National Conference on

"Recent Advances in Computational Techniques in Electrical Engineering"

Feb. 25-26, 2011

SOUVENIR

RACTEE – 2011

Organized by
Department of Electrical & Instrumentation Engineering
Sant Longowal Institute of Engineering & Technology, Longowal.
(Deemed-to-be-University) (Established by Govt. of India)
District Sangrur, Punjab-148106, India.

http://www.sliet.ac.in

Souvenir

National Conference
on
Recent Advances in Computational Techniques
in
Electrical Engineering
RACTEE – 2011
(Feb. 25-26, 2011)

Editors

Ms Surita Maini
Sh Chararnjiv Gupta
Dr Amanpreet Singh
Sh Sanjeev Singh

Organized by

Department of Electrical & Instrumentation Engineering
Sant Longowal Institute of Engineering & Technology, Longowal.
(Deemed-to-be-University)
(Established by Govt. of India)
District Sangrur, Punjab-148106, India.

ORGANIZING COMMITTEE

Patron:	Prof. V. Sahni, Director
Chairman:	Prof. V.K. Jain, H.O.D
Co-Chairman:	Prof. J. S. Dhillon
	Prof. S. Marwaha
Conveners:	Ms. Surita Maini, Associate Professor
	Mr. Sanjeev Singh, Assistant Professor
Coordinators:	Dr. Amanpreet Singh, Assistant Professor
	Mr. Charanjiv Gupta, Associate Professor
Co- Coordinators:	Mr. Manpreet Singh Manna, Associate Professor
	Ms. Pratibha Tyagi, Associate Professor

NATIONAL ADVISORY COMMITTEE

Dr. Rajneesh Arora, Vice-Chancellor, PTU
Dr. Bhim Singh, Professor, IIT, Delhi
Dr. S. V. Kulkarni, Professor, IIT, Bombay
Dr. Gopinath Pilley Professor, IIT, Roorkee
Dr. K. Gopal, Director, NIT Kurukshetra
Dr. M.K Soni, Director, Manav Rachna International University, (Engg.) Faridabad
Dr. Saroj Rangnakar, Professor, NIT, Bhopal
Dr. A. Swaroop, Professor, NIT Kurukshetra
Dr. S.P. Jain, Professor, NIT Kurukshetra
Dr. A. K. Jain, Professor, NIT, Jalandhar
Dr. Rajeev Tripathi, Professor, MN NIT Allahabad.
Dr. Brahmjit Singh, Professor, NIT Kurukshetra
Dr. Savina Bansal, Professor, GZSCET, Bathinda
Dr. Renu Wig, Professor,PUEC, Chandigarh

LOCAL ADVISORY COMMITTEE

Prof. B.C. Sarkar, Dean (R&D)
Prof. D. C. Sexena, Dean (P&D)
Prof. B.K. Kanungo, HOD (Chemistry)
Prof. A.S. Dhaliwal, HOD (Physics)
Prof. A.P Singh, HOD (ECE)
Prof. S. S. Dhaliwal, HOD (Mathematic)
Mr. Birmohan Singh, HOD (CSE)
Dr.Mahesh Kumar, HOD (EDP)
Dr. Kamlesh Kumari, HOD (CT)
Er. Amrik Singh, HOD (Mechenical)
Prof. H.K. Sharma, HOD (FET)

ORGANIZING COMMITTEE (DEPARTMENT)

1. **Steering Committee**
   - Dr. V.K.Jain
   - Dr J S Dhillon
   - Dr Sanjay Marwaha
   - Dr A S Arora
2. **Screening Committee**
   - Dr V K Jain
   - Dr J S Dhillon
   - Dr Sanjay Marwaha
   - Dr A S Arora
   - Ms Manpreet Kaur
3. **Stage Co-ordination Committee**
   - Ms Surita Maini
   - Sh Sanjeev Singh
   - Sh Manpreet Singh Manna
   - Dr Amanpreet Singh
4. **Reception Committee**
   - Ms. Pratibha Tyagi
   - Ms Anshuka Bansal
   - Sh Asim Ali Khan
   - Ms Nancy Jindal
   - Sh S S Rathore
   - Sh Sukhminder Singh, Tech
5. **Venue Arrangement Committee**
   - Sh. Diljinder Singh
   - Sh. Manmohan Singh
   - Sh. Chetan Vasudeva
   - Sh. Sanjay pal
   - Sh. Rakesh Kumar Goel, Tech
   - Sh. Navdeep Kumar, Tech
6. **Hospitality Committee**
   - Sh. Charanjiv Gupta,
   - Dr. Amanpreet Singh
   - Ms. Rajinder Kaur
   - Sh. Sanjay Pal
   - Sh. Rakesh Goel, Tech
7. **Transportation Committee**
   - Sh. Diljinder Singh
   - Sh. Asim Ali Khan
   - Sh. Amarjit Singh, Tech
   - Sh Jasvir Singh, Tech
   - Sh Hind Bhushan, Clerk
8. **Boarding & Lodging Committee**
   - Sh. J S Aujla
   - Sh. Gurmeet Singh
   - Sh Chetan Vasudeva
   - Sh S S Rathore, Tech
   - Sh Vipin Kumar, Tech
9. **Printing & Publication Committee**
   - Ms Pratibha Tyagi
   - Ms Surita Maini
   - Sh Manpreet Singh Manna
   - Sh Charanjiv Gupta
   - Dr Amanpreet Singh
   - Sh Sanjeev Singh
10. **Editorial Board**
    - Ms Surita Maini
    - Sh Chararnjiv Gupta
    - Dr Amanpreet Singh
    - Sh Sanjeev Singh
11. **Purchase Committee**
    - Ms Surita Maini
    - Sh. Manpreet Singh Manna
    - Sh Charanjiv Gupta
    - Sh Sanjeev Singh
    - Sh Amanpreet Singh

