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International Conference on
Advances in Signal Processing, Power, Embedded,
Soft Computing, Communication and Control Systems

ICSPECS-2019

11th - 12th January, 2019
Kurnool, Andhra Pradesh



Organized by
G.Pulla Reddy Engineering College (Autonomous)
Kurnool, Andhra Pradesh

Institute For Engineering and Publication (IFERP)



Chowdaryguda, Korremula (V),
Ghatkesar (M), Medchal Dist, T S-500086

ICSPECS - 19

**International Conference on Advances in Signal
Processing, Power, Embedded, Soft Computing,
Communication and Control Systems**

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Organized by:
G.Pulla Reddy Engineering College (Autonomous)
and
Institute For Engineering Research and Publication (IFERP)

From Director's Desk



Rudra Bhanu Satpathy.,

Director,
Institute For Engineering Research and Publication.

On behalf of *Institute For Engineering Research and Publications (IFERP)* and in association with *G.Pulla Reddy Engineering College (Autonomous)*, Kurnool, Andhra Pradesh. I am delighted to welcome all the delegates and participants around the globe to *G.Pulla Reddy Engineering College (Autonomous), Kurnool, Andhra Pradesh* for the “*International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems (ICSPECS-2019)*” Which will take place from *11th -12th January'19*

Transforming the importance of Engineering, the theme of this conference is “*International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems (ICSPECS-2019)*”

It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the reviewing committee, coordinator (**IFERP & GPREC**) and all the people involved for their efforts in organizing the event and successfully conducting the International Conference and wish all the delegates and participants a very pleasant stay at *Kurnool, Andhra Pradesh*.

Sincerely,



Rudra Bhanu Satpathy

Preface

The “*International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems*” is being organized by *G.Pulla Reddy Engineering College (Autonomous)*, Kurnool, Andhra Pradesh in association with *IFERP-Institute for Engineering Research and Publications* on the 11th – 12th January, 2019.

G.Pulla Reddy Engineering College (Autonomous) has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Kurnool in Andhra Pradesh.

The “*International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems*” was a notable event which brings academia, researchers, engineers, industry experts and students together.

The purpose of this conference is to discuss applications and development in area of “**Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems**” which were given international values by *Institute for Engineering Research and Publication (IFERP)*.

The International Conference attracted over 245 submissions. Through rigorous peer reviews 135 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our Management for their wholehearted support and encouragement. We thank our Principal for his continuous guidance. We are also thankful for the cooperative advice from our advisory Chairs and Co-Chairs. We thank all the members of our local organizing Committee, National and International Advisory Committees.

ICSPECS-2019

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ANANTHAPURAMU – 515 002 (A.P.) INDIA



Prof. S. SRINIVAS KUMAR
M. Tech., Ph. D (IIT KGP)
VICE - CHANCELLOR

MESSAGE FROM HON'BLE VICE CHANCELLOR



I am delighted to know that G.Pulla Reddy Engineering College(Autonomous), Kurnool is organizing **International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems (ICSPECS-2019)** on 11th & 12th January, 2019. I extend my warm greetings to the Management, Director, Principal and Organizing team of ICSPECS-2019 for organizing such mega event. These technical conferences enable the Engineering community to update the advancements in Technology and Research and create the opportunities for more innovations, knowledge sharing and collaborative research. I acknowledge and appreciate the endeavor made by the Management, Director, Principal and organizers who involved in it.

I wish all the delegates who take part in this mega summit to have an excellent research experience by sharing and acquiring more innovative ideas and skills. And this conference may pave the way for collaborative research and development for concrete Nation building with technological advancements in every walk of our life. I wish the Conference, ICSPECS-2019 more useful and successful.

Prof. S. SRINIVAS KUMAR

Vice-Chancellor

Message from Hon'ble Chairman



I am pleased to welcome you to the International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems-2019 (ICSPECS-2019) is held on 11th&12th January, 2019 at G.Pulla Reddy Engineering College (Autonomous), Kurnool in association with Institute For Engineering Research and Publication (IFERP), Chennai.

The intent of any conference is not only to discuss lively and emerging issues of a particular domain but also dissemination of the awareness among other learned folks. Over the years, dramatic improvements have been made in the field of Soft Computing and Communication Technologies and applications. I hope ICSPECS-2019 will become surely the most important International conference dedicated to bring out latest trends in Engineering and Technology.

In order to provide an outstanding technical level for the presentations at the conference, we have invited distinguished experts to participate in the Technical Program Committee. I hope all the delegates have an excellent experience in presenting their Research contributions and attending plenary sessions by keynote speakers during 2 days of conference. I hope ICSPECS-2019 makes you aware of state-of-the art systems and provides a platform to discuss various design issues and challenges. I am very happy to know that the articles presented at ICSPECS-2019 will be available for citation at reputed scientific repositories like Science Direct, Research Pedia and academic library. I congratulate the Director, Principal, Heads of concerned Departments and Organizing Team of ICSPECS-2019 for making this event very useful and successful.

