

TIME	TITLE/AUTHOR
12:50 - 01:05 PM	<b>Experimental Study of Detection Efficiency of NaI(Tl) Detector</b> Waqas Arshad, Hira Murtaza, Azhar Hussain Malik, Rizwan Ahmed, Masroor Ahmad, Pakistan Institute of engineering and Applied Sciences (PIEAS), Pakistan

TIME	ACTIVITIES
01:05 - 02:30 PM	<b>Prayer break</b>
02:30 - 03:00 PM	<b>Lunch break</b>
03:00 - 03:30 PM	<b>Panel Discussion</b>
03:30 - 03:45 PM	<b>Summary and final remarks by the Conference Co-Secretary (Prof. Dr. Naveed Ramzan)</b>
03:45 - 04:00 PM	<b>Distribution of shields to Guests</b>
04:00 - 04:15 PM	<b>Closing address by the Worthy Vice Chancellor University of Engineering and Technology, Lahore</b>

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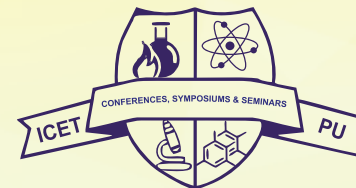
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3rd International Conference on Engineering Sciences  
Institute of Chemical Engineering & Technology,  
University of the Punjab, Lahore.



3rd International Conference on Engineering Sciences

## EVENT PROGRAMME

DAY   01	December 21, 2017 (to be held at PU)
TIME	ACTIVITY
9:00 AM	On Desk Registration
9:30 AM	Guests to be Seated
9:55 AM	Arrival of Honourable Chief Guest
10:00 AM	Recitation
10:05 AM	National Anthem
10:10 AM	Opening words by the Conference Secretary (Prof. Dr. Mahmood Saleem)
10:15 AM	Address by Worthy Vice Chancellor , University of the Punjab
10:20 AM	Address by the Chief Guest
10:25 AM	<b>Plenary Talk - 1</b> <b>Em.Univ.-Prof. Dipl.-Ing. Dr.techn. Gernot Staudinger</b> <b>(Graz University of Technology, Graz, Austria)</b> <b>Implementation of mercury abatement and organic carbon reduction at a cement plant</b>
10:55 AM	Vote of thanks by Dean Faculty of Engineering and Technology
11:00 AM	Refreshment and Poster Session

## TECHNICAL SESSIONS

TECHNICAL SESSION | 01A CHAIRED BY | **Prof. Dr. Gernot Krammer**  
CO-CHAIR BY | **Prof. Dr. Aamir Ijaz**

TIME	TITLE/AUTHOR
11:30 - 11:50 AM	<b>Hydrogen Economy &amp; Fuel Cells</b> Invited Talk by Prof. (R) Dr. Arshad Chughtai, Institute of Chemical Engineering & Technology, University of the Punjab, Lahore
11:50 - 12:05 PM	<b>Catalytic degradation of Low Density Polyethylene (LDPE) into fuel oil on pilot scale: Designing and manufacturing of coal furnace and using CaC2 as a catalyst</b> Syed Fawad Ali Shah - University of Bologna, Italy, Italy
12:05 - 12:20 PM	<b>Comparative study on the effect of acid gas cleaning by MDEA vs (MDEA + Piperazine) as a solvent using Aspen Hysys</b> Naveed Islam, Muddasar Habib, University of Engineering and technology, Peshawar, Pakistan

TIME	TITLE/AUTHOR
12:20 - 12:35 PM	<b>Conversion of Tap Water Into Mineral Water</b> Zubair Ahmed, Hassan Abbas, Tahir Ghani
12:35 - 12:50 PM	<b>Synthesis Loop Differential Pressure Surge Problem Analysis</b> Abubakar Sohail, Pak Arab Fertilizer Limited, Multan
12:50 - 01:05 PM	<b>Simulation of Proton Exchange membrane fuel cell (PEMFC) by using Ansys fluent</b> Asifa Awan, Mahmood Saleem, University of the Punjab
01:05 - 01:20 PM	<b>Effect of Different Parameters on Coal Washability by Float &amp; Sink Analysis</b> Muhammad Imran, Najaf Ali, Waqar Ali Khan, Shahid Raza Malik NFC IEFR, Faisalabad
01:20 - 01:35 PM	<b>Barrier Properties of Metalized and non-metalized Packaging Films</b> Shagufta Ishtiaque, Muhammad Faisal Akhter, Haseeb Hassan, Amjad Saleem, UoK, Pakistan
01:35 - 01:50 PM	<b>Water Energy Management Solution Project</b> Hamid Mukhtar, Pakistan

