2019 3rd International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE 2019)

Noida, India
10 – 11 October 2019

IEEE Catalog Number: CFP19RDC-POD
ISBN: 978-1-7281-2069-0

Copyright © 2019 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP19RDC-POD
ISBN (Print-On-Demand): 978-1-7281-2069-0
ISBN (Online): 978-1-7281-2068-3

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

Table of Content

Sr. No.	Content	Page No.
1	Steady State and Dynamic Response of a Large and A Small Induction Machine via Modelling and Simulation **Mansi Mohapatra, Sandeep Banerjee, Sanya Gujral, Ashutosh Jindal, Soumendra Kumar Bagh**	**01-06**
2	A New Visual Cryptography Scheme with Perfect Contrast using Galois Fields **Debolina Paul, Saptarshi Chakraborty**	**07-11**
3	Importance of Negative Phase Sequence Overcurrent Protection for Solidly Grounded Delta-Wye Transformer **J. Arockiya Xavier Prabhu, Jay Shekhar Jha, Raghuram Chelluri, Nagaraju Somidi**	**12-16**
4	Maintenance of DC Link Voltage using Synchronous Reference Frame Theory **Aakriti Khanna, Anjali Garg, Alka Singh**	**17-21**
5	Optimal Allocation of Distributed Generation for Power Loss Minimization using PSO Algorithm **Pragya Guru, Nitin Malik, Sheila Mahapatra**	**22-26**
6	Orbit Transfer using Optimal Control Theory **Deepak Gaur, Mani Shankar Prasad**	**27-31**
7	Bistatic Coverage Driven Assessment of Proposed Space Radar Constellations **Deepak Gaur, Mani Shankar Prasad**	**32-37**
8	Precision Orbit Determination for Errored Dynamic Models **Deepak Gaur, Mani Shankar Prasad**	**38-44**
9	Wide Band Transimpedance Amplifier using Class AB FVF **Nidhi Singh, Vandana Niranjan**	**45-48**
10	Power Quality Control of DFIG Using Smart Neural Learning **Krishna Kumar, Imran Khan, Anwar Ahmad**	**49-54**
11	Application of Loss Sensitivity Factor and Grass Hopper Optimization Algorithm for Solving Distributed Generator and Capacitor Allocation Problem in Distribution System **Hassan Adamu Daya, Vishal Kumar, Suresh Kumar Sudabathula, Velamuri Suresh, Babangida Jauro Mohammed**	**55-58**
12	Internet of Things (IOT) in Distribution grid using DSTATCOM **E. Soumya, K. Lakshmi Prasanna, Vidyasagar Madhireddy, Ramchandra Nittala**	**59-63**

13	A multimodal approach for localization of Ackerman steering micro ground vehicles in bad GPS reception environments **Sidharth Talia**	**64-69**
14	Effect of Frequency Variation on Fault Location in Transmission Line Using Synchrophasor Technology **Rakesh Patekar, Pankaj Yadav, S. R. Tambay**	**70-75**
15	Low Power and High Linearity Cascode CMOS LNA for BLE Applications in 45 nm Technology **Dr. Malti Bansal, Jyoti**	**76-81**
16	Comparison of RL and LC Output Matching Networks for Cascode Inductive Source Degeneration LNA in 45 nm CMOS Technology **Dr. Malti Bansal, Jyoti**	**82-87**
17	Renewable Energy Sources Integration in Micro-grid including Load Patterns **Mukul Singh, Omveer Singh, Ashwani Kumar**	**88-93**
18	Hybrid Optimization Model for Smart Grid Distributed Generation Using HOMER **Harpreet Sharma, Sachin Mishra**	**94-99**
19	Demand Side Management Using GUI **Neeraj, Preeti Malik, Shalu Garg, Kanika singhal**	**100-105**
20	A study of optimization algorithms applied to Integrated Renewable Energy Systems **Ravi Chaurasia, Sanjay Gairola, Yash Pal, Rajkumar Viral**	**106-109**
21	Secure Data Carrying Methodology Through Digital Protection Wall Using Higher LSB Technique over Wireless Network **Ms. Devika Gawande, Dr. Sharad Mohod**	**110-115**
22	Analysis of Different Controllers on SMPS Based Charging Stations **N Padmini, Dr. Anupama Prakash, Dr. Bedatri Moulik**	**116-122**
23	FPGA Based Parallel Filters for Failure Recovery **RAJU KATRU, Dr. M. CHANDRASEKHER**	**123-130**
24	Smart LED Streetlighting System with Improved Power Quality and Low Standby Consumption **Aman Jha**	**131-136**
25	Comparison of Advance and Conventional Motors for Electric Vehicle Application **Darshan U. Thakar, Dr. R.A. Patel**	**137-142**
26	FPGA Implementation of Jpeg Image Compression **Sandhya G, Aakarshitha Suresh, Malini T, Mrs. Rajeshwari B**	**143-148**
27	Survey of Stochastic Computing for Hardware implementation **Minal Deshmukh, Dr. Prasad Khandekar**	**149-152**

