

2018 International Conference on Power Generation Systems and Renewable Energy Technologies (PGSRET 2018)

**Islamabad, Pakistan
10-12 September 2018**



**IEEE Catalog Number: CFP18PGS-POD
ISBN: 978-1-5386-7028-6**

**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:	CFP18PGS-POD
ISBN (Print-On-Demand):	978-1-5386-7028-6
ISBN (Online):	978-1-5386-7027-9

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

Need for Mutual Services Interaction Between Smart Grid and Cloud Data Centers.....	1
<i>S. M. Ali, I. Hussain, Z. Ullah, I. Sami, R. Asghar, U. Farid, B. Khan, C. A. Mehmood and A. Haider</i>	
Failure Influence Index for Power Transmission Systems	6
<i>M. Jawad, S. M. Ali, I. Sami, Z. Ullah, U. Farid, B. Khan and C. A. Mehmood</i>	
Insulation Characteristic of CCl ₂ F ₂ with mixtures of CO ₂ /N as a Possible Alternative to SF ₆ substitute Gas for High Voltage Equipment's.....	14
<i>H. Shafqat Kharal, R. Ullah, Z. Ullah, R. Asghar, Waqar Uddin, B. Azeem, S. M. Ali, A. Haider and Muhammad Kamran</i>	
An Integrated Long-Term Energy Forecasting Approach for Sustainable Energy Mix in Pakistan	19
<i>M. Mujahid Rafique, Muhammad Ali Shakir, Imran Zahid and Ghulam Yasin Chohan</i>	
Enhancing the active and reactive Power quality of Doubly Fed Induction Generator using Adaptive PI Controller	24
<i>Waqar Uddin, Kamran Zeb, Zahid Ullah, Muhammad Adil, Hee Je Kim, Ayesha Tanoli, R. Ullah, Bilal Khan and Aun Haider</i>	
Energy efficient, peltier based portable cabinet cooling system for vaccine cold chain.....	30
<i>Muhammad Hassaan Younis and Haroon-Ur-Rashid Khan</i>	
High Power Medium Voltage PMSG based WECS using Three-Level Boost and Modular Multilevel Converters	34
<i>Ahmad Kamal and Dr. Abdul Basit</i>	
Energy Scenario and Potential of Hydroelectric Power in Pakistan	40
<i>Waqar Uddin, Sadam Hussain, Kamran Zeb, Musaib Aleem Dildar, Z. Ullah, Ihsan Ullah Khalil, R. Ullah, A. Haider, M. Adil and H. J. Kim</i>	
Modular Multilevel Converter Based HVDC System Efficiency Evaluation Using Analytical Method	46
<i>Ehtasham Mustafa, Muhammad Yousaf Ali Khan, Nasir Saleem, Aamir Nawaz and Armaghan Zafar</i>	
Techno-economio-environmental viability assessment of Grid-Connected photovoltaic system- A case for different cities of Pakistan	50
<i>Rida Younis, Amina Iqbal, Umer Farooq, Awais Iqbal, Habib Ullah Manzoor, Amir Mehmood and Tareq Manzoor</i>	
Economic Loss Minimization of A Distribution Feeder and Selection of Optimum Conductor for Voltage Profile Improvement.....	55
<i>Hamid Ali, Shafaat Ullah, Irfan Sami, Naseer Ahmad and Faisal Khan</i>	
Single and Three Phase Switch Ladder Multilevel Inverter	61
<i>Malik Muhammad Zaid, Muhammad Usama Malik, Muhammad Sibtain and Muhammad Moosa</i>	

