

## ICET 2019 Technical Sessions

**Day 1: Monday, December 2, 2019**

### Plenary Session

<b>Hall A</b>	09:45 – 10:00 am	Guests to be Seated
	10:00 – 10:10 am	Qirat
	10:10 – 10:20 am	Conference Introduction
	10:20 – 10:30 am	Opening Address by Conference Chair
	10:30 – 10:55 am	Key-Note Address by Chief Guest
<b>Café</b>	10:55 – 11:25 am	Refreshments

### Invited Talks

<b>Hall - A</b>	11:30 – 12:15 pm	<b>TBA</b> <b>Prof. Dr. Shoab. A. Khan</b> <i>Department of Computer &amp; Software Engineering</i> <i>National University of Science and Technology (NUST), Pakistan</i>
	12:15 – 12:45 pm	<b>TBA</b> <b>Dr. Yasar Ayaz</b> <i>Department of Robotics and Intelligent Machine Engineering,</i> <i>National University of Science and Technology (NUST), Pakistan</i>
	12:45 – 01:15 pm	<b>Recent Architectural Advancements in Deep CNN</b> <b>Prof. Dr. Asifullah Khan</b> Pakistan Institute of Engineering and Applied Sciences (PIEAS), Pakistan
	01:15 – 01:45 pm	<b>Software Everywhere - Engineering Challenges for Critical Software Systems</b> <b>Dr. Zohaib Zafar Iqbal</b> FAST National University of Computing and Emerging Sciences (FAST NUCES), Islamabad Pakistan
	01:45 – 02:30 pm	<b>Prayer and Lunch Break</b>

<b>COLAB</b>	10:00 AM – 06:00 pm	<b>PhD Symposium</b>
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Parallel Sessions 1 (A, B, C, D)		
Session 1A (AI/Machine Learning I)		
Room 4	02:30 – 03:00 pm	<b>Talk: Enabling Digital Building Technologies for Better Living</b> <b>Dr. Gerhard Zucker</b> Austrian Institute of Technology (AIT), Austria
	03:00 – 03:20 pm	<b>40</b> - Fall Detection using Accelerometer Calibration <i>Ahmed Naeem, Salman Khan</i>
	03:20 – 03:40 pm	<b>148</b> - Classification of Skin Cancer Dermoscopy Images Using Transfer Learning <i>Haseeb Younis, Muhammad Hamza Bhatti, Muhammad Azeem</i>
	03:40 – 04:00 pm	<b>216</b> - Human Activity Recognition using Multi-Head CNN followed by LSTM <i>Waqar Ahmad, Bibi Misbah Kazmi, Hazrat Ali</i>
	04:00 – 04:20 pm	<b>278</b> - Version Detection in Spreadsheets Based on Headers Similarity <i>Awais Azam, Khubaib Amjad Alam, Hamid Ali</i>
	04:20 – 04:40 pm	<b>Prayer Break</b>
Session 1B (Power and Control I)		
Room 1	02:30 – 03:00 pm	<b>Talk: Smart Grid Technologies for Electric Distribution Network</b> <b>Dr. Sohail Khan</b> Austrian Institute of Technology (AIT), Austria
	03:00 – 03:20 pm	<b>27</b> - Fractional Integral Terminal Sliding Mode MPPT Control for Photovoltaic System <i>Zain Ahmed Khan, Laiq Khan, Qudrat Khan, Fazal Wahab Karam</i>
	03:20 – 03:40 pm	<b>23</b> - Design and Investigation of FRT Schemes for Three-Phase Grid-Tied PV System <i>Saif Ul Islam, Kamran Zeb, Waqar Uddin, Imran Khan, Muhammad Ishfaq, Zahid Ullah, Hee Je Kim</i>
	03:40 – 04:00 pm	<b>135</b> - Output Current Control of Modular Multilevel Converter Using Backstepping Controller <i>Muhammad Ishfaq, Waqar Uddin, Kamran Zeb, Imran Khan, Saif Ul Islam, Muhammad Adil Khan, Hee Je Kim</i>
	04:20 – 04:40 pm	<b>Prayer Break</b>