Dr.P.Subba Reddy
Chairman,GPREC

Message from the Director, GPREC



It is a great pleasure and an honor to extend to you a warm invitation to attend the International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems (ICSPECS-2019) is held on 11th&12th January, 2019 at G.Pulla Reddy Engineering College (Autonomous), Kurnool in association with Institute For Engineering Research and Publication (IFERP), Chennai.

The theme of ICSPECS-2019 'Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems' will underpin the need for participation in forums for collaborative Research and cooperation of individuals from a wide range of professional backgrounds.

I strongly believe that the ICSPECS-2019 Conference will provide a wonderful forum for budding Engineers, Academia and Researchers to refresh their knowledge base and explore the innovations in Engineering and Technology. The Conference will strive to offer plenty of networking opportunities, providing the opportunity to meet and interact with the scientists and researchers

I hope all the technical sessions and keynote addresses will give you rewarding experience and make you to excel in your research areas.

With best wishes.

Dr.P.Jayarami Reddy
Director, GPREC

Message from Principal, GPREC



On behalf of the Local Organizing Committee and GPREC, the hosting institution and IFERP, it is my great pleasure to welcome you to International Conference on Advances in Signal Processing, Power, Embedded, Soft Computing, Communication and Control Systems (ICSPECS-2019) to be held on 11th -12th January, 2019 at G.Pulla Reddy Engineering College (Autonomous), Kurnool in association with Institute For Engineering Research and Publication (IFERP), Chennai. The idea to host the ICSPECS-2019 in GPREC at Kurnool is to bring together Researchers, Scientists, Engineers, Scholars and Students in the areas of Computer Science, Electronics and Communication Engineering and Electrical Engineering.

The ICSPECS-2019 Conference will foster discussions and hopes to inspire participants from a wide array of themes to initiate Research and Development and collaborations within and across disciplines for the advancement of Technology. I feel it is important to reiterate the need to translate Engineering & Technology into knowledge to help overcome societal challenges.

The various thematic sessions will showcase important technological advances and highlight their significance and challenges in a world of fast changes. I hope the delegates will have a great experience while attending the plenary sessions and oral presentations and will get an opportunity to interact with the conference participants.

The Local Organizing and Conference Committees will make any possible effort to make sure that the participation of delegates will be technically rewarding.

I congratulate all the participants for having their research articles presented at ICSPECS-2019 and sharing a most pleasant, interesting and fruitful conference.

With best wishes,

Dr.B.Sreenivasa Reddy
Principal
GPREC, Kurnool.

Message by Convener



On behalf of the Conference board I would like to welcome all the delegates to ICSPECS-2019.

The overwhelming response to our initiative to organize ICSPECS-2019 indicates the popularity of this conference and confirms that ICSPECS-2019 will become the world-wide forum for all aspects of Engineering and Technology in the field of soft Computing, Communication, Electrical and Electronics related topics. The current society is already witnessing the stupendous growth of ICT in past few decades. Therefore, every sub domain of ICT is infested with some issues which need to be resolved for the welfare of mankind. There are innumerable issues associated with various segments of communication technologies, networks like security issues, cost minimization issues in high performance computing, energy minimization issues in IoT etc.

The ICSPECS-2019 will facilitate the young researchers, industries and research agencies especially, those, who are carrying out their research work in the aforesaid domain of Computer Science, Information Technology, Electrical, Electronics and Communication Engineering with valuable discussions in order to make the outcomes more realistic.

The main objective of ICSPECS-2019 is to provide an apt platform where awareness about novel researches can be disseminated, scope for further research can be investigated and challenges can be discussed. The delegates with high academic pursuits will join and share their experiences, views for coping up with the recent challenges. This prestigious conference is organized by G.Pulla Reddy Engineering College (Autonomous) in association with IFERP. The conference itself starts with the plenary session on 11th Jan, 2019, where keynote speeches will be given by distinguished experts. I am happy to say that the outcome of this two day Conference is brought out in the form of proceedings. I would like to express my thanks to IFERP for their outstanding Support and association with us in constituting the Technical Program Committee with distinguished experts as members and the competent evaluation of the large number of submissions. All selected papers received by the deadline have been included in the conference proceedings and best quality papers will be published in Scopus Indexed Journals.

On behalf of organizing team, I am thankful to our Management, Director, Principal and Steering Committee Chair for their extensive support and guidance to organize ICSPECS-2019 successfully. I wish all the participants to have a successful and rewarding experience from ICSPECS-2019.