28	Recent Strategies for Automatic Generation Control of Multi-Area Interconnected Power Systems: A Review **Ashwini Kumar, Omveer Singh**	**153-158**
29	Recent Trends in Automation-A study of RPA Development Tools **Saurabh Gupta, Sangeeta Rani, Dr. Amit Dixit**	**159-163**
30	Sensor Based Quality Check and Automated Fuel Level Indication System **Dr Rajani Akula, Bhagavatula Ramya Sai, Kokku Jaswitha, Molugu Sanjay Kumar, Veeramreddy Yamini**	**164-168**
31	A Review of Various Techniques for Solar Radiation Estimation **Amar Choudhary, Deependra Pandey, Anil Kumar**	**169-174**
32	Integrated Bluetooth UWB Antenna with Reconfigurable Characteristics including rejection of Dual Interfering Bands using Parasitic Elements Backed Plane for Wireless Applications **Naresh Kumar, Pradeep Kumar, Manish Sharma**	**175-179**
33	Tri-Band Monopole Antenna for UMTS (1920-2170 MHz), WiMAX (3.4-3.6GHz) and WLAN (5.15- 5.35GHz) Wireless Applications **Chitra Kaul, Naresh Kumar, Manish Sharma**	**180-184**
34	MIMO Antenna with Superwideband Bandwidth Including Dual Notched Band Characteristics for UWB/X/Ku Band Wireless Applications **Manish Sharma, Manoj Kapil, Naresh Kumar**	**185-190**
35	Energy Conservation through Lighting Audit- A Case Study of Hostel Building **Farhanaz Mulla, Sunita S Tambakad, R G Patil**	**191-196**
36	PID and MRAC control of a Quadrotor **Ritika Thusoo, Dr. Sheilza Jain, Sakshi Bangia**	**197-201**
37	Islanding Detection and Prevention by Using Facts Power Filter **Abhishek Dixit, Amit Kumar Singh**	**202-207**
38	CNT based Wearable ECG Sensors **Dr. Malti Bansal, Bani Gandhi**	**208-213**
39	CNT based Textiles for Smart ECG Monitoring **Dr. Malti Bansal, Bani Gandhi**	**214-219**
40	A Robust Multilevel Security Mechanism against Geometric Attacks **Yamini Jain, Sangeeta Dhall, Shailender Gupta**	**220-226**
41	StudieMe: College Recommendation System **Vidish Sharma, Tarun Trehan, Rahul Chanana, Suma Dawn**	**227-232**
42	On the Modeling of Multistable Memory States using Memristor **Santosh Parajuli, Ram Kaji Budhathoki**	**233-235**
43	Real Power Transmission Loss Minimization and Bus Voltage Improvement Using STATCOM	**236-241**

Bhaskar Gaur, Ravi Ucheniya, Amit Saraswat

44 Technology Based Intervention to Improve Social Skills in Students on Autism Spectrum) **242-246**
Kanika Singhal, Neeraj, Shalu Garg

