICS to think about parameters like Power, deferral, PDP, and ADP with 8TEXOR, 8TMUX, 6T viper and so forth with 1.2V stockpile voltage in 130-nm innovation. The proposed one introduces an improvement of 51%, 98% in ADP and PDP individually when contrasted with the 8T MUX based Single piece snake component. Further, it stresses low control scattering and least postpone required to show the ideal rationale that is helpful in numerous convenient applications. Record Terms: single piece snake component, 8TMUX, 2TMUX, MUX Area Delay Product (ADP), Power Delay Product (PDP).

Keywords: 2T MUX, 8TEXOR, 8TMUX, (ADP), Power Delay Product (PDP).

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

### ICICMEAP-2017

## ISSN-2455-6300 November-2017, SPL ISSUE-11.1

## LOW POWER TESTABLE REVERSIBLE COMBINATIONAL CIRCUITS

Paper ID - 205

A paper presented by:Syamala Y., Tilak A.V.N., Srilakshmi K., Anil C.T. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Testable issue tolerant frameworks are turning out to be significant for low control hardware circuits. Because of progression of semiconductor producing innovation the prerequisites for Automatic Test gear (ATE) has impressively expanded. Therefore, one of the Design for Testability (DFT) strategies, for example, Built-In-Self-Test (BIST) is turning out to be basic piece of any fast low power VLSI plan. On the other hand, reversible rationale is one of the option in contrast to irreversible rationale as there is no loss of bit data from contribution to yield. A low control reversible BIST test design generator which gives test vectors to diminish exchanging action for minimization of intensity during testing is proposed in this paper. A gated clock conspire, one of the low control BIST systems is utilized to produce the test designs. The resultant reversible testable circuits can recognize any blunders that incorporate stuck-at, missing entryway, open and short blames for both sensible and physical acknowledge and deficiency inclusion is acquired for these circuits. The power utilization and power-postpone result of the structured circuits are seen as diminished in the scope of 35 to 90%.

**Keywords**: Circuit faults, Logic gates, Clocks, Testing, Integrated circuit modelling, Transistors Power demand

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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## MULTI-MODAL BIOMETRIC SYSTEM USING IRIS, FACE AND FINGERPRINT IMAGES FOR HIGH-SECURITY APPLICATION

## Paper ID - 206

A paper presented by: Tarannum A., Rahman M.D.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Biometric frameworks (BS) are typically utilized for person's acknowledgment depends on the organic characters of people, for example, ears, veins, marks, voices, composing styles, smells, steps, and so forth the Uni-model BS doesn't give better security and acknowledgment precision so the multi-model BS are presented, yet the multi-model BS comprise of certain downsides for example, intra class varieties, Spoof assaults, non-all inclusiveness, and uniqueness. To beat the disadvantages and improving the execution of Multi-model biometrics and future level combination based biometric. In this paper unique mark, iris and face natural characters dependent on exceptionally verified (utilizing Advanced Encryption Standard (AES)) FIF-AES-MM multi-model BS is presented. In this FIF-AES-MM framework, honing channel is utilized for picture upgrade which give proficient info picture to Confirmation. The Empirical Mode Decomposition (BEMD) and details extraction calculations are utilized for include esteem extraction. BEMD technique is utilized for Face and Irish component esteem extraction. Particulars extraction meteorology is utilized for unique mark Feature esteem extraction. The Feature level combination (FLF) approach is utilized for consolidating the highlights and Connection strategy is utilized for coordinating, at long last the FIF-AES-MM framework exhibitions are estimated. The execution parametric amount, for example, precision, execution time, mistake rate, Review (R), False negative (FN), False Positive (FP), Precision (P), True Positive (TP) and True Negative (TN). The FIF-AES-MM framework gives better exactness 90%, 80, and 70%.

**Keywords**: Advanced Encryption Standard, Biometric systems, Bi-dimensional Empirical Mode Decomposition, Feature level fusion and Minutiae.

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#### ICICMEAP-2017

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## HUMAN EMOTION DETECTION BASED ON FACIAL EXPRESSION USING CONVOLUTION NEURAL NETWORK

## Paper ID - 207

A paper presented by:Satyanarayana P., Madhar Khan P., Junez Riyaz S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Profound learning is an accomplishment inside the field of PC vision. This paper manages profound learning systems to see outward appearances that address human emotions. Face sentiments are the impressions of the inward feelings of a human. The human articulations assume a basic job in nonverbal correspondence. Our article manages eight standard sentiments joy, irate, trouble, dreading, amazing, nauseating, hatred and unbiased. different looks into have been performed, in seeming insightful PC vision which can see the human's propensity. The proposed work accomplishes improved execution model with less ages. To actualize this, productive calculations and methods are utilized while creating the model. In the preprocessing strategy, Histogram balance has been applied to the crude info pictures. Clump Normalization procedure is utilized in the proposed model for better learning rate. CK+ dataset is utilized for preparing and testing the model. To test the model continuously harr include based course classifier is utilized for identifying the face. the model was prepared on Google Colab with a GPU.

**Keywords:** Facial expressions, Facial Emotions, NonVerbal Communication, Face Detection, Convolutional Neural Network (CNN), Deep Learning.

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#### ICICMEAP-2017

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## GEOMETRIC WATER FILLING ALGORITHM FOR RESOURCE ALLOCATION IN COGNITIVE RADIO NETWORK

## Paper ID - 208

A paper presented by:Preetham C.S., Srikanth G., Kumar J.A., Harper S.S., Ashiq S., Sriram C.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Water filling calculation is a procedure of deciding adjustment techniques on directs in correspondence frameworks. This is a procedure of assigning capacity to the sub-channels relying upon the measure of commotion in that channel by a technique for filling water in a vessel. In various structuring issues, water-filling assumes a significant job in radio asset distribution (RRA). For correspondences, it begins from a class of the issues of expanding the mutual information between the info and the yield of a channel with parallel self-governing sub-channels. With water-filling, more power is assigned to the channels with higher augmentations to intensify the whole data rates or the limit of the considerable number of channels. For RRA, a champion among the most typical issues is to light up control designation using the Conventional water filling (CWF). We are additionally going to utilize Recursive water filling calculation to see its measure of wastage of intensity.

Keywords: RRA, CWF, intensity

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#### ICICMEAP-2017

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# DESIGN OF HOME AUTOMATION SYSTEM USING NODE MCU WITH THE IMPLEMENTATION OF IOT

## Paper ID - 209

A paper presented by:Sahiti V., Narayana Y.T., Reddy Y.N., Sridhar Y. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

With the appearance of innovation experienced by average folks brilliant home application have expanded on an enormous scale and have demonstrated to be helpful to work from their work place in any event, when crippled individuals and newborn children are deserted homes. Web Of Things (IOT) is an expansion to the field of implanted frameworks which empowers the client to work from a far away separation through a site page. Numerous analysts have created various topologies of Home Automation framework. Be that as it may, they demonstrated to be expensive. The present paper centers around building up a Home Automation System utilizing a straightforward NodeMCU

Keywords : NodeMCU, IOT,

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## DSR AND AODV COMPARISON CHARACTERISTICS FOR PATHING INSTRUCTIONS

## Paper ID - 210

A paper presented by: Mohan Rao K.R.R., Naga Kiranmai G., Vikas N., Murari A.S. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Best productive system framework has the choice of appropriate directing of the way and its convention. At versatile Adhoc Framework the picked Instructions educated to better similar to data transport and data decency. In this manner, the execution examination of the convention s is the critical walk before choosing explicit convention. Course advancement should be done with at any rate overhead and transmission limit utilization. In this paper, the execution examination is done on an Adhoc On-request Routing Vector and Dynamic Source Routing considering an arrangement of parameters.

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## BASED ON MODERN GNSS SIGNALS OBSERVED AT NORTHERN LOW LATITUDE STATION ANALYSIS OF FADING EFFECTS DUE TO IONOSPHERIC SCINTILLATIONS

## Paper ID - 211

A paper presented by:Sridhar M., Venkata Ratnam D., Uday Bhaskar T., Leela Prasanna A., Rohit B., Ramaraju A.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The significant danger to Global navigational framework's sign accessibility, precision, and handling is the sign blurring caused due to ionospheric glitters. In this paper the triple - recurrence information of GPS signal gathered at Koneru Lakshmaiah University, Guntur, India is prepared to break down the sign blurring attributes of GPS signal groups. Ionospheric glitter parameter known as blur span is determined utilizing GPS C/N0 estimations. It is seen that greatest blur term is around 90 sec. It is obvious that the L5 signal blurring force is low when contrasted with L1 and L2 signals. The result of this work would be valuable for creating between recurrence supporting calculations utilized in signal following and reacquisition in future GNSS beneficiaries.

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#### ICICMEAP-2017

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## FOR PHYSICALLY DISABLED USE OF ADVANCED MOTION TRACKING WITH MOBILITY ASSISTANCE

## 105 Paper ID - 212

A paper presented by:Satyanarayana P., Sai Prajwal K., Chandra Naga Varma T., Sri Manojna E., Sitara S.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In present-day situation, numerous individuals aren't ready to control controlled wheel seat utilizing different interfaces like joystick, head control or voice control. Therefore, another picture preparing based portability help framework is proposed in this paper consequently tracks the leg development of the helping individual and tails him appropriately. In expansion to this, an eye following component has been instilled into the proposed framework that would help the handicapped individual in controlling the development of wheel-seat utilizing eye development without a helping individual. The leg rackingmodule has been conceived utilizing the foundation subtraction and CamShift calculations while the eye-following module uses the Haar falls alongside the Daugman's calculation to follow the eyedevelopment.

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#### ICICMEAP-2017

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## FLOWER IMAGE SEGMENTATION: A COMPARISON BETWEEN MARKER CONTROLLED WATERSHED, WATERSHED EDGE WAVELET FUSION AND WATERSHED

## Paper ID - 213

A paper presented by:Inthiyaz S., Madhav B.T.P., Kishore Kumar P.V.V., Vamsi Krishna M., Sri Sai Ram Kumar M., Srikanth K., Arun Teja B.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstarct:

Watershed Transformation is one of the integral assets for picture division. Watershed change based division is for the most part alluded to marker-controlled division. This paper proposes another methodology of picture division that incorporates histogram levelling and picture smoothening strategies with the Prewitt or sobel edge discovery administrator. The outcomes when contrasted and the past strategy, shows this can accomplish increasingly exact portioned results and can lessen the over division impact

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#### ICICMEAP-2017

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## **CPW-FED NOTCH BAND TAPERED SLOT MIMO ANTENNA**

Paper ID - 214

A paper presented by:Lakshmi M.L.S.N.S., Madhav B.T.P., Khan H., Sai Sri Vasanthi N., Bamra A., Krishna G.V., Pavan Srikar N. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

A coplanar waveguide nourished indent band reception apparatus is proposed in this paper to score WLAN working band. A decreased step ground with indented round fix is utilized in the proposed antenna configuration to get score band attributes. Half wavelength cuts are presented inside the decreased opening ground and in the round fix separately. A FR4 substrate material is utilized to model the proposed model and estimated the S-Parameters on ZNB 20 vector arrange analyser. The altered model is scoring the band from 4GHz-7GHz in which WLAN working band is there. The proposed antenna has lower cross polarization with amazing impedance data transfer capacity in the working band.

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## MIMO TRANSMISSION IN LTE USING AN EFFICIENT POWER CONTROL DETECTION SCHEME

## Paper ID - 215

A paper presented by:Rentapalli V.R., Sowjanya B., Madhav B.T.P. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper authors proposed a proficient requesting plan for obstruction wiping out, which is resolved for numerous antenna frameworks utilizing transmission control. In view of this methodology, the fixed requesting calculation is first structured, for which the geometric mean is utilized for channel gain coverage. Simulation results shows that proposed requesting plans utilizing QR-decay require a decreased computational unpredictability results with improved blunder execution. In this article a diagram of intensity control in LTE uplink MIMO plans including collectors reasonable for uplink MIMO are additionally exhibited, and their connection exhibitions are looked at.

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## TRACKING AND SHAPE FEATURES USING FIS AND ANN FOR CONTINUOUS SIGN LANGUAGE RECOGNITION

## Paper ID - 216

A paper presented by:Prasad M.V.D., Anil Kumar D., Kishore P.V.V., Sastry A.S.C.S., Harini A., Raviteja K., Roja Sneha N., Ashok Reddy B. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Fuzzy and Neural Network based arrangement of consistent gesture based communication recordings with basic foundations prepared with cross breed highlights is the focal point of this work. Following and catching hand position vectors is the fine art of horn schunck optical stream calculation. Dynamic forms separate shape highlights from sign outlines in the video succession. The two most prevailing aspects of communication via gestures are joined to manufacture sign highlights. This element lattice is the preparation vector for Fuzzy Inference Engine (FIS) and Artificial Neural Networks (ANN). The classifiers are tried with 50 signs in a video grouping. Ten distinct endorsers made 50 signs. Various occurrences of FIS and ANN are tried with various mix of highlight vectors. The outcomes draw examinations among FIS and ANN classifiers for Continuous Sign Language. A word coordinating score (WMS) checks the presentation of the classifiers. A 90.8% normal coordinating score is accounted for FIS and 91.2% for ANN

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### LOW-POWER FLIP-FLOPS IMPLEMENTATION USING C-ELEMENT

Paper ID - 217

A paper presented by:Supriya M.V., Noorbasha F.

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstarct:

To support expressive accomplishment of computerized plans, although compressing the power use, satisfaction of double edge flip-slumps receivesfreshly forms into the objective of multitudinous investigation. Powerful low-control flip-flops gain locale total principal components net unexpected length of dramatic arranges succeeding perimeters/circuits. Individually conclude and impressive testing as long as their exploit, Q-Delay, Path of the Rise time, Path of the fall time and Normal Power Consumption. While Power uncover savvy successful tally with respect to transistors most recent thing zapping circuits, uncertainly we endure adjusting including conspiring comic number like transistors suspensefulthe each number of flip-flops. Investigation/request about static/stable circuits go on spent throughDual Data Rate (DDR) utilizing PTM CMOS-45nm Technology close by 5MHZ frequencies counting their victory operation. Sensational construction with respect to Dual Data Rate (DDR) Flip-Flop uses 30% fewercapacity/control, including 14% lower C-Q delay.

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#### ICICMEAP-2017

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## LOW POWER HIERARCHICAL CAM BASED RAM ON FPGA

Paper ID - 218

A paper presented by:Komal R.C., VenkateswaraRao M. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In the Wireless switches and system gadgets like server's CAM Content-Addressable Memories will be generally utilized as they have a decent transmission rate to move the information bundles. So the primary pretended by the CAM is it will effectively move the web bundles like drop and forward component. During such transmission CAM having a restrictions like more power utilization and less reconciliation thickness, alongside this CAM won't be available on the FPGA which will expand the use of system structure. So as to lessen the powerful utilization and to accomplish more reconciliation density,we proposed RAM based CAM in this paper. Presently a-days on current FPGA we can see bigger squares of RAM.

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## LIGHTER VERSION OF SKEIN CRYPTOGRAPHIC HASH FUNCTION DESIGN AND IMPLEMENTATION USING VERILOG HDL

### Paper ID - 219

A paper presented by:Mooragondi A.L., Senapati R.K., Yadlapti A. Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Secure Hashing set of rules-1 (SHA-1), made through National Institutes of Standards and Technology in 1993 is a hashing calculation that was utilized to supply message digest. In 2005, cryptanalysts decided assaults on SHA-1 proposing that the calculation may not be comfortable adequate for progressing use. The downsides of SHA-1 outcome in creation of new calculation, SHA-2 which had over the top phase of insurance. One of the disadvantages of this calculation turns into no longer likeminded with running frameworks. In 2012, NIST played out a hash highlight resistance to choose a standard for the most recent SHA-3 cryptosystem of which skein was into one of the five finalists. This examination is pointed towards actualizing "Lighter adaptation of Skein" which depends on the skein hash work in Verilog and its FPGA reenactment utilizing the Xilinx Virtex 7. The plan for both encryption and unscrambling of lighter rendition of skein has been talked about in this investigation. The added substances, it utilizes are threefish square figure and the remarkable square emphasis. The general execution properties of lighter adaptation of skein are talked about underneath. The rule objective is to analyze and look at the inertness, throughput and deferral of lighter adaptation of skein with skein-256 and different other customary square figures and cryptosystems.

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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## TARGET TRACKING IN AUTONOMOUS UNDERWATER VEHICLE.

Paper ID - 220

A paper presented by:M. Kavitha Lakshmi, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The main goal of this research work is to use Autonomous Underwater Vehicle (AUV) to inspect the direction of the underwater objective in active mode. AUV measurements of distance, bearing and elevation are used to calculate the target direction using estimated range and velocity. Unscented Kalman Filter (UKF) is discussed in AUV for adaptive tracking of the aim using structured square innovation method. AUV releases the arm to the target once the target is available. According to the acceptance criterion, UKF calculates the target route with less than 30 course error and less than 1 m/s speed error and the results are satisfactory.

*Keywords:* Stochastic theory, Statistical signal processing, Applied statistics, Estimation theory.

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#### ICICMEAP-2017

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## USE OF UKF AND MGAEKF IN TARGET TRACKING ONLY FOR BEARINGS AND ELEVATION ANGLES.

## Paper ID - 221

A paper presented by:M. Kavitha Lakshmi, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The purpose of this research work is to monitor the target even if measurements of the range are not available. Measurements of bearing and elevation are used to assess the target direction. Modified angle-only extended Kalman filter (MGAEKF) and Unscented Kalman filter (UKF) are used to handle noise-corrupted measurements.to analyse the target motion. It is observed that the results are more accurate with UKF than that of MGAEKF.

*Keywords:* Stochastic theory, Statistical signal processing, Applied statistics, Estimation theory.

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## SUBMARINE TO SUBMARINE OWNERSHIP S-MANEUVER AUTOMATIC TARGET MONITORING

## Paper ID - 222

A paper presented by:V. Lakshmi Bharathi, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

This research effort is to investigate the passive mode movement of the target. Goal tracking is conducted using non-scented angle-only Kalman filter (UAKF) bearing and altitude measurements. UAKF is used to process the measurements contaminated by noise and to evaluate the target's direction. Ownership is maneuvered for early system observability and for quick solution. Specific computational modeling and simulation realization is carried out using UAKF.

**Keywords:** stochastic theory, statistical signal processing, applied statistics, estimation theory.

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### ICICMEAP-2017

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## TARGETING USE OF AERIAL VEHICLES UNMANNED.

Paper ID - 223

A paper presented by: T. Vaishnavi Chandra, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Research effort in this paper is to use Unmanned Aerial Vehicles (UAV) to monitor the target to get measurements of range, bearing and elevation. Unscented Kalman filter is used to handle the measurements that are distorted by noise. Through the personal communication system between UAV and the weapon guide station, this knowledge about range, bearing and elevation is transmitted to the weapons guide station. The results of mathematical modelling and simulation were discussed in detail.

**Keywords:** Stochastic theory, Statistical signal processing, Applied statistics, Estimation theory.

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### ICICMEAP-2017

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## PASSIVE TARGET MONITORING IN EW SETTING USING ESM MEASUREMENTS.

## Paper ID - 224

A paper presented by:B. Omkar Lakshmi Jagan, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In EM environment, It is suggested to monitor a target in passive mode using ESM framework in the EW context. Modified bearings-only extended Kalman filter with parameterized state vector is considered for quick convergence goal tracking. Accessible bearing measurements from the EW receiver were tested. Such measurements from the receiver are not in standard time intervals and must be configured depending on the target's antenna scan rate. The results of the two chosen scenarios and the simulation output of the algorithm are displayed.

Keywords- Electronic Warfare, Estimation Theory, Kalman Filter, Sonar.

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### ICICMEAP-2017

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## STUDY OF ELECTROENCEPHALOGRAMS WITH WAVELET CONVERSION AND STATISTICAL SIGNAL PROCESSING

## Paper ID - 225

A paper presented by:P. SasiKiran, Komali, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

EEG is the expression of electrical signals flowing in the cerebral cortex of the brain via synaptic experiences of neuron nerve cells. When many of the brain's nerve cells excite faster, the resulting activity contributes to seizure, which EEG can register. This paper introduces a new approach to use wavelet transformation technique and minimum standardization to identify the seizure events on the EEG data of human subjects. The EEG signals are evaluated based on their respective circumstances by executing the technique on five brain recording sets. Results showed a better comparison of EEG monitoring seizure and non-seizure sets using a simplified methodology.

Keywords: EEG, Brain's nerve.

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## INTEGRATED MULTI-PHASE LEVEL SETS WITH REVISED MARKER ENABLED HISTOPATHOLOGICAL IMAGES FOR BREAST CANCER SEGMENTATION

## Paper ID - 226

A paper presented by:RajyaLakshmi, S. KoteswaraRao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Early stage symptomatic detection of Breast Cancer (BC), helps radiologists and internists in their diagnosis to combat the mortality rate. Pre-processing and removal of false-positives used K-means clustering, Otsu's thresholding method and CLAH (Contrast Limited Adaptive Histogram) equalisation techniques. The nuclei are detected using Circular Hough Transform. Initially, nuclei extraction was achieved by following Marker Controlled Watershed Approach, but the tests are suffering from inhomogeneities of local severity. The model that incorporates Adaptive Structuring Item size Marker Enabled Watershed Approach with Novel Multi-Phase Level Sets is therefore proposed. Performance results have shown that the hybrid approach proposed is cheaper, more efficient and more reliable for BC tissue image segmentation useful in diagnosis.

**Keyword**: Breast Cancer, Adaptive Structuring Element's Size, Marker Controlled Watershed Approach, Novel Multi- Phase Level Sets, Biomedical Image Processing.

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## DEVELOPMENT OF AN ARTIFICIAL GROUND PLANE BASED ON ELECTROMAGNETIC BAND GAP

## Paper ID - 227

A paper presented by: Vasujadevi Midasala

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Communication systems are the most powerful things that lead the world through technology and electronics growth. These have expanded the origin of contact between any countries, individuals, etc. It is achieved through wireless communication. Communication's core is antenna. When our planet's population growth grows, this leads to an increase in digital, electronic device users that helps connect with each other. The rise in users in contact with a limited number of antennas triggers the terrible traffic. And essentially we should add multifrequency antennas to reduce this traffic. With the increase in number of antennas radiation and the electromagnetic interferences will be increased. Due to this the parameters like gain, efficiency, directivity etc will be nightmare in the field of communication. So in order to overcome these drawbacks in wireless communication a technique called Electromagnetic Band Gap (EBG) structures are introduced. EBG structure is a 3-D entity that provides the promising enhancement of any antenna's bandwidth in parameters such as gain, direction, efficiency and antenna. EBG is a system that positions the conductors with the substratum's electrical band gaps. Such devices are used as antenna patches to reduce noise interference and peak radiation due to the number of conducting elements and surface currents present in any of the micro strip antennas. To improve the performance of any of the low profile antennas, EBG structure is implemented in a single word. This EBG framework is planned using HFSS code. HFSS 15.0 is a software that automates the development of geometry, solution set-up and post-processing reports on 25 elements of the antenna. It helps to build a lot of simple antennas.

Keywords: EBG, HFSS, 3-D Object

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## CYBER SECURITY APPLICATION WITH ENERGY FINGERPRINTING

Paper ID - 228

A paper presented by: Vasujadevi Midasala

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The hyper-accelerated growth of "connected everything" that drives the Industrial Things Internet (IIoT) is not just about linking multitudes of disparate devices. It also deals with the data collected, analyzed and implemented across a wide range of applications. The protection of the devices that receive, assimilate is key to the IIoT theory and transmit data to other locations. The supersonic development of the concept of "connected everything" introduces new vulnerabilities faster than the security measures organizations can adopt. PFP Cyber Security is a technology that has established a unique approach to tackle the security issues faced by resource-constrained hardware platforms and the growth of threats to cyber security. The PFP engineering would classify what the device normally looks like as a "fingerprint." If a subsequent fingerprint is not matched, it may be an indication that something is wrong.

Keywords:- IIoT, PFP

## INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

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## A HYBRID FILTER DESIGNED TO REMOVE NOISE IN VIDEO APPLICATIONS USING POWER FINGER PRINTING

## Paper ID - 229

#### A paper presented by: Vasujadevi Midasala

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper introduces a hybrid three-dimensional filter to eliminate from color video sequences arbitrarily valued impulse noise. To order to avoid blurring of images, the shifting median technique is used to shield noise-free isolated pixels from filtering. Brightness information obtained from median filtering and chromaticity information is used to restore noisy pixels Is obtained by filtering the directional function. This hybrid filter is used in a three-dimensional sliding window where spatial as well as temporal neighborhood information is available under consideration to restore the frame. Just noise-free3-dimensional sliding window pixels are used to restore the image. Results of simulation show that the proposed three-dimensional hybrid filter provides superior performance compared to other methods of filtering.

**Keywords**: Color video filtering, Impulse detector, Random valued impulse noise, Median filtering, Vector directional filtering

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## SCHIFF BASE CRYSTALLINE LIQUID COMPOUNDS WITH DISPERSED CITRATE GOLD NANOPARTICLES— OPTICAL AND TEXTURAL ANALYSIS.