Distributed Energy Optimization using Consensus Theory Approach	67
<i>Muhammad Awais, Nian Liu, Muhammad Jamshed Abbas, Faisal Mehmood Shah, Abdul Rehman and Sadeq Muhammad Qaid Al-Fakih</i>	
A Novel Design of FRT Strategy and Proportional Resonant Controller for Three Phase Grid connected PV System.....	72
<i>Saif-Ul- Islam, Kamran Zeb, Waqar Uddin, Imran Khan, Muhammad Adil Khan, Z. Ullah and H. J. Kim</i>	
OPTIMIZATION OF PEROVSKITE SOLAR CELL USING SCAPS.....	78
<i>Arbab Haider Ali, Muhammad Atif, Siyal Ahmad, Mashal Khan, Dr. Imran Khan and Haseeb Ahmad Khan</i>	
Proposed Defense Topology against Cyber Attacks in Smart Grid	82
<i>Muhammad Awais Shahid, Rehan Nawaz, Ijaz Mansoor Qureshi and Muhammad Habib Mahmood</i>	
Aerodynamic study of a self-rectifying impulse turbine based on OWC wave energy prototype	87
<i>Saqlain Abbas, Zulkarnain Abbas, Zubair Butt, Zahid Suleman and Riffat Asim Pasha</i>	
Pyocyanin yield improvement for enhancement of Pseudomonas aeruginosa inoculated Microbial Fuel Cell efficiency	92
<i>Muhammad Ibrahim Rashid and Saadia Andleeb</i>	
An Alternate Grid-splitting Scheme and Efficient Algorithm for Voltage Source Converter Based Multiterminal DC Grid Protection and Restoration Control	98
<i>Rifat Ara and Dr.Umer Amir Khan Amir Khan</i>	
Development and technological steps for realization of AB-PEM Fuel cell – a step towards clean & sustainable energy solutions	104
<i>Noor Ul Hassan, Bahadir Tunaboyle and Muhammad Yasin</i>	
SCADA based Power Management and Distribution System Prototype for Pakistan Scenario	110
<i>Adil Farooq, Khizer Mehmood, Umair Ali, Awais Khan Shinwari, Ashfaq Ur Rehman, Suhail Ahmed and Waseem Iqbal</i>	
Ocean Thermal Energy Conversion(OTEC) - a Techno-economic Analysis for Coastal Area of Pakistan	115
<i>Muhammad Farhan, Shafiq R. Qureshi, Syed Muhammad Tayyab and Mustafa Shahid</i>	
Impact Analysis of PV Penetration on Radial Distribution Feeder of National University of Science and Technology (NUST)	123
<i>Husnain Sadiq, Syed Ahmed Hassan Raza, Usman Hameed, Abdul Kashif Janjua and Kashif Imran</i>	
Design and Implementation of a Robust FTC scheme for the Benchmark model of Wind Turbine System	128
<i>Muhamamd Zohaib Hassan Shah, Mirza Tariq Hamayun and Li-Sheng Hu</i>	

Superhydrophilic, antifogging and antireflecting nanoparticulate coating for solar PV modules.....	134
<i>Kamran Alam, Saim Saher, Saddam Ali, Muhammad Noman, Affaq Qamar and Muhammad Humayun</i>	
Comparative study of Cascaded H-Bridge Multi level Inverter using different Phase Shifted PWM Techniques	140
<i>Usman Hameed, Mazhar Ali, Husnain Sadiq, Arsalan Habib Khawaja and Hassan Abdullah</i>	
Comparative Study on Control Techniques and Delay Margin Enhancement in LFC System.....	146
<i>Hafiz M. Usman, Al-Baraa El-Hag, Abdulla Lutfi, Ahmed Osman and Ahsan Jalal</i>	
Two-Stage Highly Efficient Online Ups with PFC for High Power Application	151
<i>Mubashar Ahmad, Syed imran Ali, Muhammad aamir and asad waqar</i>	
Design and Analysis of Load Switching Mechanism Using Sub-Microgrid Approach	156
<i>Fawad Azeem and Saqib Munawwar</i>	
How to Resolve Energy Problems of Pakistan?	161
<i>Anwar Zeb, Shoaib Ahmad, Azad Haider, Abdul Basit and Muhammad Salman</i>	
Performance Analysis of a Continuous and Discretized Second Order Generalized Integrator based Phase Lock Loop for Single Phase Grid Connected PV Systems	165
<i>Hassan Zahid Butt, Muhammad Awon and Hassan Abdullah Khalid</i>	
Development of hybrid power supply monitoring system based on LabVIEW and MATLAB	171
<i>Tariq Kamal, Murat Karabacak, Luis M Fernández Ramírez, Syed Zulqadar Hassan, Malik Qamar Abbas and Muhammad Abbas Khan</i>	
Optimized Cable Sizing – An Economical Approach to Energy Saving with Reduced Power Loss.....	177
<i>Muhammad Waseem, Rizwan Khan, Muaaz Zakria, Shayan Jamal and Sidra Perveen</i>	
System Redundancy Index based Optimized Phasor Measurement Unit Placement for Complete Network Observability	181
<i>Muhammad Awon, Hassan Zahid Butt, Hassan Abdullah Khalid and Abdul Kashif Janjua</i>	
Efficient Energy Management in a Microgrid	186
<i>Hafeez Ahmad, Dr. Ayaz Ahmad and Sadiq Ahmad</i>	
Optimal Economic Analysis of Hybrid Off Grid (Standalone) Energy System for Provincial Capitals of Pakistan.....	191
<i>M.Haseeb Nawaz, Muhammad Umer Khan, Anam Zahra, Mazhar Ali, Rashid Wazir and Kafait Ullah</i>	
Poisoning effects of P and Zn on commercial NH ₃ -SCR V ₂ O ₅ -MoO ₃ /TiO ₂ Catalyst	197
<i>Ali Zulfiqar, Lu Qiang, Iqbal Tahir, Laraib Sajida Riffat, Panjwani Manoj Kumar, Arain Zulqarnain, Tahir Muhammad Usman and Asif Muhammad</i>	
Optimal Output Voltage Control of Solar Photovoltaic Power System.....	203
<i>Abasin Ulasyar, Haris Sheh Zad and Adil Zohaib</i>	