45 Malicious Node Detection in Wireless Sensor Networks Using Support Vector Machine **247-252**
BHAVNESH JAINT, S. INDU, NEETA PANDEY, KHUSHBU PAHWA

46 Artificial Neural Network based controller design for SMPS **253-259**
Mohammad Ali Khan, Prashant Anand, G. Bhuvaneswari

47 Performance Evaluation of 1-Phase 5-Level Tstyle Multilevel Inverter using Advanced PWM Techniques **260-264**
Monika Agrawal, Dr.Vijay Bhuria, Dr.Shishir Dixit

48 Wavelet Based De-noising of EEG Signal Acquired from Tele-serial Addicted Persons **265-269**
Debasish Nath, Moirangthem James Singh, Sudarsan Sahoo, Jupitara Hazarika

49 Application of cascaded H-bridge multi-level inverter for PV based induction motor **270-276**
Abhishek Kumar Ranjan, Ashiwani Yadav, Dr. Nitai Pal

50 Performance Analysis of Cascaded Multi-level Inverter **277-281**
Sachin Mishra, Javed Dhillon, Julakanti Satheesh Reddy

51 Adaptive Sliding Mode Controller using Finite-Time Functional Observer for Continuous-time LTI Systems with Unknown Inputs **282-287**
Satnesh Singh, S. Janardhanan

52 Discrete-time Quasi-Sliding Mode Control of Singularly Perturbed Systems **288-292**
Satnesh Singh, S. Janardhanan

53 Design of Low Power Full Adder Circuits Using CMOS Technique **293-296**
Deepgandha Shete, Anuja Askhedkar

54 Recent techniques in MEMS to design a sensor for Energy Harvesting **297-301**
S. G. Agrahari, Dr. D. S. Dhote, Dr. G. D. Agrahari

55 A Prediction of the Temperature Of a Recessed LED Panel Ceiling Light **302-306**
Achhaibar Singh, Gopal Nandan, P.K. Rohatgi

56 Integral Order PID Controller for Linear Time Invariant of Nonlinear Model of Dynamic Biological Systems **307-312**
Vrushali B.Wakchaure, Dr.U.M.Chaskar

57 Sensitivity based ATC Maximization by Optimal Placement of TCSC applying Grey Wolf Optimization **313-318**
Anubha Gautam, Parsh Ram Sharma, Yogendra Kumar

58	Trajectory Tracking Control of TRMS using FO-PID and FOI-PD Controllers: An Experiment **Sudarshan K. Valluru, Rajul Kumar, Ayush**	**319-322**
59	Stability Improvement of SMIB System using TLBO Technique **Kapil Parikh, Dr.Vinesh Agarwal**	**323-328**
60	Quantitative Analysis of Pulmonary Emphysema by Congregating Statistical Features **Sachin Chhillar, Ghanapriya Singh, Ajeet Singh, Vikas Kumar Saini**	**329-333**
61	Comparison between Different MPPT Controllers for Solar PV Fed DC grid Connected Applications **Dr. Haripriya T, Dr. Alivelu M. Parimi**	**334-339**
62	BLDC Motor Based Solar Water Pumping System with Grid Interface **Dr. Haripriya T, Dr. Alivelu M. Parimi**	**340-344**
63	Modulated Perturb and Observe Maximum Power Point Tracking Algorithm for Solar PV Energy Conversion System **Susree Sukanya Satapathy, Nishant Kumar**	**345-350**
64	Wavelet Mutation based JAYA Optimization Algorithm for Global Maximum Power Peak Searching for Partially Shaded Solar PV Panel Condition **Susree Sukanya Satapathy, Nishant Kumar**	**351-356**
65	Prediction of Optical Transmittance Loss in Solar Panels Using Lambert-Beer Law **Minakshi Katoch, Dr. Nitai Pal**	**357-361**
66	Analyzing the resting-state EEG of action video game players using Wavelet Transform **Jupitara Hazarika**	**362-367**
67	Design and Implementation of Hybrid Micro-Grid in MATLAB for Fault Current Analysis in Different Modes of Micro-Grid Operations **Gurpreet kaur, Dr. Anupama Prakash, Dr. K.Uma Rao**	**368-372**
68	Power Spectrum Estimation of PMU using Digital Signal Processing Techniques **Bibaswan Bose, Ruchira**	**373-377**
69	Deep Learning Model for Brain Tumor Segmentation & Analysis **Ekam Singh Chahal, Ankur Haritosh, Ayush Gupta, Kanav Gupta, Adwitiya Sinha**	**378-383**
70	Design and Development of finger probe for diagnosis of Anemia non-invasively **Yogesh Kumar, Vikash Shaw, Parul Rani, Varun Dhiman, Ranjan Jha, Sanjeev Kumar**	**384-389**
71	Real time implementation of motion transfer mechanism for master slave robotic configuration	**390-394**