CONTENTS

Sr. No.	Paper Title	Author(s)	Page No.
1.	Contactless Excitation of electromagnetically driven MEMS resonators	Jagadesh Babu, J. Supriyanka, Rajitha Rani.S, L. Srinivas Rao, B. Prasad, B V Rajagopala Rao	1
2.	Traffic Light Detector system	Aniket Dwivedi, Naresh Khairnar	1
3.	Small Hydropower Plant: A Sustainable Source of Energy	Gaurav Dwivedi, Sachin Mishra, S.K. Singal	2
4.	A 42V Inverter/Rectifier for ISA using Discrete Semiconductor Components	Munish Kumar, Trisha Garg	2
5.	MOSFET Failure Modes in the Zero-Voltage-Switched Full-Bridge Switching Mode Power Supply Applications	Munish Kumar, Rajiv Singla	3
6.	Distributed Operating Systems (DOS) Base Distributed Algorithms	Verma Karan	4
7.	Electromyographic Switch for Control of a Power Wheelchair	Ram Babu.B, Navleen Singh Rekhi, Harshada.M	4
8.	Factors Affecting Accuracy of Home Blood Pressure Monitoring	Gurmanik Kaur, Ajat Shatru Arora, Vijender Kumar Jain	5
9.	Analysis of Two Modes of Direct Torque Controlled Induction Motor Drive	Abhishek Verma, Yogesh Kumar Chauhan	5
10.	Recent Trends on EMI/EMC Measurements and Remedies	Hasmat Malik, R.K. Jarial, V K Jain	6
11.	Novel Approach for Image Compression using Fractal Analysis	V K Jain, Amit Kamra, Anupam Garg	6
12.	Genetic Algorithms in Designing Analog Circuits	Gurpreet Singh and Manpreet Singh Manna	7
13.	Design and Performance of PID controller	Anita Khosla, LeenaG, M.K.Soni	7
14.	Integrated Power Devices Simplify an Embedded DC-DC Power Supply	Munish Kumar, Trisha Garg	8
15.	3-Phase Synchronous PWM Controller IC Provides an Integrated Solution for Intel VRM 9.0 Design guidelines	Trisha Garg, Munish Kumar	8
16.	Human and Animal Brain Memory	Pijush Kanti Bhattacharjee	9
17.	Wideband Amplifier for High frequency Applications	Dinesh Kumar, Sanjay Kumar, Abhinav Dogra	9
18.	Carbon Nanotubes for VLSI Interconnects	Dinesh Kumar and Gagnesh Kumar	10
19.	Issues in Success of Grid Computing	Taranpreet Kaur	10
20.	Biometric Fingerprint Recognition	Vasudha Ranchal	11
21.	Application of Computational Intelligence to Prevent Power System from Blackouts	Fouzul Azim Shaikh, Zaheeruddin, M. S. Jameel Asghar	11
22.	Diluted Magnetic Semiconductors Materials and their Applications	Dinesh Kumar, Sanjay kumar Abhinav Dogra	12
23.	Optimal Power Flow Solution using GA	Preetinder Kaur, G.P.S.Brar	12
24.	Solution of Complicated Electric Network(s) using Symbolic Mathematics	Jaspreet Kaur and Gursewak Singh Brar	13
25.	Education, Leadership with special reference to	Col Dr D. S. Grewal	13