CHAired BY | **Prof. Dr. Hilmi bin Mukhtar**  
CO-CHAIR | **Prof. Dr. Shahid Munir**

TIME	TITLE/AUTHOR
11:30 - 11:50 AM	<b>Journey to Safety in Pakistan</b> Mr. Farrukh Majeed Bala General Manager (HSE) SNGPL-Pakistan
11:50 - 12:05 PM	<b>Modeling the Phase Equilibria for Acid Gas Separation System using SAFT Equation of STATE</b> Rameez Ajaz, Usama Shakil, Muhammad Zaman, PIEAS, Islamabad
12:05 - 12:20 PM	<b>Effect of acid treatment on the physio-chemical structure and thermal degradation of biomass</b> Amir Javed, Umair Aslam, Naveed Ramzan, University of Engineering and Technology, Lahore, Pakistan
12:20 - 12:35 PM	<b>A Study of Effect of Feed Size and Catalyst on Conversion of Agricultural Biomass Using Fast Pyrolysis Process</b> Hafiz Muneeb Ahmad Shafique, Mahmood Saleem, ICET PU, Pakistan
12:35 - 12:50 PM	<b>Performance Enhancement of Acid Gas Removal Systems</b> Khurram Saleem, Ali Zulqarnain Khan Fauji Fertilizer Company Limited Mirpur Mathelo-65050
12:50 - 01:05 PM	<b>Desalination of Water Using Solar Energy</b> Abdullah Athar, Mahmood Saleem, Institute of Chemical Engineering and Technology Punjab University, Lahore
01:05 - 01:20 PM	<b>Utilization of parallel coordinate geometry for the process monitoring early detection and diagnosis of faults in the waste water treatment plant database.</b> Suleman Ali, Institute of chemical Engineering & Technology, University of the Punjab, Lahore
01:20 - 01:35 PM	<b>Pyrolysis: An Experimental study for the Synthesis of Furfural through various Biomasses in Fixed Bed Reactor</b> Mahmood Saleem, Nazia Baig ICET, PU Lahore
01:35 - 01:50 PM	<b>Efficient Monitoring, Logging and Fault Diagnosis for "Back-up" Power Generators</b> Linta Ahmed, Ayusha Wahid, Mehak Khalid, Mashaal Khan, NED University of Engineering and Technology, Karachi

## TECHNICAL SESSION | 04A

CHAired BY | **Dr. Syed Fahad Ali Shah** CO-CHAired BY | **Prof. Dr. Naveed Ramzan**

TIME	TITLE/AUTHOR
12:00 - 12:20 PM	<b>Talking about Pakistani Indigenous Gas</b> Invited Talk By Engr. SH. Mushtaq Ahmed, Vice President, PICHE
12:20 - 12:35 PM	<b>BET, FTIR and Raman Study of Carbon from Waste Material</b> Rizwan Ali, Dr H.M zaheer Aslam, Aamir Abbas Department of Chemical Engineering, University of Engineering and Technology, Lahore
12:35 - 12:50 PM	<b>Thermo-physical treatment of lawn grass for synthesis of activated carbon</b> Umar Anait, Zaheer Aslam, Ahmed Abdullah, Aamir Abbas, University of Engineering and Technology Lahore, Pakistan
12:50 - 01:05 PM	<b>Modeling of sorption enhanced steam methane reforming (SE-SMR) in an adiabatic packed bed reactor by using different sorbents</b> Muhammad Mateen Shahid, Dr. Syed Zaheer Abbas, University of Engineering and Technology, Lahore