## Paper ID - 230

A paper presented by:Tejaswi, M., Rao, M.C., Manepalli, R.K.N.R., Madhav, B.T.P., Pardhasaradhi, P., Giridhar, G., Pandian, K., Pisipati, V.G.K.M Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this paper, 20 µl citrate capped Gold (Au)nanoparticles are dispersed in Schiff base Liquid Crystalline compounds 6O.Om (m= 7 and 9) and characterizations were carried out to detect changes in Liquid Crystalline compounds with dispersion of nanoparticles. The method of Polarizing Microscopy (POM) is used to measure the temperatures of the phase transition. Differential Calorimetry Scanning (DSC) is used to determine the temperatures of transition and enthalpy. Scanning Electron Microscopy (SEM) provides further characterization. With the dispersion of citrate-capped Aunanoparticles into Liquid Crystalline compounds, the nematic transition temperature is reduced by 1 oC. To determine the numerical parameters of the images and their transition temperatures, the image processing technique of textural analysis is also carried out.

Keywords: Liquid Crystal, POM, DSC, Nano-dispersion, SEM and Image processing.

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#### ICICMEAP-2017

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## APPLICATION OF WAVELETS FOR DENOISING AND DETECTING DISCONTINUITIES

## Paper ID - 231

A paper presented by:V. Suresh, Dr. S. Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Noise determination is an vital part of any sign processing assessment. It can have an impact on the output and create faults in the device. Wavelet transforms are used for comparing noise additives in signal and imaging processing. Discrete wavelets are greater appropriate for denoising. Methods/Analysis: In this work it has been proposed to use DWT having their successive methods including sign decomposition, threshold of coefficient and sign reconstruction. Discontinuities also are detected via wavelets. Findings: Synthetic indicators have been generated the usage of MATLAB simulation. Attempt has been to reduce the noise in diverse instances using wavelet analysis. Corresponding results of LPF and HPF were considered. Novelty/Improvement: Further paintings can be done by way of prolonged the procedure to higher range of filtering operations.

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# UNDERWATER TARGET TRACKING TECHNIQUES BY BAR-SHALOM & FORTMANN'S INPUT ESTIMATION

## Paper ID - 232

A paper presented by:B. Omkar Lakshmi Jagan, Dr. S. Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The Extended Kalman Filter (EKF) the use of range and bearing measurements is analysed for undersea goal monitoring. The Input estimation method developed by Bar-Shalom and Fortmann for radar programs is carried out for sonar packages. Methods/Statistical Analysis: Input estimation is used to estimate the target acceleration on every occasion the target makes a maneuver. Findings: The set of rules estimates target kinematics the usage of 0 suggest chi-square disbursed random collection residual. Upon detection of target applicatyion, this algorithm corrects the velocity and position components using acceleration additives. Application/Improvements: Finally, the overall performance of this algorithm is evaluated in Monte-Carlo simulations and consequences conform the effectiveness of enter estimation method.

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## IMPROVEMENT OF KALMAN FILTER BY USING STATE SPACE TIME DOMAIN AR SIGNAL PROCESSING

## Paper ID - 233

A paper presented by:D. Rajitha, Dr. S. Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Stochastic technique had been completed useful in applications of sign and photograph processing in various programs. Kalman filters are examples of such processing in nation space time domain AR signals, AR method may be used as fashions of natural phenomena. Methods/Analysis: This paper explores the programs of Kalman filter AR sign processing the usage of LMS in second algorithm, convergence pace is studied. RLS algorithm guarantees rapid convergences. Findings: Predictor - connector algorithm is used for mathematical modeling estimation of steady or random regular having procedure clatter in AR process has been completed through discrete Kalman filter out. It is fashioned that where covariance and dimensions clatter are invariable, the assessment ever covariance and Kalman gain stabilized quick. These obstacles may be pre exercise session by means of walking to filter out offsize. Novelty/Improvement: Estimation of proper state via implement of discrete Kalman filter has proven that results are glad. Further extension can be executed to estimate different stochastic parameters.

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## APPLICATIONS OF GPS TEC DATA FOR EARTHQUAKE SIGNATURES BY UTILIZING BARTLETT AND WELCH METHODS

## Paper ID - 234

A paper presented by:Ch. Gowtham, Revati, Dr. S.Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Ionospheric general digital content perturbations for a catastrophic occasion took on seventeenth January 2014 in Indonesia are analyzed. Quake struck with a 4.7 on Richter scale. The natural calamity passed off at 3:34 hours Greenwich imply time i.E., at 9:04 hours local time. The vertical general electron content records on earthquake day is taken from the International Global Navigation Satellite System Service station, BAKO, Java, Indonesia. The variant inside the spectrum of indicators with and without disturbances in the obtained alerts is analyzed using Bartlett and Welch strategies. It is absolutely found that the seismic perturbations are identified the usage of each the methods.

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## PSEUDO LINEAR ESTIMATOR APPLICATIONS FOR TARGET TRACKING

## Paper ID - 235

A paper presented by:K.Lakshmi Prasanna, Dr. S. Koteswara Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Pseudo Linear Estimator (PLE) is advanced for energetic sonar applications. Methods/Statistical analysis: The PLE offers functions of Extended Kalman Filter (EKF). Findings: The results of PLE are as compared with that of EKF. The outcomes of MC simulation are offered for standard situations. Application/Improvements: In PLE, there is no need to initialize target kingdom vector and its covariance matrix with earlier (approximate) understanding and therefore its performance is found to be better than that of EKF.

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## ORIENTATIONAL ORDER AND POLARIZABILITIES PARAMETER IN N-(P-N-ETHOXYBENZYLIDENE)- P-N-ALKOXY ANILINES, 20.0M LC COMPOUNDS

## Paper ID - 236

A paper presented by:Putcha Srinivasa Sastry, Chintalapati Srinivas, Pokkunuri Pardhasaradhi, Venkata Gopala Krishna Murthy Pisipati Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

N.M, n.Om, nO.M and nO.Om compounds play an vital role within the essential and implemented as-pects. As a part of our systematic studies of the above homologous collection concerning the synthesis, characterization and section transition research, right here the authors report the polarizabilities and orientational order parameter, S in N-(p-nethoxybenzylidene)-p-n-alkoxy anilines, 20.0m with m = 3 to 10 liquid crystalline compounds except with m = 5 which has been already posted. The relaxation of the compounds exhibits the nematic LC phase besides with m = 10 which suggests the smectic-C section alongside the nematic segment that's initially no longer detected by means of Godzwon et al. But the author's observa-tions with TM and differential scanning calorimeter have proven the life on SmC phase in addi-tion to nematic segment. Further, SmC is clarified the use of the histogram approach whose information are given under and are posted elsewhere. The orientational order parameter, S is anticipated the use of special methods and as compared with the price acquired from birefringence,  $\delta n = (ne - no)$  wherein no field version is used. It is determined in those compounds case as in different LC compounds Vuks isotropic version is favoured compared to that of anisotropic version proposed by using Neugebauer.

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## APPLICATIONS OF EMPIRICAL MODE DECOMPOSITION METHODS FOR FAULT IDENTIFICATION IN NON-STATIONARY THERMAL WAVE IMAGING

## Paper ID - 237

A paper presented by:S.K.Subhani, B.Suresh and V.S.Ghali Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

This paper introduces a singular empirical mode decomposition based totally anomaly detection in Quadratic frequency modulated thermal wave imaging. Being suited for non-stationary sign evaluation, its aspect over different modern processing modalities in its anomaly detection functionality has been established using experimentation carried over a slight metallic specimen with embedded flat bottom holes. It also addresses the effect of size and depth on anomaly detection the use of the proposed method further to thinking about the signal to noise ratio of defects for detection.

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## APPLICATION OF STATISTICAL METHODS FOR ANALYSIS OF SUBSURFACE IN NONSTATIONARY THERMAL WAVE IMAGING

Paper ID - 238

A paper presented by:Harsha Vardan V, Raja Ram K, Naga Gopi K, A.Vijaya Lakshmi, and G.V.Subbarao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Infrared non-damaging testing uses captured surface temperature map over object floor to represent subsurface capabilities. This qualitative and quantitative evaluation of subsurface anomalies widened the scope applicability due to its entire discipline, noncontact, non-invasive testing modality similarly to its suitability for testing of various materials. Augmented by the supply of various processing and trying out methodologies it is gaining interest for floor and subsurface evaluation. This paper introduces a qualitative method for subsurface evaluation primarily based on a type the use of logistic regression and disorder depth quantification using a linear regressive model advanced for quadratic frequency modulated thermal wave imaging. The proposed methodology has been tested via experimentation carried over a carbon fiber strengthened plastic specimen with embedded flat bottom holes.

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## SUBSURFACE ANALYSIS WITH THE APPLICATION OF WAVELETS IN A NONSTATIONARY THERMAL WAVE IMAGING

## Paper ID - 239

A paper presented by: P.V.S. Saketh, P.Santhosh Kumar, Sk.Subhani, and G.V.Subbarao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Active infrared thermography uses temperature assessment over the object surface generated with the aid of distorted heat drift because of subsurface anomalies gift in the fabric. This paper affords a wavelet remodel primarily based evaluation for subsurface anomaly detection in recently introducedQuadratic frequency modulated thermal wave imaging for the subsurface evaluation specimen and compares it with the contemporary Fourier transform primarily based segment evaluation the usage of an experimentation carried over a carbon fiber strengthened plastic specimen with embedded flat backside holes.

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## BEARINGS-ONLY TARGETS TRACKING WITH THE APPLICATION OF MODIFIED POLAR KALMAN FILTER (MP-EKF)

## Paper ID - 240

A paper presented by: A.Jawahar, Dr.S.Koteswara Rao

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Background/Objectives: Surveillance is maximum important part of maritime surroundings. The goal wishes to be tracked within shortest viable time with low complexity and computational fee. Methods/Statistical Analysis: Modified Polar Extended Kalman Filter is nicely proper for bearing only target tracking. In this paper a mathematical modelling and Monte Carlo simulation has been achieved. Findings: It is determined out that MPEKF efficiently tracks the underwater goal. Therefore, it's far suitable estimation set of rules for bearings-simplest underwater passive goal tracking.

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## APPLICATION OF RANDOMIZED VERIFICATION ENVIRONMENT FOR VALIDATING ADVANCED EXTENSIBLE INTERFACE PROTOCOL

## Paper ID - 241

A paper presented by: Avinash Yadlapati, Hari Kishore Kakarla Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The intention of this exploration paper is to approve the Advanced Extensible Interface Bus Protocol using Randomized Verilog Environment. System on-Chip (SOC) design and verification has turned out to be greater complicated. Step by means of step instructions to verify a configuration has competently changed into a challenge. In this take a look at, how to develop the verification Environment of AXI the use of Verilog HDL and Randomization is supplied. The Design below Test (DUT) AXI bus is elaborated, accompanied by using a comprehensive analysis of the verification plan has been made according to the protocol. Integrated verification surroundings with Functional insurance and restrained arbitrary vectors era is completed. With this surroundings, extra coverage and minimized time spending verification has been achieved. AXI or the Advance Extensible Interface is a improvement of AMBA interface characterized inside the AMBA 3 specification. It is centered for excessive overall performance and excessive clock frequency gadget designs and includes qualities to make it suitable for fast sub-micron interconnects. AXI underpins a whole lot of capabilities which include separate deal with/manage and statistics phases, preserving up unaligned records transfers using byte strobes, burst primarily based transactions through scarcely begin deal with issued, issuing of numerous addresses without of order response and easy including of sign up ranges to give timing closure.

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## APPLICATION OF LEDIR METHODS FOR HOLE DETECTION AND HOLE HEALING IN A WIRELESS SENSORS NETWORKS

## Paper ID - 242

A paper presented by:K. Rama Krishna, K. R. R. Mohan Rao Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

To monitor and manage the whole area of a Wireless Sensor Network (WSN) with none insurance holes that impair the sensor node functionalities. Methodology: We advise an exhaustive association, which operates in stages, hole detection and hollow recovery. We layout our device primarily based on Least-Disruptive topology Repair (LeDiR) algorithm. LeDiR scheme complements the conventional and the extant direction discovery strategies within the network, easing the tasks of hole detection and hollow healing. Finding/Improvements: We enforce our machine in NS-2. Our proposed gadget implements LeDiR, efficiently controls the WSN of insurance holes and successful in enforcing hollow detection and hollow recovery. We additionally demonstrate that our scheme is a success in overcoming both the coverage holes and routing holes.

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## DESIGN OF RECONFIGURABLE WIRELESS SYSTEM FOR INPUT/OUTPUT PERIPHERAL SYSTEMS

### Paper ID - 243

A paper presented by:B. Murali Krishna, G. L. Madhumati, Habibulla Khan Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

Field Programmable Gate Arrays (FPGAs) are limitless via programs, but thankfully restrained with vicinity. FPGAs can be included to numerous fields like gadget-on-chip, communication, cryptography, sign and picture processing and so forth. Methods: The essential reason of this studies paper is to put into effect multiple packages on FPGA via interfacing with various peripherals like Universal Asynchronous Receiver Transmitter (UART), General-Purpose Input/Output (GPIO) and Digital Video Interface (DVI) - Video Graphics Array (VGA) using Partial Reconfiguration (PR). Findings: The UART peripheral is used for dual functions. First purpose is to exchange the programs dynamically using PR, and second motive serves a, design of N-bit adder and subtractor programs in serial conversation, GPIO's are used to design numerous Linear Feedback Shift Register (LFSR) techniques which are applicable in cryptography machine which generates random keys encrypted with message produces cipher can encrypt and decrypt information in wireless with ZigBee peripheral devices, and LFSR is used in Built-In-Self-Test to generate take a look at styles for a digital machine beneath check. Digital Video Interface peripheral is used to layout ZigBee primarily based wireless online game. A comparative evaluation is done among spartan, virtex5 and virtex6 architectures. It has been determined that virtex6 structure consumes fewer resources in assessment to Spartan and virtex5. Moreover, a wireless faraway manipulate is designed using ZigBee to offer the gaming manipulate to the person. Conclusion: Applications carried out the usage of various peripherals may be switched dynamically with loading partly configured bit streams in CF card to FPGA through providing instructions in serial conversation through MicroBlaze Processor.

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# MF-MB CANCELLATION DETECTION IN TRANSMISSION OF PHYSICAL LAYER NETWORK

## Paper ID - 244

A paper presented by:B. Suneela, E.V. Krishna Rao, K.Ch. Sri Kavya Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Today's Wireless networks have turn out to be increasingly customary to promise international digital connectivity, and wi-fi devices have quick developed into multimedia clever telephones, which run applications that demand excessive-pace information connections. MU-MIMO (Multi-User Multiple-Input-Multiple-Output) wireless method has obtained huge attention as a way to satisfy such demand by way of achieving excessive performance. In this paper take into account a Physical-layer Network Channel and proposed a much less trouble of MF-SIC (Multiple Feedback Successive Interference Cancellation) techniques with multi-department (MB) processing for attaining higher detection variety order. Additionally, LDPC (Low-Density Parity-Check) coded are used for making proper detection and performance at low complexities which might be used in the direction of getting rid of the inter-symbol interference, as well as spatial effects to massive size of put off spreads with MIMO channel. The experimental consequences display that those new detection systems extensively beat the preceding SIC receivers in addition to slight the singularity of propagation errors with low processing put off.

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## ANALYSIS OF LOW POWER LOW KICKBACK NOISE IN PACEMAKERS

Paper ID - 245

A paper presented by:N Bala Gopal, K Hari Kishore

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

The principle goal of this work is to investigate and examine the centrality of intensity scattering and kickback commotion in the structure of dynamic comparators utilized in cardiovascular pacemakers. Techniques/Statistics: In this paper a power and clamor effective dynamic comparators are intended for cardiovascular pacemakers dependent on regular dynamic comparators. Results/Findings: It is demonstrated that the double rail dynamic comparator experiences low kickback commotion however has more power scattering and the other way around if there should be an occurrence of adjusted dynamic comparator. From the outcomes it tends to be noticed that either power or kickback commotion can be limited at once. Application: Pacemakers are cardiovascular implantable restorative gadgets used to help up the pulse. For such gadgets low power utilization is imperative. Dynamic comparators are control hungry and basic leadership gadgets in pacemakers.

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## INFLUENCE OF BI3+ IONS ON THE AMPLIFICATION OF 1.3 MM EMISSION OF PR3+ IONS IN LEAD SILICATE GLASSES FOR THE APPLICATIONS IN SECOND TELECOM WINDOW COMMUNICATIONS

### Paper ID - 246

A paper presented by:B. Suresh, N. Purnachand, Ya. Zhydachevskii, M.G. Brik, M. Srinivasa Reddy, A. Suchocki, M. Piasecki, N. Veeraiah

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

### Abstract:

The essential target of this examination is to portray  $1G4 \rightarrow 3H5$  (1.3 µm, which is exceptionally significant in media communications) and furthermore  $3P0 \rightarrow 3F2$  (red discharge) otherworldly lines of Pr3+ particles in lead silicate glasses sharpened with bismuth particles. The force of these ghostly lines displayed enormous enhancement (about multiple times) because of co-doping with Bi3+ particles with fixed convergence of Pr3+ particles. A few radiative parameters, e.g., change probabilities (Aij), expanding proportions ( $\beta$ ), radiative life times ( $\tau$ ) and quantum efficiencies ( $\eta$ ) of these ghostly lines were assessed utilizing altered Judd-Ofelt hypothesis. These parameters displayed the maximal qualities when the glasses were codoped with the ideal convergence of Bi2O3 (5.0 mol%). The expanding populace of 3P0 and 1G4 degrees of Pr3+ particles (with the progressive increment of Bi2O3 focus up to 5.0 mol%) that caused the intensification of previously mentioned emanations happened: (I) because of the vitality move from  $3P1 \rightarrow 1S0$  outflow change of Bi3+ particles and (ii) because of the expanding nearness of Bi3+ particles in octahedral places that are anticipated to incite auxiliary deformities in the glass organize. The quantitative investigation of these outcomes together with the motor rate conditions recommended that the Pr3+ particles doped lead silicate glasses blended in with (about 5.0 mol%) Bi2O3 are profoundly effective in delivering serious 1.3  $\mu$ m (1G4  $\rightarrow$  3H5) thin discharge. Thus, it is inferred that the optical filaments drawn from the glasses of such pieces are profoundly helpful for the applications in the second telecom window.

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## REDUCTION OF KICKBACK NOISE IN LATCHED COMPARATORS FOR CARDIAC IMDS

## Paper ID - 247

A paper presented by:N. Bala Dastagiri\* and K. Hari Kishore Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Foundation/Objectives: The locked regenerative comparator is a basic square in all ADC models. It significantly experiences the non-idealities, for example, kickback clamor, warm commotion and counterbalance voltage. Particularly in an ADC actualized in Cardiac IMDs, the produced kickback clamor in hooked comparator can have any kind of effect to the precision, goals what's more, settling time to a degree. The fundamental goal of this work is to execute a strategy for kickback commotion decrease in hooked comparators. Techniques/Statistical Analysis: This work audits the different designs of hooked comparators actualized in Cardiac IMDs and furthermore make appraisal of the accessible answers for lessen the created kickback clamor in a hooked comparator. The accessible kickback commotion decrease systems are actualized in SR locked dynamic comparators and resultant discoveries are looked at. Discoveries: This brief proposes another answer for counterbalance the undesirable charge infusions in the comparator and in this manner diminishes the kickback commotion adequately. The proposed arrangement is actualized in the hooked comparator with SR lock and furthermore contrasted and the effectively accessible arrangements with respect to kickback clamor and power scattering. Application/Improvements: The proposed Kickback commotion decrease strategy diminishes the clamor to 40% more when contrasted and different methods and this system is relevant to the dynamic Comparators utilized in Cardiac IMDs

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## FPGA IMPLEMENTATION OF PARTIALLY RECONFIGURABLE DNA CRYPTOGRAPHY METHODS THROUGH WIRELESS USING ZIGBEE

### Paper ID - 248

A paper presented by:B. Murali Krishna, G. L. Madhumati, Habibulla Khan Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

Field Programmable Gate Arrays (FPGAs) are boundless by applications, however luckily restricted with region. FPGAs can be incorporated to different fields like framework on-chip, correspondence, cryptography, flag and picture handling and so on. The primary reason for this examination paper is to actualize numerous cryptography systems utilizing Partial Reconfiguration (PR) on FPGA. Fractional Reconfiguration is a procedure of changing a territory in FPGA without modifying different applications. The information will be scrambled and decoded in remote between handset through ZigBee correspondence. To pass on the data securely a few cryptography strategies are utilized. DNA gathering system is a bit of both encryption and data disguising using a couple of properties of Deoxyribonucleic Acid (DNA) groupings. It is featured that DNA groupings have a lot increasingly interesting properties which are utilized for covering of data. Three DNA methodologies utilized for information encryption and decoding are: Insertion, Complimentary Pair and the Substitution Strategy. Another DNA-MRNA-Protein technique was proposed dependent on DNA methodologies. In every procedure, a particular reference DNA grouping is picked and the message M is scrambled and a phony DNA arrangement S' is produced. S' is sent to the recipient and the recipient can perceive and unscramble the message M concealed in arrangement S'. A, C, G, and T are the four nucleotides which are considered in DNA arrangement to encode and unscramble the data. Asset Utilization of the proposed strategy, devours scarcely any assets contrasted and a few cryptography methods. Security level is improved in the proposed calculation, which was structured utilizing Verilog HDL, Synthesized and Simulated in Xilinx-ISE Simulator and results are tried on Spartan and Virtex FPGA models

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## IMAGE ENHANCEMENT OF NANO-DISPERSED N-(P-N-DECYLOXYBENZYLIDENE)-PN-HEXYLOXY ANILINE USING COMBINED UNSHARP MASKING

### Paper ID - 249

A paper presented by:B. T. P. Madhav, P. Pardhasaradhi, P. V. V. Kishore Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

The fundamental goal of the picture improvement is to process a picture with reasonable system to deliver better perceivability for a particular application. To recognize key highlights like progress temperatures, clear stage distinguishing proof in the fluid crystalline pictures, we require some novel picture preparing strategies. Characterisation and mesomorphic conduct in unadulterated and 1% ZnO nano-scattered fluid crystalline N-(p-n-decyloxybenzylidene)- p-n-hexyloxy anilines, 100.06 mixes are completed utilizing a polarizing magnifying lens and pictures are saved for upgrade. Both the mixes shows NACIG (nematic, smectic-A, smectic-C, smectic-I, smectic-G) stages and the change temperatures of the 1% ZnO nano-scattered 100.06 are diminished contrasted and unadulterated 100.06. Further, in this paper, a novel picture improvement procedure of consolidated unsharp veiling is proposed on unadulterated and 1% ZnO nano-scattered 100.06 fluid crystalline mixes for better perceivability of stages at change temperatures. The proposed strategy is utilized to distinguish the uniform locales and to identify the deformities which may not be plainly seen from the surfaces that are recorded by polarizing magnifying lens.

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## LINEARLY POLARIZED MICROSTRIP PLANAR FILTENNA FOR X AND KU BAND COMMUNICATION SYSTEMS

## Paper ID - 250

# A paper presented by:<u>B. T. P. Madhav</u><sup>\*</sup>, <u>G. Sai Gupta</u>, <u>M. Rahul</u>, <u>O. Krishna Lahari</u>, <u>M. Sameera</u>

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

Structure and investigation of a Planar filtenna to work in X and Ku band correspondence frameworks. Techniques/Analysis: The structure of the channel comprising of planar metallic structure on the top side and a deserted ground type structure on another side of the substrate. A substrate material is coordinated with vias at the base some portion of the planned structure. The reenactment consequences of the structured filtenna are conveyed with business electromagnetic instrument HFSS and all the filtenna radiation attributes are displayed in this work. Discoveries: A substrate coordinated waveguide channel is utilized in this model for RF channel choice just as a balun. The proposed filtenna involves a smaller component of 12x35.5x1.6 mm. Oddity/Improvement: Planar structures with substrate incorporated vias are going about as electromagnetic band hole structures in the present structure. The surface wave related misfortunes will be smothered with this novel structure. Microstrip line nourishing with 50 ohm impedance and simple incorporation are making this model appropriate for multiband correspondence applications.

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## INFLUENCE OF FE3O4 NANOPARTICLES DISPERSED IN LIQUID CRYSTALLINE COMPOUNDS: SPECTROSCOPIC CHARACTERIZATION

## Paper ID - 251

A paper presented by:J.Sivasri , M.C.Rao , G.Giridhar , B.T.P.Madhav , T.E.Divakar and R. K.N.R. Manepalli

Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract :

The blend is carried on fluid crystalline (LC)p-decyloxy benzoic corrosive (10OBA) and pundecyloxy benzoic corrosive (11OBA) with 0.5wt % and1wt% for Fe3O4 nanoparticles scattering. The readied tests are described by distinctive spectroscopic methods like X-beam diffraction (XRD), Scanning Electron Microscopy (SEM), Fourier Change Infra Red (FTIR) and Differential Scanning Calorimetry (DSC). Textural conclusions of the combined mixes are recorded by utilizing Polarizing Optical Microscope (POM) connected with a hot stage and camera. The outcomes show that the scattering of Fe3O4 nanoparticles in 10OBA and 11OBA displays NC stages as same as the unadulterated 10OBA and 11OBA with decreased clearing temperature true to form. Further, the nematic warm extend is expanded in both 10OBA and 11OBA with Fe3O4 nanoparticles scattering

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## PARASITIC STRIP LOADED RECONFIGURABLE MONOPOLE ANTENNA

Paper ID - 252

A paper presented by:D. Sreenivasa Rao, J. Lakshmi Narayana, B. T. P. Madhav Department of Electronics and Communication Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India.