With best wishes,

Dr.S.Nagaraja Rao,
Convener, ICSPECS-2019

ICSPECS-19

*International Conference on
Advances in Signal Processing, Power,
Embedded, Soft Computing,
Communication and Control Systems*

Keynote Speakers



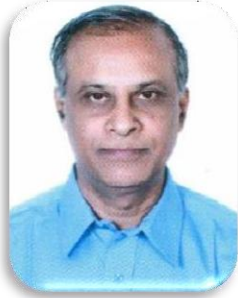
Prof G. Panda,
Professorial Fellow, IIT ,Bhubaneswar.

MESSAGE:

I am happy to learn that G. Pulla Reddy Engineering College Autonomous(GPREC) , Kurnool, Andhra Pradesh and Institute for Engineering Research and Publication (IFERP) are jointly organising an International Conference Advances in Signal Processing , Power, Embedded, Soft computing , Communication and Control systems(ICSPECS-2019) during (11-12)th January ,2019. I learnt that many interesting and reviewed papers in the area of Electrical, Electronics, Communication and Computer Science and Engineering will be presented in the conference by Ph. D students, Faculty members, and researchers from academic institutions and research and development organisations. In addition eminent keynote speakers from India and abroad will deliver their keynote speeches in the conference.

I hope the conference will be well attended and the paper presentation, keynote lectures, deliberations and interactions during the period of conference will be of immense help to the participants to carry out further research work in their own fields.

I wish the forth coming ICSPECS-2019 at GPREC, Kurnool a grant success



Dr.B.K. Venkataramu.,
Prof. Sathish Dhawan Scientist,
Liquid Propulsion Systems Centre,
Indian Space Research Organisation,
Bangalore – 560008.

BIOGRAPHY:

Shri. B.K. Venkataramu, graduated from University Visvesvaraya College of Engineering (UVCE), Bangalore in Mechanical Engineering in 1976 and later obtained his MS from IIT Madras. Starting his carrier in ISRO, Bangalore in 1977, Shri. Venkataramu has specialized in the field of Propulsion Systems for Spaccraft. He is responsible for total indigenization of propulsion systems for a range of Satellites, for interplanetary mission (Chandrayaan-1 and Mars orbiter mission), Space capsule recovery experiments etcHe also played a major role in the success of the Chandrayan-1 & Mars orbiter missions.



Sanjay Hotwani.,
Data Scientist in British Telecom
(A UK Based Company)
Bangalore

BIOGRAPHY:

Lead Data Scientist in British Telecom (A UK Based Company) with an Overall IT Experience of 14 years. Technology Enthusiast, Everyday Learner and Interested in Knowing and learning new cutting-edge technologies. Responsibilities include Architecture, Design and Development of Applications and Skilled in Machine learning, Deep learning, Statistics, Problem solving and Programming. Hobbies include Playing Cricket, Chess, Badminton and Participation in Data Science Competitions. Member of Toastmasters Club. Created Voice Bot integrated with Mobile App for BT Bangalore Employees as part of Smart Office Theme.

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ICSPECS -19

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Kurnool, Andhra Pradesh, January 11th - 12th , 2019

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CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
1.	A Novel Method for Dental Radiographs Contrast Enhancement for Efficient Diagnosis of Dental Disease ▲ N.PRAVEEN BABU	1
2.	Neuro-Fuzzy Based Load Frequency Control in Three Area Power Network. ▲ IMRAN SHAIK	2
3.	Effective use of ICT Tools in Open and Distance Learning ▲ N.PRAVEEN BABU	3
4.	Optimal Feature Selection by Distribution Diversity for Sentiment Analysis ▲ IMRAN SHAIK	4
5.	Trends and Techniques of Handling Big Health Data ▲ K LAVANYA	5
6.	Gain-Scheduled Controller Design for Cooperative Adaptive Cruise Control: Towards Automated Driving ▲ IMRAN SHAIK	6
7.	Online Control of a Nonlinear Autonomous Vehicle in Presence of Network Delay ▲ K LAVANYA	7
8.	Survey on Channel Estimation of the Orthogonal Frequency Division Multiplexing ▲ Dr. ARUL DALTON	8
9.	Dynamic Susceptibility Contrast Perfusion Quantification using Spread Bases Function ▲ T. KANAKAIAH	9
10.	Detection of Cumulonimbus Clouds Using Frequency and Spatial methods on NOAA Data ▲ T. KANAKAIAH	10
11.	Control Aspects of Cooperative Adaptive Cruise Design of log periodic dielectric resonator array for wide band applications ▲ K YAKOOB	11