The Long-term forecast of Gilgit Baltistan(GB)'s Electricity Demand.....	209
<i>Arif Hussain, Dr. Kafait Ullah, Usama Perwez and Muhammad Shahid</i>	
Research on the Protection of Hybrid HVDC System	214
<i>Muhammad Tanveer Riaz, Yang Fan, Jawad Ahmad, Muhammad Zeeshan Khan, Muhammad Abbas Khan and Eman Manzoor Ahmed</i>	
Exergy Analysis and Optimization of Series and Parallel Flow Configurations of Vapor Absorption Chiller	220
<i>Muhammad Umer Arshad, Muhammad Usman Ghani, Dr. Atta Ullah and Dr. Muhammad Zaman</i>	
Design and Characteristics Investigation of Partitioned Primary Hybrid Excited Linear Flux Switching Machine	227
<i>Areej Fatima, Faisal Khan, Muhammad Afzal Khan and Lutf Ur Rahman</i>	
Gross Potential of Biomass Products for Energy Generation in Azad jammu and Kashmir. A case study using Bio-IRENA Simulator	232
<i>Ubaid Rehman, Muhammad Shahid Khalil, Tanzeel Ur Rashid and Waqas Nazir Awan</i>	
Novel Modular Rotor Single Phase Wound Field Flux Switching Machine.....	239
<i>Lutf Ur Rahman, Faisal Khan, Areej Fatima and Muhammad Afzal Khan</i>	
Combined Simulation of Auction Revenue Rights Allocation and Financial Transmission Rights Auction for Electricity Markets	244
<i>Sherjeel Baig, Kashif Imran, Nauman Rafique and Haseeb Khan</i>	
Compensation of Switched Reluctance Motor Torque Ripple based on TSF Strategy for Electric Vehicle Applications	250
<i>Mahmoud Hamouda, Qazi Shafi ullah and László Számel</i>	
Calculation of neutronic parameters using OpenMC for potential dispersed fuels of MNSR 256	
<i>Muhammad Waqas Tariq, Muhammad Sohail and Sikander Majid Mirza</i>	
Net Zero Energy Buildings (NZEB): A Case Study of Net Zero Energy Home in Pakistan .	260
<i>Muhammad Irfan, Naeem Abas and Muhammad Shoaib Saleem</i>	
A Cost Efficient DC-DC Converter for Wireless Sensor Node	266
<i>Waseem Ullah, Gulzar Ahmad and Muhammad Kamran</i>	
Use of slab fuel geometry in fusion fission hybrid reactor for sub criticality calculations ...	272
<i>Usama Ahmed, Muhammad Sohail and Muhammad Tariq Siddique</i>	
Load Shedding Optimization: A Scenario of IESCO	276
<i>Muhammad Shoaib Sarwar, Faizan Ahmed and Muhammad Rizwan Mughal</i>	
Data-based Sensing of Composition and Quality of Product in Biodiesel Production	282
<i>Iftikhar Ahmad, Ahsan Ayub, Uzair Ibrahim and Mansoor Khan Khattak</i>	
Techno-Economic Analysis of HVDC Transmission Line Project of China-Pakistan Economic Corridor (CPEC):	288
<i>Mohsin Ali Siyal, Viwak Kella, Ahmed Mustafa Memon, Lala Rukh Memon, Arslan Hussain and Nayyar Hussain Mirjat</i>	