## Abstract:

In this work a reduced S-molded monopole radio wire is intended to work in the wide band go from 7 to 16GHz. The S-molded transmitting component is partitioned into various sub squares and later microstrip parasitic strips are utilized to join the free squares. Various directions of strips and without strip stacked designs are analyzed in this work for tunable applications. The move in the middle resounding recurrence is retained from every one of these emphasess with the states of switch positions in ON and OFF modes and the outcomes are inspected with separate to working recurrence band. The proposed reception apparatus with all strips in ON condition is prototyped on FR4 substrate and tried on ZNB 20 VNA for approval.

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## PERFORMANCE ANALYSIS OF 33 KV POLYMER AND PORCELAIN INSULATORS UNDER VARIOUS POLLUTION CONDITIONS AT COSTAL REGIONS

### Paper ID - 253

**A paper presented by:**M. Sai Krishna Reddy, S. Ravi Teja Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

Pollution on the surface of insulator reduces reliability and quality of power system. Due to the pollutions contaminations on the surface of insulator leakage current will increase and break down voltage will decrease. In this paper, it is proposed to study experimentally the effect of different types of artificial pollutions on 33 kV outdoor porcelain and polymeric insulators for their performance at Indian coastal regions. The types of pollutants used are seasalt, cement and urea. The pollutions are made artificially and are sprayed on to the insulator according to IEC 60507. After spraying it was left for 24 hours completely to dry naturally. This process was repeated for seven days till a thick visible layer is formed on the surface of insulator. Electrical tests were performed to measure leakage current and breakdown voltage to predict the effect caused by pollution on the insulators. The experimental results proved that polymeric and porcelain insulators are greatly affected by salt and urea contamination compared to cement contamination. Due to water molecule reabsorbing property of urea maximum leakage currents are high in urea pollutions and salt pollution. It is also proved that compared to porcelain, polymer insulators has high breakdown strength.

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## PROTECTING MICROGRIDS BY OPTIMAL PLACEMENT OF PID-FCC USING HYBRID ABC-APSO ALGORITHM

## Paper ID - 254

A paper presented by:K. P. Prasad Rao<sup>1</sup>, SrinivasaVarma P<sup>2</sup> <sup>1</sup>Research Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Associate Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The penetration of Distributed Generations (DG) ensures the increase of demand for consistent, reasonable and spotless electricity facing with some design and operational challenges such as large fault current. Several active and passive methods have been suggested in the past to detect islanding with the placement of fault current limiter (FCL) to reduce fault current. Since they suffer from the large non-detection zone and a high cost due to the impedance of FCL. In order to overcome such issues we proposed a novel Proportional-Integral-Derivative Fault Current Controller (PID-FCC) which is placed optimally by using a Hybrid Artificial Bee Colony with Accelerated Particle Swarm Optimization algorithm (ABC-APSO) to limit the fault current in microgrids. The PID selects the optimal size of the FCC by means of its tuned parameters. The Experimental results shows that our proposed method optimally place the PID-FCC with reduced size.

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## STRATEGIC BIDDING OF IPP IN COMPETITIVE ELECTRICITY MARKETS BASED ON NOVEL HYBRID LUS-TLBO TECHNIQUE

## Paper ID - 255

A paper presented by: K. P. Prasad Rao, Y SrinivasaRaoP Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Strategic bidding is the key issue in the competitive electricity marketplace where the participants are Independent power producers (IPPs) or generating companies and the consumers purchasing power from this market. Now-a-days the powerful digital environment supports each market player to maximize its own profit with the help of available optimization techniques. This paper implements a novel hybrid optimization technique called as Local Uni-modal Sampling-Teaching Learning Based Optimization (LUS-TLBO) method to maximize the social welfare. In this paper both power producer side and large consumer side bidding has been considered in a dayahead marketplace. The IEEE-30 bus system is considered for the verification of the strength of the proposed novel method and found to provide excellent outputs when compared with the earlier results obtained using other optimization methods.

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## CURRENT CONTROLLED BRIDGELESS BUCK CONVERTER FOR POWER FACTOR CORRECTION IN PERMANENT MAGNET BRUSHLESS DC MOTOR DRIVE SYSTEMS

## Paper ID - 256

A paper presented by:Prashanth K Pulivarthi, SVS Surya Teja, M Surya Teja R Premsai P Padmalatha Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper presents a Bridgeless Buck converter for power factor correction in brushless motor drive connected power systems. Current control technique is used to control static switches in bridgeless Buck converter. Need of additional converter before brushless DC motor may create power system quality issues. This paper presents a Bridgeless Buck converter for power factor correction in brushless motor drive systems. Control strategy with Bridgeless Buck converter for power factor correction was tested for different conditions like different DC link voltages and step-change in DC link voltage. Results prove the applicability of control scheme for different conditions and power factor was shown along with total harmonic distortions in source current of the system.

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## FAULT MITIGATION ALGORITHM FOR DIODE CLAMPED MULTI-LEVEL INVERTER FED INDUCTION MOTOR DRIVE

## Paper ID - 257

**A paper presented by:**P Prashanth, K V Siva Reddy Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

Induction motor drive is one of the prominent motor drive that is extensively used in industries these days due to its enhanced nature in construction and performance wise. Induction motor is robust in construction and requires less maintenance which is very much suited in polluted environment like industries. Inverter fed induction motor operates with variable speeds with variable supply frequency and voltage produced from inverter. Multi-level inverter performs better than conventional inverter and this paper presents fault mitigation through a simple algorithm for diode clamped topology of multi-level inverter to pledge supply continuity to induction motor during faulty conditions in inverter. Asymmetrical PWM technique is used to control diode clamped inverter switches. Proposed work was developed using MATLAB/SIMULINK software and results were presented showing induction motor and inverter performance characteristics before fault, during fault and after fault mitigation conditions for switch open and short type of faults.

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## OPTIMIZATION OF MULTI-FUEL NON-CONVEX ECONOMIC-EMISSION DISPATCH IN THE PRESENCE OF GUPFC USING UDTPSO UNDER PRACTICAL CONSTRAINTS

## Paper ID - 258

A paper presented by:B. Jyothi, A. Pandian Department of EEE, K L University, Vaddeswaram, AP, India..

## Abstract:

The continuous increase in demand on a power system upturns the Flexible AC Transmission technology (FACTS) towards developing new devices. One of such multi-converter devices is Generalized Unified Power Flow Controller (GUPFC). This device has got more emphasis, as it has five or more degrees of freedom. The simultaneous control the voltage at the sending end and the active power flow through the lines to which the device is connected. In this paper, a detailed Power Injection Model (PIM) of two series converter GUPFC including converter switching losses is presented. Satisfying equality optimizes the multi-fuel non-convex cost function and multi-fuel emission objective functions, inequality and practical constraints and as well as device limits using the proposed Uniform Distributed Two-Stage Particle Swarm Optimization (UDTPSO). A non-dominated sorting methodology is implemented along with the proposed UDTPSO to solve the multi-objective optimization problem. The present objective functions are optimized in the presence of UPFC and GUPFC.

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## FAULT DETECTION OF SIX-PHASE TRANSMISSION LINES USING DISCRETE WAVELET TRANSFORM

## Paper ID - 259

**A paper presented by:**K V Siva Reddy, S. Ravi Teja Department of EEE, K L University, Vaddeswaram, AP, India..

### Abstract:

This paper discusses about the detection of faults in six-phase transmission line by using discrete wave let transform (DWT). Now a days power utilization is drastically increasing, so the need of enhancement in power transmission capability is inevitable. To support this situation sixphase transmission system is introduced. Which will increase the power transferring capability of the system with same right of way as 3Ø transmission lines. The major problem in six-phase transmission line is fault protection and detection. Here wave let transformer is used to detect the fault in six-phase transmission line based on the phase currents. The 100km test system is taken for analysis and simulation results are presented to the proposed concept.

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## 3DOF-PID CONTROLLER BASED AUTOMATIC GENERATION CONTROL USING TLBO ALGORITHM

### Paper ID - 260

**A paper presented by:**S V N L Lalitha, S. Ravi Teja Department of EEE, K L University, Vaddeswaram, AP, India..

## Abstract:

Here an unique controller termed as 3 degree of freedom proportional-integral derivative (3DOF-PID) controller is recommended for automatic generation control of a hybrid source power system. The scrutinized system includes a unified power system having two area where every area consists of three varieties of generating sources viz. a gas, hydro and a thermal unit. Teaching Learning Based Optimization (TLBO) technique is used to optimize the gain parameters of suggested 3 DOF-PID controllers. The optimization process is carried on by taking an error function (ITAE) as objective function with the application of a sudden load disruption of 0.01p.u. in area 1.The dynamic performance of the system is inspected by considering various time response specifications like peak undershoots, peak overshoots and settling time. Further the analysis is extended by placing a HVDC link between two areas. The analysis includes a comparative study between PID controller, 2DOF-PID controller and 3DOF-PID controller. During the examination of the responses, the obtained results are compared with a pre-published result so as to prove the dominance of the present work.

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## FINITE ELEMENT APPROACH TO MEASURE MAGNETIC LOSSES IN A 3-PHASE TRANSFORMER

## Paper ID - 261

A paper presented by:Nagi Reddy. B<sup>1</sup>, A. Pandian<sup>2</sup> <sup>1</sup>Research Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

This paper analyzes a three phase transformer for a laminated steel core of 30 MVA, frequency of 50Hz and winding of each limb is given with various voltage ratings. Finite element method of Maxwell 3D approach has been used to estimate value of total core losses. This method does not consider the effect of magnetic losses during manufacturing, in the laminated core. In the physical model simulation it includes flux crowding in the surroundings of an air gap, currents circulated in the core which generates a magnetic field that adds to core magnetic field. so the core losses from the simulated physical model are divergent than the tested losses. It is noticed that the magnitude of magnetic flux density of non linear behavior is measured by 3D Magnetic of ferromagnetic core and efficacy of results found to be satisfactory.

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## OPTIMAL LOCATION AND SIZING OF SVC USING GENETIC ALGORITHM TO FIND VOLTAGE SADDLE NODE POINTS FOR IMPROVING VOLTAGE STABILITY

## Paper ID - 262

A paper presented by:L. Sri Sivani<sup>1</sup>, Nagi Reddy B<sup>2</sup>, K. Subba Rao<sup>3</sup>, A. Pandian<sup>4</sup>
 <sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India.
 <sup>2</sup>Research Scholar, Department of EEE, K L University, Vaddeswaram, AP, India.
 <sup>3,4</sup>Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Due to socio economic and technical problems, there is a restriction in the installation of new transmission lines, sometimes it needs to install Flexible AC Transmission System (FACTS) devices in the power network. In power system network, it is necessary to supply quality and reliable power to the customers. In transmission lines, maximum transfer capability plays a key role in deciding network reliability. Usually, FACTS devices can be used to control the voltage, stability, power flow and security of transmission lines. The purpose of this paper is to analyse the most suitable location of Static VAR Compensator (SVC) and sizing of SVC to enhance the voltage profile using evolutionary technique like Genetic Algorithm (GA). The SVC can generate or absorbs reactive power very quickly to regulate the voltage magnitude at the point of location of SVC. In this paper, to investigate voltage saddle node points of IEEE 30 bus system using SVC for increase in load demand and loss of generation, the MATLAB program with MATPOWER was used.

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## A NOVEL ALGORITHM FOR IMPULSE NOISE REMOVAL USING B-SPLINES FOR FINGER PRINT FORENSIC IMAGES

## Paper ID - 263

A paper presented by:Dr. Pakkiraiah. B<sup>1</sup>, Paul Ratnakanth. Pallam<sup>2</sup> <sup>1</sup>Associate Professor, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In Forensic Image, the quality of a proper Biometric image Identification and Authentication Systems depends on its reliable and accuracy result. To get a noise-free fingerprint image, they are subjected to pre-processing and filtering tasks. In this paper, we propose a method which is faster and an efficient way to remove impulse noise and also we preserve the edges so that we obtain a finger print noise free image using B-Splines. The outputs are much better than the previously proposed linear, nonlinear filters methods both in terms of noise removal as well as edge preservation for forensic image.

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## PERFORMANCE OF MPPT IN PHOTOVOLTAIC SYSTEMS USING GAANN OPTIMIZATION SCHEME

## Paper ID - 264

A paper presented by: J. Rajesh Reddy, A. Pandian Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

Researchers all over the world are currently moving toward using solar energy resulting from large energy demand and sources of energy as well as the environmental problems, such as dynamic weather conditions. The control of maximum power point tracking (MPPT) meteorological conditions is an essential portion of improving solar power systems. In this paper, we introduce an elastic controller depend on artificial neural network for regulating the MPPT. This controller is employed to the buck–boost DC-to-DC converter using the MATLAB/Simulink software program. This paper proposes a design that maximizes the performance of GA-ANN scheme and compared with ANN scheme, efficiency of PV module is shown as well as the saving power for both schemes.

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## IMPROVEMENT OF POWER SYSTEM STABILITY WITH DUAL UPFC CONTROLLER BY HYBRID DEPSO TECHNIQUE

## Paper ID - 265

A paper presented by:Srikanth Goud. B<sup>1</sup>, B. Loveswara Rao<sup>2</sup> <sup>1</sup>Research Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

This work proposes application of dual controller for dynamic stability enhancement of power system, whose parameters are optimized by hybrid DE-PSO algorithm. Initially the system is under equilibrium condition then the mechanical prime mover power is raised by 10%. With this disturbance, performance of the proposed optimized controller is studied by PSO, DE and DE-PSO techniques. Eigen value analysis has been performed for all single and dual optimized controllers considering same disturbance. The results clearly show that dual DE-PSO controller has much better performance as compared to other single and dual controllers optimized by DE, PSO and DE-PSO algorithm in terms of oscillation peaks, maximum overshoot and settling time.

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## ESTIMATION AND CORRECTION OF CARRIER FREQUENCY OFFSET USING FFT AND 16-QAM IN MIMO-OFDM

### Paper ID - 266

A paper presented by:Potla Linga Reddy Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

OFDM have several attractive features which make it more advantageous for high speed data transmission over other data transmission techniques. These features includes High Spectral Efficiency, Robustness to channel fading, Immunity to impulse interference, Flexibility, Easy equalization. But in spite of these benefits there are some obstacles in using OFDM: OFDM signal exhibits very high Peak to Average Power Ratio (PAPR), Very sensitive to frequency errors (Tx. & Rx. offset), Inter-carrier Interference (ICI) between the subcarriers. OFDM is a Multi-carrier Modulation and muxing, and offers better data rates with improved quality for end users. During the transmission of high speed data, in order to avoid the problems which are caused by wireless environments i.e. fading problems cyclic prefix is inserted in transmitter section. The CP is removed at the receiver and before removing the CP first collects the RF signal from the CP and applied to a DC converter and Power generated and is used for Receiver operation. But unfortunately it's a time taking process for power conversion and include DC converter at the receiver section indirectly increase the complexity even though these two said conditions are satisfied, once power miss matching occurred, synchronizations errors are generated i.e Timing offset and Frequency offset errors because of this channel is corrupted so our main scope of the paper is how to estimate the errors and correct the errors in MIMO-OFDM.

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## A NOVEL ULTRA-WIDE BAND (UWB) ANTENNA WITH DUAL BAND NOTCH CHARACTERISTICS FOR SHORT DISTANCE WIRELESS TELECOMMUNICATION APPLICATIONS

## Paper ID - 267

A paper presented by:S Sowmya<sup>1</sup>, V K Sai Sri Vasthava<sup>2</sup>, T Vijay Muni<sup>3</sup> <sup>1,2</sup>UG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>3</sup>Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In this paper a novel, simple design, compact size, and low cost ultra- wide band (UWB) circular monopole micro strip patch antenna with dual band notch characteristics is presented. The first notch at WLAN (5.5GHz) frequency is achieved by the Double inverted Balloon shaped slot on the ground plane and the second notch at frequency (9.2GHz) is achieved due to a small slot on the patch. The proposed antenna is designed on FR4 substrate with size in mm. of Length 32, Width 52, and height 1.6. The antenna achieves the operational bandwidth from 3.1GHz to more than 10.6GHz which is used to increase the data transfer rate for short distance wireless telecommunication applications.

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## ECONOMIC LOAD DISPATCH USING PARTICLE SWARM OPTIMIZATION

Paper ID - 268

A paper presented by: Motaparthi Nagaraju, Malligunta Kiran Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The electrical engineering research is, of late, focusing attention on soft computing techniques using the evolutionary programming and fuzzy sets. The principal objective in usage of these new methods is to go for real-time analysis, operation and control of the systems exploiting their robust and resilient properties. This paper takes up the application of particle swarm optimization (PSO) to the classical economic load dispatch (ELD) problem. The values of cognitive and social parameters used in PSO are thoroughly examined for fast convergence to optimal point. The limits on generation powers and the loss coefficients are also considered.

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## ISLANDING DETECTION IN A MULTIPLE DISTRIBUTED GENERATION SYSTEM USING DECISION TREE

## Paper ID - 269

A paper presented by:Battini Prasanth Kumar<sup>1</sup>, M Srikanth<sup>2</sup> <sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Assoc. Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In this paper, a method for islanding detection based on analysis of transient state signals is provided. Decision tree (DT) is trained for classifying the transient events off-line and used to test in online for islanding detection. The required features for classification are extracted through discrete wavelet transform (DWT) of signals and reduced the total extracted features by FFS algorithm. The proposed method is then tested on Standard 39- bus system using MATLAB.

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## APPLICATION OF FUZZY-PIDF CONTROLLER FOR AUTOMATIC GENERATION CONTROL USING JAYA ALGORITHM

## Paper ID - 270

A paper presented by:Sunitha Kundurthi<sup>1</sup>, Surya Teja Padi<sup>2</sup>, Y Srinivasa Rao<sup>3</sup> <sup>1,2</sup>UG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>3</sup>Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India

## Abstract:

This work proposes a novel Fuzzy-PID controller with derivative filter for Automatic Generation Control of a two area unified power system. The factors of the Fuzzy PIDF controllers are tuned by a recently established novel optimization technique called JAYA algorithm. The dynamic performance of the system is tested by applying a step load perturbation of 0.01p.u.in area 1. Further the analysis is extended by applying random loading in area 1. The supremacy of the proposed Fuzzy PIDF controller is established in terms of settling time, maximum and minimum overshoots by comparing the results with some prepublished results like Fuzzy PID controller and conventional PID controller. The superiority of JAYA optimization technique over other optimization techniques has also been demonstrated.

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## STABILITY ENHANCEMENT OF MULTIMACHINE SYSTEM BY IMPROVED GWO OPTIMIZED UPFC BASED CONTROLLER

## Paper ID - 271

# A paper presented by:Vinay Kumar Mangalagiri<sup>1</sup>, Nikhil S. Gujar<sup>2</sup>, P. SrinivasaVarma<sup>3</sup>

<sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Research and Development, Electrical Research and Development Association, Vadodara, India.

<sup>3</sup>Assoc. Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In this work an improved Grey Wolf Optimizer(IGWO) technique is proposed for tuning parameters of UPFC based FACTS controller. This technique is very simple and can be used for other FACTS controllers also. The proposed technique is compared with standard PSO and DE techniques in terms of convergence curves, where the fitness minimization curve shows that, this technique is much superior as compared to other techniques. The controller is first applied to single machine system for a heavy loading condition to prove its ability. Then the controller is applied to multimachine system for complete validation. It has been found from convergence rate, settling time and peaks of oscillations that the proposed controller can damp the oscillation in power system much effectively and can enhance stability of power system to a large extent as compared to other techniques.

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# THE USE OF MULTI LAYERS PERCEPTRON TO CLASSIFY AND LOCATE POWER TRANSMISSION LINE FAULTS

# Paper ID - 272

A paper presented by: A J Sai Krishna<sup>1</sup>, J Somlal<sup>2</sup> <sup>1</sup>UG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>PROFESSOR, DEPARTMENT OF EEE, K L UNIVERSITY, VADDESWARAM, AP, INDIA

# Abstract:

This paper investigates the use of Multi layers perceptron (MLP) technique for locating and detecting faults in a power transmission line. MLP was used twice in this paper to locate and to detect faults. The experiments were conducted on a 600km length, three phase power transmission line data which include the required faults to detect and locate the fault. Matlab was used to perform the experiments. Results show that MLP achieved high prediction accuracy for fault type detection of 98% and a prediction accuracy of 78% for fault location.

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# A MULTI-OBJECTIVE FORMULATION FOR THE OPTIMAL SIZING AND LOCATION OF DISTRIBUTED GENERATION SYSTEMS BY PSO TECHNIQUE

## Paper ID - 273

A paper presented by:DinakarYeddu<sup>1</sup>, Sarada Kota<sup>2</sup>, Pakkiraiah Bhupanapati<sup>3</sup>
 <sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India.
 <sup>2,3</sup>Assoc. Professor, Department Of EEE, K L University, Vaddeswaram, AP, India

## Abstract:

Infrastructure to transmit power is under extreme stress due to a variety of reasons; capacity addition coupled with load growth has put tremendous pressure on the existing systems and spurred the need for new infrastructure. Maximizing the utilization of existing infrastructure is very essential especially in regard to transmission lines to relieve the system of congestion and to meet the demand. Reducing the transmission losses is one of the important strategies to relieve the system of congestion and to meet the demand. It is also imperative to maintain the system in a stable sate while operating it at its maximum permissible operation limits. Placement of DG serves the twin purpose of reducing the loss and the enhancement of the voltage profile of a system. In this research work, multi objective function is implemented for the best possible size and site of DG. The proposed function is optimized by utilizing the Particle swarm optimization (PSO) technique. This approach is authenticated using an IEEE 33 Bus system. Results obtained show suitability of the recommended approach in lessening the losses and improving the system voltage profile.

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# AN ANALYSIS OF TRANSIENT RESPONSE OF ISOLATED SMALL HYDROPOWER PLANT WITH APPLICATION OF CRPSO OPTIMIZED PID CONTROLLER

## Paper ID - 274

A paper presented by:Manchalla Harshini Bhargavi<sup>1</sup>, Jarupula Somlal<sup>2</sup> <sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Professor, Department of EEE, K L University, Vaddeswaram, AP, India

## Abstract:

Recent increase in load demand enforces the energy sectors to find the alternative resources because the conventional sources are not last long and resources are limited. Small Hydropower is a Renewable energy source, which plays a vital role to reshape the energy scenario of the world. It is also a pollution-free source of energy and very cost effective source. Our proposed paper is in the study of Small Hydropower Plant, its virtual modeling and working are analyzed using Craziness based PSO (CRPSO) algorithm with PID Controller. The simulation model is developed in MATLAB/SIMULINK environment to study the dynamic performance of the system.

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# OPTIMAL PLACEMENT AND SIZING OF DG IN A DISTRIBUTED GENERATION ENVIRONMENT WITH COMPARISON OF DIFFERENT TECHNIQUES

### Paper ID - 275

A paper presented by:Chandra Sekhar K Sarada Kota Jyothi B Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This area proposes about the optimal location for fixing fuel cells in a distribution system by an innovative technique. The innovation of this method is the combined performance of the Genetic Algorithm and Recurrent Neural Network (RNN) technique, thus integrating GA in two stages and RNN technique. The optimum placement of fuel cell is attained by the GA first stage. The RNN is suitably trained by the target fuel cell size and the corresponding inputs such as load variation and bus number. The main objective is helps to improve the bus voltage profile and the reduce the power loss. Thus, this technique is implemented in the MATLAB/simulink and its performance is analyzed by comparing different methods like GA, PSO and other hybrid PSO techniques. The comparison result is explicitly demonstrated the supremacy of this method and confirm its sterling potential to solve the problem.

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# GENERATOR REACTIVE POWER PRICING FOR PRACTICAL UTILITY SYSTEM USING POWER FLOW TRACING METHOD

## Paper ID - 276

A paper presented by:K. Umadevi<sup>1</sup>, S.V.N.L. Lalitha<sup>2</sup> <sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Professor, Department of EEE, K L University, Vaddeswaram, AP, India

## Abstract:

The shift from regulated to restructured power system results in an increased competition among the electricity market. In restructured power system, the separation of transmission services from generation and distribution makes it necessary to find the contribution of power from individual generator to individual load. The power flow tracing method is used to obtain the generator power output to a particular load. The reactive power has to be maintained in order to sustain the voltage level throughout the system for reliable and secure operation. Hence the reactive power cost allocation has become imperative in the power system. In this paper, the tracing method is integrated with the optimal reactive power dispatch problem to trace the generator minimal reactive power for sustaining the real power transaction and enhancing the system security by meeting the demand. The Differential Evolution is used for optimal reactive power dispatch. The cost allocation to the generators for the reactive power service based on the opportunity cost method is obtained for 62 Bus Indian Utility Systems.

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# ISSUES OF UNIT COMMITMENT AND LOAD SCHEDULING: A FUZZY DYNAMIC PROGRAMMING APPROACH

## Paper ID - 277

A paper presented by:P Srinivasa Varma Sarada Kota M Srikanth Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In India maximum power is generated from Thermal Generating Power Stations. Hence, it is necessary to reduce the generation cost. The discussion is carried out in view of the money saving, computational speed – up and expandability which can be achieved by using Fuzzy logic Controller. This Paper shows a use of the Fuzzy Logic to the issues of Unit Commitment and Load Scheduling with a specific end goal to discover generation scheduling to such an extent that the total generation cost can be optimum. In this paper, as a case study, Fuzzy dynamic programming based Economic Load Dispatch technique is proposed, implemented and tested by using MATLAB Environment to demonstrate the feasibility and advantages of using Fuzzy Logic Controller in Power System applications. Favorable position of this strategy is the capacity to enhance over a more prominent assortment of working conditions. The experimental results prove that the proposed method provides feasible solution with significant savings and valid for real time operations.

