



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



## CONFERENCE PROGRAM SCHEDULE

### Day 1

**September 10, 2018**

08:30 – 09:30	Registration & Guests to be Seated (Venue: Quaid-e-Azam Auditorium)		
	Recitation from the Holy Quran (Venue: Quaid-e-Azam Auditorium)		
09:00 – 09:10	<i>Conference Overview/ Welcome Speech: <b>Dr. Saeed Badshah</b></i>		
	<i>Opening Remarks: <b>Prof. Dr. Muhammad Amir</b></i>		
9:10 – 9:30	<i>Welcome Speech:</i> <b>Prof. Dr. Aqdas Naveed Malik, Vice President IIUI (HSR)</b> <b>Prof. Dr. Ahmed Yousif Al-Draiweesh, President IIUI</b>		
9:30 – 09:45	<i>Address by Chief Guest/Guest of Honor</i>		
09:45 – 10:00	<i>Vote of Thanks: <b>Prof. Dr. Masoom Yasinzai, Rector, IIUI</b></i>		
10:00 – 10:30	Keynote Speaker 1: <b>Dr. Ansar Parvez</b> <i>Role of Nuclear in the Quest for Sustainable Energy</i> (Venue: Quaid-e-Azam Auditorium)		
10:30 – 11:30	<i>Panel Discussion on Sustainable Energy Solutions in Pakistan</i> (Venue: Quaid-e-Azam Auditorium)		
11:30 – 12:00	Tea Break		
12:00 – 12:30	Keynote Speaker 2: <b>Prof. Dr. Erol KURT</b> <i>Chaotic Applications in Engineering</i> (Venue: Quaid-e-Azam Auditorium)		
12:30 – 01:30	<b>Parallel Session A1</b> Energy Systems, Technology & Management (Hall-I)	<b>Parallel Session A2</b> Renewable Energy Systems and Technologies (Hall-II)	<b>Parallel Session A3</b> Mix Topics (Hall-III)
01:30 – 02:30	Lunch (Venue: Banquet Hall) and Prayer Break		
02:30 – 03:00	Keynote Speaker 3	Keynote Speaker 4	Keynote Speaker 5
03:00 – 04:00	<b>Parallel Session B1</b> Energy Systems, Technology & Management (Hall-I) (cont.)	<b>Parallel Session B2</b> Renewable Energy Systems and Technologies (Hall-II) (cont.)	<b>Parallel Session B3</b> Mixed Topics (Hall-III) (cont.)
04:00 – 04:15	Tea Break		
04:15 – 5:55	<b>Parallel Session B1</b> Energy Systems, Technology & Management (Hall-I)	<b>Parallel Session B2</b> Renewable Energy Systems and Technologies (Hall-II)	<b>Parallel Session B3</b> Mixed Topics (Hall-III)



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



<b>Day 2</b>			
<b>September 11, 2018</b>			
08:30 – 09:00	Registration and Arrival of Participants		
09:00 – 09:30	Keynote Speaker 6		
09:30 – 11:10	<b>Parallel Session C1</b> Ocean Energy & Hydro Power Generation Systems and Technologies (Hall-I)	<b>Parallel Session C2</b> Renewable Energy Systems and Technologies (Hall-II)	<b>Parallel Session C3</b> Renewable Energy System - Aspects of Materials and Structures (Hall-III)
11:10 – 11:30	Tea Break		
11:30 – 12:00	Keynote Speaker 7		
12:00 – 01:40	<b>Parallel Session D1</b> Energy Systems, Technology & Management (Hall-I)	<b>Parallel Session D2</b> Renewable Energy Systems and Technologies (Hall-II)	<b>Parallel Session D3</b> Mix Topics (Hall-III)
01:40 – 02:30	Lunch (Venue: Banquet Hall) and Prayer Break		
02:30 – 03:00	Keynote Speaker 8	Keynote Speaker 9	Keynote Speaker 10
03:00 – 03:30	Keynote Speaker 11	Keynote Speaker 12	Keynote Speaker 13
03:30 – 04:30	<b>Parallel Session E1</b> Energy Systems, Technology & Management (Hall-I) (cont.)	<b>Parallel Session E2</b> Renewable Energy Systems and Technologies (Hall-II) (cont.)	<b>Parallel Session E3</b> Mix Topics (Hall-III) (cont.)
04:30 – 04:45	Tea Break		
04:45 – 05:45	<b>Parallel Session E1</b> Energy Systems, Technology & Management (Hall-I)	<b>Parallel Session E2</b> Renewable Energy Systems and Technologies (Hall-II)	<b>Parallel Session E3</b> Mix Topics (Hall-III)



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



<b>Day 3</b>			
<b>September 12, 2018</b>			
08:30 – 09:00	Registration and Arrival of Participants		
09:00 – 09:30	Keynote Speaker 14		
09:30 – 11:10	<b>Parallel Session F1</b> Nuclear Power Generation Systems and Technologies (Hall-I)	<b>Parallel Session F2</b> Fossil Fuels Power Generation Systems and Technologies (Hall-II)	<b>Parallel Session F3</b> Energy Systems, Technology & Management (Hall-III)
11:10 – 11:30	Tea Break		
11:30 – 12:00	Keynote Speaker 15	Keynote Speaker 16	Keynote Speaker 17
12:00 – 01:00	<b>Parallel Session G1</b> Nuclear Power Generation Systems and Technologies (Hall-I)	<b>Parallel Session G2</b> Energy Applications of Nano- Technology (Hall-II)	<b>Parallel Session G3</b> Energy Systems, Technology & Management (Hall-III)
01:00 – 02:00	Lunch (Venue: Banquet Hall) and Prayer Break		
02:00 – 02:30	Keynote Speaker 18		
02:30 – 03:30	<b>Parallel Session H1</b> Renewable Energy Systems and Technologies (Hall-I)	<b>Parallel Session- H2</b> Mixed Topics (Hall-II)	<b>Parallel Session- H3</b> Energy Systems, Technology & Management (Hall-III)
03:30 – 03:45	Tea Break		
03:45 – 04:30	Panel Discussion and Closing Ceremony		