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
12.	Control Aspects of Cooperative Adaptive Cruise Control in the Perspective of the Cyber-physical System ▲ N.PRAVEEN BABU	12
13.	Effects of Communication on the Performance of Cooperative Adaptive Cruise Control ▲ T.KANAKIAH	13
14.	Wireless Indoor Positioning Techniques Based on Ultra Wideband (UWB) Technology ▲ K.MANJULA	14
15.	Automated Seed Sowing Machine Using ATMEGA2560 ▲ S.VASAVI	15
16.	Segmentation of tumor along with healthy tissues of brain Via Kernel Support vector machine and GLCM ▲ G.VINODA	16
17.	Multi Quadrant Operation of Brushless Direct Current Motor Drive with PI and Fuzzy Logic Controllers ▲ M.LALITHA	17
18.	A Comparison on Control Algorithms for a BEV Propulsion Motor with Road load under NEDC ▲ DR.G.ARUL DALTON	18
19.	A Study on Underwater Image Enhancement Techniques ▲ I.SWAPNA	19
20.	Comparison of Closed Loop Optimal High Level Novel Multilevel Inverter fed Induction Motor Drive using PI Controller and Fuzzy Logic Controller ▲ K.INDHUMATHI	20
21.	Deep Stock Prediction using Visual Interpretation: DeepClue ▲ P.RENUKA	21
22.	Deep Learning: An Overview ▲ K INDUMATHI	22

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
23.	Survey on MIH ▲ K INDUMATHI	23
24.	Real Time Monitoring of Integrated Coalmine Mashup Middleware System Using WSN ▲ VASAVI S	24
25.	Low Cost and PI Based Smart Home Garden Watering System Using IoT ▲ VASAVI S	25
26.	A Secure Service Key sharing approach for Authorized Service Access in Wireless Network Services ▲ J SANTHOSH KUMAR	26
27.	Analysis and performance of human activity recognition system using Gabor filter bank with Hidden Markov Model ▲ J SANTHOSH KUMAR	27
28.	Adaptive Block Memory Management for Spatial and Temporal Locality in Flash Based Storage Systems ▲ K SHASHANK	28
29.	Effective use of ICT Tools in Open and Distance Learning ▲ K SHASHANK	29
30.	Advanced Rail Clamping PWM Techniques Based Three Level VSI fed DTC Induction Motor Drive for THD and Common Mode Voltage Reduction ▲ V SWATHI	30
31.	Optimal Placement of PMU in a Transmission Network using Genetic Algorithm ▲ V SWATHI	31
32.	Analysis of Multi-Frequency Multi -GNSS Real -Time Signal Observations Acquired by Septentrio PolaRx5 Receiver Station ▲ LAXMAN.E	32

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
33.	Performance Comparison for Ripple Carry Adder Using Various Logic Design ▲ LAXMAN.E	33
34.	IOT based smart Energy meter billing monitoring and controlling the loads ▲ K SOUMYA	34
35.	Theoretical Analysis of CMOS circuits in 90 nm Technology ▲ K SOUMYA	35
36.	A Cloud-Based Event Processing Technique for Measuring Metrological Parameters of Rain Streams using SaaS Analytics ▲ Y DHANUNJAY	36
37.	Detection of Glaucoma using Adaptive Neuro Fuzzy in DWT Domain ▲ Y DHANUNJAY	37
38.	IoT based Real Time Health Care Monitoring System using LabVIEW ▲ M SANTHOSH KUMAR	38
39.	Severity Analysis of Mitral Regurgitation Using Multi-Objective Firefly Optimization Method ▲ MUNNOR ANJANEYULU	39
40.	Hybrid loop controlled dual axis solar tracking system for Residential communities ▲ M SANTHOSH KUMAR	40
41.	Estimation of Power Spectral Density in SVPWM based Induction motor drives ▲ MUNNOR ANJANEYULU	41

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
42.	Speed Control of Induction Motor Using Lab View Simulation ♣ M SANTHOSH KUMAR	42
43.	Riverbed Modeler Simulation Based Performance Analysis of Routing Protocols in Mobile Ad Hoc Networks ♣ P SRIVANI RENUKA	43
44.	Design and Analysis of Sierpinski Carpet Fractal Antenna for UHF Spaced Antenna Wind Profiler Radar ♣ M SANTHOSH KUMAR	44
45.	A Comparative Analysis of Subjective and Objective Quality Measures for Noisy Speech Enhancement ♣ P SRIVANI RENUKA	45
46.	Advanced Mechanisims for Detection of Malware Family Attacks in Computer Networks ♣ BOPPANNI SWETHA	46
47.	Multi loop Controller design for multivariable processes Employing SISO PI Tuning Rules ♣ GUDIKANDU LA SATYANARAYANA	47
48.	Robust Bit Error Rate Optimization for MASSIVE MIMOCEM System using Channel Coding Method ♣ BOPPANNI SWETHA	48
49.	A Single Core Double Inductor Buck-Boost Converter with Positive Output Voltage ♣ GUDIKANDU LA SATYANARAYANA	49
50.	An effective audio watermarking approach with high data embedding ♣ GANAPURAM UMA RANI	50