Yogesh Kumar, Vikash Shaw, Parul Rani, Varun Dhiman, Ranjan Jha, Sanjeev Kumar

72 Automatic Generation Control of Multi-Area Hydro Power System using Moth Flame Optimization Technique **395-403**
Shamik Chatterjee, Chandan Kumar Shiva, Vivekananda Mukherjee

73 Qualitative Analysis of CMOS Logic Full Adder and GDI Logic Full Adder using 18 nm FinFET Technology **404-407**
Dr. Malti Bansal, Jasmeet Singh

74 Load Management and Techno Economic Analysis of Grid-Connected Power System **408-412**
Arvasu Chikara, Divya Asija, Pallavi Choudeker, Shivam Kumar

75 Effect of different shading Patterns on Photovoltaic Array Setups **413-418**
Mihir Chaudhari , Indrajit Trivedi

76 Real-Time Traffic Light Management System with Manual Control **419-424**
Pratham Kataria, Anshul Rani

77 Automatic Generation Control of Multi-Area Multi- Source Realistic System using GWO Algorithm **425-430**
Kapil Parkh, Geetanjali Paliwal, Mahavir Singh

78 Design and Simulate the Modified Circuits of Switched Capacitor Filter using mentor graphics tool **431-436**
Ms. Meenakshi Gupta, Dr. V.K Sharma

79 Optimal Parameter Setting for Directional Relay in Multi Machine System **437-442**
Huma Anwar, Imran Khan, Anwar Ahmad

80 Renewable Energy Powered Electrification in Uttar Pradesh State **443-447**
Akanksha Sharma, H.P. Singh, S.K. Sinha, Naqui Anwer, R.K Viral

81 Implementation of Fuzzy based on Second Order Sliding Mode Controller fed Induction Motor Drive for Disturbance Rejection Analysis **448-454**
M. Anka Rao, S.Mahaboob Basha, M.Vijaya Kumar, C.Prasanth Sai

82 Reduction of Effective Disturbance in Six Phase Induction Machine Employing Field Oriented Control Strategy **455-460**
M Anka Rao, M Vijay Kumar, Gundluru Shyam Prasad

83 Determination of faults in 3-ϕ Induction Motor by Motor Current Signature Analysis **461-465**
Pratik kumar D. Solanki, Kamlesh S. Sharma

84 Analysis of Various Topologies for Voltage Sag Compensation of Dynamic Voltage Restorer **466-471**
Bharti Thakur, Dr. Manju Aggarwal, Dr. Aasha Chauhan

85 Signature Analysis of Electrical Faults in Standalone PV Systems with Storage **472-476**

Sushmita Sarkar, K Uma Rao, Jayanth Bhargav, Shrikesh Sheshaprasad, Anirudh Sharma C A

86 Automatic Fault Diagnosis System for Voltage Source Inverter Driven Induction Motor **477-481**
Mrs. Jyothi. R, Shaik Mohammed Zahid, Dr. K. Uma Rao, Dr. R. Jayapal