## TECHNICAL SESSION | 04B

CHAired BY | **Dr. Mohammad Younas** CO-CHAired BY | **Dr. Shagufta Ishtiaque**

TIME	TITLE/AUTHOR
12:00 - 12:20 PM	<b>Microbial Fuel Cell: Wastewater Treatment and Electricity Generation</b> Invited Talk By Saeed Gul, UET KPK
12:20 - 12:35 PM	<b>Up-gradation of agricultural waste bagasse as a solid fuel by means of torrefaction process</b> Muhammad Shehzad, Naveed Ramzan, Umair Aslam University of Engineering and Technology, Lahore, Pakistan
12:35 - 12:50 PM	<b>Sorption of Benzene derivatives over Surfactant modified fly ash</b> Sadiya Mushtaq, Muhammad Zaheer, Aamir Abbas, Mariam Qaiser Department of Chemical Engineering, University of Engineering and Technology, Lahore
12:50 - 01:05 PM	<b>Moderation and shielding calculations for a point neutron source</b> Muhammad Sohail, Pakistan Institute of Engineering and Applied Sciences Technology, Lahore

## TECHNICAL SESSION | 04C

CHAired BY | **Dr. Sheikh Muhammad Sajid** CO-CHAired BY | **Prof Dr. Zahid Hussain**

TIME	TITLE/AUTHOR
12:00 - 12:20 PM	<b>Theoretical Advances in Optical Wireless Communications</b> Invited Talk by Sheikh Muhammad Sajid, FAST University, Lahore
12:20 - 12:35 PM	<b>The Internet of Things (IOT) Smart Handshake Contact Information Data Logger Using OTA Technology</b> Muhammad Aitsam, IUSE School of Engineering
12:35 - 12:50 PM	<b>Anodizing of Zirconium-2 alloy and its use in dental implants</b> Ameeq Farooq, Usama Bin Ali, Muhammad Ahsan, Rafiq Ahmad, College of Engineering and Emerging Technologies, University of the Punjab, Lahore

## TECHNICAL SESSION | 03B

CHAired BY | **Prof. Dr. Nadeem Feroze** CO-CHAired BY | **Dr. Muhammad Ayub**

TIME	TITLE/AUTHOR
10:00 - 10:20 AM	<b>HAZOP Study of Oil and Gas Industry</b> <i>Invited Talk by Shagufta Ishtiaque, Department of Chemical Engineering, UoK</i>
10:20 - 10:35 AM	<b>Energy Utilization and Management in Pakistan – A Statistical Study</b> <i>Muhammad Mujahid Rafique, Muhammad Ali Shakir, Pakistan</i>
10:35 - 10:50 PM	<b>Extended Survey for Troubleshooting of Cooling Towers and Sustaining Performance in Fertilizer Industries (A case study for minimizing bio growth challenges at Fatima Fertilizer Company Limited)</b> <i>Zubair Talha, Fatima Fertilizer company limited, Pakistan</i>
10:50 - 11:05 PM	<b>Comparative study on the effect of acid gas cleaning by MDEA vs (MDEA + Piperazine) as a solvent using Aspen Hysys</b> <i>Naveed Islam, Muddasar Habib, University of Engineering and technology, Peshawar</i>
11:05 - 11:20 PM	<b>Energy and Economic Analysis of LPG Recovery from Natural Gas</b> <i>Ali Huzafa Sayyar, Muhammad Faheem, Department of Chemical Engineering, University of Engineering &amp; Technology, Lahore</i>
11:20 - 11:35 PM	<b>Modeling of one dimensional heterogeneous catalytic steam methane reforming over various catalysts in an adiabatic packed bed reactor</b> <i>Maqbool Ahmad Fahad Maqbool, Abbas Syed Zaheer, University of Engineering &amp; Technology (UET), Lahore</i>

## TECHNICAL SESSION | 03C

CHAired BY | **Prof. Dr. Ikhlaq Ahmed** CO-CHAired BY | **Prof. Dr. Asif Ali Qaiser**