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
51.	Detection of Malicious URLs using Machine Learning Techniques ▲ B PAVANI	51
52.	Feebly-Administered Deep Learning for Client Appraisal Soppiness Classification ▲ GANAPURAM UMA RANI	52
53.	A Survey on Traffic Flow Prediction with Deep Learning Algorithms on Big Data ▲ B PAVANI	53
54.	Handwritten Numeral Recognition using Deep Learning for Telugu ▲ GANAPURAM UMA RANI	54
55.	A Comprehensive Study of Load Balancing Techniques in Cloud Computing ▲ G RAM NARSAIAH	55
56.	Feature selection for Machine Learning in Big data ▲ VANGA ANUSHA	56
57.	QoS Guaranteed metrics for Dynamic Scheduling through Void filling and Burst Segmenting in OBS Networks ▲ G RAM NARSAIAH	57
58.	Performance Evaluation of MCHSEP and SEP Protocol for Wireless Sensor Networks ▲ VANGA ANUSHA	58
K ANANDA KUMARI		
59.	Dynamic load sharing among DC-DC converter for maintenance of constant voltage ▲ PAKA MALLESH	59
60.	Adaptive Compressive Sensing of Images Using VSBCD Algorithm and Improvement ▲ PAKA MALLESH	60

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
61.	Digital Implementation of Space Vector Based Coupled PWM Technique for Dual Inverter Configuration ▲ K NAVEEN KUMAR	61
62.	Effect of K-Fold Cross Validation on MRI Brain Images Using SVM Algorithm ▲ K NAVEEN KUMAR	62
63.	Blockchain for IoT application: challenges and Issues ▲ M HARI PRASAD	63
64.	Analysis of harmonics and ripple content in vector control schemes for induction motor ▲ M HARI PRASAD	64
65.	EPLQ: Efficient Privacy-Preserving Location-based Query over Outsourced Encrypted Data ▲ ARCHANA	65
66.	A Study on Different Phases and Various Techniques in Recommendation Systems ▲ N.PRAVEEN BABU	66
67.	A Study on Different Phases and Various Recommendation System Techniques ▲ ARCHANA	67
68.	Text Spotting in Video: Recent Progress and Future Trends ▲ K KRISHNA KUMARI	68
69.	An Integrated Boost Parallel Flyback Converter for Multi Load Applications ▲ BOLLARAM DIVYA	69
70.	Embedded Secured Authentication and speed limiting in various zones with alert system ▲ K KRISHNA KUMARI	70
71.	An Inception towards better Big Data Clustering Technique ▲ BOLLARAM DIVYA	71

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
72.	A Survey of Medical Image Enhancement Techniques ♣ N.PRAVEEN BABU	72
73.	Voltage Compensation Using Pv-Dvr with Sepic Converter ♣ T.KANAKIAH	73
74.	Improvement of SAG under Different Fault Conditions ♣ N.PRAVEEN BABU	74
75.	Performance Analysis of CMOS and FinFET Based Adiabatic SRAM Cell at 32nm Technology ♣ T.KANAKIAH	75
76.	Performance evaluation of multiple carrier scalar PWM Algorithms for Cascaded Multilevel Inverter fed Induction Motor Drive ♣ T.KANAKIAH	76
77.	Software Engineering for Smart Healthcare Applications ♣ K NAVEEN KUMAR	77
78.	Energy Efficient Co-Operative Spectrum Sensing Using Genetic Algorithm and Partical Swarm Optimization: A Review ♣ PAKA MALLESH	78
79.	Survey on Classification Techniques in Data Mining ♣ K NAVEEN KUMAR	79
80.	Design of Step-up Inexact MAC (IMAC) Unit for DSP Applications ♣ G SATYANARAYANA	80
81.	Latest Power Management Technologies for Mobile Computing Devices ♣ PAKA MALLESH	81
82.	Combined Fuzzy Local Binary Pattern and Wavelet Transform Features for Defect Detection of 11/33 kV Overhead Power Line Insulators ♣ PUDARI BALARAJU	82

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
83.	Low Power and High Speed Synchronous Carry Generate Adder using Modified Gate Diffusion Input Technique ♣ PAKA MALLESH	83
84.	for Sentiment Analysis ♣ PUDARI BALARAJU	84
85.	Selection Criteria of Measurement Matrix for Compressive Sensing Based Medical Image Reconstruction ♣ PAKA MALLESH	85
86.	A Survey on Mobile Cloud Computing in Lightweight Secure Data Sharing ♣ MUDDAGONI GOUTHAMI	86
87.	Joint Deblurring and Denoising of Hyperspectral Images with Pca and Total Variation ♣ KATTA ANANDA KUMARI	87
88.	Estimating Degradation Factor by Performance Ratio of Rooftop Solar PV Plant ♣ KATTA ANANDA KUMARI	88
89.	Optimal Power flow for IEEE-9 Bus System Using etap ♣ MUDDAGONI GOUTHAMI	89
90.	Design and Implementation of Traffic Density Controller using Wireless Communications ♣ MUDDAGONI GOUTHAMI	90
91.	Design and Implementation of Smart Floor Cleaning Robot using Android App ♣ PUDARI BALARAJU	91
92.	Study on various Sentiment Analysis Models ♣ PAKA MALLESH	92