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# FPGA BASED POWER ANALYSIS AND CONTROL OF DISTRIBUTED GENERATION INTERFACE

## Paper ID - 278

**A paper presented by:**M. Sai Krishna Reddy, S. Ravi Teja Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Renewable energy is becoming economic in all markets as its rapid growth results in more competitive prices. A problem arises is how to assimilate these energy sources into a conventional power grid as to boost the performance and reliability of the new Distributed Generation (DG) system. This work provides the experimental evaluations of a power control by Field Programmable Gate Array (FPGA) circuit for single-phase grid-connected Voltage Source Inverter (VSI) for residential and commercial applications. New hardware architecture of Adaptive Linear Neural Networks (ADALINE) are accept the pursuit of algorithms of power control and also allowed the real time analysis of the high order harmonics without expanding the utilization area of the FPGA circuit. These features will provides active power rapidity and also for harmonics and reactive power compensation. The simulation and experimental results shows that the fixed and variable frequency schemes are evaluated using MATLAB/Simulink-Xilinx.

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# EVALUATION OF ORB-SLAM IN A DYNAMIC ENVIRONMENT USING AN RGB-D CAMERA

## Paper ID - 279

A paper presented by:Sk.Moulali, K. Siva Reddy Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

Simultaneous Localization and Mapping (SLAM) assumes that the environment is static. In a dynamic environment, the localization accuracy and map quality of SLAM may be degraded by moving objects. By removing these moving objects SLAM performance may improve. ORB-SLAM is a state-of-the-art SLAM algorithm that has shown good performance on several RGB-D datasets with a moving camera in static and dynamic environments. ORBSLAM is robust to moderate dynamic changes. However, ORB-SLAM has not been evaluated with a moving RGB-D camera and an object moving at a range of specific linear speeds. This paper evaluates the performance of ORB-SLAM with a moving RGB-D camera in a dynamic environment that includes an object moving at a range of specific linear speeds. A Vicon motion capture system is used for ground truth. Results from experiments indicate that a moving object at lower speeds, in the range tested, degrades the performance of ORB-SLAM improves.

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# SINGLE PHASE PQ THEORY BASED CONTROL OF ACTIVE POWER FILTER FOR POWER QUALITY ENHANCEMENT IN DG CONNECTED MICROGRID

### Paper ID - 280

A paper presented by: Y. RAMACHANDRA<sup>1</sup>, M.AKHILESHWAR<sup>2</sup>, A. PANDIAN<sup>3</sup> K.SUBBARAO<sup>4</sup>

<sup>1,2</sup>UG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>3,4</sup> Professor, Department of EEE, K L University, Vaddeswaram, AP, India

## Abstract:

The number of DG systems like Photovoltaic and Wind Energy Systems are now penetrating more into the conventional power system. In microgrids loads and generators are in closer vicinity. However, due to the unpredictable nature of non-conventional energy resources like wind and solar with varying loads, it is almost impossible to maintain an accurate power balance between the source and load. Furthermore, to compensate reactive power and harmonics of this AC microgrid and also to maintain a reasonable power quality, it is essential to use a stateof-the-art controller like shunt active power filter (Sh. APF). This research work is an effort in the same direction wherein the actual environmental data like solar irradiation and wind profile have been collected with the help of the weather monitoring system in BITS-Pilani Hyderabad Campus and this data has been used in conceiving and designing an AC microgrid of suitable capacity. The loads included in this system are both harmonic and reactive in nature. Finally, a Sh. APF with an appropriate control scheme has been incorporated in the proposed AC microgrid so that impeccable power quality is maintained at the load end, apart from achieving a good power balance.

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# OPTIMIZED PID CONTROLLER FOR BLDC MOTOR USING NATURE INSPIRED ALGORITHMS

# Paper ID - 281

**A paper presented by:** Y. Srinivasa Rao, P. SrinivasaVarma Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

The class of population algorithms for solving various problems of global optimization is often called as methods inspired by nature. Methods in this class are based on the modelling of intelligent behaviour of organized members of the population. The nature of this collective intelligence is found among the social insects, such as ants, bees and among some species of fish and birds. Population based algorithms have number of advantages over classical methods for solving complex optimization problems. This paper presents the comparison of population algorithms with classical methods of tuning PID control parameters for the control of speed of brushless direct current (BLDC) motor .The position of BLDC rotor here is determined by measuring the changes in the Back emf. Sensorless control method reduces the cost of motor as it does not need sensors to detect position of rotor. The BLDC is modelled in MATLAB/SIMULINK and trapezoidal back emf waveforms are modelled as a function of rotor position using matlab code. The proposed population algorithms are effective in tuning control parameters thereby reducing the time domain parameters like steady state error, settling time, rise time and peak overshoot. The population algorithms such as Particle swarm optimization (PSO) algorithm and bat algorithm (BA) based on effective objective function-Integral absolute error (IAE) are proposed for the optimal tuning of controller parameters. The results obtained from these algorithms are compared with the classical methods.

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# ANALYSIS OF A MULTI-UNIT HYDRO-THERMAL SYSTEM FOR AUTOMATIC GENERATION CONTROL USING FUZZY LOGIC CONTROLLER INTEGRATED WITH PID CONTROLLER

## Paper ID - 282

A paper presented by:Kiran Babu V<sup>1</sup>, SrinivasaVarma P<sup>2</sup> <sup>1</sup>Resaerch Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>ASSOC. PROFESSOR, DEPARTMENT OF EEE, K L UNIVERSITY, VADDESWARAM, AP, INDIA Pranati Das, Department of Electrical Engineering, Indira Gandhi Institute of Technology,Odisha, India

# Abstract:

In this research analysis Automatic generation control has been carried out on a multiunit hydro-thermal system by Fuzzy logic controller integrated with PID controller (FPID) tuned by Gravitational Search Algorithm (GSA). Here a multi-unit unified power system is used which comprises a hydro unit and a thermal unit with non-reheat turbine. The dynamic responses of this hydro-thermal system are experimented by considering two cases: with SLP of 1.5% in area 1 and by increasing system loading by 10%. Integral time absolute error (ITAE) has been taken as an evaluating function to get the finest values of FPID controller with a disturbance of 0.015p.u in area 1. For establishing the dominance of the implemented controller, the obtained results are compared with a pre-published journal result of PID controller. Numerous time domain parameters such as settling time, peak overshoots and peak undershoots are computed and compared with the pre-published results so as to show the superiority of the suggested controller.

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# EFFECT OF INTER-TURN FAULTS IN MODIFYING LINE-END COIL VOLTAGE WAVEFORMS PERTAINING TO LOW VOLTAGE RANDOM WOUND INDUCTION MOTORS

# Paper ID - 283

**A paper presented by:**RBR Prakash, Y Srinivasa Rao Department of EEE, K L University, Vaddeswaram, AP, India.

# Abstract:

Sinusoidal pulse width modulated pulses are used in adjustable speed drives for better efficiency. These pulses have high frequency components that propagate both along the coil and also in a traverse direction by capacitive coupling. End effect is a highly non-linear voltage distribution causing stress on inter-turn insulation. Such a stress tends to lower the insulation integrity in the motor. The mismatch between cables surge impedance and motor surge impedance causes a multiple reflection at the line-end coil and cable junction. Study have been made by computer simulation and verified by experiments. The patterns of disturbance in line-end coil voltage waveforms prove the presence of impending inter-turn faults.

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# LQR PI CONTROLLER WITH OPTIMAL SELECTION OF WEIGHT MATRICES FOR FIRST AND SECOND ORDER TIME DELAY PROCESS

# Paper ID - 284

A paper presented by:G Swapna, K Sarada Department of EEE, K L University, Vaddeswaram, AP, India.

# Abstract:

Time delays can limit and deteriorate the achievable system performance and induce instability to the system. PI controller gains should be selected carefully by considering the effects of time delay. The known tuning rules for conventional PI controller might cause immoderate overshoot and more settling time in the closed loop responses of FOPTD process. In this paper, to effectively control the FOPTD process, LQR PI controller is proposed. The selection of weight matrices is done by the skew-symmetric matrix based modified feedback gain matrix. The simulation is used for validated the proposed method. The proposed method is also extended to second order time delay process.

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# **OPTIMIZATION OF ENERGY STORAGE DEVICE IN PHOTO VOLTAIC SYSTEM**

# Paper ID - 285

A paper presented by:D Sudha, S Raja Sekhar Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper explores about the excellent scope of battery energy storage in a gridconnected Photo Voltaic (PV) system and optimizes the total annual operating cost of the system using Invasive Weed Optimization Algorithm. An energy flow decision problem of the system was implemented in the MATLAB to decrease the maintaining cost of the system. The PV system without the battery energy storage was much more favorable to adopt from the economical point of view, but not from the practicable point of view. Balance power developed from the PV cells can either be stored in a storage device or dispose to the grid, and power could be drawn through the grid if the Photo Voltaic production and battery discharging cannot meet the need. The main intention is to decrease the charge affiliated with total electricity investment by using the Metaheuristic techniques in parallel hitting the demand and decreasing the peak power purchase from the terminal.

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# A MODIFIED APPROACH FOR BLIND DEBLURRING OF COLOR MEDICAL IMAGE BASED ON ADMM

# Paper ID - 286

A paper presented by:D Narasimha Rao, G R S Naga Kumar, S Raja Sekhar Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract.

A competent and flexible tool to optimize inverse problems related to image reconstruction by restoration is Alternating Direction Method of Multipliers (ADMM) with the knowledge of known blur. This method is later modified to perform Blind Image De-blurring (BID) of unknown blur on original image by using some function of regularization. But, in real world for de-blurring, the prior knowledge of blurring filter is important. In this research work, estimates of the image and blurring operator are obtained by considering significant image edges. An ADMM iteration criterion forms the base for which whiteness measurement parameter estimation which includes auto-correlation, auto-covariance. Using these parameters best ISNR is taken as input resulting from the iterations. Different degradation conditions are considered in the analysis to estimate the performance and to bring a conclusion to the degradation and restoration pair by processing composite and component images of the input RGB-CT lung image.

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# SHUNT ACTIVE POWER FILTER CONNECTED TO MPPT BASED PHOTO VOLTAIC ARRAY FOR PQ ENHANCEMENT

## Paper ID - 287

A paper presented by:D Sudha Rani, G Swpna Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Due to increase of Non linear loads, maintaining Power Quality (PQ) became an important issue to Utility. Shunt Active Power Filters is one of the best Harmonics compensating devices. Day to day the demand of electrical energy is increasing leads to the more power generation. To generate pollution free energy the utilities are triggering on Renewable Energy. Solar Energy is best suitable source of energy to convert in to electrical energy. With the application of MPPT in PV array system helps to produce maximum energy under the variable conditions like environmental temperature and solar radiation. This Paper presents the operation of Shunt active power Filter along with MPPT based solar array system. During Day time the generated electrical power from solar array is connected to load through the SAPF and in night times the distribution system acts as utility to the load. In both cases the non-linear source current is compensated by SAPF and source current becomes harmonics free. Simulation and Hardware results are presented.

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# LOW COST DYNAMIC VOLTAGE RESTORER

Paper ID - 288

A paper presented by:D Sudha, S Raja Sekhar Department of EEE, K L University, Vaddeswaram, AP, India.

# Abstract:

In this paper reduced cost topology to trade-off voltage sags and swells is projected. Dynamic voltage restorer does not employ rectifier phase and DC capacitor but, deploys thyristors as control means thereby significantly lowering the cost. The framework is basic, disposing of the work of capable machine stages, incurring furthermore an esteem diminishment and constancy increment. To approve the reproduction models, relate exploratory control stage is utilized to judge the anticipated element voltage restorer.

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# ANTI SURGE CONTROL DESIGN FOR VARIABLE SPEED COMPRESSOR USING DYNAMIC SIMULATION

## Paper ID - 289

**A paper presented by:**D V N Ananth, S Rama Subbanna Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstrac:

This work on compressor anti-surge control closes some of the gaps related to the significant properties of control strategies. Anti-surge control is an important issue in operation of e.g. oil and gas processing plants. However, control strategies have not previously been studied thoroughly from a control theoretic viewpoint. Special attention is given to the input-output relationship between recycle valve opening and control variable when changing the compressor speed. The properties are then validated through simulations. The compression system is found to be open-loop stable for operating points along the surge control line. However, the behavior of control variable in different points is highly dependent on control strategy. A normalized control variable structure based on a operating point invariant to inlet conditions will perform similarly for a range of compressor speeds. The report also provide greater insight in the dynamics of the compression system, along with guidelines for strategy analysis and synthesis and controller tuning.

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# DISCRIMINATION OF MAGNETIC INRUSH CURRENT FROM FAULT CURRENT IN TRANSFORMER- A NEW APPROACH

## Paper ID - 290

A paper presented by: Yashasvi Tripathi KushagraMathur S.V.N.L. Lalitha M. Ramamoorthy Department of EEE, KL University, Green fields, Vaddeswaram, Dist.-Guntur, PIN- 522502, Andhra Pradesh, India

## Abstract:

It is a challenge for the power engineers all around the globe to find a fast and accurate method of discriminating magnetic inrush currents from fault currents in Power Transformers. Though the previously known inrush current detection techniques are able to do it but they are less reliable and slow to respond due to use of filter. A new approach of discriminating inrush current from fault current in a fast and precise manner is developed. Based on the asymmetry of inrush current waveform, a unique criteria for discrimination is established. MATLAB coding is developed to model a transformer for the analysis. Various switching instants on the supply voltage waveform have been considered at intervals of 900 from 00 to 3600 with different residual flux in magnetic core.

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#### ICICMEAP-2017

# ISSN-2455-6300 November-2017, SPL ISSUE-11.1

# **DESIGN OF LOW VOLTAGE PANEL**

Paper ID - 291

A paper presented by: K. V. Shiva Reddy, B. NavyaSree Asst. Professor, Department of EEE, KL University, AP, INDIA UG student, Department of EEE, KL University, AP, INDIA

## Abstract:

Low voltage (LV) panels are most common across all the industries and one of the more common special requirement which need to be designed in accordance with safety standards prevailing. An electrical panel is that the combination of protection and switch devices assembled in one or a lot of adjacent compartments. A panel is made by adding compartments as per the specified form of construction, that is termed "enclosure" (with support and mechanical protection functions for the various parts enclosed), and therefore the electrical instrumentality, represent by the equipment, the interior affiliations and therefore the incoming and outgoing feeders for the connection to the installation. This paper is mainly on the lv switch gears.

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# DUAL ACTIVE BRIDGE BASED BATTERY CHARGER FOR RENEWABLE ENERGY APPLICATIONS

# Paper ID - 292

**A paper presented by:**G R S Naga Kumar P Siva Sankar Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Energy storage is required along with the renewable energy sources to provide continuous power to the grid and to improve the dynamic performance of the system during extreme weather conditions. In this paper, a bi-directional battery charger based on Dual Active Bridge (DAB) suitable for Renewable energy applications is presented. The transformer used in the DAB provides isolation between the DC Link and the Battery. A phase shift control is used for the power control through the Battery charger. This paper explains the operation, control philosophy, and power flow through DAB during charging and discharging modes of operation. Simulation results are presented to explain the operation and dynamic performance of the system.

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# A COMPARATIVE STUDY AND EXPERIMENTAL INVESTIGATION OF CONTINUOUS AND DISCONTINUOUS PWM ALGORITHMS FOR VSI FED INDUCTION MOTOR DRIVE

## Paper ID - 293

A paper presented by: M N Chaitanya, D Seshi Reddy, D Narsimha Rao Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper investigates and compares various continuous and discontinuous Pulse width modulation algorithms for two-level three-phase voltage source Inverter. In SPWM, variable AC output voltage of inverter is produced by comparing a sinusoidal reference signal with triangular signal, where as Conventional SVPWM uses complex voltage vector for PWM control. It is observed that SVPWM algorithm makes it possible to the fundamental output voltage to increase 15.5% as compared with SPWM. More over Conventional SVPWM requires sector information and angle for calculating gating sequence of the inverter, a simplified SVPWM algorithm is also described, which does not require sector and angle calculation. However it is observed that continuous PWM algorithm gives more switching losses and high harmonic distortion at higher modulation index. This paper presents simplified discontinuous Pulse width modulation methods (DPWM) for two-level three-phase voltage source inverters. In the proposed DPWM a zero sequence signal is injected in sinusoidal reference signal to generate different modulators with easier implementation. The simulation and experimental results shows the superiority of this algorithm as compared with conventional PWM algorithms.

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# ENERGY SAVINGS USING VFDS IN A CENTRIFUGAL PUMPING SYSTEM

# Paper ID - 294

A paper presented by: M Srikanth, D Sudha Rani, D Narsimha Rao Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Energy is the fundamental need to perform any process in the world. Energy insufficiency is the major challenge endured all over the world till date. Pumping system contributes about 30 % of the currently installed utilities. Hence, by enhancing the pumping system energy efficiency, significant energy savings can be achieved. Also the affinity laws of centrifugal loads states reduction in speed by 50% causes reduction in power consumption up to 80%. In recent decades, Variable Frequency Drives (VFDs) are preferred to control the speed of the pumps.

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# REDUCED ORDER MODEL OF INDUCTION MOTOR IN SYNCHRONOUSLY ROTATING REFERENCE FRAME

# Paper ID - 295

# A paper presented by:S Palani Kumar, D Sudha Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

This paper gives information about the comparing of the fifth and third order model of induction machine and to give out the best suited model of the induction machines for the required application. The stability of these machines coupled with the inverters i.e three phase inverters are studied and the results are illustrated. Also by comparing various characteristic of the both models of machines. The model with much advantages are figured out and applied for the needs of users. These models are designed in the MATLAB environment and the results are simulated. The model comprises of inverter of three phase and the induction machine which is to be simulated in the MATLAB platform.

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# SIMULATION AND ANALYSIS OF MICROGRID POWER FLOW WITH DISTRIBUTED ENERGY RESOURCES USING MATLAB/SIMULINK

## Paper ID - 296

**A paper presented by:**S.V.N.L. Lalitha, M N Chaitanya Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Our world has witnessed a rapid transformation in the field of electrical generation, transmission and distribution. We have been constantly developing and upgrading our technology to make the system more economically efficient. Currently, we face an acute shortage of energy resources due to over consumption by the industries worldwide. This has compelled experts to look for alternatives to fossil fuels and other conventional sources of energy to produce energy in a more sustainable manner. The concept of Microgrid has gained popularity over the years and has become a common sight all over the world because of the ability of a Microgrid to provide power to a localized section without being dependent on conventional resources. This project focuses on development of such an AC hybrid Microgrid which receives power from DERs such as PV array alongside a Battery storage System and also uses a Emergency Diesel Generator System and an Online UPS system to provide power to pre-defined loads under different conditions. This paper focuses on the power flow to the loads under two main modes of operation- On Grid and Off Grid mode of operation and studies the Microgrid under different states as mentioned in the following pages. The fundamental objective of the paper is to design an efficient Microgrid model such that it can sustain the multiple loads simultaneously under all conditions.

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#### ICICMEAP-2017

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# SIMULATION DEVELOPMENT AND ANALYSIS OF A MICROGRID NETWORK TO DERIVE OPTIMUM SIZING OF A VOLTAGE SOURCE FOR A BESS

## Paper ID - 297

**A paper presented by:**P Linga Reddy, P Prasanth Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The main challenge in micro grid with Distributed Energy Resources (DER) is managing intermittent nature of renewable energy sources like solar and wind. This can be tackled by integrating, a Battery Energy Storage System (BESS) into the microgrid network. In general, a BESS is a grid-tied system and having fast power adjustment capability. But stand-alone BESS cannot operate in the absence of local Voltage Source (VS) as reference in the network. To ensure reliable operation of a microgrid system during utility grid outage or nonavailability of intermittent renewable energy sources, it is important to operate BESS with local VS and dispatch the stored energy. This paper discusses the analytical methodology that can be adopted for identifying the most suitable device which can act as a reference VS for the BESS, and provide the reference voltage and frequency in absence of the main grid. The outcome of this analysis identifies a suitable device as a local reference VS for the BESS and defines optimum sizing rulesbased on the network characteristics. In the event of grid outage, the BESS takes less than 1 sec to ramp up completely and start feeding loads. Thus, it is critical for the new reference VS to feed and secure non-sheddable loads on its own during that interval. A detailed Matlab/ Simulink simulation and analytical study was conducted and it was concluded that, an Uninterruptible Power Supply (UPS) with a 35-45% kVA size of that of the BESS and an overload capacity of 150-200% can be chosen as the reference VS for the BESS.

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#### ICICMEAP-2017

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# GENETIC ALGORITHM BASED MULTI-OBJECTIVE DESIGN OPTIMIZATION OF RADIAL FLUX PMBLDC MOTOR

## Paper ID - 298

A paper presented by:S.V.N.L. Lalitha, K Sarada, G Srinivasa Rao Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper presents Genetic Algorithm based multi-objective optimal design procedure of radial flux permanent magnet brushless DC (PMBLDC) motor. Three fitness functions are taken into consideration i.e. efficiency, weight and combination of both. The first two fitness functions are single-objective and the third one is multiobjective. Multi- objective function is combinational function which incorporates both efficiency and weight of the motor in to single fitness function. Motor design is optimized using these three functions separately. Air gap flux density (Bg), torque to rotor volume ratio (K*trv*), length of air gap (lg), aspect ratio (A*r*) and split ratio (S*r*) are selected as design variables. At the end, FEM (Finite Element Method) is used to validate optimized design obtained from the algorithm.

# INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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# ROTOR SIDE CONVERTER CONTROL OF GRID CONNECTED DFIG

Paper ID - 299

**A paper presented by:**M Saikrishna Reddy, S Ravi Teja Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This work presents control scheme for the rotor side converter (RSC) of a doubly fed induction generator (DFIG) connected to the electric power grid to capitalize upon the existing combined vector and direct power control (CVDPC) scheme. This is achieved by introducing space vector modulated (SVM) switching and consequent implementation of ANFIS controller. The resulting scheme, ANFIS-SVM-CVDPC is compared with CVDPC and the performance and control effectiveness of both the schemes is analyzed by simulation in terms of Dc link voltage, rotor speed, active and reactive power generation of the DFIG with respect to steady-state and variable wind conditions. Simulation using MATLAB/Simulink conducted on a grid-connected 9-MW DFIG-based wind farm and the consequent analysis confirm the improved performance of ANFIS-SVM-CVDPC over CVDPC.

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#### ICICMEAP-2017

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# DATA TRANSMISSION IN SHIPS BASED ON LIGHT FIDELITY

Paper ID - 300

A paper presented by:D Seshi Reddy, J Somlal Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Light Fidelity (LiFi) is a technology based on Visible Light Communication (VLC). VLC using the Light Emitting Diode (LED) will become an appealing alternative for the present radio frequency communication. In this paper we proposed a safe and cost efficient data transmission system in ships using VLC in the place of radio frequency communication and a repeater system using which the distance of transmission can be increased. LiFi uses rapid pulses for data transmission. The LEDs will transfer data in high intensity that it will be difficult for human eyes to follow. The proposed scheme will be an appealing solution for the wireless data transmission in ships in a safer manner, especially in oil tankers and chemical tankers. It will be cost efficient and high speed. The reliability of the system is much more than the present system. It could be extended to places such as hazardous zone, hospitals, radio frequency free zones, etc. The result shows that the data transmission is executed in the system with the LiFi transceiver.

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#### ICICMEAP-2017

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# COMPARATIVE ANALYSIS OF FUZZY AND PI CONTROLLER BASED TWO SWITCH BUCK-BOOST CONVERTER FOR POWER FACTOR CORRECTION

## Paper ID - 301

A paper presented by:K. V. Shiva Reddy<sup>1</sup>, B. NavyaSree<sup>2</sup> <sup>1</sup>Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>UG student, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The use of power electronic devices in the present scenario is not avoidable. But the power electronic devices cause low power factor in the input side during AC- DC conversion to drive the DC load. This article presents two switch buck- boost converter for correcting the input power factor. This two-switch buck boost converter not only improve the input factor but also satisfies the DC load. The average current control technique is used to control the two- switch buck boost converter to achieve the unity power factor at the input side. Compared to conventional dcdc converters, two- switch buck boost converter is more efficient because of low voltage stress across the switches. The performance of the converter is further enhanced by incorporating fuzzy logic controller and PI controller. At last, the proposed concept is validated by the MATLAB/SIMULINK software and the appropriate results are presented. The performance of fuzzy logic and PI controller are also presented.

# INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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# COMPARISON OF SYMMETRICAL AND ASYMMETRICAL CASCADED H-BRIDGE MULTILEVEL INVERTER

## Paper ID - 302

A paper presented by:K. V. S. Prasad<sup>1</sup>, N. Vinay Kumar<sup>2</sup> <sup>1</sup>Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>UG student, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper deals with the comparison of symmetrical and Asymmetrical cascaded H bridge Multilevel inverter. In this system the Symmetrical and Asymmetrical DC voltage source are designed and given input to the inverter. In Symmetrical Cascaded H Bridge Multilevel inverter (SCHBMLI) the DC voltage sources are same Vdc1=120 V and Vdc2=120V respectively. The output voltage of one block of Inverter is 5-level. Where as in the Asymmetrical Cascaded H bridge Multilevel inverter (ASCHBMLI) the DC voltage source are designed for two block of inverter, the DC voltage Source are Vdc1=60 V, Vdc2=120V, Vdc3=60V and Vdc4=120V respectively. The output voltage levels of two block of inverter is 13 level. Again the ASCHBMLI are designed with different voltage source, the voltage sources are Vdc1=9V, Vdc2=18V, Vdc3=63V and Vdc4=126V respectively. The output voltage levels of two block of inverter is 49 level. The low frequency Pulse width modulation technique is used for controlling the switches in the inverter. The Total harmonic distortion (THD) is analyzed in the system.