TIME	TITLE/AUTHOR
10:00 - 10:20 AM	<b>Cloning and expression of an enantioselective Esterase gene from Endophytic Bacteria, that can help in achieving highest grade of purity</b> <i>Invited Talk by Zahid Hussain, Government College University, Lahore</i>
10:20 - 10:35 AM	<b>Monte Carlo EGS5 Simulations for Efficiency Calibration of NaI(Tl)</b> <i>Hira Murtaza, Azhar Hussain Malik, Moiz-ul-Ain, Waqas Arshad, Pakistan Institute of engineering and Applied Sciences (PIEAS), Pakistan</i>
10:35 - 10:50 PM	<b>Characterization of Natural Gas Pipeline Coating</b> <i>Mr. Fahim Javed, SNGPL</i>
10:50 - 11:05 PM	<b>Characterization of stones used in Dado Ornamentation from Asif Khan Tomb, Lahore-Pakistan</b> <i>Dr. Saima Gulzar, School of Architecture and Planning University of Management and Technology, Lahore</i>
11:05 - 11:20 PM	<b>Geotechnical Investigations Improve Economic Worth of an Exploration Venture: Case Study of Economic Analysis of Exploration Project</b> <i>Ejaz Gul, Economics, Nature and Leadership Analytics, Pakistan Research Fellow</i>
11:20 - 11:35 PM	<b>Solar as use for Energy Efficient &amp; Sustainable Housing: A Case of Lahore City</b> <i>Ammad Baig, Department of City &amp; Regional Planning University of Engineering &amp; Technology, Lahore</i>

TIME	ACTIVITIES
11:35 - 12:00 PM	<b>Refreshment</b>

## TECHNICAL SESSION | 01C

CHAired BY | **Prof. Dr. Shahid Naveed** CO-CHAIR BY | **Prof. Dr. Abdus Salam**

TIME	TITLE/AUTHOR
11:30 - 11:50 AM	<b>A study on torrifaction and step pyrolysis of agriculture waste</b> <i>Invited Talk by Muhammad Tayyeb Javed, PIEAS, Islamabad</i>
11:50 - 12:05 PM	<b>Production, Properties &amp; Scope of BioPlastics</b> <i>Hafisa Ayeshah Nawaz, Ifrah Akhtar, Tanveer Fatima, Nabeela Shahzadi, Umme Laila Baloch, Toor-e-Aiman Rizvi, University of the Punjab, Lahore</i>
12:05 - 12:20 PM	<b>Production of Bio-oil from Co-Pyrolysis of Organic Solid Waste</b> <i>Muhammad Hassan Qasim, Najaf Ali, Waqar Ali Khan, Shahid Raza Malik, NFC IEF, Faisalabad</i>
12:20 - 12:35 PM	<b>Synthesis of Heterogeneous Catalyst for Bio diesel Production from Cooking Oil</b> <i>Sadia Nasreen, UET Taxila, Pakistan.</i>
12:35 - 12:50 PM	<b>CFD simulation of heat transfer through an assembly of thin vertical cylinders</b> <i>Atta Ullah, Faisal Shafiq, Adnan Hamid, Muhammad Nadeem, Mansoor H Inayat, Pakistan Institute of Engineering &amp; Applied Sciences (PIEAS)</i>
12:50 - 01:05 PM	<b>A Case Study of Line Balancing Using Ranked Position Weight (RPW) Method in a Manufacturing Industry</b> <i>Muhammad Ayat, Tabish Sarfraz, Ahmed Elmahi, Mutahira Ilyas, Dawood University of Engineering of Technology</i>
01:05 - 01:20 PM	<b>Effect of metal oxides loading on MWCNTs: Characterization Study</b> <i>Mariam Qaiser, Sadiya Mushtaq, Zaheer Aslam</i>
01:20 - 01:35 PM	<b>Electrochemical adsorption of methylene blue on platinum coated with graphene oxide</b> <i>Sehrish Talat, Mohsin Ali Raza, Zaeem Ur Rehman, Faizan Ali Ghauri, Muhammad Awais Ali Zubair, Aqil Inam, College of Engineering and Emerging Technologies, University of the Punjab, Lahore</i>
01:35 - 01:50 PM	<b>Effect of graphene oxide coated-glass fibers on the mechanical properties of unsaturated polyester composites</b> <i>Mohsin Hussain, Muhammad Mujddid, Mohsin Ali Raza, Qasim Ali, Faizan Ali Ghauri, CEET, University of the Punjab, Lahore, Pakistan</i>