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
93.	A Scalar Based SVPWM and Dpwm Techniques for 3-Level Inverter Fed DTC of Open End Winding Induction Motor Drive ♣ B YELLAIAH YADAV	93
94.	Application of bird swarm algorithm for optimal allocation of renewable energy driven distributed generation ♣ EGGADI KALPANA	94
95.	Realization of Butterworth Low Pass Filter Design in Microstrip ♣ PUDARI BALARAJU	95
96.	Dust-Reddening Studies near the Taurus Molecular Cloud ♣ K KRISHNA KUMARI	96
97.	Cloud Storage Auditing Protocol for Security Key Updates ♣ K KRISHNA KUMARI	97
98.	Variable Blocksize Motion Estimation for H.264 ♣ EGGADI KALPANA	98
99.	A Novel Technique for Buffer Based Advanced Video Coding ♣ B YELLAIAH YADAV	99
100.	Non-Subsampled Contourlet Transform based Multimodal Medical Image Fusion and its Performance Evaluation ♣ M HARI PRASAD	100
101.	A Novel Discrete Wavelet Based Protective Relaying Scheme for 3-Phase induction Motor ♣ KATTA ANANDA KUMARI	101
102.	I-Semi -supervised clustering for Network Intrusion Detection ♣ M HARI PRASAD	102
103.	Use of Clustering Sentiments for Opinion Mining: An experimental analysis ♣ K KRISHNA KUMARI	103

CONTENTS

SL.NO	TITLES AND AUTHORS	PAGE NO
104.	Semi-Automation of Libraries ♣ G SAI KUMAR	104
105.	Advancing knowledge on Regulating and saving of the Animals Health with Sensor and Networks through IoT ♣ EGGADI KALPANA	105
106.	A Review of Bigdata Privacy Preservation Methods ♣ YEDLA RAMADEVI	106
107.	Detection Techniques for Selective Forwarding Attack in Wireless Sensor Networks ♣ MUDDAGONI GOUTHAMI	107
108.	An Improved Stream Processing Approach ♣ YEDLA RAMADEVI	108
109.	Full Reference-Image Quality Assessment with Global and Local Image Regions for Visual Quality Perception and Optimization ♣ BOPPANNI SWETHA	109
110.	Accident Detection and Alert System ♣ MUDDAGONI GOUTHAMI	110
111.	Comparison Study of Active Noise Cancellation ♣ B YELLAIAH YADAV	111
112.	Techniques for Detection and Classification of Brain Tumor from MRI Images ♣ BOPPANNI SWETHA	112
113.	Microstrip Antenna Design for Low Power Cognitive Radio Applications ♣ YEDLA RAMADEVI	113

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A Novel Method for Dental Radiographs Contrast Enhancement for Efficient Diagnosis of Dental Disease

N.PRAVEEN BABU

Abstract:--

Contrast Enhancement for Low resolution image is an active area of research to attain an effective diagnosis results in the medical field through Digital Medical Images. To do this, a novel contrast enhancement method is proposed in this paper based on the spatial correlation characteristics of image pixels. Considering the spatial correlation as main factor, the proposed method focused to improve the contrast of center pixels based on its neighborhood pixels. Extensive simulations are conducted over the proposed method through several dental radiograph images and the obtained results are analyzed both qualitatively and quantitatively. The Quantitative analysis is done through a metric, called contrast root mean square deviation and the obtained values are compared with conventional contrast enhancement techniques, Histogram related methods and Contrast stretching methods.

Keywords:--

Dental Radiograph, Contrast Enhancement, Histogram, Correlation, CMRSD.