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#### ICICMEAP-2017

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# ENHANCEMENT OF ATC USING PSO BY INCORPORATING GENERALIZED UNIFIED POWER FLOW CONTROLLER

## Paper ID - 303

A paper presented by:G G Raja Sekhar<sup>1</sup>, V. Suresh Babu<sup>2</sup> <sup>1</sup>Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>UG student, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In the power industry the word deregulation means transforming the present form of the power market into another form so that better efficiency can be obtained by drawing private sector investments. The deregulated market is mainly concerned about the transmission pricing, congestion management and Available Transfer Capability (ATC). Among these interesting challenges ATC should be the one to be taken care for providing a solid open access transmission service. ATC can be improved either by using new transmission facilities or by using FACTS devices. This paper concerns about the FACTS device application, namely Generalized Unified Power flow Controller (GUPFC) to maximize the power transfer for a proposed transaction during normal circumstances. Particle Swarm Optimization (PSO) is used as an optimization tool for obtaining optimal control settings of GUPFC, so that the audacious job of establishing new transmission system can be prevented for enhancement of ATC. Studies on IEEE 6 bus and IEEE 30 bus test system are done to illustrate the results obtained in all the cases by the use of proposed method which are best.

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#### ICICMEAP-2017

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# ESTIMATION OF HARMONICS IN MICRO-GRID USING UNSCENTED KALMAN FILTER

### Paper ID - 304

A paper presented by:B Jyothi, T Teja Sreenu, K NarsimhaRaju, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper recounts adoption of Unscented Kalman Filter (UKF) in micro-grid for harmonics estimation. Vigorous application of nonlinear loads due to induction of emanating power electronics technologies leads to inject harmonics into the system and hence an assessment tool is needed for its estimation and elimination. This can be achieved by several algorithms such as KF(the Kalman Filter), EKF(the Extended Kalman Filter), AKF(the Adaptive Kalman Filter) etc. have come into focus. The estimation of phase, frequency, amplitude and contents of harmonics from a noisy signal can be done by using Extended Kalman Filter(EKF). But its performance regresses whenever a highly nonlinear signal is being considered as it suffers from uncertainty because of linearization and severe calculation of Jacobean matrices. On account of this, the paper suggests an Unscented Kalman Filter(UKF) to conquer the linearization and differentiation problem of EKF for dynamic tracking of harmonics in a Micro-grid. The selection of the micro-grid model and the parameters of UKF as well as the measurement error covariance matrices Q and R is done . The algorithm is applied to a selected micro-grid model and outcomes are studied in MATLAB/SIMULINK environment.

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#### ICICMEAP-2017

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# OPTIMAL PLACEMENT OF DISTRIBUTED GENERATION FOR IMPROVING VOLTAGE STABILITY AND POWER LOSS REDUCTION

## Paper ID - 305

A paper presented by:P Srinivasa Varma<sup>1</sup>, N. Nithya Sri<sup>2</sup> <sup>1</sup>Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>PG student, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Stability improvement and reduction of transmission losses in an interconnected power system has become a major concern. Distributed generations can be an efficient solution to today power system environmental and economic changes. Installing DGs influences power system stability and losses. Inspite of many advantages installation of DGs have been facing problem with coordination of existing protection component in the distribution network due to increased short circuit currents and may even effect voltage status and network losses. As DGs can increase or deteriorate power losses and voltage stability, the prior concern must be given to the placement of DGs by tracing of optimal location. In this paper, a method is presented for locating and sizing of DGs to enhance voltage stability point of view are determined using bifurcation analysis as the best locations to install DGs. vulnerable buses from voltage stability point of view are determined using bifurcation analysis are connected to the system and voltage profile is brought into the given permissible voltage security limits. Then, the global optimal size of DGs is determined employing the Dynamic Programming search method for IEEE 34 bus system with and without considering DG reactive limits.

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#### ICICMEAP-2017

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# COMPENSATION OF CURRENT HARMONICS IN PV-GRID SYSTEM USING FUZZY BASED APF CONTROLLER

# Paper ID - 306

# A paper presented by: B Pakkiraiah, T Vijay Muni, K NarsimhaRaju, Department of EEE, K L University, Vaddeswaram, AP, India.

# Abstract:

The main aim of this paper is to compensate a current harmonics in PV-APF system using Fuzzy Logic Controller. A 3-  $\Phi$  3-wire system is proposed in this paper which consists of PV system, a dc/dc converter which is controlled by MPPT, three phase VSC to act as APF and Non-Linear Load. The main theme of this INC MPPT is to efficiency from the PV system. For reliable performance of active power filter and better harmonic compensation this paper propose a concept of instantaneous power theory. Also, a comparison analysis is performed for improving THD by PI/Fuzzy controllers. This system is experimentally verified and tested using Simulink.

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# OPTIMUM LOCATION OF DISTRIBUTED GENERATOR IN DISTRIBUTION SYSTEM BY ADOPTING HARMONIC SEARCH ALGORITHM

# Paper ID - 307

# A paper presented by:S Ravi Teja, T Teja Sreenu, M Kirankumar Department of EEE, K L University, Vaddeswaram, AP, India.

# Abstract:

This paper gives problem of distributed generator(DG) in distribution network with desire of reducing active power loss and increasing profile voltage in distribution system. By recognize the optimum position for establishment of Distributed Generator units in a distribution grid using Sensitivity Analysis. For identifying optimum placement and size of DG by using Harmonic Search Algorithm (HSA). Stimulations has been trial on 33-bus, 69- bus permissible to confirm the suggested algorithm. The results are empowering.

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#### ICICMEAP-2017

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## ATC ENHANCEMENT USING REACTIVE POWER FLOWS AND FACTS DEVICES

#### Paper ID - 308

A paper presented by:K. V. S Prasad, D V N Ananth Asst. Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

In deregulated electric power system more concern is about customer satisfaction with their benefits. The power demand should be maintained in stability limits. To maintain the stability limits in network ATC is needed. Basically in the network, the methodologies for evaluation of Linear ATC will not consider transfer of reactive power effect. But in Enhancement of Linear ATC (ELATC) method of evaluation the reactive power flows in the network are considered. This paper also emphases on the assessment of effect of TCSC as FACTS device onenhancement of ATC by determining their optimal location through Sensitivity methods. The main contribution of paper is assessment of ATC and the FACTS devices optimal location for better reliability in system. The mockup 3 bus system is taken as case study for theoretical evaluation. The MATLAB program was developed and the simulation results are presented.

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#### ICICMEAP-2017

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#### ANALYSIS OF CAPACITOR VOLTAGE BALANCE IN MULTILEVEL INVERTER

Paper ID - 309

A paper presented by:VNSR.Murthy, A.Pandian Research Scholar, EEE Dept, KL University, Vijayawada Professor, EEE Dept, KL University, Vijayawada

#### Abstract:

A redundancy balancing technique for the five-level diode-clamped inverter is presented, which balances the four dc-link capacitor voltages at high modulation index and high power factor. The technique is based on dividing the vector space of the five-level inverter into six two-level vector spaces. Dwell times are calculated as for conventional two-level space vector modulation, and the switching sequence is determined depending on the four capacitor voltages, using a redundant state method. The proposed technique maintains link capacitor balance for high modulation indices, including over modulation, irrespective of the power factor. The proposed algorithm is validated by simulation and practically. The results obtained from the MATLAB/SIMULINK is tabulated to compare the total Harmonic Distortion(THD) for different modulation techniques.

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#### ICICMEAP-2017

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## IMPLEMENTATION OF ETHERNET BASED MONITORING AND CONTROLLING

#### Paper ID - 310

**A paper presented by:**S Ravi Teja, Sk Moulali, G G Raja Sekhar Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Currently most of the devices are not provided with network interface for transferring data through the network. As the embedded system it has the performance of network and human interaction ARM processor based Ethernet interface module is designed. Real time operating system RT Linux is ported into the processor Samsung S3C2440A and data can be transmitted between remote devices and host computer. Ethernet is connected between host and ARM processor and data can be transmitted through Ethernet. Monitoring is done by the PIR sensor, voice recognition unit, camera which captures the image when an object is sensed and detected with a particular voice word occurs. Processed data can be transmitted through Ethernet device module to the web server. Acquiring, monitoring data from a geographically distant place, and controlling which needs a human intervention can be made faster, reliable and less costly using the designed system. Embedded devices equipped with network makes it easier and powerful to monitor and control remote data, which is one of the major outcomes of the field of communication and networking technologies. ARM has the high performance Ethernet controller, the system communication and debugging are fast, real time and reliable. It also monitors online and diagnosis can be done immediately. It controls the multicore process as multithread process under RTOS.

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## FUZZY PEAK CURRENT CONTROLLED INTEGRATED PFC CONVERTER WITH SLOPE COMPENSATION

#### Paper ID - 311

**A paper presented by:**B Loveswara Rao, SVNL Lalitha Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Design and implementation of a fuzzy peak current controlled Integrated Power Factor Correction (PFC) Converter with slope compensation is presented in this paper. With the integrated topology reduces the number control switches. The proposed converter has the advantage of low bulk capacitor voltage and only single control switch hence reduce in complexity in control and cost. Sub-harmonic oscillations which are produced in peak current controller. By adding an external compensating signal effect of oscillations are reduced and performance of the converter is improved. The fuzzy controller (FLC) robust and effective than conventional linear controllers like P, PI, PID, hence in this work a (90 V – 230V), 50Hz AC input, 48V DC output and operating at 100 kHz switching frequency converter is implemented in MATLAB/Simulink software. Results shows that converter achieve high power factor and satisfies IEC-61000-3-2 and other European input current harmonic limits for class-C and Class-D applications.

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# DESIGN OF HYBRID RENEWABLE ENERGY SYSTEM WITH A CAPACITY OF 300KW BY USING MATLAB

### Paper ID - 312

**A paper presented by:**G. Srinivasa Rao, T. Vijay Muni Department of EEE, KLUniversity, Vaddeswaram, Guntur, India.

### Abstract:

On earth, power consumption is rapidly increasing day by day and the non-renewable energy sources are decreasing. So people are researching on renewable energy sources (wind, solar, hydro...).Govt. want to provide reliable power to customer. Power consuming in India possessed fourth place and in generation third place in world. In our project solar and wind sources are taken for hybrid system. Here 20% is power produced from wind and 80% from solar. Off grid 300kw of power is generated by solar and wind energy resources. voltage and current waveforms are observed by MATLAB Simulation.

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## FUZZY LPCM CONTROLLED BUCK INTEGRATED PFC CONVERTER FOR CLASS-C&D APPLIANCES

### Paper ID - 313

**A paper presented by:**D Kalyan, P Siva Sanka, J Somlal Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Design and implementation of a fuzzy linear peak current mode (LPCM) controlled Buck Integrated Power Factor Correction (PFC) Converter is presented in this work. The converter has the advantage of low bulk capacitor voltage and only single control switch hence reduce in complexity in control and cost. Sub-harmonic oscillations which are produced in peak current controller. By adding an external compensating ramp signal effect of oscillations are reduced and performance of the converter is improved. The fuzzy controller (FLC) robust and effective than conventional linear controllers like P, PI, PID, hence in this work a (90 V – 230V), 50Hz AC source, 48V DC and operating at 100 kHz switching frequency converter is implemented in MATLAB/Simulink software and results are verified experimentally. Results shows that converter meets IEC-61000-3-2 and other European input current harmonic limits for class-C&D applications.

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#### ICICMEAP-2017

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## POWER FACTOR CORRECTION OF SRM DRIVE WITH CUK CONVERTER FOR AIR CONDITIONING APPLICATION

### Paper ID - 314

A paper presented by:Malligunta.kiran kumar, Paleti.Gangadhar Electrical and Electronics Engineering, KLUniversity, Vaddeswaram, Guntur, India Research Scholar, Electrical and Electronics Engineering, KLUniversity, Vaddeswaram, Guntur, India Tallapraga.Gopikrishna, Electrical and Electronics Engineering, KLUniversity, Vaddeswaram, Guntur, India

#### Abstract:

The paper proposes a D.C-D.C converter that corrects power factor for a switched reluctance motor used in air conditioning application. The converter used for power factor correction is Cuk D.C-D.C converter. The hysteresis current control technique is used for getting torque, current and speed characteristics of switched reluctance motor. The compressor speed of the air conditioner is maintained at desired condition by controlling voltage of D.C link which is directly proportional with the speed of the switched reluctance motor. The switched reluctance motor proposed model is modelled in MATLAB- Simulink and these simulated results are used to explain the improvement of power factor input ac main of switched reluctance motor for wide variation in speed and ac input voltage.

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#### ICICMEAP-2017

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## IDENTIFYING DYNAMIC PARAMETERS USING DNN AND BAT OPTIMIZATION TECHNIQUE IN BLDC MOTOR

### Paper ID - 315

**A paper presented by:**G Swapna, RBR Prakash Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Brushless dc (BLDC) motor widely used in industrial automation, aerospace, and military appliances. The accurate model and efficiency parameter based on its analysis and design of the BLDC motor. The parameter identification is derived by practical mathematical model via optimization techniques. The two optimization methods for parameter identification in BLDC, i.e. Deep neural network (DNN) and BAT algorithm are employed. Torque constant, back emf, mechanical time constant and electrical time constant can be estimated. The DNN and BAT optimization technique can provide optimal BLDC model parameters.

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## DESIGN, ANALYSIS AND SIMULATION OF BOOST INVERTER FOR INTERFACING FUEL CELL SYSTEM TO SINGLE PHASE GRID

#### Paper ID - 316

A paper presented by:T.TejaSreenu, S.Md.Abdulmalik, M.PoojithaChowdary Department of EEE, KLUniversity, Vaddeswaram, Guntur, India

#### Abstract:

In this paper, we enhance the load requirement with the help of the fuel cell. Basically, the output voltage of a fuel cell will be less so here we use boost-inverter topology. This offers low cost and compactness. To increase the efficiency, a battery is also used because it can storage energy and it can also act as a to and fro motion to protect the fuel cell from slow dynamics. The single-phase boost inverter works as a V-mode control and whereas the direct current to direct current and a bi-face converter is Amp-mode control. The low-frequency current which is rippled is supplied by the battery because it can reduce the effects of such rippled current which is drawn directly from the electric Cell. In this paper, we are applying this to stand alone system.

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## COMPLETELY INFORMED ARTIFICIAL BEE COLONY FOR DYNAMIC PROBLEMS AND OPTIMAL SENSOR PLACEMENT

#### Paper ID - 317

# A paper presented by:D Seshi Reddy, RBR Prakash, Y srinivasa Rao Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

This paper proposes for improving the quality of solutions by enhancing the bees update strategy known as Completely Informed Artificial Bee Colony (CABC) and applying it for optimal sensor placement. CABC algorithm performs a comprehensive analysis on standard benchmark problems with greater dimensions value (30 and 50) and on problems of dynamic optimization. This algorithm is applied further in Wireless Sensor Network (WSN) for optimal placement of sensors. Based on a well-known energy model CABC is applied for the optimal positions of the cluster head nodes and to maximize the coverage based on a probabilistic sensor model. By regress experiments, the suitability of algorithmic is investigated. Output show that the proposed algorithm is better and competitive in performance with other population based stochastic algorithms.

### INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

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#### FAILURE ANALYSIS OF PFC BOOST CONVERTER

Paper ID - 318

**A paper presented by:**B Jyothi, M srikanth, A Pandian Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Boost converter is used in various applications such as SMPS, UPS and for motor driving application where the power factor is major concern as a Power factor corrector (PFC).Boost converter topology will be connected in series with another DC to DC converter which can be used to step up/down based on application requirement. If PFC/Boost converter fails the total circuit will be impacted by turning OFF the system and the load gets disconnected from the supply of required voltage to function. PFC/Boost converter operation is most critical for any system as frontend where it is used. Unique way of failure analysis is presented in this paper for circuit level and for critical component such as IGBT, Electrolytic Capacitor and for Diode. The entire paper describes the failure mode and possible reasons from four major parameters and its sub parameters. By referring the presented analysis root-cause analysis can be find very easily and the analysis time can be reduced. The described four methods are classifies as Internal causes, Mismanagement production, miss handled application and unavoidable factors. And the analysis was presented in easy understandable cause and effect diagram.

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## CASCADED MULTILEVEL INVERTER BASED STATCOM FOR HIGH POWER APPLICATIONS

#### Paper ID - 319

A paper presented by:T Santosh Tej , V S Prasadarao K Department of EEE, K L University, Guntur, India

#### Abstract:

This paper presents the control of voltage in balanced and unbalanced supply voltage conditions. A basic Var compensating scheme is proposed with a five-level inverter based multilevel STACOM. The proposed topology ensures that a cascaded Five-level inverter associated in course through open-end windings of at three-stage transformer is implemented. The voltages of the DC link incorporated in the inverter are controlled at various levels to acquire fivelevel operation. Here a conventional PWM control methodology is used for inverter control, further implementing it in MATLAB/SIMULINK to foresee the execution of the proposed plot.

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#### ICICMEAP-2017

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#### FUZZY RSC CONTROL OF DFIG

Paper ID - 320

## **A paper presented by:**M. Srikanth, K Sarada Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

This paper presents control scheme for the rotor side converter of a grid connected doubly fed induction generator by the way of fuzzy logic control for combined vector and direct power control (CVDPC) scheme. The resulting scheme, FLC-CVDPC is analyzed with respect to steady-state and variable wind conditions. Simulation carried on a grid-connected 9-MW DFIG based wind farm and consequent analysis confirm the improved performance of FLC-CVDPC over CVDPC.

### INTERNATIONAL CONFERENCE ON INNOVATIONS IN COMPUTATIONAL METHOD AND ELECTRONIC APPLICATION PROCESS

#### ICICMEAP-2017

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## IMPLEMENTATION OF A NOVEL P&O MPPT CONTROLLER FOR PHOTOVOLTAIC SYSTEM AT STANDARD TEST CONDITIONS

#### Paper ID - 321

**A paper presented by:**D Kalyan, S Ravi Teja, M N chaitanya Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

This paper gives an ample idea of a novel P&O MPPT controller implementation to a DC-DC boost converter for a photovoltaic system at standard test conditions (STC) to track Maximum Power Point (MPP). The novel P&O MPPT controller implementation accompanies that initialization of duty cycle and calculation of power at the starting of the algorithm. Photovoltaic (PV) model is designed for lighting applications with a single diode. The PV system output is connected to a DC-DC boost converter to regulate the voltage up to a desired level. The novel P&O MPPT algorithm is implemented in a feed forward manner. The steady state condition reached at less than 0.05sec time, and tracks 10% more power at STC. The novel P&O MPPT controller results are compared with conventional P&O MPPT controller; the models are simulated in MATLAB/SIMULINK.

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## ENHANCED DFT ALGORITHM FOR ESTIMATION OF PHASOR BY PMU UNDER POWER QUALITY EVENTS

#### Paper ID - 322

A paper presented by:Munukutla Naga Chaitanya Asst. Professor, Department of EEE. K L University, Vaddeswaram, Guntur, Andhra Pradesh, India.

#### Abstract:

Due to the increased penetration of distributed generators into the distribution system as well as due to various power electronic devices in the power network, there exists strong disturbances in electrical waveforms i.e., in amplitude ,phase and frequency. These fluctuations need to be supervised and monitored for efficient energy management, safety and also protection purposes. Nowadays, this task is performed by Phasor Measurement Units (PMUs), which measure the phasor of voltage and current waveforms on a common time scale synchronized to the Coordinated Universal Time (UTC). Phasor Measurement Units (PMUs) are also expected to quickly measure fundamental frequencies and rate of change of such frequencies (ROCOF) by accurate parameter estimation algorithms. The commonly used algorithm for estimation of phasor is Discrete Fourier Transform (DFT). But it is observed that, its performance is effected by harmonic environments. In this paper, DFT algorithm was modified to improve its phasor estimation capability under such harmonic environments. Then, the performance of proposed algorithm is compared with the Least Square Error (LSQ), Recursive DFT algorithm. Simulation Results are also reported.

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## EXTREME LEARNING FORECAST MODEL FOR GRID CONNECTED MPPT BASED PHOTOVOLTAIC STATION

### Paper ID - 323

A paper presented by:P Srinivasa Varma, M Srikanth, D Seshi Reddy Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Energy management includes grid planning, scheduling and maintenance and forecasting of power. This paper presents an intelligent and efficient method to predict and forecast the maximum power output of the PV array for which Extreme Learning Machine algorithm is used to train the single layer feed forward network associated with perturb and observe method of Maximum power point(MPP) tracking. By which the grid operator can predict when there will be the scarcity or surplus of power such that they will regulate the generation accordingly. A mathematical model of PV array with maximum power point tracking technique is designed by the help of MATLAB to get accurate data to train and test the single layer feed forward network (SLFN) by Extreme Learning Machine (ELM) algorithm. Simulation results were taken and the output shows that the designed SLFN model with ELM technique forecast the power output of PV array efficiently with high accuracy.

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## EXUDATES DETECTION IN DIABETIC RETINOPATHY IMAGES USING POSSIBILISTIC C MEANS CLUSTERING ALGORITHM WITH INDUCED SPATIAL CONSTRAINT

### Paper ID - 324

**A paper presented by:** K P Prasad Rao, T Vijaya muni, K Sarada Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Diabetic Retinopathy (DR) is a progressive ailment and is a prime cause of vision loss in diabetic patients. Presences of exudates in retinal fundus obstruct the vision. Exudate detection using image processing techniques are helpful for the ophthalmologist's in prior screening and diagnosis. It helps the patients in controlling the pathos from progression. This paper exhibits a framework for the exudates detection in non-dilated fundus images using Possibilistic C means clustering algorithm with induced spatial constraint. The performance of the method is evaluated using statistical analysis.

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## COMPARATIVE PERFORMANCE EVALUTION OF COMBINED ECONOMIC DISPATCH AND EMISSION DISPATCH USING HYBRID SEARCH ALGORITHM

#### Paper ID - 325

A paper presented by:S Rajasekhar, Grs Nag Kumar ,K Narsinharaju, Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

This paper illustrates about CEED evalution using Hybrid Search Algorithm. This paper discuseed about the combined algorithms of firefly and differentinal evoluation algorithm to I 'Cost of the generating units', NOx Emissions Dispatch and CEED problems(Combined Economic Dispatch and Emissions Dispatch) in base load power plants. The instant energy yielding process are ecologically unclean as the coal used plants desecrate the earth. The intermixture of the fossil fuels, separate the Carbon, Nitrogen andndusulphar cause detrimental effects on Homo-sapiens. materials and gaseous pollutants from discharge of heat to water. This adverse effects induced by the Emission of particulate and gaseous pollutants will be reduced by fair distribution of load between the plants of a power system. As such, the operation cost of the plants rasiesnoticeably. To reduce the ecological and environmental constraints, optimized algorithms have been proposed for minimum cost, minimum NOx Emissions and Combined economic and emissions dispatches. Theproposed algorithms hase been tested for IEEE 30 bus system and results are compared with DE and firefly technique.

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## CONTROLLING THE SPEED OF DC MOTOR USING CONVENTIONAL AND FUZZY LOGIC CONTROLLERS

#### Paper ID - 326

A paper presented by:Prashanth K Pulivarthi, SVS Surya Teja, M Surya Teja, R Premsai, P Padmalatha Dept. of EEE, K L University, Guntur, Andhra Pradesh, India Lecturer, Dept. of EEE, Govt. Polytechnic College, Visakhapatnam.

#### Abstract:

Control system is the back bone of all processes of modern day industries. Precise and accurate control of these processes is critical to ensure quality in the end product and safety of personnel. DC motors have features like low cost, flexibility, reliability that is the reason for these dc motors to play a major role in areas where control is required. These motors are generally used where speed control is to be required. Therefore, to control the speed we require some of the controllers. But, some of the control systems have problems like longer settling time, undesirable overshoot, and vibrations. In this paper the conventional controllers such as PI, PID controllers and fuzzy logic controllers are used to control the speed of DC machine. The conventional controllers like PI and PID takes longer duration to get settled when compared with the fuzzy logic systems. Hence, for this purpose fuzzy logic controller is introduced to meet the control problems.

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## 2X2 BLOCK PROCESSING ARCHITECTURE FOR A TWO DIMENSIONAL FIR FILTER USING SCALABLE RECURSIVE CONVOLUTION

### Paper ID - 327

A paper presented by:KP Prasad Rao, D Sudha Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

In this paper a 2x2 block processing architecture for a two dimensional FIR filter is proposed. A 2- parallel scalable recursive convolution algorithm is used to develop block processing algorithm where and are multiples of 2. The algorithm is easily scalable to any order of 2x2parallel block processing. Computational complexity in terms of multiplications is reduced by a factor of 9/16 at the cost of increased number of additions. However, the adder complexity reduces for window size greater than 2 times the block size.