TIME	ACTIVITIES
01:50 - 02:30 PM	<b>Lunch and Prayer Break</b>
02:30 - 03:00 PM	<b>Plenary Talk - 2</b> <b>Prof. Dr. Hilmi bin Mukhtar</b> <b>(Universiti Teknologi Petronas, Malaysia)</b> <b>“Development of Enhanced Polymeric and Enhanced Mixed Matrix Membranes (E3Ms) for Carbon Dioxide Removal from Natural Gas”</b>

## TECHNICAL SESSION | 02A

CHAired BY | **Prof. Dr. Asad Ullah Khan** CO-CHAired BY | **Prof. Dr. Abdullah Khan Durrani**

TIME	TITLE/AUTHOR
03:00 - 03:20 PM	<b>Carbon dioxide (CO2) Capture: Advancement in technology and design</b> <i>Invited Talk by Mohammad Younas, University of Engineering and Technology Peshawar</i>

TIME	TITLE/AUTHOR
03:20 - 03:35 PM	<b>Coal Gasification</b> <i>Khurram Saleem, Irfan Ullah Khan, Zainab Mazhar, (FFC)</i>
03:35 - 03:50 PM	<b>Production of coal briquettes from Pakistani coal fines by blending with indian starch based binder and molasses</b> <i>Qazi Mohammed Omar, Majid Moein Sabri, M. Ehtisham Javed, Sami ul Haq, Javeed A. Awan, Institute of Chemical Engineering &amp; Technology, University of the Punjab, Lahore, Pakistan</i>
03:50 - 04:05 PM	<b>Use of SiO<sub>2</sub>@ZnO submicron composite for Theranostics</b> <i>Syed Mujtaba ul Hassan, Department of Metallurgy and Materials Engineering (DMME), PIEAS, Nilore, Islamabad</i>
04:05 - 04:20 PM	<b>Measuring functional service quality of hospitals using structural equation modeling: A South Asian Context</b> <i>Iram Fatima and Muhammad Shafiq</i>
04:20 - 04:35 PM	<b>Comparison of Conversion of Tap water to Mineral Free Water using Ion Exchange and Reverse Osmosis Methods</b> <i>Waqar Azhar, ICET, University of Punjab, Lahore.</i>

## TECHNICAL SESSION | 02B

CHAired BY | **Dr. Muhammad Najam Khan**  
CO-CHAired BY | **Mr. Farrukh Majeed Bala**

TIME	TITLE/AUTHOR
03:00 - 03:20 PM	<b>Renewable Phenol Production from Oil Palm Shell Waste Biomass by Microwave Assisted Pyrolysis at 2.54 Ghz</b> <i>Invited Talk by Muhammad Najam Khan, BUIITEMS, Pakistan</i>
03:20 - 03:35 PM	<b>Proximate analysis of Pakistani coal &amp; biomass, and blending of coal with biomass using heat balance method for estimating its potential for energy generation</b> <i>Junaid Khan, Muhammad Ali, Faraz Zahid, Sidra Ijaz Khan, Muhammad Zahoor, College of Earth and Environmental Sciences</i>
03:35 - 03:50 PM	<b>Synthesis of polysulfone/alumina nano composite membrane with improved hydrophilicity and water flux</b> <i>Muhammad Ayaz, Syed Fawad Ali Shah, Qazi Sohaib, Muhammad Younas, University of Engineering and Technology, Peshawar, University of Bologna, Via Terracini 28, 40131 Bologna, Italy</i>
03:50 - 04:05 PM	<b>Modified Anti-Surge Scheme System for Ammonia Plant Synthesis Gas Compressor</b> <i>Saqib Raouf, Fatima Fertilizer, Pakistan</i>
04:05 - 04:20 PM	<b>Removal of lead (Pb+2) from waste water by adsorption using graphitic adsorbent</b> <i>Mubeen khalid, Faseeh Mustafa, Nabeel Asad, Muaaz Farooq</i>
04:20 - 04:35 PM	<b>CAN Plant Revamp Project: A Success Story</b> <i>Furqan Nasir, Fatima Fertilizer Company Limited, Pakistan</i>