87 Towards Development of a Portable Apparatus for Knee Health Monitoring **482-487**
Anitha Govindhan, Prathick Singh D

88 Food Spoilage Detection Using Convolutional Neural Networks and K Means Clustering **488-493**
Rajesh Kannan Megalingam, Gadde Sakhita Sree, Gunnam Monika Reddy, Inti Rohith Sri Krishna

89 A Single Phase Hybrid Modular Multilevel Converter Based STATCOM with Reduced Lower Order Harmonics for Railway Application **494-499**
Sreekesh Kesava Pillai, Suman Maiti

90 DSP Based Photovoltaic Hardware Development for Controlling Voltage and Current **500-502**
Radak Blange, Chitrelekha Mahanta, Anup Kumar Gogoi

91 Digital Ticket Booking and Checking Using Aadhaar Card or Fingerprint and Android Application **503-507**
Adesh Jamnik, Munna Shahare, Sanjana Kamble, Nikesh Kale, Mayur Bhadade, Dr. Shrikant V. Sonekar

92 Towards A Novel Deep FLANN for Prediction of Stock Market **508-513**
Prashant Gaurav, Abhishek Singhal, Ashish Mani

93 Emerging trends in Electric Vehicle in Indian market **514-518**
Snehalika, Swagat Das

94 Design, Modeling and Performance of Static Synchronous Series Compensator Regulated Selfexcited induction generator **519-525**
Ashok Kumar, Yogesh K Chauhan, Ashish Shrivastava

95 Modelling of Solar parabolic trough collector considering Unsymmetrical Heat Flux **526-530**
Nafees Alam Wani, Gopal Nandan

96 Multi-Criteria Pareto-Based Control Loop Performance Assessment **531-533**
Gustavo Sanchez

97 Microgrid System for A Rural Area - An Analysis of HOMER Optimised Model Using MATLAB **534-539**
Gourav Kumar Suman, Om Prakash Roy

98 FEM Based Study of Short Circuit Forces on Power Transformer Windings **540-544**
Suman Yadav, Ram Krishna Mehta

99	Impact of FACTS Device on Zonal Protection Scheme in Modified Dorsey- Chicago Transmission System **Kuwar Yatendra, Pushkar Tripathi, Ram Singh**	**545-550**
100	Impact of Solar Photovoltaic Penetration In Distribution Network **Ram Singh, Pushkar Tripathi, Kuwar Yatendra**	**551-556**
101	Comparative Analysis of Isolated and Non-Isolated Bi-Directional DC-DC Converters for DC Microgrid **Radhika Swarnkar, Hemant Kumar Verma, R. N. Patel**	**557-562**
102	A novel approach for detection and removal of High Impedance Faults in power system based on voltage parameter **Shivam Kumar, Divya Asija, Pallavi Choudeker, Arvasu Chikara**	**563-568**
103	Robot Operating System Integrated robot control through Secure Shell(SSH) **Rajesh Kannan Megalingam, Santosh Tantravahi, Hemanth Sai Surya Kumar Tammana, Nagasai Thokala, Hari Sudarshan Rahul Puram, Naveen Samudrala**	**569-573**
104	Design of PID plus second order derivative controller for automatic voltage regulator using whale optimization algorithm **Shamik Chatterjee, Mohamed Ahmed Dalel, Mahesh Palavalasa**	**574-579**
105	Minimum Component Grounded Inductor Simulator employing CDDITA **Patan Ayesha Khanam, Mayank Srivastava**	**580-584**
106	Power Quality Improvement for Non Linear Load Applications using Passive Filters **Jayashree Sushma Sanjay, Banishree Misra**	**585-589**
107	PSO Optimized PID Controller Design for the Process Liquid Level Control **Adnan Mukhtar, Vijay Kumar Tayal, HP. Singh**	**590-593**
108	Condition Monitoring and Fault Diagnosis Techniques of Electric Machines **Nitish, Amit Kr. Singh**	**594-599**
109	Simulation of Fuzzy Logic Controller for Boost Converter in Renewable Energy and HVDC Application **Mayank Velani, Kevin Santoki, Kishan Khunt, Savan Pedhadiya**	**600-603**
110	Mathematical Modelling of Vertically Cascaded Triple Micro Optical Ring Resonator (VCTMORR) with 1X2 I/O Ports **Binshati Chatterjee, Sanjoy Mandal**	**604-609**
111	Design of an Improved Q-ZSI with Fault Tolerance for EV Applications **Krishna Veer Singh, Susheem Koul, Hari Om Bansal, Dheerendra Singh**	**610-614**
112	Review on e-Learning Environment Development and context aware recommendation systems using Deep Learning **Gaurav Srivastav, Shri Kant**	**615-621**