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#### PERFORMANCE ASSESSMENT OF GAUSSIAN BILATERAL FILTER

Paper ID - 328

A paper presented by:J Somlal, GRS Nag Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

Denoising is one of the important aspects in image processing applications. Denoising is the process of eliminating the noise from the noisy image. There are numerous denoising approaches are presents and each algorithm has some advantages & disadvantages. After image denoising, quality is one of the main concerns. There are several quality assessments models are present's to evaluate the quality of an image, in that objective quality assessments is the most prominent models compared to other. This work reviews some of the significant image denoising algorithms such as Gaussian bilateral filter and Gaussian bilateral filtering (GBF) with wavelet thresholding approaches in terms quality assessments.

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## INVESTIGATION OF SIW DIRECTIONAL COUPLER FOR 60GHZ MM-WAVE APPLICATIONS

#### Paper ID - 329

# A paper presented by: P Siva Samkar, Sk Moulali, SVNL Lalitha Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

In this article, 60 GHz directional coupler is designed by using Substrate Integrated Waveguide (SIW) technology using coplanar waveguide as a transmission path. To design directional coupler RT duriod 5880 substrate material is used. Here directional coupler is analyzed by changing the thickness of copper coating and height of the substrate. By changing the thickness of copper coating and height of substrate examining the directional coupler results like reflection coefficient, insertion loss, coupling factor, isolation loss, VSWR, surface current, Electric field and magnetic field variations. Verifying the thickness and height of substrate is suitable for RADAR application in millimeter frequency range. RT duriod 5880 substrate material height is 0.508mm and thickness of 0.035mm are chosen to design directional coupler. At 60 GHz directional coupler gives reflection coefficient as - 36.03 dB, insertion loss as -1.3 dB and coupling factor of -6.3 dB and isolation loss of -36 dB.

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#### SURVEY AND ANALYSIS OF ECG INTERPRETATION TECHNIQUES

#### Paper ID - 330

## A paper presented by: M Sai Krishna Reddy, SkMoulali, K NarsinhaRaju Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

An electrocardiogram abbreviated as ECG or EKG is a representation of the electrical activity taking place inside the heart with respect to time. Simply put, it registers the heart's electrical stimulation. This stimulation is also referred to as excitation or activation. These electrical excitations are responsible for the contraction and expansion of the heart, resulting in a heartbeat. Primary aim of an electrocardiogram is to diagnose and monitor possible heart abnormalities like Atrial Fibrillation, Myocardial Infarction (heart attack), Anginia etc. The electrocardiogram (ECG OR EKG) is a basically a graphic record of the direction and magnitude of electrical signals travelling in the heart that are generated by polarization and depolarization of the atria and ventricles. An ECG consists of the P-QRS-T pattern which represents the different phases involved in the conduction of electrical signals inside the heart. There may be an additional **U** wave present occasionally. All these patterns have been elaborated upon in the later sections.

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## RECTANGULAR ENCLOSURE POSSESSING MULTIPLE APERTURES WITH VARIOUS DIMENSIONS INCLUDING MUTUAL COUPLING EFFECT

#### Paper ID - 331

# A paper presented by: B Loveshwara Rao, D Narasimha Rao, GRS Nag Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Shielding is mandatory in electrical and electronic equipments, which has been the focus of research in recent times. This paper intends to develop an analytical formulation for the shielding effectiveness, considering various parameters of multiple apertures, variation in sizes and polarization angles with mutual coupling between the apertures of rectangular enclosures. It is necessary to contemplate the mutual coupling between the apertures for an exact estimation of the shielding effectiveness. The considered formulae are extended to incorporate the acceptable mutual coupling between the apertures. Besides, simulations have been performed to verify the shielding effectiveness of rectangular enclosure with identical and completely different sizes of apertures. It is clear from the simulation results that the shielding effectiveness is at its best, once mutual coupling is taken into consideration and at the worst, once the mutual coupling is unheeded. It may even be perceived that the shielding effectiveness is comparatively a lot for the apertures of identical size than those of various sizes.

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#### IMAGE ENCRYPTION BY EXPONENTIAL GROWTH EQUATION

Paper ID - 332

A paper presented by:D Seshi Reddy, P Siva Sankar Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

This paper proposes the image encryption by using the exponential growth equation. This new algorithm encrypts the image through a two stage process. In the first stage, a reference exponential growth function is generated for the foundation for the encrypted image. In the second stage, the random image matrix is used as a key for the encryption which is applied on the first stage resultant matrix. The advantage of this method is encrypting the image efficiently. This method could be applied to provide more complexity against attackers and it takes less time for encryption.

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#### IOT BASED INDOOR NAVIGATION WEARABLE SYSTEM FOR BLIND PEOPLE

Paper ID - 333

A paper presented by:D Kalyan, T Vijaya Muni Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract.

This paper presents a wearable audio assistance indoor navigation system for blind people using IoT. In this model, visual markers are used for identification of the points of interest in the environment; In addition, we enhance this location status with information collected in real time by other sensors. The blind users wear glasses built with sensors like RGB camera, ultrasonic, magnetometer, gyroscope, and accelerometer to improve the quantity and quality of the available data. To improve the ultrasonic perception, we use two ultrasonic sensors. An audio assistance system provided to user uses audio bank with simple known instructions. This makes the user to navigate freely in the prepared environment. The readings of the sensors are uploaded to the cloud and it will send an alert message to the registered mobile whenever the readings are greater than the threshold value.

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## ANALYSIS OF DIFFERENT DETECTION TECHNIQUES OF MIMO IN FUTURE GENERATION OF WIRELESS COMMUNICATION

#### Paper ID - 334

**A paper presented by:**G Swapna, P Srinivasa Varma Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

The MIMO has multiple antennas at the transmitting end and also at the receiving end. It provides an improvement in performance in terms of data rate and reliability of the system. MIMO has a wide variety of applications in wireless communications. MIMO is being used in many new technologies which include Wi-Fi, HSPA+, LTE to provide increased link capacity and spectral efficiency. The adaption of Massive MIMO for future generation 5G technology increases data rates and provides quality service to the rapidly increasing users. This paper consists of comparative analysis of different decoding techniques used at the receiver end for the detection of transmitted signal in the MIMO system. The decoding techniques are Zero Forcing (ZF), Minimum Mean Square Error (MMSE), Maximum Likelihood (ML), Ordered successive Interference Cancellation (OSIC), Sphere Decoding (SD), Lattice Reduction. This comparison is based on Bit Error Rate (BER), Signal to Noise Ratio (SNR), capacity, computational complexity, and computational time. This analysis is used to choose the specific decoding technique according to application.

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## 2-BIT COMPARATOR WITH 8-TRANSISTOR 1-BIT FULL ADDER WITH CAPACITOR

#### Paper ID - 335

A paper presented by:Sk. Moulali, S Ravi Teja Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

In modern technology comparator is most widely used circuit to convert the analog to digital signals and to compare a digital signal with the corresponding reference signal. But the circuit complexity is high as per existed system and also the delay produced by the existed comparator produces same delay in the final response. So we present a new 2-Bit comparator system in which 1-Bit full adder and 1-Transistor AND gate are present. The 1-Bit full adder is constructed using 8-Transistor with capacitor to decrease the delay, power dissipation, no of transistor's, circuit complexity and average power consumption.

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## A LOW-NOISE AC COUPLED INSTRUMENTATION AMPLIFIER FOR RECORDING BIO SIGNALS

#### Paper ID - 336

**A paper presented by:**S P Linga Reddy, S Palani Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

The human body is the source of many kinds of signals. These signals are called as bio signals. These signals can be measured by placing an electrode in contact with the human body. These signals will be in the range of few mille volts and also the electrode will induce dc offset to the measured signals. These bio signals should be amplified for further analysis in biomedical applications. The bio signals will amplify by AC coupled instrumentation amplifier. The dc offset also suppressed by the AC coupled instrumentation amplifier. An AC coupled instrumentation amplifier is presented in this paper with low input interfered noise of ~20  $nV/\sqrt{Hz}$  and gain of 65 dB and CMRR of 142 dB with the total power consumption of 104pW.

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## AN ENHANCED VIOLA JONES FACE DETECTION METHOD WITH SKIN MAPPING & SEGMENTATION

#### Paper ID - 337

A paper presented by:P.Satyanarayana, N.Jaya Devi, S.K.Sri Hasitha, M.Sesha Sai Department of Electronics & Communication Engineering K L University, Guntur, India

### Abstract:

people count is one of the tedious task if it involves human intervene. As an alternative, automation of the process is done using image processing as it provides high accuracy. The face detector is based on state-of- art cascade of boosted integral feature. This Algorithm overcomes the drawbacks of Viola Jones Algorithm and relatively faster than Hog detection. The proposed system makes use of HAAR Cascade Classifiers to detect the face in real-time, this alone is error prone. These errors are eliminated by eliminating the non-face regions detected by mapping the skin colour of image with detected regions. Two different threshold methods are used to reduce the search space. Algorithm is evaluated on many databases. Experiments on these databases reveal good performance of the proposed algorithm.

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## HARDWARE IMPLEMENTATION OF VARIABLE DIGITAL FILTER USING CONSTANT COEFFICIENT MULTIPLIER FOR SDR APPLICATIONS

#### Paper ID - 338

**A paper presented by:**P.Srikanth Reddy, Dr.P. Satyanarayana, G.Sai Krishna, K.Divya Department of Electronics & Communication Engineering K L University, Guntur, India

#### Abstract:

Software Defined Radio (SDR) is widely used in wireless communication where Variable Digital Filter (VDF) plays a major role in extracting signals. The VDF allows the low pass, high pass, band pass and band stop frequency responses as per the given filter coefficients. In this paper, we implemented a variable digital filter (VDF) based on decimation using Constant Coefficient Multiplier (CCM). The proposed method is synthesized using Verilog in Xilinx Vivado software and implemented on Zynq-7020(XC7Z020-1CLG484) development board. The performance parameters are compared with previous implemented architectures in terms of area, power and latency. By the analysis it is clear that the proposed method is less complex and utilizes less area. The maximum operated frequency for the proposed VDF is 132.22MHz.

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### AN INTEGRATED APPROACH FOR MICROWAVE HOME SECURITY SYSTEM

Paper ID - 339

A paper presented by: A Pandian, GG Raja Sekhar Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract.

In modern society, the crimes occur frequently more high-tech, intelligent trend in recent years. People have to be more attentive in home security. This paper discusses the development of a low-cost microwave home security system to detect the motion of people accurately in the required premises. An alert is produced to warn persons that the space has been violated. The transmitter section which contains microwave sensor continuously transmits Microwave rays which are received by the receiver section. Microwave sensors utilize electromagnetic fields and devices internally. The microwave sensor works on the principle of Doppler Effect which will detect the change in frequency. The transmitted signal illuminates the quantity of interest, and the receiver detects the existence, distance and position of a target, which has better application than PIR, IR and other object detecting sensors. The output of PLL will be the difference between the locked frequency and the received frequency. Soon after the microwave signal is interrupted, the microcontroller the program burnt into the EPROM and control the alarm and serially sends a message in SBUF to the GSM module. The operation of whole system is controlled by user's mobile phone to turn ON and OFF the microwave sensor using the DTMF decoder circuit. This paper is implemented using the after-market parts and build an integrated home security system.

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## PERCENTAGE OF TIME ANALYSIS FOR WORMHOLE ATTACK USING DIFFERENT TOPOLOGY

#### Paper ID - 340

**A paper presented by:**Y Srinivasa Rao, K P Prasada Rao Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

This paper explains about the performance of an event monitoring system in 2-Dimensional (2D) and 3-Dimensional (3D) wormhole attacks in wireless sensor networks. The system is implemented in cellular, grid and random topologies. The nodes in the wireless sensor networks always suffer due to the Denial of Service attack. This attack can be overcome by using a centralized monitoring system which creates greater time delay in the system. Here event monitoring system gives a modified approach to reduce the percentage of time during the communication between nodes present in the WSN. Performance of event monitoring is validated using qualnet software and percentage of time has been taken as a factor which has been analyzed in three different topologies.

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#### A REAL-TIME IMAGE MOSAICKING USING ON BOARD COMPUTER

Paper ID - 341

**A paper presented by:**P Linga Reddy, S Palani Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

### Abstract:

In some situations, the total scene of human vision cannot capture in a single shot of camera sensor, image Mosaic is a technique of forming a large image by combining more than one frame of a scene. This paper demonstrates a simple and novel approach for a real-time im- age Mosaicing technique implemented with a standalone rapid prototype Raspberry Pi device with a camera sensor. Mosaicing many video frames with similar scenes are time consuming process and lead to inconsistency between frames of the overlap region. Instead of Mosaicing all capture video frames, only every nth frame is considered for Mosaicing technique, filtering video frames are processed for every nth frame of a video sequence. Image Mosaicing process starts with corner point detection fol- lowed by feature point extraction, matching, geometric transformation, hamming distance and finally wind up with warping and blending.

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## ROBUST FUZZY LOGIC TECHNIQUE FOR LOW CONTRAST IMAGE SHADOW REMOVAL

#### Paper ID - 342

## A paper presented by:G Swapna, B Jyothi Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

The shadows are playing very hazardous for recognizing objects in low contrast Images. Shadow leads to the problem of false positive errors and false negative errors. Shadows are created because the light source has been blocked by object. In the existing method, suspected shadows are extracted and removed by taking the shadow features into consideration during image segmentation and by calculating the statistical features of the image. But the main limitation of existing method is that the dark objects which could be mistaken for shadows are ruled out according to object properties and spatial relationship between objects. Many effective algorithms have been proposed for shadow detection but no algorithm is produced accurate results. In this project robust fuzzy logic technique is using to eliminate shadow of object. This method accurately identifies shadow areas with information such as gray scale and brightness of the images. The threshold value is obtained by s-curve from the estimated grayscale value of the shadow areas by estimating control parameters. This method work perfectly for low contrast, noisy and overlapped images.

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# EXTENDED PREDICTIVE CONTROLLER FOR A FIRST ORDER PROCESS WITH DEAD TIME MODEL

#### Paper ID - 343

**A paper presented by:**B Loveshwara Rao, GRS Nag Kumar Department of EEE, K L University, Vaddeswaram, AP, India.

#### Abstract:

Predictive control technique is a dominant technique to design a controller which is robust in nature. Predictive control techniques evolved from the dynamic matrix control concepts. The overshoot with the Process Variable (PV) around the set point has been observed as the limitation of Dynamic Matrix Control (DMC) algorithm. To overcome this drawback, few modifications were made in the dynamic matrix control algorithm by adding an extension. The extension is in the form of weighting matrix which will be used in the final control law. The results obtained with the extended DMC shows a significant difference in time domain analysis for both the primitive dynamic matrix control and the extended dynamic matrix control. The control algorithms developed were implemented on the First Order Plus Dead Time (FOPDT) model in Simulink platform with MATLAB® 2015 environment.

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## PERFORMANCE ANALYSIS OF MIMO LOW COMPLEXITY K-BEST SPHERE DECODER ALGORITHMS

## Paper ID - 344

**A paper presented by:**K Harinatha Reddy, P Siva Sankar Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

To achieve high throughput with nearer ML performance required for next generation wireless communication systems low complexity K-Best Sphere decoding algorithms are required. However designing of such decoder has been made a significant challenge. In this paper, we analyzed several MIMO detection schemes under various channel conditions with different modulation schemes and compare their performance. Finally, we proposed a low complexity Kbest sphere decoding algorithm, which achieves near ML performance with very much reduced computational complexity.

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### **MRI-PET IMAGE FUSION USING TUNED COEFFICIENTS**

Paper ID - 345

A paper presented by:S. Koteswara Rao, Santi Prabha Department of Electronics & Communication Engineering, K. L. University, Vaddeswaram, Guntur District, Andhra Pradesh, India. Department of Electronics & Communication Engineering, J. N. T. University, Kakinada, Andhra Pradesh, India.

## Abstract:

A mathematical approach that combines anatomical and molecular information obtained from multiple modalities provides reliable and accurate information in medical image processing. For better information integration and visual perception, the coefficients of low resolution Positron Emission Tomography (PET) image should be enhanced in the fusion of PET and Magnetic Resonance Imaging (MRI) images. In this paper, the coefficients of PET image are tuned iteratively using Stochastic Resonance. Mutual Information is used as a measure to quantify SR effect. The Directive Contrast for PET image tuned coefficients is computed and used as a fusion rule. Simulations on standard medical image data sets were carried out and the proposed method showed improved performance in both subjective and objective measurements.

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#### ICICMEAP-2017

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# A SOFT COMPUTING APPROACH FOR DETECTION OF THE VOLTAGE FLICKER SOURCE

## Paper ID - 346

A paper presented by:G Srinivasa Rao, K NarsinhaRaju, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The presence of heavy loads in the electric power network create lot of fluctuations in supply voltage which in fact give rise to one of the power quality issue called as voltage flicker. Nowadays utilities as well as consumers have become more attentive to this issue. The detection of flicker is necessary in order to mitigate it. A soft computing method for identification of flicker source is presented in this paper. This method is based upon Discrete Wavelet Transform and Artificial Neural Network. The wavelet transform is used for extracting features of voltage signal with flicker. A multilayer feed forward neural network with back propagation algorithm is then trained with these features. The trained network is tested by applying a new input signal from a flicker source. The flicker source used is an arc furnace. The accuracy of proposed technique has been validated by performing simulation in MATLAB/Simulink environment.

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# CLOUD COMPUTING BASED PERSONAL HEALTH RECORDS BY USING DATA ENCRYPTION

Paper ID - 347

A paper presented by:Harshitha G V P, BulliBabu Rasamsetti Under Graduate Student in Department of Electronics and Computer Science Engineering K L University, Guntur, Andhra Pradesh.

Associate Professor in Department of Electronics and Computer Science Engineering, K L University, Guntur, Andhra Pradesh.

## Abstract:

Unique wellbeing record (PHR)1 will be kept up in the bound together server should keep up the patients near home and PHR administrations would outsourced should outcast pro coops. Those essential concerns may be around examination information. Those tolerant records ought to make if those patients Might truly control those advertising kept up with helterskelter2 security which is more security. The security plans are used to protect that particular information from general population get. Tolerant information could make accessed Eventually Tom's perusing a large number distinctive individuals. Each power will be doled out with right reasonably for a specific situated of qualities. The entry control and protection management is an intricate assignment in the tolerant wellbeing record oversaw economy methodology. Conveyed registering may be a casual statement used to depict a combination about Different sorts about registering thoughts that incorporate endless that would chortle through a continuous correspondence. It may be an identical word to passed on preparing over an arrangement and methods those abilities will run a system around a number chortled Pcs meanwhile majority of the data proprietors invigorate those singular data under outcast cloud server ranches. Those novel patient-driven framework Also a suited from claiming data get will instruments will control PHR1 set far over semi-put stock Previously, servers. On finish fine-grained What's more versant majority of the data get will control to PHRs, we utilize quality built encryption (ABE) methodologies on scramble each patient's PHR1 record. Different data proprietors3 camwood get should comparable data values. Those recommended arrangement Might a chance to be arrived at out to progressive quality built encryption (HABE) for get to control part.

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# COMPARATIVE STUDY ON SUB SYNCHRONOUS RESONANCE IN THE SOUTH INDIA

## Paper ID - 348

**A paper presented by:**D Kalyan, S Ravi Teja, M N chaitanya Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper represents the subject mentioned in its title but also explains on machine. Maintaining speculative honor in AC machine modeling and control all over the investigator focuses on the profit and simplicity of series compensation, unfolding the basis of thyristor controllers. This also clarifies the basics of subsynchronous resonance in 400kV lines and their coupled dynamics, power delivery and also load restrictions. A powerful collection of practical information, this paper serves as a largely useful tool for the design and control of high efficiency machines. This paper chooses a practical advance related to case studies on subsynchronous resonance in 400 kV lines from original data. It is an ultimate paper, which guides scholar through the information in an apparent and well-illustrated manner.

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## **OBJECT DETECTION AND TRACKING USING THERMAL CAMERA**

Paper ID - 349

A paper presented by:B Jyothi, A Pandian Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The moving object detection and tracking is an important requirement in battle field. Tracking moving objects is not easy in a real time environment, because of continuous change of the location of objects during movement. The proposed algorithm can detect and track the moving object in a real-time environment by using image processing algorithm. This algorithm first detects the object in a video using foreground detection method. It then performs morphological operations to remove noisy pixels. After that track the objects using kalman filter. The proposed method uses thermal camera to detect and track objects especially during dim light or no light. And arduinouno controller, '2' channel relay board and servo motor are used to control thermal camera in order to extract frames. The proposed system can achieve good result for object detection and tracking the region of interest. Thus the proposed algorithm camera.

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# PV BASED MULTI-LEVEL INVERTER CAPABLE OF POWER FACTOR CONTROL WITH DC LINK SWITCHES USING POD TECHNIQUE

## Paper ID - 350

# A paper presented by:S V N L Lalitha, J Somlal Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper proposes a five-level inverter topology based on an H-Bridge structure with four switches connected to the DC-Link. A new PWM method uses only one carrier signal which is based on a POD (Phase Opposition Disposition) modulation technique. The switching sequence for stabilizing the capacitor voltage is also determined. Additionally, to improve the number of the voltage level minimum number of components are required. Working principle of the proposed inverter is justified using simulation. At first, the simulation of the proposed circuit is carried out using pulse generators to obtain the 5 levels of voltage. Secondly, single carrier POD technique is used to obtain the voltage levels. The sinusoidal current and voltage waveforms are obtained using an LC filter and they are compared. This can be also extended to nine level inverters with the same number of H-bridge switches.

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# SIX TYPES OF BATTERIES COMPARATIVE ANALYSIS AND THEIR DYNAMIC MODEL FOR ELECTRIC VEHICULAR TECHNOLOGY

## Paper ID - 351

**A paper presented by:**M Sai Krishna reddy, P Linga Reddy Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Battery is one of the most prime components in both the utility and commercial/industrial power system, as Electric Vehicles (EVs), Hybrid Electric Vehicles (HEVs) and Plug-in Hybrid Electric Vehicles (PHEVs) have been developed. The significance of research and development of lithium-ion battery is on the rise in automobile industry. The desire of this paper is to enhance the reader - general operational characteristics with various types of batteries, the discharge and charge dynamic models of the battery with six types, an upgrade and battery dynamic model is easy-to-use. Comparison between the six types of batteries, various parameters of the battery and Simulation results convey the different load conditions of the Li-Ion battery. The proposed analysis is performed to identify the high performance of Li- Ion battery compare to six batteries and it is research for future work of the researchers.

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# ACCURATE DETECTION OF RETINAL TEARS BASED ON NEURAL NETWORK USING FOURIER SERIES POWER SPECTRUM SEGMENTATION TECHNIQUE

### Paper ID - 352

**A paper presented by:**O. Chandra Sekhar, K NarsimhaRaju, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Stride towards developing an automated technique for diabetic damage detection through blood vessel segmentation in retinal images. Medical image plays very important role in identification and classification of diseases. In human eye, retina is attached to the inner surface which plays the major role for visualization. Image processing technique is used to improve the visualization of retina and become better quality of the retinal images. The retina is a layered tissue, covering the inner of the eye that allows the transformation of incoming light into a neural signal which is acceptable for the processing in the visual cortex of the brain. A retinal tear will occurs when a portion of the retina separates from the outer layers of the eye. Serious condition of the retinal tears is called as retinal detachment. The former identification and analysis of Retinal tears is presented. The proposed methods made are up of three major stages such as preprocessing, Fourier Series Power spectrum segmentation and improved ANN classification. The main focus of this proposed work is plan to design the algorithm based on segmentation with clustering, and the artificial neural network (ANN) for identification of Retinal tears with the help of MATLAB with maximum accuracy.

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## DETERMINATION OF ATC BY USING DCPTDF AND ACPTDF METHODS

Paper ID - 353

A paper presented by: P Siva Sankar, R B R Prakash Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

In the deregulated electrical market, the competition for choice and to acquire of electric power is increasing drastically in our day to day life. ATC is used to calculate the transfer of maximum power between lines. The definition of ATC implies the measurement of remained transfer capability in the transmission system for further commercial activity. ATC of the power system network depends on factors i.e., thermal overload limitation, voltage stability limitation, voltage magnitude limitation. It gives the information about the unused power at any particular point of the network. To calculate ATC, DCPTDF (DC Power Transfer Distribution Factor) and ACPTDF (AC Power Transfer Distribution Factor) methods are used in this paper. The study of DCPTDF and ACPTDF methods are used to analyze the load flows. The above methods are applied on IEEE 6-bus system. These methods are calculated by using MATLAB software. Load flow solution is analyzed by NR (Newton-Raphson) method.

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# POWER SPECTRUM ESTIMATION OF SEISMIC WAVE USING PERIODOGRAM METHOD

## Paper ID - 354

# **A paper presented by:**D Sudha, P Srinivasa Varma Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Volcanoes, Tsunamis and many other seismic sources produce sudden elastic waves that propagate through the Earth. The time of occurrence and the frequencies of these earthquake waves must be predicted to mitigate the damage. These parameters are attained from the power spectrum. In this article, Periodogram technique is used for the calculation of spectral density. Simulation is carried out and the results are presented.