Sr. No.	Paper Title	Author(s)	Page No.
	Excellence in Higher Technical Education	Col Dr D S Grewal	14
26.	Defining Artificial Intelligence	Gurinderpal Singh Brar, Gagandeep kaur	14
27.	Fiber Optics Technology	Gurinderpal Singh Brar, Guriqbal Singh	15
28.	Different Generator Topologies For Wind Energy Conversion System-A Review	Gurinderpal singh Brar	15
29.	Appropriate Energy Management For Rural Development	Gagandeep kaur, Gurinderpal singh Brar, Harkiran kaur	16
30.	Urban Energy Management	Gagandeep Kaur, Gurinderpal Singh Brar	16
31.	Scenario of Captive Plants in India	Arvind Dhingra, Tejinder Singh	17
32.	Energy Management	Gurinderpal Singh Brar, Harkiran Kaur, Gagandeep Kaur	17
33.	Temperature Transducer	Satnesh Singh, B.B. Sharma	17
34.	Simple Sliding Mode based Stabilization Scheme for Hyperchaotic System	Bharat Naresh, Harmeet Singh, Gaganjot Kaur	18
35.	Comparative Study of Particle Swarm Optimization, Ant Colony Optimization and Genetic Algorithm Techniques in Circuit Partitioning	Venkatesulu, Veeranna D	18
36.	Target Tracking Systems using GPS Module	R. B. Patel, Vishal Garg	19
37.	Resource Management in Peer-to-Peer Networks: A NADSE Approach	Harkirat Singh Brar, Sonia, Kulvir Singh	19
38.	Comparison and Analysis of Wavelet Transform for Image Restoration	Vinay Kumar, R.K.Jarial, V.K.Jain	20
39.	Distribution transformer failure and its reduction	Anshu Oberoi, J.S.Sohal, R.S.Kaler, Rajneesh Kaler	20
40.	Design Issues of Control Plane in IP Over WDM Optical Networks for Traffic Engineering	Sanjay Gairola, Ashish Thombre	21
41.	Performance Comparison of Vector Controlled and Direct Torque Controlled PMSM Drive	Shikha Singh, G. Bhuvaneswari, Bhim Singh	21
42.	Design and Control of Single Ended Primary Inductance Converter Based SMPS	K. Hari Prasad, P.Mythilisharan, P.Laxminarayana, K. Subba Rao	22
43.	Threshold Based Speech Segmentation for Telugu Language	Pankaj Sharma, Anshuka bansal, Anita Khosla	22
44.	Nanotechnology in Electronics	Vishal Sharma, Amarpal Singh, Ajay K. Sharma	23
45.	Performance Evaluation of Multi-tone Radio over Fiber (RoF) Transmission System under the Impact of Fiber Non-Linearity	Navneet Bhullar, Kamlesh Kumari, Sangeeta Sharma	23
46.	Removal of Synthetic Dyes from Aqueous Streams Employing Adsorption Using Sugar cane Baggasse	Pardeep Singh, Sanjay Sharma	24
47.	Parametric analysis and design of Regional Language Character Mapping in Education	Guresh Pal Singh, Amarpal Singh	24
48.	A Survey of Energy Efficient Routing Protocols in Wireless Ad hoc Networks	Jashandeep Singh Yograj Sood, N P Padhy, R. Jha, Mandeep Singh	25
49.	Diagnosis of power transformer by frequency response analysis		