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



## Technical Sessions

1.	Ocean Energy & Hydro Power Generation Systems and Technologies	Session – C1
2.	Renewable Energy Systems and Technologies	Session – A2, B2, C2, D2, E2, H1
3.	Renewable Energy System - Aspects of Materials and Structures	Session – C3
4.	Energy Systems, Technology & Management	Session – A1, B1,D1, E1, F3, G3, H3
5.	Fossil Fuels Power Generation Systems and Technologies	Session – F2
6.	Nuclear Power Generation Systems and Technologies	Session – F1, G1
7.	Energy Applications of Nano-Technology	Session – G2
8.	Mixed Topics	Session – A3, B3, D3, E3, H2



4<sup>th</sup> International Conference on  
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**DETAILED PROGRAM**

**DAY 1**



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11:30 – 12:00	Tea Break
12:00– 12:30	Keynote Speaker 2: <b>Prof. Dr. Erol KURT</b> <b><i>Chaotic Applications in Engineering</i></b> (Venue: Quaid-e-Azam Auditorium)

<b>Day:1 Parallel Session A1</b>		
<b>Energy Systems, Technology &amp; Management</b>		
<b>Venue: Hall-I</b>		
<b>Session Chair: Dr. Shahid Maqsood</b>		
<b>Time</b>	<b>Speaker Name/Authors</b>	<b>Paper Id/Paper Title</b>
12:30 – 01:30	Muhammad Usman, Hassan Ahmad Sheikh, Muhammad Zeeshan Wahab, Muhammad Amjad and Muhammad Rizwan	<b>Paper Id 188</b> <i>Determination of Optimum Insulation Thickness for Different Cities of Pakistan</i>
	Muhammad Shoaib Sarwar, Faizan Ahmed and Muhammad Rizwan Mughal	<b>Paper Id 121</b> <i>Load Shedding Optimization: A Scenario of IESCO</i>
	Sardar Wasif Ashraf Khan, Aamer Nazir, Rasikh Tariq, Muhammad Aftab Ahmad and Khuram Pervez Amber	<b>Paper Id 44</b> <i>Thermo-Enviro-Economic Evaluation of an Integrated Absorption Cooling System with Waste Heat of Rotary Cement Kiln Shell</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:1 Parallel Session A2 Renewable Energy Systems and Technology		
Venue: Hall-II Session Chair: Dr. Suheel Abdullah Malik		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:30 – 01:30	Waqar Uddin, Kamran Zeb, Zahid Ullah, Muhammad Adil, Hee Je Kim, Ayesha Tanoli, Aun Haider and Bilal Khan	<b>Paper Id 16</b> <i>Enhancing the active and reactive Power quality of Doubly Fed Induction Generator using Adaptive PI Controller</i>
	Ahmad Kamal and Dr. Abdul Basit	<b>Paper Id 18</b> <i>High Power Medium Voltage PMSG based WECS using Three-Level Boost and Modular Multilevel Converters</i>
	Rida Younis, Amina Iqbal, Umer Farooq, Awais Iqbal, Habib Ullah Manzoor, Amir Mehmood and Tareq Manzoor	<b>Paper Id 32</b> <i>Techno-economio-environmental viability assessment of Grid-Connected photovoltaic system- A case for different cities of Pakistan</i>

Day:1 Parallel Session A3 Mix Topic		
Venue: Hall-III Session Chair: Dr. Nadeem Sheikh		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:30 – 01:30	Ahsan Waqar, Salman Ahmad, Talha Yahya, Babar Hussain and Muhammad Sarwar	<b>Paper Id 179</b> <i>Protection Coordination Studies of a Distribution Network with Embedded Distributed Generator</i>
	Mahmoud Hamouda, Laszlo Szameland Shafi Ullah Qazi	<b>Paper Id 114</b> <i>Compensation of Switched Reluctance Motor Torque Ripple based on TSF Strategy for Electric Vehicle Applications</i>
	Jafar Hussain, Hasan Gelani, Bilal Ahmad, Asad Ali, Sana Rehman and Waseem Arshad	<b>Paper Id 132</b> <i>Design and Development of EMG Controlled Prosthetics Limb with the Self-Charging Capability</i>

01:30 – 02:30	Lunch (Venue: Banquet Hall) and Prayer Break
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# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



02:30 – 03:00	Keynote Speaker 3: <b>Dr. Muzaffar Ali</b> <i>Integration of Solar Energy Systems with Intelligent Buildings: A Model-based Simulation Approach</i> (Venue: Hall-I)	
Day:1 Parallel Session B1 Energy Systems, Technology & Management		
Venue: Hall-I Session Chair: Dr. Naseem Iqbal		
Time	Speaker Name/Authors	Paper Id/Paper Title
03:00 – 04:00	Ramna Khalid, Saima Shaheen, Aqeel Rehman and Asfa Javed	<b>Paper Id 175</b> Van de Graaff Generator – A Cost Effective Solution
	Arjmand Khaliq, Muhammad Amar Zulfiqar and Pemra Sohaib	<b>Paper Id 201</b> Smart Grid Technology Integration with Smart Phones for Energy Monitoring and Management System
	Hasan Erteza Gelani, Faizan Dastgeer, Muhammad Umair, Muhammad Umar, Jafar Hussain and Rao Danyal	<b>Paper Id 129</b> Uninterruptible Power Supply (UPS) in Pakistan: Effects and Way Forward

02:30 – 03:00	Keynote Speaker 4: <b>Dr. SYED MUSHTAQ AHMED SHAH</b> <i>Operational Management of Renewable Distributed Generation</i> (Venue: Hall-II)	
Day:1 Parallel Session B2 Renewable Energy Systems and Technology		
Venue: Hall-II Session Chair: Dr. Adnan Umar		
Time	Speaker Name/Authors	Paper Id/Paper Title
03:00 – 04:00	Abasin Ulasyar, Haris Sheh Zad and Adil Zohaib	<b>Paper Id 99</b> <i>Optimal Output Voltage Control of Solar Photovoltaic Power System</i>
	Umar Maqbool and Umer Amir Khan	<b>Paper Id 233</b> <i>Wavelet Based Feature Analysis of Fault Signals in a Microgrid</i>
	Mamoona Khalid, Abdul Kashif Janjua and Hassan Abdullah Khalid	<b>Paper Id 205</b> <i>Effect of PV Panel Orientation on Batteries in a Solar Generation System</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