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# SHADOW DISPERSION OF PV ARRAY UNDER VARIABLE IRRADIANCE FOR SUPERIOR POWER GENERATION BY MAGIC SQUARE CONFIGURATION

### Paper ID - 355

**A paper presented by:**D Narasimha Rao, P Srinivasa Varma, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The PV array generates smaller amount of the power compared with other electrical power generation components. There are many components that are adversely effected the output of PV array, in such components, one is partial shading. Due to this, each module in PV array receives different solar irradiations causes different P-V characteristics of its peak values. This paper presents a pioneering method called as Magic Square configuration has been proposed to enhance the generated power of photovoltaic modules by configuring those are under affect of shade. Thus there is no change of electrical arrangement of PV modules in an array but only the objective location in the total cross tied (TCT) array is rearranged according to the magic square arrangement. Proposed paper gives comparison data with the conventional configuration method and hence the performance is calculated. The proposed technique provides a better solution that how shadow effect on the PV modules has been reduced and how this shadow is distributed, and not only that also gives an idea about how the inequality losses due to the partial shading is effectively reduced. The power loss of various configurations of 3X3 and 4X4 array has been compared. The proposed technique is validated through MATLAB/Simulink environment.

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# PERFORMANCE IMPROVEMENT OF HYDRO-THERMAL SYSTEM WITH SUPERCONDUCTING MAGNETIC ENERGY STORAGE

## Paper ID - 356

A paper presented by:Kiran Babu V<sup>1</sup>, SrinivasaVarma P<sup>2</sup> <sup>1</sup>Resaerch Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>ASSOC. PROFESSOR, DEPARTMENT OF EEE, K L UNIVERSITY, VADDESWARAM, AP, INDIA

#### Abstract:

This paper deals with the improvement of dynamic performance of load following based Hydro-Thermal system employing Superconducting Magnetic Energy Storage. It is encountered many advantages for using superconducting magnetic energy storage as a replacement for other energy storage methods. Since it has less time delay during the chargingand discharging, with an availability of instantaneous and high power within a stipulated time. But other storage methods like pumped hydro or compressed air have a considerable large time delay for conversion of energy as stored mechanical into useful electrical energy back. If the load demand is varying continuously and frequently then selection of SMES is the best method. Also, it has negligible power loss than the other storage methods because of no/low resistance. In addition that, SMES has no moving parts and thus it has a better efficiency which results in the reliable operation. SMES is incorporated in two area system in consequence improving the response of the system with the help of computer simulations, and the dynamic performance of the system is effectively improved. The main objectives of this paper are to develop the SMES model in two area hydrothermal system using MATLAB/Simulink in addition that the comparative study for the improvement of dynamic performance of the system with and without SMES.

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## DYNAMIC STATE ESTIMATION WITH PMU MEASUREMENTS TO IDENTIFY BAD DATA

Paper ID - 357

 A paper presented by:Sudha Dukkipati<sup>1</sup>, P Siva Shankar<sup>2</sup>, A V G A Marthanda<sup>3</sup>
 <sup>1,2</sup>Department of EEE, K L University, Vaddeswaram, AP, India.
 <sup>3</sup>Department of Electrical and Electronics, LakireddyBalireddy College of Engineering, Mylavaram, India.

## Abstract:

In this paper, a Dynamic State Estimation (DSE) method with optimal allocation of Phasor Measurement Units (PMU) is formulated to identify bad data in the power system. A Generalized Normal Residual (GNR) method is proposed to detect and identify bad data with optimal PMU and conventional measurements. Apart from all other methods proposed to identify bad data in the system, a novel index to compute a threshold value for each type of measurement is proposed. The index proposed depends on a number of measurements and normalized residuals computed which exactly determines the bad data bus. The measured data formulated with the integration of optimal PMU measurements and conventional measurements are utilized in dynamic state estimation method to measure accurate states and identify measurement errors of the system. Binary Integer Linear Programming (BILP) method modeled with zero injection buses is utilized for optimal allocation of PMUs in the power system. Dynamic State Estimation with and without bad data is compared to show its effectiveness in estimating states of the system. MATLAB Simulations on IEEE 14, 30, 57 and 118 buses are carried out by BILP method to show the effectiveness of the proposed method.

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## TRAFFIC LIGHT MANAGEMENT SYSTEM SUBJECT TO ACCIDENT AND TRAFFIC AT INTERSECTIONS

### Paper ID - 358

A paper presented by: Y. Ramachandra<sup>1</sup>, M.Akhileshwar<sup>2</sup>, A. Pandian<sup>3</sup>, K.Subbarao<sup>4</sup> <sup>1,2</sup>UG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>3,4</sup> Professor, Department of EEE, K L University, Vaddeswaram, AP, India

## Abstract:

The traffic found at intersections is increasing that has been increasing the need to design a solution that will handle current intersection problem. The vehicle detection mechanisms in conventional systems can handle traffic for pre-specified situations.. Conventional systems are not scalable and have high cost. At every intersections there are various issues like traffic, making path for emergency vehicles and traffic light manipulation after accident is detected, etc. Any efficient traffic management system should be able to handle such issues. This paper proposes a traffic management system that will use Wireless Sensor Network(WSN) to manipulate traffic light signal according to the traffic and emergency vehicles detected at the intersection or after an accident occurs at an intersection. The traffic flow sequence is altered according to the output of traffic detection phase. The traffic light manipulation algorithm and traffic information communication algorithm are presented in this paper that will handle most of the issues at intersections.

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## **VOLUME ESTIMATION OF AN OBJECT USING 2D IMAGES**

Paper ID - 359

A paper presented by:G JahnaviChowdary<sup>1</sup>, S. Palani Kumar<sup>2</sup> <sup>1</sup>PG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2</sup>Associate Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Images are used to record and represent information, they are present everywhere and influence how we perceive information about a particular subject. In this paper, we propose a unique method for estimation of the volume of a solid object with the help of image processing without 3D reconstruction. The input to our system consists of mere images of the object of interest from different views. Present methods to estimate the volume of an object with the help of images such as the one involving Monte Carlo method require minimum five images, whereas the idea proposed by us requires 2-3 images depending on the type of the object. It is advantageous over water displacement method for volume calculation as the object is not tempered during the process. The proposed idea incorporates edge detection, image segmentation, and feature extraction to identify the object and find its dimensions, after which, the object is broken down into infinitesimally slices along the horizontal axis and volume is calculated for each slice. The addition of all volumes of these slices results in the estimated volume of the object.

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## NOVEL APPROACHES FOR TRANSMISSION SYSTEM EXPANSION PLANNING-TLA

Paper ID - 360

A paper presented by:Nagi Reddy. B<sup>1</sup>, A. Pandian<sup>2</sup>, M. Ramamoorty<sup>3</sup> <sup>1</sup>Research Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2,3</sup>Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The "change" is the word which commonly effect daily in the technology. Without change, the world will be stop. Especially the use of electricity day by day increases and consumers expected reliability. Here we can define the reliability under this as the best for least. Hence the quality of power system is expected. Transmission line design plays major role for effective utilization of an electrical power. The transmission loss and allocation of unbundled market participants is essential in the present deregulated electricity markets. In this paper, we concentrated to allocate the transmission line loss. The evolution of market various techniques to rate consumable generated electrical power should take into consideration leads unfair access to distribution networks. With this, Electrical power losses of consumer network must be impartially allocated among the all distributed gencos and discoms. The methods which gives allocation of the electrical power transmission cost and losses are mainly divided into two categories. Those are postage stamp, Megawatt-mile, Nodal and proportional sharing have been supported on an arbitrary allotment of electrical power losses between consumers and generators. First two belongs to one category and the next two other. The procedure is based on network laws and does not consider any assumptions. Considering the real power input and real power loss contribution factors, loss allocation can be done. Case study of the proposed loss allocation procedure is conducted on 5 bus and 2 bus system.

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#### ICICMEAP-2017

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## TRANSMISSION LOSS ALLOCATION IN A DEREGULATED POWER SYSTEM

Paper ID - 361

A paper presented by:N Rajesh<sup>1</sup>, A. Pandian<sup>2</sup>, K Subba Rao<sup>3</sup> <sup>1</sup>Research Scholar, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>2,3</sup>Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

This paper is mainly focused on the transmission loss allocation in a deregulated power system. The principle target of this restructured power system is to create the competition among the electricity market. This paper portrays different types of transmission loss allocation methods. The two loss allocation methods are Postage Stamp Method and Proportional Sharing Method. These methods are illustrated by using sample IEEE-5 bus system theoretically and practically calculated using Mat lab and it is verified on IEEE-14 bus system and Indian 24 bus system. The performance of loss allocation to the transmission customers are elaborated.

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# SUSTAINABLE OPERATION OF GRID CONNECTED DFIG DURING RECURRING SYMMETRICAL FAULTS USING FUZZY CONTROLLER

## Paper ID - 362

## A paper presented by:S.V.N.L Lalitha Professor, Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

Doubly Fed Induction Generator (DFIG) can get adapted to modern grid rules to maintain synchronism and stability during disturbances if controlled by good control strategy. As per modern grid rules, DFIG needs to operate during grid faults without losing synchronism for prescribed time period during under voltages is called low voltage ride through (LVRT). Hence for this, enhanced field oriented control technique (EFOC) was adopted in Rotor Side Control (RSC) of DFIG converter to improve power transfer and for ensure dynamic and transient stability margin. The proposed EFOC technique with fuzzy controller can damp pulsations in electromagnetic oscillations, improve voltage mitigation and limit surge currents and to have sustained operation of DFIG during voltage sags. The proposed strategy has advantages like improved reactive power control with improved continuity of voltage and current waveforms from stator and rotor to grid during disturbance. The system performance with under-voltage of 30 and 60% of the rated voltage with symmetrical fault occurring at the point of common coupling during 2 to 2.5 seconds are analyzed using simulation studies.

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# TWO AREA LOAD FREQUENCY CONTROL FOR DFIG BASED WIND TURBINE SYSTEM USING MODERN ENERGY STORAGE DEVICES

### Paper ID - 363

**A paper presented by:**K.S.Srikanth, M .Kirankumar, G .G .Raja sekhar Department of EEE, K L University, Green Fields, Vaddeswaram, Guntur, AP ,India

## Abstract:

In this paper, energy storage devices like super conductor magnetic energy storage system (SMES) and thyristor controlled capacitor storage phase shifters (TCPS) and FACTS device like static synchronous series compensator (SSSC) are used to damp oscillations in a power system. In general, with increase in number of wind generators connected to grid, penetration issues slowly increases. Due to this, if there is a sudden change in load in one area, frequency deviation in all areas takes place which leads to electro-mechanical oscillations in the system. To damp out these oscillations tie-line based frequency controllers (TLFC) were generally used for DFIG systems. Hence for effective damping of oscillations, SMES, TCPS and SSSC are chosen for DFIG based wind turbine system. It is to find a suitable device among TLFC, SMES, TCPS, SSSC to work in coordination to control frequency regulation and tie-line power for area DFIG based systems. Simulation results prove that oscillations damping can be effective if coordinated SMES and TCPS or with SSSC installation in both areas are better options.

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# PERFORMANCE OF DFIG DURING SYMMETRICAL AND ASYMMETRICAL GRID FAULTS WITH DAMPING CONTROLLER BASED SSSC

## Paper ID - 364

A paper presented by:B Ramakrishna<sup>1</sup>, T Srikanth<sup>2</sup>, M Naga Chaitanya<sup>3,</sup>T Vijay Muni<sup>4</sup> <sup>1,2</sup> UG Student, Department of EEE, K L University, Vaddeswaram, AP, India. <sup>3,4</sup>Asst. Professor,Department of EEE, K L University, Vaddeswaram, AP, India.

## Abstract:

The renewable energy resources like wind with doubly fed induction generator (DFIG) is playing a vital role in meeting the ever-increasing load demand. Most of the industrial and commercial loads are sensitive to fault, as surge current damages the system. The DFIG wind turbine set is very sensitive when grid fault occurs, which damages the stator and rotor winding and also the converters and the capacitor. To overcome these effects, DFIG grid connected system is equipped with damping controller based static synchronous series compensator (SSSC) based series FACTS device with a new control scheme for oscillations damping and quicker voltage injection technique. Voltage damping circuit is provided in the outer control loop of SSSC for improving voltage profile of stator and rotor. The inputs for the damping circuit are rotor speed and stator real power and controller is designed with cascaded 2nd order lead-lag compensator. The results are presented for single line, double line and triple line to ground faults and system behavior is examined.

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## MUSEUM GUIDE ROBOT WITH COMMUNICATIVE HEAD

## Paper ID - 365

A paper presented by:K.V.Narasimha Rao and Shaikh Mardanali Chand Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Face or head movement plays an important role in human communication. This paper presents a museum guide robot that moves its head to communicate smoothly with humans. We have analyzed the behavior of human guides when they explain exhibits to visitors. Then, we have developed a robot system that can recognize the human's face movement using vision. The robot turns its head depending on the human's face direction and the contents of utterances. We use the analysis results of human behavior to control the head movements. Experimental results show that it is effective for the guide robot to turn its head while explaining exhibits

Keywords 3D Printing, Robotics, Assistive Technology,

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# INTENTION RECOGNITION USING LEAP MOTION CONTROLLER AND ARTIFICIAL NEURAL NETWORKS

## Paper ID - 366

A paper presented by: T.Babu Rao and S V Seshu Kumar Gajula Department of Mechanical Engineering Koneru Lakshmaiah Education Foundati Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract

Intention recognition is an important topic in the field of Human Robot Interaction. If the robot is wanted to make counter movements just in time according to human's actions, a robotic system must recognize the intention of the human necessarily. In this paper, a method for a robotics system to estimate the human's intention is presented. In our method, the information is provided from the sensor called as leap motion controller device. The decision about the tendency of human intention is made by Artificial Neural Network. A scenario has been designed that a human subject tries to pile the boxes on each other. The main point for this robotic system and the scenario is to recognize the intention as which box would be held by the subject

keyword: intention recognition, leap motion, AI Networks

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## MULTIMODAL CONTROL FOR HUMAN-ROBOT COOPERATION

Paper ID - 367

A paper presented by: Y.Appalanaidu and Perla Sudheer Kumar Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

For intuitive human-robot collaboration, the robot must quickly adapt to the human behavior. To this end, we propose a multimodal sensor-based control framework, enabling a robot to recognize human intention, and consequently adapt its control strategy. Our approach is marker-less, relies on a Kinect and on an on-board camera, and is based on a unified task formalism. Moreover, we validate it in a mock-up industrial scenario, where human and robot must collaborate to insert screws in a flank

keyword: human-robot collaboration, recognize human intention, Kinect

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## PROGRESS AND PROSPECTS OF THE HUMAN-ROBOT COLLABORATION

Paper ID - 368

A paper presented by:P. Venkateswarlu and Prasanna Mulakalapalli Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Recent technological advances in hardware design of the robotic platforms enabled the implementation of various control modalities for improved interactions with humans and unstructured environments. An important application area for the integration of robots with such advanced interaction capabilities is human–robot collaboration. This aspect represents high socio-economic impacts and maintains the sense of purpose of the involved people, as the robots do not completely replace the humans from the work process. The research community's recent surge of interest in this area has been devoted to the implementation of various methodologies to achieve intuitive and seamless human–robot-environment interactions by incorporating the collaborative partners' superior capabilities, e.g. human's cognitive and robot's physical power generation capacity. In fact, the main purpose of this paper is to review the state-of-the-art on intermediate human–robot interfaces (bi-directional), robot control modalities, system stability, benchmarking and relevant use cases, and to extend views on the required future developments in the realm of human–robot collaboration

keyword: intention recognition, leap motion, AI Networks

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# ADAPTABLE WORKSTATIONS FOR HUMAN-ROBOT COLLABORATION: A RECONFIGURABLE FRAMEWORK FOR IMPROVING WORKER ERGONOMICS AND PRODUCTIVITYN.

## Paper ID - 369

A paper presented by:B.V.Dharmendra and Chougule Sukhadip Mhankali Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Musculoskeletal disorders, the single largest category of workrelated injuries in many industrial countries, are associated with very high costs in terms of lost productivity. In highvolume production facilities, large parts of the workstation should ideally be adapted to individual workers in real time to prevent such injuries. However, in smaller production lines, especially those found in small and medium enterprises (SMEs), regularly adapting the entire workstation to accommodate flexibility is a major challenge. A solution to the problem is the development of reconfigurable human-robot collaboration (HRC) workstations and frameworks. These are key to enabling agile manufacturing, by merging the dexterity, flexibility, and problem-solving ability of humans with the strength and precision of robotics

keyword: musculoskeletal, human-robot collaboration

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# TOWARD ERGONOMIC RISK PREDICTION VIA SEGMENTATION OF INDOOR OBJECT MANIPULATION ACTIONS USING SPATIOTEMPORAL CONVOLUTIONAL NETWORKS

## Paper ID - 370

A paper presented by:K. Rama Krishna and Dasore Abhishek Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Automated real-time prediction of the ergonomic risks of manipulating objects is a key unsolved challenge in developing effective human–robot collaboration systems for logistics and manufacturing applications. We present a foundational paradigm to address this challenge by formulating the problem as one of action segmentation from RGB-D camera videos. Spatial features are first learned using a deep convolutional model from the video frames, which are then fed sequentially to temporal convolutional networks to semantically segment the frames into a hierarchy of actions, which are either ergonomically safe, require monitoring, or need immediate attention. For performance evaluation, in addition to an open-source kitchen dataset, we collected a new dataset comprising 20 individuals picking up and placing objects of varying weights to and from cabinet and table locations at various heights. Results show very high (87%–94%) F1 overlap scores among the ground truth and predicted frame labels for videos lasting over 2 min and consisting of a large number of actions

keywords: manipulator ,rgb camera ,human robot collaboration

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# FORMAL DESIGN AND ANALYSIS OF A GEAR CONTROLLER: AN INDUSTRIAL CASE STUDY USING UPPAAL

### 10715 Paper ID - 371

A paper presented by:K.V.Narasimha Rao and Deshmukh Yogiraj Ramakantrao Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

### Abstract:

In this paper, we report on an application of the validation and verification tool kit Uppaal in the design and analysis of a prototype gear controller, carried out in a joint project between industry and academia. The gear controller is a component in the control system operating in a modern vehicle, implementing the gear change algorithm. We give a detailed description of the formal model of the gear controller and its surrounding environment, and its correctness formalized in 46 logical formulas according to the informal requirements delivered by our industrial partner of the project. The second contribution of this paper is a solution to the problem we met in this case study, namely how to use a tool like Uppaal, which only provides reachability analysis to verify bounded response time properties e.g. if f1 (a request) becomes true at a certain time point, then f2 (a response) must be guaranteed to hold within a given time bound. We present a logic and a method to characterize and model{check such properties for networks of timed automata by syntactical transformation and reachability analysis. The advantage of this approach is that we need no additional implementation work to extend the existing model{checker, but simple manual syntactical manipulation on the system description. The method has been demonstrated in verifying the correctness of the gear controller design. It takes 2.99 seconds to check the 46 logical formulas by Uppaal installed on a Pentium 75MHz PC equipped with 24 MB of primary memory.

Keywords: validation, gear controller, etc.

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## MODAL AND STRESS ANALYSIS OF GEAR TRAIN DESIGN IN PORTAL AXLE USING FINITE ELEMENT MODELING AND SIMULATION

## Paper ID - 372

A paper presented by:P. Jamaleswara Kumar and Divakara Murthy Keta Department of Mechanical Engineering Koneru Lakshmaiah Education Foundatio Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

The portal axle is a gearbox that is specially designed for off-road driving conditions. It is installed between the wheel and the axle shaft to give higher ground clearance to the vehicle. The modeling and simulation of spur gears in portal axle is important to predict the actual motion behavior. However, gear train design in portal axle is difficult to study comprehensively due to their relatively low cost and short product life cycle. In this study, modal analysis of portal axle is simulated using finite element method (FEM). Modal analysis is simulated on three different combinations of gear train system commonly designed for portal axle. The three gear trains being analyzed are gear train without idler gear, one idler gear and two idler gears. FEM static stress analysis is also simulated on three different gear trains to study the gear teeth bending stress and contact stress behavior of the gear trains in different angular positions from 0° to 18°. The single and double pair gear train design evaluation, and the study of gear stress behavior in gear train which is needed in the small workshop scale industries.

Keywords: Portal axle; Spur gears; Stress analysis; Modal analysis; Angular position; Gear train

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# DESIGN AND CHARACTERISTIC ANALYSIS OF ECCENTRIC HELICAL CURVE-FACE GEAR

## Paper ID - 373

A paper presented by:K.Murahari and G Siva Prasad Department of Mechanical EngineeringKoneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

A composite motion eccentric helical curve-face gear pair consisting of a helical non-circular gear and an eccentric helical curve-face gear is put forward based on the combination of eccentric gear and curve-face gear. This new gear pair can implement the rotation of intersected axes as well as the movement of output axe. Based on the spatial coordinate transformation theory, the coordinate system of eccentric helical curve-face gear pair is obtained and the pitch curve of eccentric helical curve-face gear is designed. The meshing equation and the tooth surface equation of eccentric helical curve-face gear are derived based on the spatial gear engagement theory and the conjugate surface theory. By changing the different parameters of eccentric helical curve-face gear pair, the influencing factors and variation of transmission ratio, pressure angle and kinematics are analyzed. According to the motion relationship of the gears and the method of generation, the establishment of solid model for the eccentric helical curve-face gear is presented with the application of SolidWorks. Furthermore, the correctness of the design theory of eccentric helical curve-face gear pair is verified by using the motion simulation and the experimental verification.

**Keywords:** Composite motion, Eccentric helical curve-face gear, Characteristic analysis, Verification analysis

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# STRUCTURAL ANALYSIS OF COMPOSITE MATERIAL HELICAL GEAR UNDER DIFFERENT LOADING

## Paper ID - 374

A paper presented by:P.V.Rama Rao and G.Venkata Nagamani Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Gearing is one of the most critical components in a mechanical power transmission system, and in most industrial rotating machinery. In recent years it is required to operate machines at varying load and speed. Gear teeth normally fail when load is increased above certain limit. Therefore it is required to explore alternate materials for gear manufacturing. Composite materials provide adequate strength with weight reduction and they have emerged as a better alternative for replacing metallic gears. In this work an attempt has been made to replace the metallic gears of steel alloy with the composites . The composites consider were the Aluminium Silicon carbide composite Carbon fiber epoxy composites and carbon fiber silicon carbide ceramic composite . Efforts have also been carried out for modelling of the transmittiing power gear assembly on creo 3.0 and fem based structural behaviour of different material were studied. Ansys 14.0 is used the analysis tool in the present work to detrmine the total deformation , von misses stress and the natural frequencies at various mode. Composite gears offer improved properties over steel alloys and these can be used as better alternative for replacing metallic gears.

**keywords:** Gearing, Aluminium silicon carbide, Carbon Epoxy, Carbon fibre silicon carbide, ANSYS.

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# DESIGN AND ANALYSIS OF AN INTEGRATED HALBACH-MAGNETIC-GEARED PERMANENT-MAGNET MOTOR FOR ELECTRIC VEHICLES

## Paper ID - 375

A paper presented by: A Jagadeesh and Ghulanavar Rohit Dundappa Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

This paper proposes an integrated Halbach-magnetic-geared permanent-magnet (PM) motor to meet the new demands arising from electric vehicles. It can offer the advantages of lightweight, compact size and low-speed high-torque operation. The key is to newly incorporate the Halbach arrays into the coaxial magnetic gear (MG) in such a way that the PM motor field and the MG field are decoupled. In addition, because the adoption of Halbach arrays can enhance the effective harmonic components as well as suppress the useless harmonic components of the magnetic field, the torque transmission performance of the outside MG can be improved. Moreover, the iron losses can also been reduced. Simulation results based on the time-stepping finite element method are given to verify the validity of the proposal.

Keywords: magnetic gear, permanent magnet, halbach array, torque transmission

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# DEVELOPMENT OF COMPUTER-BASED MODEL FOR DESIGN AND ANALYSES OF WORM GEARING MECHANISM

## Paper ID - 376

A paper presented by:P. Venkateswarlu and Gudi Sayareddy Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Current computer software for designing gear systems have limited flexibility and few offer multiple gearing design options. The objective of this study was to develop an interactive package for the design and analyses of worm gearing mechanisms. The worm gears were designed based on full-depth involute teeth. Mathematical models were developed to compute geometry factors for surface durability of singleenveloping worm gearing cases which were extracted from established American Gear Manufacturers Association (AGMA) standards. Maximum percentage errors from the geometry features, bending loads and wear loads are 0.97%, 3.27% and 1.77% respectively and insignificant. A software capable of computing geometry parameters, bending and wear loads, and selecting appropriate materials for worm mechanisms with good accuracy has been developed.

Keywords: Single Worm; Gear Design; Bending Loads; Wear Loads

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# DESIGN AND STRUCTURAL ANALYSIS OF MAIN LANDING GEAR FOR LOCKHEED T-33 JET TRAINER AIRCRAFT

## Paper ID - 377

A paper presented by:P. Venkateswarlu and Gurram Raghavendra Reddy Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

This work is mainly focused on structural design and analysis of the main landing gear for a jet trainer aircraft, that is economical and possess the high strength to weight ratio but still simple in design. An attempt is made to graphically synthesis and understands the kinematics of the mechanism. ADAMS is used to verify the mobility of the design. Computer 3D modeling of the assembly is done in Unigraphics NX 10 and finite element analysis is performed to analyze stresses developed during landing at the rate of descending. The linear static analysis is carried out to compute the deflections of the main landing gear and to estimate the internal stresses with the help of finite element program ANSYS Workbench. The simulation results are discussed in this paper.