On Design of DC-Link Voltage Controller and PQ Controller for Grid Connected VSC for Microgrid Application	294
<i>Sahar Zafar, M. Awais Amin, Beenish Javaid and Hassan Abdullah Khalid</i>	
Techno-economic Analysis of Selexol and Sulfinol Processes for Pre-combustion CO ₂ Capture.....	300
<i>Neelam Ramzan, Usama Shakeel, Afşin Güngör and Muhammad Zaman</i>	
Uninterruptible Power Supply (UPS) in Pakistan: Effects and Way Forward.....	306
<i>Hasan Erteza Gelani, Faizan Dastgeer, Muhammad Umair, Muhammad Umar, Jafar Hussain and Rao Danyal</i>	
Design and Development of EMG Controlled Prosthetics Limb with the Self-Charging Capability	312
<i>Jafar Hussain, Hasan Erteza Gelani, Bilal Ahmad, Asad Ali, Sana Rehman and Waseem Arshad</i>	
Mathematical Analysis for Calculation of an optimum Tilt Angle of Solar Panels for Islamabad.....	316
<i>Syed Muhammad Sami Ur Rehman, Muhammad Ammar Nazeer, Zafar Iqbal, Muhammad Abdul Basit and Aqeel Ahmed</i>	
Techno-economic Analysis of PV/Wind/Biomass/Biogas Hybrid System for Remote Area Electrification of Southern Punjab (Multan), Pakistan using HOMER Pro	322
<i>Muhammad Umer Khan, Muhammad Hassan, Haseeb Nawaz, Mazhar Ali and Rashid Wazir</i>	
VALIDATION OF KINETIC MODEL OF NAPHTHA REFORMING REACTOR FOR OPTIMIZATION OF PROCESS.....	328
<i>Muhammad Bilal and Khurram Imran Khan</i>	
Electrical Condition Monitoring of Low Voltage Nuclear Power Plant Cables: $\tan \delta$ and Capacitance	332
<i>Angel Asipuela, Ehtasham Mustafa, Ramy S.A. Afia, Tamus Zoltan Adam and Muhammad Yousaf Ali Khan</i>	
Structural Analysis of a Large Composite Wind Turbine Blade under Extreme Loading...	336
<i>Himayat Ullah and Baseer Ullah</i>	
CFD Analysis of Passive Autocatalytic Recombiner	342
<i>Rab Nawaz, Shahid Waqas Khan and Kamran Rasheed Qureshi</i>	
Prototype Designing of Hybrid Power System for Industry with efficient design of Solar Power System.....	347
<i>Sajjad Durrani, Hazrat Ali, Ali Zahir and Shahid Khan</i>	
Operation of Microgrid with cascaded Current-Voltage Control of Voltage-sourced Converter based on H-infinity Repetitive Control Strategy.....	353
<i>Salman Tahir and Abdul Khalique</i>	
Feasibility and Design Analysis for Installation of Micro Hydro Power Turbines in Pakistan	359
<i>Syed Muhammad Hasan Askary, Ali Asghar Muzzaffar, Basit Ali, Syed Muhammad Shuja and Muhammad Sadiq</i>	