02:30 – 03:00	Keynote Speaker 5: <b>Prof. Dr. Engr. Muddasar Habib</b> <i>Sustainable Resource Recovery for Energy Savings</i> (Venue: Hall-III)	
Day:1 Parallel Session B3 Mix Topic		
Venue: Hall-III Session Chair: Dr. Nadeem Shaikh		
Time	Speaker Name/Authors	Paper Id/Paper Title
03:00 – 04:00	Taqi Ahmad Cheema, Abdul Samad Saleem and Rizwanullah .	<b>Paper Id 215</b> <i>Experimental Investigation of Various Blade Configurations of Gravitational Water Vortex Turbine (GWVT)</i>
	Angel Asipuela, Ehtasham Mustafa, Ramy S.A. Afia, Tamus Zoltan Adam and Muhammad Yousaf Ali Khan	<b>Paper Id 138</b> <i>Electrical Condition Monitoring of Low Voltage Nuclear Power Plant Cables: <math>\tan\delta</math> and Capacitance</i>
	Ehtasham Mustafa, Muhammad Yousaf Ali Khan, Nasir Saleem, Aamir Nawaz and Armaghan Zafar	<b>Paper Id 29</b> <i>Modular Multilevel Converter Based HVDC System Efficiency Evaluation Using Analytical Method</i>
04:00 – 04:15	Tea Break	



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



Day:1 Parallel Session B1 Energy Systems, Technology & Management		
Venue: Hall-I Session Chair: Dr. Rustam Khan		
Time	Speaker Name/Authors	Paper Id/Paper Title
04:15 – 5:55	<i>Fawad Azeem and Dr. Ghous Bakhsh Narejo</i>	<b>Paper Id 76</b> <i>Design and Analysis of Load Switching Mechanism for Islanded Microgrids</i>
	<i>Adil Farooq, Khizer Mehmood, Umair Ali, Awais Khan Shinwari, Ashfaq Ur Rehman, Suhail Ahmed and Waseem Iqbal</i>	<b>Paper Id 64</b> <i>SCADA based Power Management and Distribution System Prototype for Pakistan Scenario</i>
	<i>Leena Aftab and Unza Jamil</i>	<b>Paper Id 174</b> <i>Integrated Energy Modeling – Present status of Pakistan vs. World</i>
	<i>Muhammad Awais Shahid, Rehan Nawaz, Ijaz Mansoor Qureshi and Muhammad Habib Mahmood</i>	<b>Paper Id 49</b> <i>Proposed Defense Topology against Cyber Attacks in Smart Grid</i>
	<i>M. Jawad, S. M. Ali, I. Sami, Z. Ullah, U. Farid, B. Khan and C. A. Mehmood</i>	<b>Paper Id 09</b> <i>Failure Influence Index for Power Transmission Systems</i>



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



Day:1 Parallel Session B2 Renewable Energy Systems and Technology		
Venue: Hall-II Session Chair: Dr. Kamran Qureshi		
Time	Speaker Name/Authors	Paper Id/Paper Title
04:15 – 5:55	<i>Bibi Asma Batool, Aliya, Mahain Noor and Syed Owais Athar</i>	<b>Paper Id 185</b> <i>A Study of Asymmetrical Multilevel Inverter Topologies with Less Number of Devices and Low THD: A Review</i>
	<i>Saima Shaheen, Ali Raza, Ramna Khalid and Asfa Javed</i>	<b>Paper Id 195</b> <i>An Adaptive Voltage Droop Control mechanism for Multi-Terminal VSC-HVDC System for Offshore Wind Farms</i>
	<i>Mubashar Ahmad, Syed imran Ali, Muhammad aamir and asad waqar</i>	<b>Paper Id 75</b> <i>Two-Stage Highly Efficient Online Ups with PFC for High Power Application</i>
	<i>Hassan Zahid Butt, Muhammad Awon and Hassan Abdullah Khalid</i>	<b>Paper Id 78</b> <i>Performance Analysis of a Continuous and Discretized Second Order Generalized Integrator based Phase Lock Loop for Single Phase Grid Connected PV Systems</i>
	<i>Mazhar Abbas, Jonghoon Kim and Inho Cho</i>	<b>Paper Id 171</b> <i>Investigation and Control of Fuel Cell dynamics in Fuel-Cell Hybrid Railway Propulsion System</i>





**4<sup>th</sup> International Conference on  
Power Generation Systems and Renewable  
Energy Technologies**  
*September 10-12, Islamabad, Pakistan*



<b>Day:1 Parallel Session B3</b>		
<b>Mix Topic</b>		
<b>Venue: Hall-III</b>		
<b>Session Chair: Dr. Rafi Ullah</b>		
<b>Time</b>	<b>Speaker Name/Authors</b>	<b>Paper Id/Paper Title</b>
04:15 – 5:55	<i>Muhammad Awon, Hassan Zahid Butt, Hassan Abdullah Khalid and Abdul Kashif Janjua</i>	<b>Paper Id 84</b> <i>System Redundancy Index based Optimized Phasor Measurement Unit Placement for Complete Network Observability.</i>
	<i>H. Shafqat Kharal, R. Ullah, Z. Ullah, R. Asghar, Waqar Uddin, B. Azeem, S. M. Ali, A. Haider and Muhammad Kamran</i>	<b>Paper Id 10</b> <i>Insulation Characteristic of CCl<sub>2</sub>F<sub>2</sub> with mixtures of CO<sub>2</sub>/N as a Possible Alternative to SF<sub>6</sub> substitute Gas for High Voltage Equipment's</i>
	<i>Salman Tahir and Abdul Khaliq</i>	<b>Paper Id 156</b> <i>Operation of Microgrid with cascaded Current-Voltage Control of Voltage-sourced Converter based on H-infinity Repetitive Control Strategy</i>
	<i>S. M. Ali, I. Hussain, Z. Ullah, I. Sami, R. Asghar, U. Farid, B. Khan, C. A. Mehmood and A. Haider</i>	<b>Paper Id 04</b> <i>Need for Mutual Services Interaction Between Smart Grid and Cloud Data Centers</i>
	<i>Usman Hameed, Hassan Abdullah, Husnain Sadiq, Mazhar Ali and Arsalan Habib Khawaja</i>	<b>Paper Id 72</b> <i>Comparative study of Cascaded H-Bridge Multi level Inverter using different Phase shift PWM Techniques</i>
	<i>Adnan Zaid and Ahmad Mostafa</i>	<b>Paper Id 228</b> <i>Comparison between Mo Addition to Zinc Aluminum Alloy, ZA22, Grain Refined by Ti and Ti-B after Pressing by the Equal Channel Angular Press, ECAP</i>



