

2018 1st International Conference on Power, Energy and Smart Grid (ICPESG 2018)

**Mirpur, Azad Kashmir, Pakistan
9-10 April 2018**



**IEEE Catalog Number: CFP18P19-POD
ISBN: 978-1-5386-5483-5**

**Copyright © 2018 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:	CFP18P19-POD
ISBN (Print-On-Demand):	978-1-5386-5483-5
ISBN (Online):	978-1-5386-5482-8

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

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Page	Item	Title of Paper	Authors
1	paper	Investigation of the effects of critical incident energy parameters using ETAP® to reduce arc flash hazards	Abeera Khan, Mohammad Mohsin Aman
7	paper	Day Ahead Load Forecasting for IESCO using Artificial Neural Network and Bagged Regression Tree	Ahsan Raza Khan, Sohail Razzaq, Thamer Alquthami, Muhammad Riaz Mughal, Adil Amin, Anzar Mahmood
13	paper	Design of High Frequency (MHz) Planar Pot-Core Transformer	F. Alam, Z. Ullah, A. Majid, J. Saleem, A. Haider
19	paper	Modeling and Simulation of Phasor Measurement Unit (PMU) for Early Fault Detection in Interconnected Two-Area Network	Asad Waqar, Zeeshan Khurshid, Jehanzeb Ahmad, Muhammad Aamir, Muneeb Yaqoob, Imtiaz Alam
25	paper	Multiple User Based Residential Energy Management Scheme for Smart Homes	Muhammad Awais, Muhammad Babar Rasheed, Muhammad Zahid Iqbal, Muhammad Usman
31	paper	Levenberg-Marquardt SMC control of Grid-Tied Doubly Fed Induction Generator (DFIG) using FRT Schemes under Symmetrical Fault	Babar Azeem, Z. Ullah, F. Rehman, S. M. Ali, A. Haider, S. Saeed, I. Hussain, C.A. Mehmood, B. Khan

37	paper	Backstepping control design for two-wheeled self balancing robot	Ejaz Ahmad, Ateeq ur Rehman, Owais Khan, Muhammad Haseeb, and Nihad Ali
43	paper	Energy Efficient Buildings based on Occupants Behaviour: A survey	Fahim Ahmed, Sheraz Aslam, Muhammad Hassan Rahim and Nadeem Javaid
48	paper	Efficiency Enhancement of SnS Solar Cell using Back Surface Field	Faisal Baig, Hanif Ullah, Salman Ahmed
53	paper	Design and Simulation of a 3 Phase Induction Motor drive based on Indirect Rotor Field Orientation using MATLAB Simulink tool	Muhammmad Farooq Umar, Muhammad Noman Akbar, Syed Muhammad Raza Kazmi
59	paper	Economic viability of in-house DC system in Pakistan	H.E.Gelani, F. Dastgeer, M. Umar, J. Hussain, R. Danyal, M.Umair
63	paper	Modeling of 1 MW Solar Thermal Tower Power Plant using TRNSYS	Hamza Ahmad Raza, Sara Sultan, Shomaz, ul Haq, Abid Hussain
69	paper	Design and Fabrication of Indoor Solar Thermal Cooker using Therminole	M. S. Hasan, Muhammad Iftikhar Khan, Zamran Rabeel, Muhammad Usman, Anzar Mahmood
74	paper	Cogging Torque Reduction of Flux-Switching Permanent Magnet Machine with Overlapping Windings	I. Hussain, F. Khan, U. Zafar, N. Ahmad, N. Iqbal
80	paper	Analytical Modeling of Low Cost Single Phase Wound Field Flux Switching Machine	S. Ishaq, F. Khan, N. Ahmad, K. Ayaz, W. Ullah

86	paper	Damping Low Frequency Oscillations in an HVDC System Using Neuro-Fuzzy SMC	Jan Shair, Rabiah Badar
92	paper	Voltage Improvement of Loop Configured Distribution Networks with DGs & FACTS Devices	M Junaid Afzal, Saqlain Ahmad, Muhammad Awais Arshad, Syed Ali Abbas Kazmi
97	paper	Risk Management of Overhead Electric Power Lines	Kamran Hafeez, Muhammad Dilshad Sabir, Zeeshan Najam, Muneeb ullah Anjum
102	paper	An Optimal Scheduling of Smart Home Appliances using Heuristic Techniques with Real-time Coordination	Muhammad Usman Khalid, Nadeem Javaid
108	paper	Taxi Model of Unmanned Aerial Vehicle: Formulation and Simulation	Maryam Wasim, Mukhtar Ullah, Jamshed Iqbal
114	paper	Transient Analysis of a Distribution Transformer using ATP-EMTP	Mujtaba Ali, Dr. M. Asghar Saqib
120	paper	Failure of Modern Hydro Alternator Windings Insulation and Their Root Causes	Naveed Ali Khanz, Muhammad Naeem Arbabz, Muhammad Waqas
126	paper	An Optimal Scheduling of Smart Home Appliances using Heuristic Techniques with Real-time Coordination	Muhammad Usman Khalid, Nadeem Javaid
132	paper	Computational intelligence in context of autonomous vehicle modeling: A survey	Rabia Rauf, Faisal Riaz, Muaz. A.Niazi
139	paper	Machine Learning based False Data Injection In Smart Grid	Rehan Nawaz, Muhammad Awais, Ijaz mansoor