## TECHNICAL SESSION | 02c

CHAired BY | **Prof. Dr. Rafiq Ahmed** CO-CHAIR | **Prof. Dr. Naveed Ramzan**

TIME	TITLE/AUTHOR
03:00 - 03:20 PM	<b>Parametric effects on producer gas obtained from coal-bagasse blend in allothermal circulating fluidized bed gasifier</b> <i>Invited talk by, Sadiq Hussain, NFC Institute of Engineering and Technology Multan, Department of Pe.t and Gas Engineering</i>
03:20 - 03:35 PM	<b>To Investigate The Effects of Talc in Floor Tile Glaze as Opacifier</b> <i>Murtaza Khan, Muhammad Imran ahmad, Zahid ur Rehman Department of Mining Engineering, UET Peshawar, Pakistan</i>
03:35 - 03:50 PM	<b>Study of Intrinsic Efficiency of HPGe Detectors</b> <i>Azhar Hussain Malik, Pakistan Institute of engineering and Applied Sciences (PIEAS), Pakistan</i>

TIME	TITLE/AUTHOR
03:50 - 04:05 PM	<b>Eco-friendly green inhibitor Aloe vera gel and Henna leaves efficiency for mild steel API X-70</b> <i>Asif Hussain, Syed Muhammad Zain Mehdi, Rauf Amjad, Iraq, Ameerq Farooq, Rafiq Ahmad, College of Engineering and Emerging Technologies, University of the Punjab, Lahore.</i>
04:05 - 04:20 PM	<b>Effect of anionic surfactant on the performance of nickel electroplating bath</b> <i>Bilal Ahmad, Muhammad Awais Raza, Ameerq Farooq, College of Engineering and Emerging Technologies, University of the Punjab, Lahore</i>
04:20 - 04:35 PM	<b>Estimation of Water Corrosive and Scaling Nature Using Langelier Saturation Index with Results Validation</b> <i>Talal Ashraf</i>

## DAY | 02

December 22, 2017 (to be held at UET)

TIME	ACTIVITIES
09:00 - 09:30 PM	<b>Plenary Talk - 3</b> <b>Ao.Univ.-Prof. Dipl.-Ing. Dr.techn Gernot Krammer, (Graz University of Technology, Graz, Austria)</b> <b>“Challenges in Particle Filtration+B12”</b>
09:30 - 10:00 PM	<b>Plenary Talk - 4</b> <b>Dr. Muhammad Ayoub, (Universiti Teknologi Petronas, Malaysia) Economization and “Optimization of Biodiesel Production via utilization of Co-product Crude Glycerol into valuable Polyglycerol Products”</b>

## TECHNICAL SESSION | 03A

CHAired BY | **Prof. Dr. Gernot Staudinger** CO-CHAIR BY | **Prof. Dr. M. Suleman Tahir**

TIME	TITLE/AUTHOR
10:00 - 10:20 AM	<b>Treatment And Re-Using of Cooling Tower Blowdown, Boiler Blowdown and Reverse Osmosis Rejected Water as a Make-Up Water in Cooling Tower</b> <i>Invited Talk by Muhammad Suleman Tahir, UoG, Pakistan</i>
10:20 - 10:35 AM	<b>Chlor-Alkali Industry in Pakistan- Technology Advancements, Sustainability and Future Prospective</b> <i>Zubair Qamar, Institute of Chemical Engineering and Technology, University of the Punjab, Lahore, Pakistan</i>
10:35 - 10:50 PM	<b>Enhancing boiler efficiency through waste heat recovery</b> <i>Khurram Saleem, Aneeq Shafiq, FFC, Pakistan</i>
10:50 - 11:05 PM	<b>A Study of Sedimentation of rod like particles</b> <i>Adnan Hamid, Samia Mehdi, Atta Ullah, Muhammad Nadeem, PIEAS</i>
11:05 - 11:20 PM	<b>Physio-chemical evaluation and thermal degradation study of torrefied biomass Reactor Dynamics and Control of a Methanol Autothermal Reformer</b> <i>Umair Aslam, Naveed Ramzan, University of Engineering and Technology, Lahore, Pakistan</i>
11:20 - 11:35 PM	<b>Reactor Dynamics and Control of a Methanol Autothermal Reformer</b> <i>Anees Ahmad, Naveed Ramzan, Muhammad Faheem, Department of Chemical Engineering, University of Engineering &amp; Technology, Lahore</i>