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DETAILED PROGRAM

DAY 2



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## Day 2: September 11, 2018

09:00 – 09:30

Keynote Speaker 6: **Prof. Bernabé Marí Soucase**  
*New materials for third generation photovoltaic devices. From concentration systems to low cost perovskites*  
(Venue: Hall-I)

### Day:2 Parallel Session C1

#### Ocean Energy & Hydro Power Generation Systems and Technologies

Venue: Hall-I

Session Chair: Dr. Farman Ali Shah

Time	Speaker Name/Authors	Paper Id/Paper Title
09:30 – 11:10	Waqar Uddin, Sadam Hussain, Kamran Zeb, Musaib Aleem Dildar, Zahid Ullah, Ihsan Ullah Khalil, Rahmat Ullah, Muhammad Adil, Aun Haider and Hee Je Kim	<b>Paper Id 20</b> <i>Energy Scenario and Potential of Hydroelectric Power in Pakistan</i>
	Saqlain Abbas, Zulkarnain Abbas, Zubair Butt, Zahid Suleman and Riffat Asim Pasha	<b>Paper Id 50</b> <i>Aerodynamic study of a self-rectifying impulse turbine based on OWC wave energy prototype</i>
	Muhammad Farhan, Shafiq R. Qureshi, Syed Muhammad Tayyab and Mustafa Shahid	<b>Paper Id 65</b> <i>Ocean Thermal Energy Conversion(OTEC) Feasibility for Coastal Area of Pakistan</i>
	Waqar Uddin, Sadam Hussain, Kamran Zeb, Ihsan Ullah Khalil, Zahid Ullah, Musaib Aleem Dildar, Muhammad Adil, Muhammad Ishafq, Imran Khan and Hee Je Kim	<b>Paper Id 163</b> <i>Effect of Arm Inductor on Harmonic Reduction in Modular Multilevel Converter</i>
	Asad Ali, Muftooh Ur Rehman Siddiqi, Riaz Muhammad and Arshad Ali	<b>Paper Id 224</b> <i>Design and Simulation of an Electro-mechanical Control System for Mini Hydro Power Plants</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:2 Parallel Session C2 Renewable Energy Systems and Technology		
Venue: Hall-II Session Chair: Dr. Ali Nawaz		
Time	Speaker Name/Authors	Paper Id/Paper Title
09:30 – 11:10	<i>Iftikhar Ahmad, Ahsan Ayub, Uzair Ibrahim and Mansoor Khan Khattak</i>	<b>Paper Id 122</b> <i>Data-based Sensing of Composition and Quality of Product in Biodiesel Production</i>
	<i>Muhammad Irfan, Naeem Abas and Muhammad Shoaib Saleem</i>	<b>Paper Id 118</b> <i>Net Zero Energy Buildings (NZEB): A Case Study of Net Zero Energy Home in Pakistan</i>
	<i>Hafiz M. Usman Butt, Al-Baraa El-Hag, Abdulla Lutfi, Ahmed Osman and Ahsan Jalal</i>	<b>Paper Id 73</b> <i>Comparative Study on Control Techniques and Delay Margin Enhancement in LFC System</i>
	<i>Saif Ul Islam, Kamran Zeb, Waqar Uddin, Muhammad Adil Khan, Imran Khan, Z. Ullah and Hee Je Kim</i>	<b>Paper Id 47</b> <i>A Novel Design of FRT Strategy and Proportional Resonant Controller for Three Phase Grid connected PV System</i>
	<i>Syed Muhammad Hasan Askary, Ali Asghar Muzzaffar, Basit Ali, Syed Muhammad Shuja and Muhammad Sadiq</i>	<b>Paper Id 157</b> <i>Feasibility and Design Analysis for Installation of Micro Hydro Power Turbines in Pakistan</i>



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:2 Parallel Session C3 Renewable Energy System - Aspects of Mat & Structures		
Venue: Hall-III Session Chair: Dr. Abdul Jalil		
Time	Speaker Name/Authors	Paper Id/Paper Title
09:30 – 11:10	Areej Fatima, Faisal Khan, Muhammad Afzal Khan and Lutf Ur Rahman	<b>Paper Id 108</b> Design and Characteristics Investigation of Partitioned Primary Hybrid Excited Linear Flux Switching Machine
	Lutf Ur Rahman, Faisal Khan, Areej Fatima and Muhammad Afzal Kha	<b>Paper Id 112</b> Novel Modular Rotor Single Phase Wound Field Flux Switching Machine
	Kamran Alam, Saim Saher, Muhammad Noman, Affaq Qamar and Muhammad Hamayun	<b>Paper Id 70</b> Superhydrophilic, antifogging and antireflecting nanoparticulate coating for solar PV modules
	Himayat Ullah and Baseer Ullah	<b>Paper Id 142</b> Structural Analysis of a Large Composite Wind Turbine Blade under Extreme Loading
	Samreen Siddique, Rashid Wazir, Anam Zahra, Naseem Iqbal, Adeel Javed, Mazhar Ali and Fatima Ilyas	<b>Paper Id 162</b> Technical and financial analysis for a 50MW wind farm in Pasni, Balochistan
11:10 – 11:30	Tea Break	