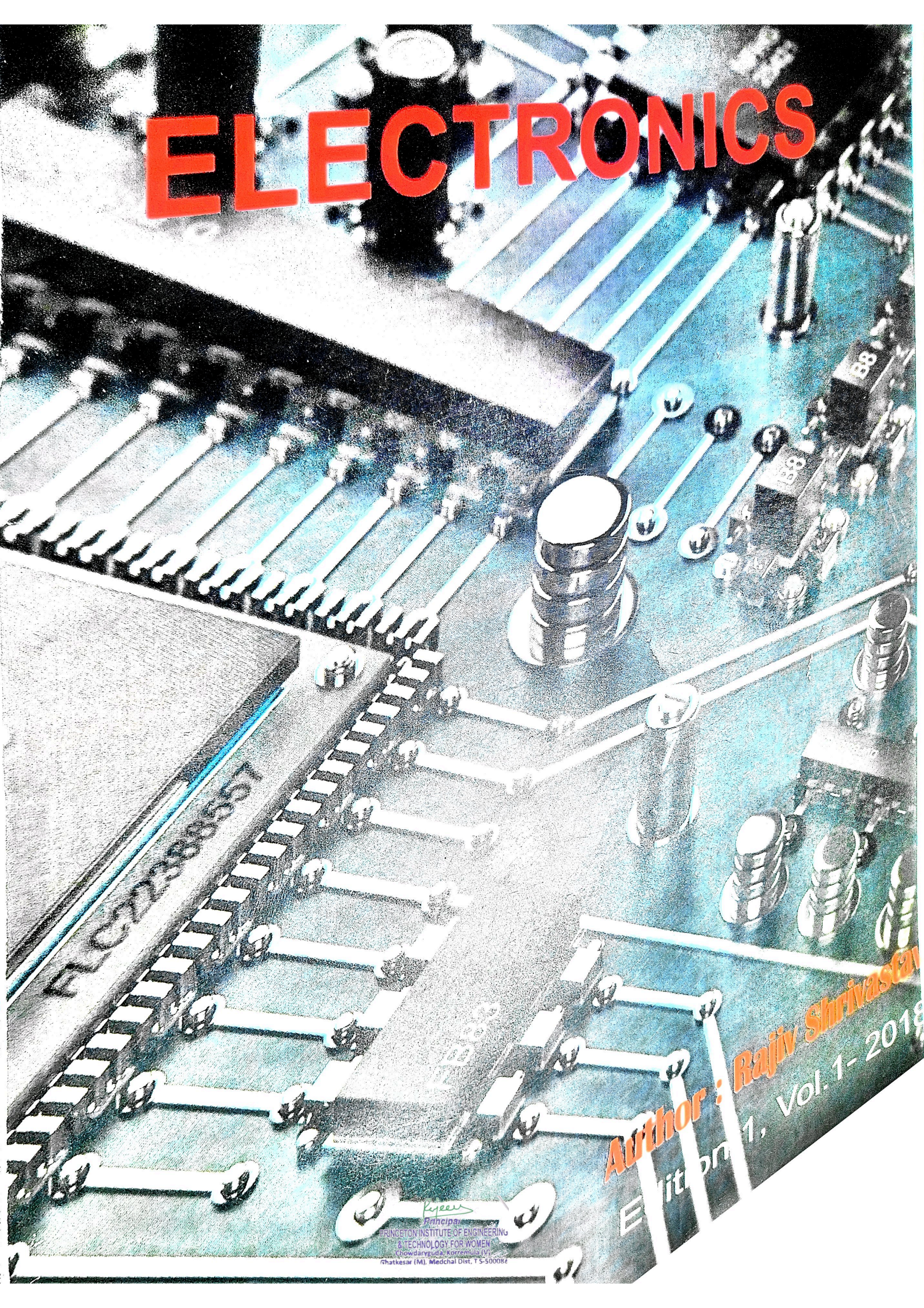
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Prof. Dr. Rajeev Shrivastava



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Syllabus: BASIC ELECTRONICS

FIRST TERM:

PN junction, Depletion layer, Barrier potential, forward and reverse bias, breakdown voltage, PIV Characteristics of PN junction diode knee voltage, load line and ideal PN junction diode, junction capacitance, Zener diode

Rectifiers and filters-half wave, center tap full wave and bridge rectifier, percentage of regulation, PIV, ripple factor, C, RC, LC and PI filter, voltage doubler, clipping and clamping circuit, voltage regulation.

BJT- Introduction, basic theory of operation of PNP and NPN transistor, V-I characteristics, CB, CE and CC configuration, junction FET-introduction, theory of operation, JFET parameters JFET-amplifiers

MOSFET- Introduction, theory of operation MOSFET parameters application. Graphical analysis of BJT and FET circuits, linear models of BJT and FET. Pulse and large signal models of BJT and FET