Session 1C (Images & Computer Graphics I)		
Room 3	02:30 – 02:50 pm	<b>155</b> - Automatic alert generation against pre-defined rules-set for perimetric security of sensitive premises using YOLOv3 <i>Muhammad Asif, Azeem Ilyas, Muhammad Sajjad, Adnan Masood</i>
	02:50 – 03:10 pm	<b>49</b> - A Deep Learning based Approach for Precise Video Tagging <i>Sadia Ilyas, Hafeez Ur Rehman</i>
	03:10 – 03:30 pm	<b>179</b> - Image Classification Based on Mid-Level Feature Fusion <i>Muhammad Arsalan Aslam, Muhammad Naveed Salik, Faisal Chughtai, Nouman Ali, Saadat Hanif Dar, Tehmina Khalil</i>
	03:30 – 03:50 pm	<b>137</b> - Wheelchair Training Virtual Environment for People with Physical and Cognitive Disabilities <i>Haseeb Younis, Farheen Ramzan, Javeria Khan, Muhammad Usman Ghani Khan</i>
	04:20 – 04:40 pm	<b>Prayer Break</b>
Session 1D (IoT and Networks I)		
Room 2	02:30 – 02:50 pm	<b>142</b> - Optimal Power Distribution Algorithm for Energy Efficient IoT-NOMA Enabled Networks <i>James Adu Ansere, Joseph Henry Anajemba, Samson Hansen Sackey, Celestine Iwendi, Moshin Kamal</i>
	02:50 – 03:10 pm	<b>232</b> - IoT Based Health Monitoring System for Electrical Motors <i>Naveed Khan, Faizan Rafiq, Faisal Abedin, Farid Khan</i>
	03:10 – 03:30 pm	<b>275</b> - Performance Measure on Efficient Wireless Data Transfer in Highly Conductive Medium <i>Muhammad Asim Nadeem, Hammad Shaikh, Muhammad Rauf</i>
	03:30 – 03:50 pm	<b>29</b> - IoT-based Accident Detection and Emergency Alert System for Motorbikes <i>Saad ur Rehman, Shaheryar Ahmad Khan</i>
	04:20 – 04:40 pm	<b>Prayer Break</b>
Parallel Sessions 1(E, F, G and H)		
Session 1E (Security)		
Room 4	04:40 – 05:00 pm	<b>105</b> - Recommending movies on user's current preferences via deep neural network <i>Muhammad Faisal, Abdul Hameed, Akmal Saeed Khattak</i>

	05:00 – 05:20 pm	<b>53</b> - Cloud Crypter for bypassing Antivirus <i>Yousif Ali, Abdul Hameed</i>
	05:20 – 05:40 pm	<b>171</b> - Attack Detection and Identification in Cyber Physical Systems: An example on Three Tank System <i>Zohaib Tahir, Abdul Qayyum Khan, Muhammad Asad</i>
	05:40 – 06:00 pm	<b>288</b> - Online Adversarial Coverage for Multi-Agent Systems <i>Owais Khan, Ahmad Din, Abbas Khalid, Ahmad Khan, Ashfaq Ahmed, Kashif Zia</i>
	06:00 – 06:20 pm	<b>239</b> - Intrusion Detection System for In-Vehicular Communication <i>Iqra Nazakat, Khurram Khurshid</i>