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11:30 – 12:00	Keynote Speaker 7: <b>Dr. Ahmad Faris Ismail</b> <i>Heat Transfer Enhancement and Lubrication Properties of CNT-Nanofluids</i> (Venue: Hall-I)	
Day:2 Parallel Session D1 <b>Energy Systems, Technology &amp; Management</b> Venue: Hall-I Session Chair: <b>Dr. Alessandro Zanarini</b>		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:00 – 01:40	Syed Muhammad Sami Ur Rehman, Muhammad Ammar Nazeer, Zafar Iqbal, Muhammad Abdul Basit and Aqeel Ahmed	<b>Paper Id 133</b> <i>Mathematical Analysis for Calculation of an optimum Tilt Angle of Solar Panels for Islamabad</i>
	Muhammad Hassaan Younis and Haroon-Ur-Rashid Khan	<b>Paper Id 17</b> <i>Energy efficient, peltier based portable cabinet cooling system for vaccine cold chain</i>
	Muhammad Abdul Basit, Rabiah Badar and Saad Dilshad	<b>Paper Id 212</b> <i>Improving the Stability of Power System using Type-II NeuroFuzzy Based Damping Control for HVDC</i>
	Hamid Ali, Shafaat Ullah, Irfan Sami, Naseer Ahmad and Faisal Khan	<b>Paper Id 37</b> <i>Economic Loss Minimization of A Distribution Feeder and Selection of Optimum Conductor for Voltage Profile Improvement</i>
	Hafiz Muhammad Bilal Ahmed, Abdul Kashif Janjua and Dr. Muhammad Bilal Khan	<b>Paper Id 161</b> <i>An elasticity based deterministic study of relationship between factors effecting domestic energy usage in Pakistan</i>





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Day:2 Parallel Session D2 Renewable Energy Systems and technology		
Venue: Hall-II Session Chair: Dr. Hafiz Muhammad Ali		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:00 – 01:40	<i>Shafiq Qureshi, Muhammad Farhan, Nasir Abbas and Mustafa Shahid</i>	<b>Paper Id 168</b> <i>Solar Desalination Plant for Pakistani Coastal Area – A Cost and Technical Analysis</i>
	<i>Naveed Ahmed Unar, Muhammad Zakir Shaikh and Bhawani Shankar Chowdhry</i>	<b>Paper Id 234</b> <i>AN OVERVIEW OF POWER GENERATION POTENTIAL OF PAKISTAN'S WIND ENERGY CORRIDOR</i>
	<i>Faizan Shabir, Muhammad Sultan and Zahid Mahmood Khan</i>	<b>Paper Id 187</b> <i>Steady-state investigation of adsorption cooling system using water as refrigerant</i>
	<i>M.Haseeb Nawaz, Umer Khan and Anam Zahra</i>	<b>Paper Id 94</b> <i>Optimal Economic Analysis of Hybrid Off Grid (Standalone) Energy System for Provincial Capitals of Pakistan</i>
	<i>Husnain Sadiq, Syed Ahmed Hassan Raza, Usman Hameed, Dr. Kashif Imran and Abdul Kashif Janjua</i>	<b>Paper Id 66</b> <i>Impact Analysis of PV Penetration on Radial Distribution Feeder of National University of Science and Technology</i>



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:2 Parallel Session D3 Mix Topic		
Venue: Hall-III Session Chair: Dr. Naseem Iqbal		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:00 – 01:40	Malik Muhammad Zaid, <i>Muhammad Usama Malik, Muhammad Sibtain and Muhammad Moosa</i>	<b>Paper Id 40</b> <i>Single and Three Phase Switch Ladder Multilevel Inverter</i>
	<i>Tariq Kamal, Murat Karabacak, Luis M Fernández Ramírez, Syed Zulqadar Hassan, Malik Qamar Abbas &amp; Muhammad Abbas Khan</i>	<b>Paper Id 82</b> <i>Development of hybrid power supply monitoring system based on Lab VIEW and MATLAB</i>
	<i>Waseem Ullah, Gulzar Ahmad and Muhammad Kamran</i>	<b>Paper Id 119</b> <i>A Cost Efficient DC-DC Converter for Wireless Sensor Node</i>
	<i>Muhammad Tanveer Riaz, Yang Fan, Jawad Ahmad, Muhammad Zeeshan Khan, Muhammad Abbas Khan and Eman Manzoor Ahmed</i>	<b>Paper Id 102</b> <i>Research on the Protection of Hybrid HVDC System</i>
	Yasir Nawaz, Shahid Maqsood and Khawar Naeem.	<b>Paper Id 172</b> <i>Effect Of Input Parameters Of Wire Electric Discharge Machining On Surface Integrity Of Dc53 Die Steel)</i>
	Adnan I. O. Zaid	<b>Paper Id 223</b> <i>Effect of Molybdenum Addition to Aluminum Grain Refined by Titanium Plus Boron on Its Grain Size and Mechanical Characteristics in the Cast and After Pressing by the Equal Channel Angular Pressing, ECAP, Conditions</i>
01:40 – 02:30	Lunch (Venue: Banquet Hall) and Prayer Break	



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



02:30 – 03:00	Keynote Speaker 8: <b>Dr. Muhammad Sultan</b> <i>Low-cost air-conditioning and cooling systems for various applications in Pakistan</i> (Venue: Hall-I)
	Keynote Speaker 9: <b>Prof. Dr. Musa Yilmaz</b> (Venue: Hall-II)
	Keynote Speaker 10: <b>Dr. Adnan I. O. Zaid</b> (Venue: Hall-III)

03:00 – 03:30	Keynote Speaker 11: <b>Dr. Alessandro Zanarini</b> <i>Surface Concept, design, manufacturing, setting up, maintenance: a machine whole life together with advanced technologies in structural dynamics for improving renewable energy systems</i> (Venue: Hall-I)	
Day:2 Parallel Session E1		
Energy Systems, Technology & Management		
Venue: Hall-I		
Session Chair: Dr. Muhammad Sultan		
Time	Speaker Name/Authors	Paper Id/Paper Title
03:30 – 04:30	Rifat Ara and Dr. Umer Amir Khan	<b>Paper Id 59</b> <i>An Alternate Grid-splitting Scheme and Efficient Algorithm for Voltage Source Converter Based Multiterminal DC Grid Protection and Restoration Control</i>
	Mazhar Fida and Muhammad Aamir	<b>Paper Id 178</b> <i>Power Quality Improvement of Single Phase Distribution Feeder Using Hybrid Series Active Power Filters with Sliding Mode Controller.</i>
	Muhammad Awais, Nian Liu, Muhammad Jamshed Abbas, Faisal Mehmood Shah, Abdul Rehman & Sadeq Muhammad Qaid Al-Fakih	<b>Paper Id 42</b> <i>Distributed Energy Optimization using Consensus Theory Approach</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