113	Adaptive Control Algorithm for DSTATCOM in three phase four wire distribution systems for Power Quality Improvement **Atma Ram, Paras Ram Sharma, Rajesh Kr. Ahuja**	**622-627**
114	A comparative analysis of different load balancing algorithms on different parameters in cloud computing **Yogita Yashveer Raghav, Dr. Vaibhav Vyas**	**628-634**
115	Comparative Study of SDBR and R-Type SSFCL for Enhancement of Low Voltage Ride-Through Capability of Wind-Farms **Rohit Kumar Gupta, Preeti Verma, Bharti Dwivedi**	**635-639**
116	Novel Technique for Detection of Power Quality Disturbance **Arati S. Ambhore, Dr. S. R. Paraskar, G. N. Bonde**	**640-645**
117	PMSG based WECS with MPPT via modified P & O algorithm **Nishtha Verma, Sandeep Banerjee, Sanchita Gupta, Siddharth Goyal, Rahul Sharma**	**646-650**
118	Voltage Stability and Power Loss Enhancement of Distribution System using Dragonfly Algorithm **Vishal Kumar, Hassan Adamu Daya, Suresh Kumar Sudabattula, Velamuri Suresh**	**651-655**
119	Analysis and Comparison of Reduced Switch Topologies of Multilevel Inverter Using Various PWM Techniques **Deepshikha Singla, P. R. Sharma**	**656-662**
120	Smart soil nutrients analysis and prediction of the level of nutrients using a bot. **Nachiket Kulkarni, Amit Thakur, Tanay Rajwal, Prof. Rupali Tornekar, Prof. Saraswati Patil**	**663-668**
121	Optimal Siting and Sizing of an Off-grid Integrated Renewable Energy System (IRES) For Remote Rural Electrification **Ravi Chaurasia, Sanjay Gairola, Yash Pal, Rajkumar Viral**	**669-676**
122	Review of Exoskeleton: History, Design and Control **Vikash Kumar, Yogesh V. Hote, Shivam Jain**	**677-682**
123	Analysis of a Nearest Level Modulation Scheme for a Cascaded/Series Connected Switched Sources (SCSS) based MLI **Mayank Velani, Dr. Meeta Matnani, Kishan khunt, Kevin Santoki, Savan Pedhadiya**	**683-686**
124	A New Multilevel Inverter Topology with Minimal Power Electronics Component **Kamaldeep, Arjun Tyagi, Himanshu**	**687-692**
125	Algorithm for Tracking the Maximum Power from PV System **Kamlesh K. Bharti, Vijay P Singh, R.K. Patel, S.P. Singh**	**693-697**
126	Interval Derivatives Based Approach for Multiple DGs allocation Considering Variation in Input Parameters **Tarannum Bahar, Omveer Singh, Vinod Yadav**	**698-703**

127 Comparative Analysis of Parameter Estimation Techniques for Modelling a Twin Rotor MIMO System **704-709**
Arockia Vijay Joseph, Sridhar P.Arjunan

128 Multiple Dispersed Generation Allocation using Analytical Approach **710-715**
Tarannum Bahar, Omveer Singh, Vinod Yadav