KeyWords: Main Landing Gear, Gear Mechanism, Mobility, Stress analysis

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# DESIGN AND ANALYSIS OF CROWN PINION OF A DIFFERENTIAL GEAR BOX FOR REDUCED NUMBER OF TEETH TO IMPROVE TORQUE TRANSMITTED

## Paper ID - 378

A paper presented by:T.Babu Rao and Jagadale Vishal Satish Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Bevel gears are widely used because of their suitability towards transferring power between nonparallel shafts at almost any angle or speed. Spiral bevel gears, in comparison to straight or zerol bevel gears, have additional overlapping tooth action which creates a smoother gear mesh. This smooth transmission of power along the gear teeth helps to reduce noise and vibration that increases exponentially at higher speeds. Currently the bolero pickup vehicle of Mahindra Company is running with a pinion present in the differential gear box having 11 numbers of teeth. By reducing number of teeth on pinion, we can increase the torque. So we carried out this work to design a new pinion suitable to fit in the bolero pickup vehicle. Only the number of teeth are reduced by keeping all other dimensions same to fit the new pinion in the same housing.

Keywords: Spiral bevel gear, Pinion, Differential gear box

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# DESIGN AND STRUCTURAL ANALYSIS OF HIGH SPEED HELICAL GEAR USING ANSYS

## Paper ID - 379

A paper presented by: Y.Appalanaidu and K Nagendra Babu Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

In the gear design the bending stress and surface strength of the gear tooth are considered to be one of the main contributors for the failure of the gear in a gear set. Thus, the analysis of stresses has become popular as an area of research on gears to minimize or to reduce the failures and for optimal design of gears In this paper bending and contact stresses are calculated by using analytical method as well as Finite element analysis. To estimate bending stress modified Lewis beam strength method is used. Pro-e solid modeling software is used to generate the 3-D solid model of helical gear. Ansys software package is used to analyze the bending stress. Contact stresses are calculated by using modified AGMA contact stress method. In this also Pro-e solid modeling software is used to generate contact gear tooth model. Ansys software package is used to analyze the contact stress. Finally these two methods bending and contact stress results are compared with each other.

Keywords: Bending stress, Contact stress, Gear, Helical gear, FE method

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## DESIGN AND ANALYSIS AIRCRAFT NOSE AND NOSE LANDING GEAR

Paper ID - 380

A paper presented by:Mithileshkumar Dikshit and K Rajesh Kumar Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Abstract Tri-cycle arrangement landing gear is extensively used as it is simple; convenient both structurally as well as aerodynamically. Though it is advantageous over other configuration is has its own draw backs. Factors like its weight drag, sudden application of load, acoustics, fatigue etc tend to slow down its performance and life. Among main landing gear and nose landing gear; the former carries about 85% of total weight of aircraft and latter carries around 12-15% of weight. The nose landing gear is also a source of noise and its effect is prominent when compared to main landing gear. In this project the executive jet aircraft are studied thoroughly and a nose landing gear similar to those of executive jets is modeled using CATIA. The same geometry is imported to ANSYS ICEM and flow on the body is analyzed for different angle of attack. Pressure variation, temperature, density and velocity distribution around the body is noted and then Coefficient for Lift and Drag are plotted against angle of attack for obtained results. It is also important to check the strength and stiffness of designed landing gear. Hence using ANSYS APDL and Explicit; Static structural and Impact test has been carried out for designed geometry. Stress distribution and deformation was noted for two distinct materials such as steel and aluminum alloy and primary results of acoustics has been compared with the available data.

**Keywords:** Angle of attack; Deformation; Flow over body; Coefficient of lift; Coefficient of drag Impact landing; Nose landing gear; Stress distribution; Acoustics

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### DYNAMIC ANALYSIS OF WIND TURBINE GEARBOX COMPONENTS

Paper ID - 381

A paper presented by:P. Venkateswarlu and K.M.V. Ravi Tej Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

This paper studies the dynamic response of a wind turbine gearbox under different excitation conditions. The proposed 4 degree-of-freedom (DOF) dynamic model takes into account the key factors such as the time-varying mesh stiffness, bearing stiffness, damping, static transmission error and gear backlash. Both the external excitation due to wind and the internal excitation due to the static transmission error are included to represent the gearbox excitation conditions. With the help of the time history and frequency spectrum, the dynamic responses of wind turbine gearbox components are investigated by using the numerical integration method. This paper explains underwhich conditions the fretting corrosion, as one of the wind turbine gearbox failure modes, may occur. Furthermore, it is observed that the external excitation fluctuation has large influence on the dynamic responses of both the gears and bearings.

**Keywords:** wind turbine; gearbox; dynamic responses; excitation conditions; time-varying mesh stiffness; static transmission error; damping; gear backlash

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# STRESS ANALYSIS OF THIN RIMMED SPUR GEAR WITH ASYMMETRIC TROCHOID

#### Paper ID - 382

A paper presented by:P. Jamaleswara Kumar and Kummaraguntla Raghavendra Sreedhar Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Involute spur gears are widely used machine element in many industrial areas. Thinrimmed spur gears are popular in applications where low weight design and high power transmission are required. The stress occurred on thin-rimmed spur gears are different from standard spur gears due to deformations on rim. For this reason, rim thickness is key parameter for stress analysis of thin-rimmed gears. As rim thickness decreases, the value of maximum bending stress increases and the location of maximum stress is moved bottom of tooth which results in fatigue life reduction. In this study, to decrease maximum bending stress and to move upper the critical point; asymmetric trochoid profile is proposed. Asymmetry is constituted with using rack cutter has different tip radius on sides. This allows using larger tip radius on one side. Firstly, 3D design of spur gear with thin rimmed is realized in CATIA precisely. Then gears are imported to ANSYS package for finite element analysis. Normal force is applied on HPSTC. The rim surface is not fixed to allow rim deformations. The effects of using asymmetric trochoid on value and location maximum bending stress of thin rimmed spur gears is obtained with conducted case studies.

Keywords: Thin rimmed, involute spur gear, asymmetric trochoid

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## FINITE ELEMENT ANALYSIS OF CONTACT AND BENDING STRESSES IN HELICAL GEAR PAIR

Paper ID - 383

A paper presented by:T.Babu Rao and Kundurthi Bharadwaja Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

In gear design, excessive tooth contact stresses and bending stresses are one of the prime gear failure factors; therefore, its analysis is very important in order to shorten the possibility of gear tooth failure. In the present work, the tooth bending stresses and contact stresses in a helical gear pair is calculated using AGMA theory and finite element analysis (FEA). The modelling of helical gear pair is carried out in CREO and ANSYS is used for FEA. It is observed that the bending stresses and contact stresses, both decreases with an increase in the helix angle if pressure angle remains constant. However, the error in the calculation by AGMA and FEA is higher for the bending stresses than the contact stresses and bending stresses.

Keywords: Helical gear pair, Bending stresses, Contact stresses

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## DESIGN AND ANALYSIS OF STEERING GEAR AND INTERMEDIATE SHAFT FOR MANUAL RACK AND PINION STEERING SYSTEM

### Paper ID - 384

A paper presented by:P. Venkateswarlu and Lahane Sachin Bhaskar Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Manual rack and pinion steering systems are commonly used due to their simplicity in construction and compactness. The main purpose of this paper is to design and analyze the rack and pinion steering system. In this paper analyzed the two components of the steering system. Firstly, this paper investigates the AGMA equation. To determine the contact stresses between two mating gears the analysis is carried out on the equivalent contacting cylinders. The results obtained from ANSYS are presented and compared with theoretical values. This paper also deals with the stress analysis of the rack. By using FEM a stress analysis has been carry out. Steering rack deflection and bending stresses are found. This stresses are compared with analytical result. Secondly, Fatigue analysis of intermediate steering shaft is done to find the life of the intermediate steering shaft in cycles and determined the factor of safety of the shaft. The Software results, mathematical and logical calculation implementation in a research will increase the performance and efficiency of a design.

**Keywords:** Rack and Pinion Steering Gear, Contact Stress, Rack Bending Stress, Steering Intermediate Shaft, Life Cycle, Safety Factor, ANSYS Software.

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## DESIGN AND ANALYSIS OF SPLIT FIXTURE FOR GEAR HOBBING MACHINE

Paper ID - 385

A paper presented by:T.Babu Rao and Kundurthi Bharadwaja Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

Compared to the conventional gear hobbing fixtures, split fixture can effectively reduce job set-up time during the manufacturing process. This paper investigates the behaviour and analysis of split fixture under varying static loading conditions. Design of the part was established by considering the ability of the split fixture to carry jobs of various diameters. In order to validate the design, Static structural analysis was carried out on two positional configurations of the split fixture. A load of 1 ton was applied on the resting face of the fixture to simulate the effect of holding the job. The analysis included a study of the Stress, Deformations, and Modal analysis at different resonating frequencies to check for failure of design. By applying varying loads similar to practical conditions, it was observed that the design successfully withstood the applied forces without failure and a factor of safety of 142 was achieved in a critical loading case. Investigating the effect of dynamic loads on the Split Fixture and including auxiliary assembly components in design analysis.

Keywords: Gear hobbing, Modal analysis, Split fixture, Static structural analysis

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## DESIGN AND STRUCTURAL ANALYSIS OF SKID LANDING GEAR

Paper ID - 386

A paper presented by:K.V.Ramana and Bhingare Yashwantrao Kanta Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

The undercarriage or landing gear in aviation is the structure that supports an aircraft on the ground and allows it to taxi, takeoff and land. A helicopter is an aircraft that can take off and land vertically also called a rotary aircraft, it can hover and rotate in the air and can move sideways and backwards while aloft. Here the type of landing gear is studied and the designing process is done through CATIA (Computer Aided Three Dimensional Interactive Application). The results from analyzing the stress strain state for the skid landing gear with regards for the physically and geometrically nonlinear scheme of deformation were compared.

Keywords: The Skid Landing Gear, Composites, Designing, Structural Analysis, landing.

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## DYNAMIC CONTACT ANALYSIS AND TOOTH MODIFICATION DESIGN FOR EMU TRACTION GEAR

## Paper ID - 387

A paper presented by:G Diwakar and Baviskar Abhijit Chandrakant Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

A series of problems arise when a gear pump operates at high speed, including instability of the rotor, deformation of the chamber, and wear of the journal bearing. Among all failure modes, journal bearing wear is the most serious. The wear of journal bearings of a circular arc gear pump that operates at high speed is thus presented in this article. A journal bearing that offsets the unbalanced radial force is designed by analysis of the fluid and determination of eccentricity of the gear shaft. Experiments show that the wear of the new journal bearing is effectively reduced.

**Keywords:** Circular arc gear pump, journal bearing, unbalance radial force, analysis of fluid, eccentricity

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## DESIGN AND STRUCTURAL ANALYSIS OF CERAMIC COATED PETROL ENGINE PISTON USING FINITE ELEMENT METHOD

## Paper ID - 388

A paper presented by:K.V.Ramana and Bhingare Yashwantrao Kanta Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

#### Abstract:

Piston is made of aluminium alloys is a crucial part in internal combustion engine. When the combustion of fuel take place insides the engine cylinder, high pressure and high temperature will be developed as the engine will operate at high load and at high speed. As a result of this high thermal and high structural stresses in the piston is produced inside the engine cylinder and if these stresses exceeds the designed values, the failure of piston take place. To avoid the failure of the piston thermal and structural intensity should be reduced to safe allowable limits. In this work an attempt is made to reduce the thermal and structural stress intensity by coated the piston with ceramic material. The zirconia-based ceramic coatings are used as thermal barrier coatings owing their low conductivity and their relatively high coefficient of thermal expansion. Firstly the structural and thermal stresses analyses are investigated on a conventional (uncoated) piston made of aluminium alloy namely A2618. Secondly the structural and thermal analyses are performed on the piston coated with zirconium material using the ANSYS software. The effects of coating on the thermal behaviours of the piston are investigated. The main objective is to investigate and analyse the structural and thermal stress distribution of the piston at the real engine condition during combustion process. The analysis is carried out to reduce the stress concentration on the upper end of the piston .i.e. piston head/crown and piston skirt and sleeve using ANSYS software. The result obtained is compared to select the better material for piston manufacturing.

keywords: Engine piston, thermal analysis, structural analysis, FE analysis.

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## DESIGN AND ANALYSIS OF PISTON OF INTERNAL COMBUSTION ENGINE ON DIFFERENT MATERIALS USING CAE TOOL ANSYS

### Paper ID - 389

A paper presented by: P.V.Rama Rao and Deshpande Rakhi Ashok Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

### Abstract:

The modern trend is to develop IC Engine of increased power capacity. One of the design criteria is the endeavor to reduce the structures weight and thus to reduce fuel consumption. This has been made possible by improved engine design. In the internal combustion engine there are many reciprocating parts which are responsible for giving the motion to the engine. The piston is "Heart" of the engine and its working condition is the worst one of the key parts of engine in the working environment. So it is very important for design and structural analysis of the piston. There are lots of research works proposing, for engine pistons, new geometries, materials and manufacturing techniques, and this evolution has undergone with a continuous improvement over the last decades and required thorough the modeling like PRO-E. Then giving it the constrains which are act on the working condition of the piston after the model of the piston into the analysis software ANSYS in IGES format. Then the analysis becomes completed on the different parameters (temperature, stress, deformation) and easily analysis the result. The different material Al alloy 4032, AISI4340 Alloy Steel & Titanium Ti-6A1-4V. After the analysis of the different material piston it analyzed that the Al alloy is suitable for I.C.Engine piston.

keywords: Design of Piston, Ansys, Pro-E.

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## DESIGN ANALYSIS OF PISTON FOR FOUR STROKE SINGLE CYLINDER ENGINE USING ANSYS

### Paper ID - 390

A paper presented by:G Diwakar and J. Jagadesh Kumar Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

In this study, structural analysis is investigated on conventional piston made of Al alloy A2618. Secondly analysis are performed on piston made of Al-GHY1250 and Al-GHS1300.The material used for the design of piston should have light weight, low cost, structurally and thermally withstand at very high pressure and temperature condition that will occur in combustion process. In this project, it has been decided to study a particular piston design and its capability for maximum gas pressure. In this work, initial planning is to make piston model using solid modeling software Creo / Pro 5.0. It has been decided to mesh the geometry analyze using ANSYS. For the analysis of piston input conditions and process of analysis, a lot of literature survey has been done. High combustion gas pressures will act as a mechanical loads and causes major stresses in the critical region of the piston. Detailed static structural analysis is carried out for various loading conditions like maximum gas pressure load. Comparative study is done to select best material.

Keywords: A2618, Al-GHY1250, Al-GHS1300, Creo/ Pro 5.0.

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## NUMERICAL INVESTIGATION INTO THE EFFECT OF FINS ON FLUID NATURAL CONVECTION IN COAXIAL

### Paper ID - 391

A paper presented by:Rajeshkumar Bhuyan and Jadhav Rahul Diliprao Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

### Abstract:

This paper attempted to numerically examine the involvement of serrated fins on natural convection heat transfer between coaxial cylinders. The outer channel of annular cylinders was circular, while the inner channels involved three cross-sections including circular, square and triangular. As two geometric constraints, the area of annular cylinders and the diameter of outer channel were assumed to be identical in each scenario explored in this study. The fins had equal areas placed on the inner surface, so as to compare their effects on thermal properties of annular cylinders under constant temperature boundary within the range of Rayleigh numbers from 105 to 108. The results indicated that higher a Rayleigh number is directly correlated with higher convection heat transfer coefficient of surfaces. However, the inclusion of fins reduced the rate near the fins, thus mitigating the heat transfer coefficient of inner channel. This trend intensified at higher Rayleigh numbers. Therefore, the involvement of fins at lower Rayleigh numbers brings about greater efficiency in heat transfer. The comparison of fins in terms of efficiency revealed that maximum heat is transferred when the fins have been mounted on a circular channel.

Keywords: Coaxial Annular Cylinders, Natural Convection, Fins, Numerical Simulation

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## ECOFRIENDLY UNION OF SILVER NANOPARTICLES FROM INDUSTRIALLY ACCESSIBLE PLANT POWDERS AND THEIR ANTIBACTERIAL PROPERTIES

### Paper ID - 392

A paper presented by:G Diwakar and Jagdale Manoj Narsing Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

#### Abstract:

Use of various plant materials for the biosynthesis of nanoparticles is considered a green technology, as it does not involve any harmful chemicals. The present study reports that silver nanoparticles (Ag NPs) were synthesized from a silver nitrate solution by commercially available plant powders, such as Solanum tricobatum, Syzygium cumini, Centella asiatica and Citrus sinensis. Ag NPs were characterized by UV-vis spectrophotometer, X-Ray Diffractometer (XRD), Atomic Force Microscopy (AFM) and fourier transform infrared (FTIR) spectroscopy. The formation and stability of the reduced silver nanoparticles in the colloidal solution were monitored by UV-vis spectrophotometer analysis. The mean particle diameter of silver nanoparticles was calculated from the XRD pattern, according to the line width of the plane, and the refraction peak, using Scherrer's equation. AFM showed the irregular shapes of Ag NPs, and the formation of silver nanoparticles was found to be 53, 41, 52 and 42 nm, corresponding to Syzygium cumini, Citrus sinensis, Solanum tricobatum and Centella asiatica, respectively. FTIR spectroscopy confirmed the presence of protein as the stabilizing agent surrounding the Ag NPs. Antimicrobial activity of the silver bionanoparticles was performed by a well diffusion method. The highest antimicrobial activity of Ag NPs synthesized by C. sinensis and C. asiatica was found against Pseudomonas aeruginosa (16 mm). The Ag NPs synthesized in this process were found to have efficient antimicrobial activity against pathogenic bacteria.

Keywords :Nano particles, FTIR, AFM, XRD, etc.

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## TORSEMIDE AND FUROSEMIDE AS GREEN INHIBITORS FOR THE CONSUMPTION OF GENTLE STEEL IN HYDROCHLORIC CORROSIVE MEDIUM

### Paper ID - 393

A paper presented by:K. Rama Krishna and Kanasani Hari Brahmaia Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

#### Abstract:

The performance of torsemide and furosemide drugs as corrosion inhibitors for mild steel in 1 N HCl was thoroughly investigated by weight loss and electrochemical methods. The inhibition efficiencies of drugs obtained by all methods were in good agreement with each other. Torsemide exhibited higher inhibition efficiencies than furosemide in all the experimental studies. Polarization studies revealed that the inhibiting action of the compounds is under mixed control. The free energy of adsorption and the influence of temperature on the adsorption of inhibitors onto a mild steel surface have been reported. The adsorption of the compounds was found to obey the Langmuir adsorption isotherm. The mechanism of inhibition and formation of the Fe-inhibitor complex were confirmed by FT-IR and UV-visible absorption spectral analysis. The scanning electron microscopy (SEM) and atomic force microscopy (AFM) results established the formation of a protective layer on the mild steel surface. Quantum chemical calculations were applied to correlate the inhibition performance of inhibitors with their electronic structural parameters. © 2013 American Chemical Society.

Keywords: HCL, performance, methods, agreement, etc

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## IDEAL VALUE MARKING DOWN AND PARCEL ESTIMATING ARRANGEMENTS FOR PERISHABLE THINGS IN A PRODUCTION NETWORK UNDER PROPEL INSTALLMENT PLAN AND TWO-ECHELON EXCHANGE CREDITS

### Paper ID - 394

A paper presented by:P.V.Rama Rao and Kazi Atik Mubarak Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

#### Abstract:

In this paper, an effective approach, Taguchi grey relational analysis, has been applied to experimental results of wire cut electrical discharge machining (WEDM) on Inconel 825 with consideration of multiple response measures. The approach combines the orthogonal array design of experiment with grey relational analysis. The main objective of this study is to obtain improved material removal rate, surface roughness, and spark gap. Grey relational theory is adopted to determine the best process parameters that optimize the response measures. The experiment has been done by using Taguchi's orthogonal array L36 ( $21 \times 37$ ). Each experiment was conducted under different conditions of input parameters. The response table and the grey relational grade for each level of the machining parameters have been established. From 36 experiments, the best combination of parameters was found. The experimental results confirm that the proposed method in this study effectively improves the machining performance of WEDM process.

Keywords: Taguchi,SR,MRR,WEDM,etc

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## LASER ENGINEERED NET SHAPING PROCESS IN IMPROVEMENT OF BIO-COMPATIBLE IMPLANTS

### Paper ID - 395

A paper presented by:G Diwakarv and Kiran Kumar Madisetty Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

### Abstract:

Additive manufacturing or Rapid Prototyping (RP) is an advanced manufacturing technology emerging as key player in both industrial and medical fields. Dissimilar to traditional manufacturing processes, in additive manufacturing process material is added as sequential thin layer to achieve the build parts with minimal post processing and it requires less time to fabricate prototypes with high accuracy. Additive manufacturing shows desired results for fabricating the customized medical implants. As there is a large variation to part structure from patient to patient, it is difficult to make implants from conventional manufacturing processes. So, rapid prototyping is most advanced and convenient to fabricate a medical implant that suits the patient's requirements. The present paper reviews the works produced by Laser Engineered Net Shaping (LENS) technique to fabricate the medical implants from bio-materials.

Keywords: prototyping, fields, manufacturing, etc.

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## CONDITION MONITORING AND DIAGNOSTIC ANALYSIS OF INDUCED DRAUGHT FAN ROTOR SYSTEM

### Paper ID - 396

A paper presented by:G Diwakarv and Kiran Kumar Madisetty Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

#### Abstract:

Today's machines are more complex as they have to meet more stringent functional and operational requirements. Growing demand on reliability and performance of these machines and maintaining high productivity without sacrificing product quality have made it imperative for maintenance engineers to device newer strategies in maintenance of plant and machines. One of such strategies is condition monitoring, which has emerged as the most powerful tool in maintenance engineering to prevent uneconomical, unreliable, unhealthy, unsafe and even lethal conditions. In this paper an attempt has been made to monitor the condition of induced draught fan rotor system of a large utility thermal power plant. The data has been logged for a period of 6 months and has been rationalized for ease of investigation. The values are plotted on time-domain for velocity to facilitate trend monitoring. Fault diagnosis of the rotor.

Keyword: complex, demand, engineering, etc.

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# RESEARCH ARTICLE DESIGN OPTIMIZATION OF A MICRO AIR VEHICLE (MAV) FIXED WING

### Paper ID - 397

A paper presented by: Y.V.Hanumantha Rao and Koli Somnath Rajaram Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502 Vaddeswaram, Pin-522502

#### Abstract:

Micro air vehicles are gaining attention due to their wide range of applications in civilian and defense fields. The wings of these vehicles generate a particular flow regime which is to be explored further. Since the theories on the aerodynamics of all affects are still to be investigated, simulation based computational fluid dynamics is a good approach rather than wind tunnel experiments which involves cost and long periods of experimentation. This study mainly emphasize on the lift, lift coefficient, drag and drag coefficient with respect to Reynold's number and angle of attack, by modelling and analyzing the fixed wing of a micro air vehicle. The analysis has been done selecting NACA25411 air foil. Modelling has been done in Gambit and analysis is taken up using Fluent. Angle of attack and Reynold's number have been optimized to increase the lift and decrease the drag.

Keywords: vehicles, aerodynamics, air, angle, etc.

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## DESCRIPTION AND WEAR PROPERTIES OF CO-CR-W ALLOY DEPOSITED WITH LASER ENGINEERED NET SHAPING

### Paper ID - 398

A paper presented by:K.Murahari and Lonavath.Srinivas Naii Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

#### Abstract:

Commercially available Co-Cr-W alloy, known as Stellite 6, samples are deposited using Laser Engineered Net Shaping process using L9 orthogonal array of Taguchi method with three different process parameters, each at three levels. All the samples are tested for the microstructure analysis with ESEM and wear resistance. The EPMA mapping is also presented for analysis. The wear testing results reveal that the samples fabricated with 350W laser power, 7.5 g/min powder feed rate and 15mm/s laser scan speed have exhibited highest wear resistance at 30N load and 300rpm.

Keywords: satellite, samples, EPMA, ESEM, etc.

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## VALID ARE SUGIYAMA' S EXPERIMENTS ON FOLLOWER FORCES

## Paper ID - 399

A paper presented by:Y.V.Hanumantha Rao and Gunda Satheesh Kumar Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

## Abstract:

This paper is inspired by the review articles of Langthjem and Sugiyama, and Elishakoff on the dynamic stability of non-conservative elastic systems. It examines Sugiyama's experimental results on a cantilever column subjected to the weight and thrust of a small rocket motor mounted at the tip end. The test results cannot be utilized directly for comparison with estimated critical loads of the column but they demonstrate the stabilization of the system due to rocket thrust.

**Keywords:** force,end,estimate,loads,etc

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## ELECTRO CHEMICAL BEHAVIOUR OF LENSTM DEPOSITED CO-CR-W ALLOY FOR BIO-MEDICAL APPLICATIONS

#### Paper ID - 400

A paper presented by:G Diwakar and Jagdale Manoj Narsing Department of Mechanical Engineering Koneru Lakshmaiah Education Foundation Vaddeswaram, Guntur District, Andhra Pradesh-522502

### Abstract:

In additive manufacturing processes, Laser Engineered Net Shaping (LENS) is the promising technology in developing medical implants with minimal material wastage and high accuracy in shape and size. It enables the custom design of implants that vary from patient to patient. In the present work, the LENS process has been used to fabricate and test Co-Cr-W alloy for its corrosion resistance. The process parameters selected for fabricating the samples are laser power; powder feed rate and laser scan speed, each at three levels. Samples are fabricated as per the Taguchi L-9 orthogonal array and analysis is carried out through the ANOVA and Grey Relational Grade Analysis. Through this methodology, the primary process parameters viz. Laser power (LP), Powder feed rate (PFR) and scan speeds (SS) can be optimized simultaneously for achieving a better combination of multiple performance characteristics. From the

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