03:00 – 03:30	Keynote Speaker 12: <b>Dr. Hafiz Muhammad Ali</b> <i>Surface Tension Enhanced Condensation on Horizontal Finned Tubes: An Overview</i> (Venue: Hall-II)	
Day:2 Parallel Session E2 Renewable Energy Systems and technology		
Venue: Hall-II Session Chair: Dr. Naveed Ishtiaq		
Time	Speaker Name/Authors	Paper Id/Paper Title
03:30 – 04:30	Arbab Haider Ali, Muhammad Atif, Siyal Ahmad, Mashal Khan, Dr. Imran Khan and Haseeb Ahmad Khan	<b>Paper Id 48</b> <i>OPTIMIZATION OF PEROVSKITE SOLAR CELL USING SCAPS</i>
	Sajjad Durrani, Hazrat Ali, Ali Zahir and Shahid Khan	<b>Paper Id 152</b> <i>Prototype Designing of Hybrid Power System for Industry with efficient design of Solar Power System</i>
	Adnan I. O. Zaid	<b>Paper Id 218</b> <i>Utilization of Solar Energy as a Thermal Energy Storage System in Palestine</i>

03:00 – 03:30	Keynote Speaker 13: Dr. Naseem Iqbal <i>Metal-Organic Frameworks for Renewable Energy Applications</i> (Venue: Hall-III)	
Day:2 Parallel Session E3 Mix Topic		
Venue: Hall-III Session Chair: Dr. Muhammad Iqbal		
Time	Speaker Name/Authors	Paper Id/Paper Title
03:30 – 04:30	Muhammad Umer Arshad, Muhammad Usman Ghani, Dr. Atta Ullah and Dr. Muhammad Zaman	Paper Id 105 Exergy Analysis and Optimization of Series and Parallel Flow Configurations of Vapor Absorption Chiller
	Amil Daraz, Suheel Abdullah Malik and Altaf Ul Haq	Paper Id 176 Review of Automatic Generation Control For Multi-Source Interconnected Power System Under Deregulated Environment.
	Naseer Ahmad, Faisal Khan and Naveed Ur Rehman	Paper Id 200 Design Consideration of Inner and



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



		<i>Outer Rotor Flux Switching Machine</i>
	<i>Adnan I. O. Zaid</i>	<b>Paper Id 200</b> <i>Effect of Copper Addition at a Rate of 4% Weight on the Microstructure, Mechanical Characteristics, and Surface Roughness on the Hot Extrusion of Aluminum</i>

04:30 – 04:45	Tea Break
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# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



Day Parallel Session E1 Energy Systems, Technology & Management		
Venue: Hall-I Session Chair: Dr. Muhammad Sultan		
Time	Speaker Name/Authors	Paper Id/Paper Title
04:45 – 05:45	Muhammad Mujahid Rafique, Muhammad Ali Shakir, Imran Zahid and Ghulam Yasin Chohan	<b>Paper Id 15</b> <i>An Integrated Long-Term Energy Forecasting Approach for Sustainable Energy Mix in Pakistan</i>
	Muhammad Waseem, Rizwan Khan, Muaaz Zakria, Shayan Jamal and Sidra Perveen	<b>Paper Id 83</b> <i>Optimized Cable Sizing – An Economical Approach to Energy Saving with Reduced Power Loss</i>
	Hafeez Ahmad, Dr. Ayaz Ahmad and Sadiq Ahmad	<b>Paper Id 87</b> <i>Efficient Energy Management in a Microgrid</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:2 Parallel Session E2 Renewable Energy Systems and technology		
Venue: Hall-II Session Chair: Dr. Naveed Ishtiaq		
Time	Speaker Name/Authors	Paper Id/Paper Title
04:45 – 05:45	Ali Arham Ali, Muhammad Usman Usman and Muhammad Junaid Junaid	<b>Paper Id 177</b> <i>Design &amp; Fabrication of Gravity Based Solar Tracker Applied On Scheffler Reflector</i>
	Muhammad Tayyab, Abdur Rafai, Azher Abdul Jabbar, Hamza Ali Khan and Akif Naseem	<b>Paper Id 196</b> <i>Design &amp; Fabrication of Automatic Indexing Head with a Moving Platform</i>
	Muhammad Ibrahim Rashid and Saadia Andleeb	<b>Paper Id 53</b> <i>Pyocyanin yield improvement for enhancement of Pseudomonas aeruginosa inoculated Microbial Fuel Cell efficiency</i>

Day:2 Parallel Session E3 Mix Topic		
Venue: Hall-III Session Chair: Dr. Muhammad Iqbal		
Time	Speaker Name/Authors	Paper Id/Paper Title
04:45 – 05:45	Neelam Ramzan, Usama Shakeel, Afşin Güngör and Muhammad Zaman	<b>Paper Id 128</b> <i>Techno-economic Analysis of Selexol and Sulfinol Processes for Pre-combustion CO2 Capture</i>
	Sajida Laraib, Qiang Lu, Suhaib Sajid, Zulfiqar Ali and Tahir Iqbal	<b>Paper Id 184</b> <i>Experimental Study on Ni/γ-AL2O3 and Its Modified Catalysts for Catalytic Steam Reforming of Methane</i>
	Shafi Ullah, Hanif Ullah, Amal Bouich, Faisal Baig, Yousaf Hameed Khattak, Miguel Mollar and Bernabé Marí Soucase	<b>Paper Id 206</b> <i>Hydrothermal synthesis of SnS2 and Sn1-xFexS2 powders</i>



4<sup>th</sup> International Conference on  
Power Generation Systems and Renewable  
Energy Technologies  
*September 10-12, Islamabad, Pakistan*