Contents

CHAPTER 1

1.1 PN Junction:..... 8

1.2 Process of diffusion: 8

1.3 Depletion layer:..... 13

1.4 Diode Symbol:..... 15

1.5 Barrier potential:..... 17

1.6 Process of drift in a semiconductor material:..... 17

1.7 Total current in a semiconductor 18

1.8 Biasing of PN junction diode..... 19

1.8.1 Forward biasing: 19

1.8.2 Reverse biasing: 20

1.9 Breakdown mechanism and breakdown voltage:..... 24

1.9.1 Zener Breakdown:..... 24

1.9.2 Avalanche breakdown:..... 24

1.10 V-I characteristics of PN junction diode..... 25

1.10.1 V-I characteristics in forward bias condition 25

1.11 V-I characteristics in Reverse bias condition:..... 26

1.11.1 Complete VI characteristics of PN junction diode 27

1.12 Load lines:..... 29

1.13 Diode static resistance:..... 31

1.14 Dynamic resistance of diode:..... 31

1.15 PN junction diode model:..... 31

1.16 Modelling of PN junction diode for DC analysis..... 32

1.16.1 Ideal PN junction diode model:..... 32

1.16.2 Constant voltage drop model:..... 33

1.16.3 Piecewise linear model..... 34

1.17 Diode model for AC input: Small signal model of diode 35

1.18 High frequency model of diode..... 36

1.19 Junction capacitance:..... 38

1.19.1 Step graded junction:..... 39

1.19.2 Linear graded junction:..... 40

1.19.3 Diffusion /storage capacitance:..... 41

1.20 Zener diode:..... 41

1.20.1 Symbol of Zener diode:..... 43

1.20.2 V-I characteristics of Zener diode:..... 43

1.20.3 Specification of Zener diode..... 44

1.21 Zener diode equivalent circuit..... 45

1.22 Application of Zener diodes..... 45

CHAPTER 2: Diode circuits 59

2.1 Introduction:..... 59

2.2 Rectifier:..... 59

2.2.1 Types of rectifier:..... 60

2.2.2 Half wave rectifier:..... 60

2.2.3	Specification of half wave rectifier.....	62
2.3	Full wave rectifier:.....	62
2.3.1	Center tap full wave rectifier:.....	65
2.3.2	Bridge type full wave rectifier.....	69
2.4	Filters:.....	73
2.4.1	Series inductor filter:.....	75
2.4.2	Shunt capacitor filter:.....	77
2.4.3	LC filter or choke input filter:.....	78
2.4.4	Pi filter/CLC filter:.....	79
2.5	Clipping circuits:.....	81
2.5.1	Positive and negative clipper:.....	81
2.5.2	Negative clipper:.....	82
2.5.3	Biased clipper:.....	84
2.5.4	Combination clipper:.....	86
2.6	Clamping circuits.....	88
2.7	Voltage doubler:.....	89
CHAPTER 3: BJT and JFET..... 102		
3.1	BJT introduction:.....	102
3.2	Modes of operation of BJT.....	104
3.3	BJT configuration:.....	105
3.4	Operation of PNP transistor:.....	107
3.5	Operation of NPN transistor.....	110
3.6	Transistor in CB configuration:.....	113

3.6.1	Input characteristics of CB configuration.....	114
3.6.2	Output characteristics of CB configuration.....	115
3.7	Transistor in CE configuration.....	116
3.7.1	Input characteristics of CE configuration.....	118
3.7.2	Output characteristics of CE configuration.....	119
3.8	Transistor in CC configuration.....	121
3.8.1	Input characteristics of CC configuration.....	122
3.8.2	Output characteristics of CC configuration.....	123
3.9	BJT biasing techniques.....	124
3.9.1	Fixed bias/Base resistor biasing.....	126
3.9.2	2. Collector to base bias.....	129
3.9.3	3. Base bias with collector and emitter feedback.....	131
3.9.4	Voltage divider biasing.....	134
3.10	Procedure to determine region of operation of BJT.....	137
3.11	Transistor as an amplifier.....	138
3.12	Transistor as a switch.....	143
3.13	Field effect transistors..... Error! Bookmark not defined.	

3.14	Operation of N channel JFET	155
3.14.1	JFET parameters	155
3.15	The P Channel JFET	162
3.16	Biasing of JFET:	162
3.17	JFET Amplifier	163
CHAPTER 4: MOSFETs, Graphical analysis of BJT, JFET and models.....		168
4.1	MOSFET	199
4.1.1	Introduction....	Error! Bookmark not defined.
4.1.2	Depletion type MOSFET	Error! Bookmark not defined.
4.2	Operation of N channel DE MOSFET	Error! Bookmark not defined.
4.3	Symbol of DE MOSFET	Error! Bookmark not defined.
4.4	Drain characteristics of DE MOSFET	Error! Bookmark not defined.
4.5	P Channel DE MOSFET	Error! Bookmark not defined.
4.6	E MOSFET:	Error! Bookmark not defined.
4.7	Operation of N Channel E MOSFET:.....	Error! Bookmark not defined.
4.8	Channel Length Modulation: Error!	Bookmark not defined.
4.9	Punch through:.....	Error! Bookmark not defined.

4.10	Drain characteristics of E MOSFET	Error! Bookmark not defined.
4.11	Symbols of E-MOSFET ...	Error! Bookmark not defined.
4.12	P Channel E MOSFET	Error! Bookmark not defined.
4.13	Application of MOSFET..	Error! Bookmark not defined.
4.14	MOSFET parameter	Error! Bookmark not defined.
4.15	Graphical analysis of BJT circuits	199
4.16	Graphical analysis of FET	203
4.17	Linear models of BJT	206
4.18	Large signal model of BJT	209
4.19	Linear modelling of FET circuits	212
4.20	Large signal modelling of FET	214

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