Three-Phase AC-DC Voltage Disturbance Rejection Control Strategy by Using Inverter Decoupling Topology	365
<i>Faisal Mehmood Shah, Han Minxiao, Tila Muhammad, Wang xxxie and Muhammad Awais</i>	
An elasticity based deterministic study of relationship between factors effecting domestic energy usage in Pakistan.....	370
<i>Hafiz Muhammad Bilal Ahmed, Abdul Kashif Janjua and Dr. Muhammad Bilal Khan</i>	
Technical and financial analysis for a 50MW wind farm in Pasni, Balochistan.....	374
<i>Samreen Siddique, Rashid Wazir, Anam Zahra, Naseem Iqbal, Adeel Javed, Mazhar Ali and Fatima Ilyas</i>	
Effect of Arm Inductor on Harmonic Reduction in Modular Multilevel Converter	380
<i>Waqar Uddin, Sadam Hussian, Kamran Zeb, Ihsan Ullah Khalil, Z. Ullah, Musaib Aleem Dildar, M. Adil, M. Ishafq, Imran Khan and H. J. Kim</i>	
Solar Desalination Plant for Pakistani Coastal Area – Cost and Technical Analysis	385
<i>Shafiq Qureshi, Muhammad Farhan, Nasir Abbas and Mustafa Shahid</i>	
Estimation of Radioactive Waste for Decommissioning of KANUPP-1 Reactor	392
<i>Muhammad Naveed Ashraf, Awais Zahur, Dr. Rustam Khan, Tasneem Fatima, Muhammad Sajjad and Muhammad Rizwan Ali</i>	
KANUPP Reactor Core Model and its Validation	398
<i>Muhammad Sajjad, Muhammad Rizwan Ali, Muhammad Naveed Ashraf, Rustam Khan and Tasneem Fatima</i>	
Investigation and Control of Fuel Cell dynamics in Fuel-Cell Hybrid Railway Propulsion System.....	403
<i>Mazhar Abbas, Inho Cho and Jonghoon Kim</i>	
EFFECT OF INPUT PARAMETERS OF WIRE ELECTRIC DISCHARGE MACHINING ON SURFACE INTEGRITY OF DC53 DIE STEEL	409
<i>Yasir Nawaz, Shahid Maqsood and Khawar Naeem</i>	
Integrated Energy Modeling – Present status of Pakistan vs. World	415
<i>Leena Aftab and Unza Jamil</i>	
Van de Graaff Generator – A Cost Effective Solution	424
<i>Ramna Khalid, Saima Shaheen, Aqeel Ur Rehman and Asfa Javed</i>	
Review of Automatic Generation Control For Multi-Source Interconnected Power System Under Deregulated Environment	430
<i>Amil Daraz, Suheel Abdullah Malik and Altaf Ul Haq</i>	
Design & Fabrication of Gravity Based Solar Tracker Applied On Scheffler Reflector	435
<i>Saeed Badshah Saeed, Ali Arham Ali, Muhammad Usman Usman and Muhammad Junaid Junaid</i>	
Power Quality Improvement of Distribution Feeder Using Hybrid Series Active Power Filters with Sliding Mode Controller.....	439
<i>Mazhar Fida, Muhammad Aamir, Muhammad Ali and Asad Waqar</i>	