DETAILED PROGRAM

DAY 3



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day 3: September 12, 2018		
09:00 – 09:30	Keynote Speaker 14: <b>Dr. Naseem Irfan</b> <i>Post Combustion NO<sub>x</sub> Control from Coal Fired Power Plants using Selective Non-Catalytic Reduction (SNCR) Technology</i> (Venue: Hall-I)	
Day:3 Parallel Session F1 Nuclear Power Generation Systems and Technologies		
Venue: Hall-I Session Chair: Dr. Syed Mushtaq Ahmed Shah		
Time	Speaker Name/Authors	Paper Id/Paper Title
09:30 – 11:10	Muhammad Waqas Tariq, Muhammad Sohail and Sikander Majid Mirza	<b>Paper Id 117</b> <i>Calculation of neutronic parameters using OpenMC for potential dispersed fuels of MNSR</i>
	Usama Ahmed, Muhammad Sohail and Muhammad Tariq Siddique	<b>Paper Id 120</b> <i>Use of slab fuel geometry in fusion fission hybrid reactor for sub criticality calculations</i>
	Rab Nawaz, Shahid Waqas Khan and Kamran Rasheed Qureshi	<b>Paper Id 143</b> <i>CFD Analysis of Passive Autocatalytic Recombiner</i>
	Muhammad Sajjad, Muhammad Rizwan Ali, Muhammad Naveed Ashraf, Rustam Khan and Tasneem Fatima	<b>Paper Id 170</b> <i>KANUPP Reactor Core Model and its Validation</i>
	Rustam Khan, Muhammad Kashif Khan and Awais Zahur	<b>Paper Id 213</b> <i>Radiation Shielding Design of PWR Steam Generator</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:3 Parallel Session F2 Fossil Fuels Power Generation Systems and Technologies		
Venue: Hall-II Session Chair: Dr. Muzaffar Ali		
Time	Speaker Name/Authors	Paper Id/Paper Title
09:30 – 11:10	Muhammad Bilal and Khurram Imran Khan	<b>Paper Id 136</b> VALIDATION OF KINETIC MODEL OF NAPHTHA REFORMING REACTOR FOR OPTIMIZATION OF PROCESS
	Rizwan Ahmad, Faisal Khan, Irshad Ullah, Bakhtiar Khan, Shuhab Ahmad and Naseer Ahmad	<b>Paper Id 202</b> Portable grounding system using Backfill materials
	Ubaid Rehman, Muhammad Shahid Khalil, Tanzeel Ur Rashid and Waqas Nazir Awan	<b>Paper Id 110</b> Gross Potential of Biomass Products for Energy Generation in Azad jammu and Kashmir. A case study using Bio-IRENA Simulator
	Umer Khan, Muhammad Hassan, Haseeb Nawaz, Rashid Wazir and Mazhar Ali	<b>Paper Id 134</b> Techno-economic Analysis of PV/Wind/Biomass/Biogas Hybrid System for Remote Area Electrification of Southern Punjab (Multan), Pakistan using HOMER Pro
	Ali Zulfiqar, Lu Qiang, Iqbal Tahir, Laraib Sajida Riffat, Panjwani Manoj Kumar, Arain Zulqarnain, Tahir Muhammad Usman and Asif Muhammad	<b>Paper Id 95</b> Poisoning effects of P and Zn on commercial NH <sub>3</sub> -SCR V <sub>2</sub> O <sub>5</sub> -MoO <sub>3</sub> /TiO <sub>2</sub> Catalyst



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:3 Parallel Session F3 Energy Systems, Technology & Management		
Venue: Hall-III Session Chair: Dr. Hafiz Muhammad Ali		
Time	Speaker Name/Authors	Paper Id/Paper Title
09:30 – 11:10	Arif Hussain, Dr. Kafait Ullah, Usama Perwez and Muhammad Shahid	<b>Paper Id 101</b> <i>The Long-term forecast of Gilgit Baltistan(GB)'s Electricity Demand</i>
	Faisal Mehmood Shah, Han Minxiao, Tila Muhammad, Wang xxxie and Muhammad Awais	<b>Paper Id 158</b> <i>Three-Phase AC-DC Voltage Disturbance Rejection Control Strategy by Using Inverter Decoupling Topology</i>
	Danial, Muhammad Hassan Khan, Abdul Moiz Siddiqui, Shehzar Shahzad Sheikh and Syed Owais Athar	<b>Paper Id 192</b> <i>State of The Art Tidal Energy Systems: Issues, Challenges, and Possible Solutions</i>
	Abdul Rehman, Nian Liu, Abubakar Siddique, Waseem Aslam, Bin Guo and Faisal Mehmood Shah	<b>Paper Id 207</b> <i>Optimal Scheduling and Multi- objective Assessment of CCHP system</i>
	Sherjeel Baig, Kashif Imran, Haseeb Baloch and Nauman Rafique	<b>Paper Id 113</b> <i>Combined Simulation of Auction Revenue Rights Allocation and Financial Transmission Rights Auction for Electricity Markets</i>
11:10 – 11:30	Tea Break	



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



11:30 – 12:00	Keynote Speaker 15: <b>Dr. Syed Farman Ali Shah</b> <i>Policy Implications For Sustainable Ethanol Production</i> (Venue: Hall-I)	
Day:3 Parallel Session G1 Nuclear Power Generation Systems and Technologies		
Venue: Hall-I Session Chair: Dr. Rustam Khan		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:00 – 01:00	Muhammad Naveed Ashraf, Awais Zahur, Dr. Rustam Khan, Tasneem Fatima, Muhammad Sajjad and Muhammad Rizwan Ali	<b>Paper Id 169</b> <i>Estimation of Radioactive Waste for Decommissioning of KANUPP-1 Reactor.</i>
	Suhail Ali, Kamran Qureshi, Saira Gulfam, Sarim Ahmed Qamar and Rab Nawaz	<b>Paper Id 230</b> <i>Safety Assessment of Advanced PWR</i>
	Aziz Haider, Sajjad Tahir, Rustam Khan, Tariq Siddique and Wazir Muhammad	<b>Paper Id 229</b> <i>Stopping Power and Depth Dose Measurement of Proton and Photons in Water using MCNPX</i>