Sr. No.	Paper Title	Author(s)	Pag No.
50.	Identification of Harmonic Sources in Power System - A Bibliographical	Ashwani Kumar Chandel, Manoj Kumar	25
51.	Performance Evaluation of AODV in WiMAX and WiFi Network	Gurjinder Kaur, V.K.Jain, Yogesh Chaba	26
52.	Revaluation of IIR Filter Design Techniques for Video Applications	Damanpreet Singh, Ranjit Kaur	26
53.	Different techniques to remove Baseline Wander from ECG signal: A Review	Ankit Jayant, Manpreet Kaur, Daljinder Singh	26
54.	Anatomy of Power Transformer Failure	Lillie Dewan, Rajinder Sabharwal	27
55.	Simulation Performance of Reed-Solomon Codes as a Function of Redundancy in AWGN Channel	Saurabh Mahajan, Gurpadam Singh	27
56.	Apnoea and Apnoea Detectors	Laxinder Singh	28
57.	Condition Assessment of Power Transformer by Modern Diagnostic Techniques	R.K Jarial, Deven vatsal, Y.R Sood	28
58.	Performance Analysis of HDWDM Systems at Ultra High Capacities	Yugnanda, R.S.Kaler	29
59.	Finite Element 2D Electromagnetic Field Analysis of a Permanent Magnet Synchronous Motor	Ajay Kumar, Sanjay Marwaha, Anupama Marwaha	29
60.	Switching from Beyond 3G to 4G using Radio over Fiber	Anjan Mittal, Gittaly Dhingra	30
61.	Design of Electromechanical Outrigger System for Platform Leveling of Heavy Load Weapon Systems	V V Parlikar, P M Kurulkar, Dr A K Mishra, A N Kulkarni, C Ganguly	30
62.	Analysis of How Feedback Acts as A Double Edge Sword in A Control System	Manu Prakram, Kamaldeep Sharma	31
63.	Magnetic Field Analysis of Linear Induction Motor	Manpreet Singh Manna, Sanjay Marwaha Nitika Garg, Sugandha Singh	31
64.	Line to Phase Voltage Transformations in an Isolated Generating System	Gaurav Kumar Kasal, Bhim Singh	31
65.	Reference Current Generation of single phase Shunt Active Power Filter under Distorted Supply Voltage	Yogesh Rohilla, Yash Pal	32
66.	Review of Digital IIR Filters Genetic Algorithm for Delay Equalizers	Gurleen Kaur, Ranjit Kaur	32
67.	Magnetic Flux Analysis of Permanent Magnet Generator by Adaptive Finite Element Method	Chetan Vasudeva, Sanjay Marwaha, Anupma Marwaha Abhinav Dogra	33
68.	Dynamic modelling of spine of human body - A review	Pratibha Tyagi, Vikas Rastogi, Ajat Shatru Arora	33
69.	Flux Analysis of LIM using Adaptive Finite Element Method	Atul Singh, Sanjay Marwaha, Chetan Vasudeva	34
70.	Design and Development of Fault-tolerant Devices in Electrical Machines	Ranjeet Kumar	34
71.	Internet and Web as the source of high performance/low cost software solutions	Major Singh, Lakhwinder Kaur	35
72.	Reliability and Value Engineering	Jaswinder Kaur	35
73.	Stand-alone Wind Energy Conversion System with a Doubly Fed Induction Generator	Shailendra Sharma, Bhim Singh	36

Sr. No.	Paper Title	Author(s)	Page No.
74.	Fuzzy Pre-Compensated PI Controller For HVDC Light Systems	Subhasis Jhampati, Bhim Singh	36
75.	A Review on Image Denoising	Manoj Kumar Singh, Asim Ali Khan	37
76.	Bioanalytical Techniques for Monitoring the Toxicity of Pesticides and Their Residues	Paramjeet Kaur, Priti Bansal, Dhiraj Sud	37
77.	A Review on Image Processing	Manoj Thakur, Shailesh Pratap Singh	38
78.	A Three-Phase Modular AC-DC Converter with Power Factor Improvement for Telecommunication Systems	R. Kalpana, Bhim Singh, G. Bhuvaneswari	38
79.	Star-polygon Transformer Supported Three-leg VSIs based Three-Phase Four-Wire UPQC	Yash Pal, A. Swarup, Bhim Singh	39
80.	Modeling and control of Stand-alone Solar-PV Power Generating System	Neha Adhikari, B. Singh, A.L.Vyas	39
81.	A New Control Algorithm for Self Supported Dynamic Voltage Restorer (DVR)	Parag Kanjiya, Bhim Singh	40
82.	Trends in Image and Video Compression Techniques and Standard	Rajinder Kaur	41
83.	Power Factor Regulated Electronic Ballast Operating in DCM	Ashish Shrivastava, Bhim Singh	41
84.	A Review on Face Recognition Using Genetic Algorithm and Back-Propagation Neural Network	Kanhaiya Kumar, Asim Ali Khan	42
85.	EEG Signal Based Brain Computer Interface System to control a Wheelchair	Gautam Kaushal, Amanpreet Singh, V.K.Jain	42
86.	Mobile Agent System for Rescue Management System	Sanjeev Prakash , V.K. Jain	42
87.	Low Head Canal Power Plant: A Feasibility Perspective	Manbir Kaur, Amit Kumar	43
88.	Multiobjective Short-term Hydrothermal Generation Scheduling	Nitin Narang, J.S. Dhillon,D.P. Kothari	43
89.	A Review Of Digital Image Watermarking	Parul Aggarwal, Asim Ali Khan	44
90.	Dipole Applicators for Interstitial Hyperthermia : Design, Modelling and Validation	Surita Maini, Sanjay Marwaha, Anupma Marwaha	44
91.	Hybrid Evolutionary Search Algorithm to solve Economic Load Dispatch	Nirbhow Jap Singh, J.S. Dhillon, D.P. Kothari	45
92.	Cost-benefit analysis and emission reduction of lighting retrofits in an academic institution	Arvinder Singh, J. S. Aujla	45
93.	Energy Conservation Analysis and Load management in Barnala District Electricity Distribution Network	Charanjiv Gupta, Sanjeev Singh and Khushdeep Singh	46