			Qureshi, Muhammad Habib Mahmood
145	paper	Micro Hydro Power Plant Dummy Load Controller	Muhammad Hussnain Riaz, Muhammad Khalil Yousaf, Tahir Izhar, Tariq Kamal, Muhammad Danish, Affan Razzaq, Muhammad Huzaifa Qasmi
149	paper	Testing Study of Commercially Available LithiumIon Battery Cell for Electric Vehicle	Rida Fatima, Aneeque Ahmed Mir, Abdul Kashif Janjuaa and Hassan Abdullah Khalid
154	paper	Analysis of Refractivity guide for Multiple Cities of Pakistan to Improve forecasts in Signal Strength	Saima Gull , Abdullah Saeed, Zagham Abbas, Saddam Awan, Muhammad Farhan Khan
159	paper	Automatic Three Phase Load Balancing System by Using Fast Switching Relay in Three Phase Distribution System	Sajid ul Haq, Bilal Arif, Asif Khan, Junaid Ahmed
165	paper	A Smart Framework for Power Distribution and Load Balancing using Arduino	Sajjad Durrani, Hussnain Arif, Ehtisham Ali, Asad Ali, Shahid Khan, Hazrat Ali
171	paper	An integral sliding mode based robust voltage tracking control of three phase inverter	Sameer Sabir, Abdul Khaliq, Quadrat Khan, M. Saleem

177	paper	Design of STATCOM with a Novel Approach to the Trigger Circuit, Using Numerical Analysis	Samiya Zafar, Fizzah Beig, Hira Haider, Sana Zaheer, Yusra Rauf
182	paper	Comparison of Non-Isolated Converter Topologies for Maximization of Energy Yield of Photovoltaic Energy Conversion System	Muhammad Saqib Ali, Muhammad Kamal Ahmad, Muhammad Farooq Umar, Syed Muhammad Raza Kazmi
188	paper	An image conveys a message: A brief survey on image description generation	Sidra Shabir, Syed Yasser Arafat
194	paper	An SDN Enhanced Load Balancing Mechanism for a Multi-Controller WiFi Network	Sohaib Manzoor, Syed Muhammad Abrar Akber, Muhammad Ilyas Menhas Muhammad Imran, Muhammad Sajid, Hassan Talal, Usama Samad
199	paper	Effect of Nanoparticles on Breakdown, Aging and other Properties of Vegetable oil	M. S. Sulemani, A. Majid, F. Khan, N. Ahmad, M. A. Abid, I. U. Khan
205	paper	Real Time Controlling Algorithm for Vehicle to Grid System under Price Uncertainties	Ubaid ur Rehman, Muhammad Riaz
212	paper	Predicting Crop Diseases Using Data Mining Approaches: Classification	Umair Ayub, Syed Atif Moqurrab

218	paper	Comparative Study of Control Techniques for Power Loss Minimization in a Distribution Network	Umer jamil, Adil Amin, Anzar Mahmood
223	Paper	Optimal Under Voltage Load Shedding Scheme for a Distribution Network Using EPSO Algorithm	Muhammad Usman, Adil Amin, Muhammad Muneer Azam, H. Mokhlis
229	paper	A Multi Input Multi Output Bidirectional DC-DC Boost Converter with Backup Battery Port	Muhammad Waseem, Laraib Saeed, Muhammad Yasir Ali Khan, Jawad Saleem and Abdul Majid
235	paper	Prospects of Smart Grid in Azad Jammu and Kashmir	Khursheed Sabeel, Anila Kousar, Adil Amin, Muhammad Usman, Mamoona Akbar, Anzar Mahmood
241	paper	Approach for Forecasting Smart Customer Demand With Significant Energy Demand Variability	Zafar A. Khan, Dilan Jayaweera,