11:30 – 12:00	Keynote Speaker 16: <b>Dr. Ali Nawaz Mengal</b> <i>Nanofluids: Increasing performance in solar collector applications</i> (Venue: Hall-II)	
<b>Day: :3 Parallel Session G2</b>		
<b>Energy Applications of Nano-Technolog</b>		
<b>Venue: Hall-II</b>		
<b>Session Chair: Dr. Muhammad Sultan</b>		
Time	Speaker Name/Authors	Paper Id/Paper Title
12:00 – 01:00	<i>Sahar Zafar, M. Awais Amin, Beenish Javaid and Hassan Abdullah Khalid</i>	<b>Paper Id 125</b> <i>On Design of DC-Link Voltage Controller and PQ Controller for Grid Connected VSC for Microgrid Application</i>
	<i>Jawad Ahmad, Jian Li, Mohsin Hussain, Muhammad Tanveer Riaz, Muhammad Azeem Akbar and Muhammad Zeeshan Khan</i>	<b>Paper Id 219</b> <i>Study of Physio-chemical Properties of POSS/ Mineral Oil based Nanofluids</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



11:30 – 12:00	Keynote Speaker 17: <b>Dr. Abdul Shakoor</b> (Venue: Hall-III)	
<b>Day:3 Parallel Session G3</b>		
<b>Energy Systems, Technology &amp; Management</b>		
<b>Venue: Hall-III</b>		
<b>Session Chair: Dr. Ihsan ul Haq</b>		
<b>Time</b>	<b>Speaker Name/Authors</b>	<b>Paper Id/Paper Title</b>
12:00 – 01:00	Manzar Ahmed, Mishaal Ahmed Ahmed and Ali Aizaz Aizaz	<b>Paper Id 39</b> <i>decentralized control strategy in microgrid for smart homes</i>
	<i>Faisal Shahzad, Hassan Erteza Gelani, Haroon Farooq and Waqas Ali</i>	<b>Paper Id 56</b> <i>Comparative Analysis of AC and DC Distribution System with Respect to Harmonic Distortion Considering Daily Load Profile</i>
	<i>Noor Ul Hassan, Bahadir Tunaboylu and Muhammad Yasin</i>	<b>Paper Id 63</b> <i>Development and technological steps for realization of AB-PEM Fuel cell – a step towards clean &amp; sustainable energy solutions</i>
01:00 – 02:00	Lunch (Banquet Hall) and Prayer Break	



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies *September 10-12, Islamabad, Pakistan*



Day:3 Parallel Session H1 Renewable Energy Systems and technology		
Venue: Hall-I Session Chair: Dr. Syed Zubair		
Time	Speaker Name/Authors	Paper Id/Paper Title
02:30 – 03:30	Ayesha Khan and Rabia Khan	<b>Paper Id 34</b> <i>Cost Optimization of Hybrid Microgrid using Solar PV, Fuel Cell and Diesel Generator in HOMER</i>
	Muhamamd Zohaib Hassan Shah, Mirza Tariq Hamayun and Li-Sheng Hu	<b>Paper Id 67</b> <i>Design &amp; Implementation of a Robust FTC scheme for the Benchmark model of Wind Turbine System</i>
	Şehmus Fidan, Mehmet Cebeci, Ahmet Gündoğdu and Musa Yilmaz	<b>Paper Id 92</b> <i>A New Single Hidden Layer Neural Network Based Control Of Wind Turbines</i>



# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



Day:3 Parallel Session H2 Mix Topic		
Venue: Hall-II Session Chair: Dr. Mohsin Riaz		
Time	Speaker Name/Authors	Paper Id/Paper Title
02:30 – 03:30	<i>Bukhtiar Mohsin, Nadeem Shaukat, Ahmad Shaheryar and Siraj-Ul-Islam Ahmad</i>	<b>Paper Id 235</b> <i>Neutron Energy Spectrum Unfolding using Stochastic Techniques</i>
	Furkan Emre Sahin and <a href="#">Musa Yilmaz</a>	<b>Paper Id 238</b> <i>Optical Design of Concentrated Photovoltaic Systems with Chromatic Aberration Minimization</i>
	<i>Adnan I. O. Zaid</i>	<b>Paper Id 217</b> <i>Effect of Mo Addition to ZA22 Alloy Grain Refined by Ti+B on its Metallurgical and Mechanical Characteristics after Pressing by the ECAP Process</i>
	<i>Adnan I. O. Zaid</i>	<b>Paper Id 220</b> <i>Effect of Molybdenum Addition to Aluminum Grain Refined by Titanium plus Boron on its Mechanical Characteristics, Ductility and Formability</i>





# 4<sup>th</sup> International Conference on Power Generation Systems and Renewable Energy Technologies September 10-12, Islamabad, Pakistan



02:00 – 02:30	Keynote Speaker 18: <b>Dr. Nauman Khurshid Awan</b> <i>Estimating and forecasting renewable energy potential by using advanced nowcasting methods in data scarce region</i> (Venue: Hall-III)	
<b>Day:3 Parallel Session H3</b> <b>Energy Systems, Technology &amp; Management</b> <b>Venue: Hall-III</b> <b>Session Chair: Dr. Nauman Khurshid Awan</b>		
<b>Time</b>	<b>Speaker Name/Authors</b>	<b>Paper Id/Paper Title</b>
02:30 – 03:30	<i>Anwar Zeb, Shoaib Ahmad, Azad Haider, Abdul Basit and Muhammad Salman</i>	<b>Paper Id 77</b> <i>How to Resolve Energy Problems of Pakistan?</i>
	<i>Ayesha Abbasi, Dr. Ijaz Mansoor Qureshi and Dr. Hassan Abdulllah</i>	<b>Paper Id 190</b> <i>An Overview of control strategies with emphasis on demand response for stability and reliability enhancement of Microgrids</i>
	<i>Mohsin Ali Siyal, Viwak Kella, Ahmed Mustafa Memon, Lala Rukh Memon, Arslan Hussain and Nayyar Hussain Mirjat</i>	<b>Paper Id 123</b> <i>Techno-Economic Analysis of HVDC Transmission Line Project of China-Pakistan Economic Corridor (CPEC)</i>
03:30 – 03:45	Tea Break	
03:45 – 04:30	Panel Discussion and Closing Ceremony	