A Communication-less Protection Strategy to Ensure Protection Coordination of Distribution Networks with Embedded DG	445
<i>Ahsan Waqar, Salman Ahmad, Talha Yahya, Babar Hussain and Muhammad Sarwar</i>	
Experimental Study on Ni/ γ – Al_2O_3 and Its Modified Catalysts for Catalytic Steam Reforming of Methane	451
<i>Sajida Laraib, Qiang Lu, Suhaib Sajid, Zulfiqar Ali and Tahir Iqbal</i>	
A Study of Asymmetrical Multilevel Inverter Topologies with Less Number of Devices and Low THD: A Review	457
<i>Bibi Asma Batool, Aliya, Mahain Noor and Syed Owais Athar</i>	
Steady-state investigation of adsorption cooling system using water as refrigerant	463
<i>Faizan Shabir, Muhammad Sultan and Zahid M. Khan</i>	
Determination of Optimum Insulation Thickness for Different Cities of Pakistan	467
<i>Muhammad Usman, Hassan Ahmad Sheikh, Muhammad Zeeshan Wahab, Muhammad Amjad and Muhammad Rizwan</i>	
An Overview of control strategies with emphasis on demand response for stability and reliability enhancement of Microgrids	475
<i>Ayesha Abbasi, Dr. Ijaz Mansoor Qureshi and Dr. Hassan Abdullallah</i>	
State of The Art Tidal Energy Systems: Issues, Challenges, and Possible Solutions	481
<i>Danial, Muhammad Hassan Khan, Abdul Moiz Siddiqui, Shehzar Shahzad Sheikh and Syed Owais Athar</i>	
An Adaptive Voltage Droop Control mechanism for Multi-Terminal VSC-HVDC System for Offshore Wind Farms	487
<i>Saima Shaheen, Ali Raza, Ramna Khalid and Asfa Javed</i>	
Design & Fabrication of Automatic Indexing Head with a Moving Platform	492
<i>Muhammad Tayyab, Abdur Rafai, Azher Abdul Jabbar, Hamza Ali Khan and Akif Naseem</i>	
Design Consideration of Inner and Outer Rotor Flux Switching Machine	498
<i>Naseer Ahmad, Faisal Khan, Naveed Ur Rehman, Samra Ishaq, Atif Zahid and Erwan Sulaiman</i>	
Smart Grid Technology Integration with Smart Phones for Energy Monitoring and Management System	503
<i>Arjmand Khaliq, Muhammad Amar Zulfiqar and Pemra Sohaib</i>	
Portable grounding system using Backfill materials	507
<i>Rizwan Ahmad, Faisal Khan, Irshad Ullah, Bakhtiar Khan, Shohab Ahmad and Naseer Ahmad</i>	
Effect of PV Panel Orientation on Batteries in a Solar Generation System	512
<i>Mamoona Khalid, Abdul Kashif Janjua and Hassan Abdullah Khalid</i>	
Hydrothermal synthesis of SnS_2 and $Sn_{1-x}Fe_xS_2$ powders	517
<i>Shafi Ullah, Hanif Ullah, Amal Bouich, Faisal Baig, Yousaf Hameed Khattak, Miguel Mollar and Bernabé Marí Soucase</i>	

Optimal Scheduling and Multi-objective Assessment of CCHP system	522
<i>Abdul Rehman, Nian Liu, Abubakar Siddique, Waseem Aslam, Bin Guo and Faisal Mehmood Shah</i>	
Improving the Stability of Power System using Type-II NeuroFuzzy Based Damping Control for HVDC	527
<i>Muhammad Abdul Basit, Rabiah Badar and Saad Dilshad</i>	
Radiation Shielding Design of PWR Steam Generator	533
<i>Rustam Khan, Muhammad Kashif Khan and Awais Zahur</i>	
Experimental Investigation of Various Blade Configurations of Gravitational Water Vortex Turbine (GWVT).....	541
<i>Taqi Ahmad Cheema, Abdul Samad Saleem and . Rizwanullah</i>	
Study of Physio-chemical Properties of POSS/ Mineral Oil based Nanofluids.....	546
<i>Jawad Ahmad, Jian Li, Mohsin Hussain, Muhammad Tanveer Riaz, Muhammad Azeem Akbar and Muhammad Zeeshan Khan</i>	
Design and Simulation of an Electro-mechanical Control System for Mini Hydro Power Plants	551
<i>Asad Ali, Muftooh Ur Rehman Siddiqi, Riaz Muhammad and Arshad Ali</i>	
Stopping Power and Depth Dose Measurement of Protons in Water using MCNPX	557
<i>Aziz Haider, Sajjad Tahir, Rustam Khan, Tariq Siddique and Wazir Muhammad</i>	
Safety Assessment of Advanced PWR	562
<i>Suhail Ali, Kamran Qureshi, Saira Gulfam, Sarim Ahmed Qamar and Rab Nawaz</i>	
Wavelet Based Feature Analysis of Fault Signals in a Microgrid.....	568
<i>Umar Maqbool and Umer Amir Khan</i>	
AN OVERVIEW OF POWER GENERATION POTENTIAL OF PAKISTAN'S WIND ENERGY CORRIDOR	574
<i>Naveed Ahmed Unar, Muhammad Zakir Shaikh and Bhawani Shankar Chowdhry</i>	
Neutron Energy Spectrum Unfolding using Stochastic Techniques.....	580
<i>Bukhtiar Mohsin, Nadeem Shaikat, Ahmad Shaheryar and Siraj-Ul-Islam Ahmad</i>	