### Session 1F (Power and Control II)

<b>Room 1</b>	04:40 – 05:00 pm	<b>141</b> - LI-Ion Battery Parameter Identification Using Pseudo Random Noise <i>Muhammad Taimoor Talat, Arsalan Habib Khawaja</i>
	05:00 – 05:20 pm	<b>91</b> - Performance evaluation of an evacuated flat plate photovoltaic-thermal (PVT) collector for heat and electricity <i>Izaz Ahmad Qureshi, Adeel Waqas</i>
	05:20 – 05:40 pm	<b>111</b> - Intermittent Wind Energy Assisted Micro-Grid Stability Enhancement Using Security Index Currents <i>Saqif Imtiaz, Muhammad Waseem Altaf, Ashfaq Riaz, Muhammad Naveed Naz, Muhammad Kamran Bhatti, Rana Gulraiz Hassan</i>
	05:40 – 06:00 pm	<b>28</b> - Design of Adaptive Sliding Mode Controller for Single-Phase Grid-Tied PV System <i>Kamran Zeb, Saif Ul Islam, Waqar Uddin, Imran Khan, Muhammad Ishfaq, Zahid Ullah, Tiago Davi Curi Busarello, Hee Je Kim</i>
	06:00 – 06:20 pm	<b>206</b> - Design and Implementation of an Automatic Synchronizing and Protection Relay through Power-Hardware-in-the-Loop (PHIL) Simulation <i>Muhammad Sarwar, Muhammad Abubakar, Mishal Mahmood, Mariam Azam, Khair-un-Nisa Fatima, Babar Hussain</i>

### Session 1G (Mobile Communications / Power II)

<b>Room 3</b>	04:40 – 05:00 pm	<b>8</b> - Multiband Monopole Antenna for ISM, WiFi And Satellite Communication Applications <i>Madeeha Ishtiaq, Asif Khan, Zia Ul Islam, Amjad Iqbal</i>
	05:00 – 05:20 pm	<b>123</b> - Comparative Analysis of Localization Schemes in Conventional vs Next Generation Cellular Networks

		<i>Muhammad Jawad, Hashir Azam, Sadia Jabeen Siddiqi, Mian Imtiaz ul Haq, Tauseef Ahmad</i>
	05:20 – 05:40 pm	<b>162</b> - Pilot Contamination Mitigation for High and Low Interference Users in Multi-Cell Massive MIMO Systems <i>Adil Khan, Muhammad Irfan, Yasir Ullah, Shabeer Ahmad, Sibghat Ullah, Babar Hayat</i>
	05:40 – 06:00 pm	<b>184</b> - LTE-Unlicensed and WiFi: Sharing Unlicensed Spectrum in 5GHz Band <i>Muhammad Muneeb Bin Tariq, Khawaja Faizan, Mudassar Ali, Farhan Qamar</i>
	06:00 – 06:20 pm	<b>290</b> - Integrated Fault-Diagnoses and Fault-Tolerant MPPT Control Scheme for a Photovoltaic System <i>Zaheer Alam, Laiq Khan, Qudrat Khan, Shafaat Ullah, Sagheer Ahmed, Malak Adnan Khan</i>
<b>Session 1H (Images &amp; Computer Graphics II)</b>		
<b>Room 2</b>	04:40 – 05:00 pm	<b>137</b> - Wheelchair Training Virtual Environment for People with Physical and Cognitive Disabilities <i>Haseeb Younis, Farheen Ramzan, Javeria Khan, Muhammad Usman Ghani Khan</i>
	05:00 – 05:20 pm	<b>155</b> - Automatic alert generation against pre-defined rules-set for perimetric security of sensitive premises using YOLOv3 <i>Muhammad Asif, Azeem Ilyas, Muhammad Sajjad, Adnan Masood</i>
	05:20 – 05:40 pm	<b>175</b> - Self Driving Car using Visual Ego motion estimation <i>Waleed Razzaq, Usman Arif, Azib Akram, Wasif Muhammad</i>
	05:40 – 06:00 pm	<b>17</b> - A Novel Technique of Dynamic Resource Allocation in Software Defined Network <i>Muhammad Awais Khan, Munam Shah</i>

Lawn	07:00 – 09:30 pm	<b>Conference Networking Dinner</b>
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**Day 2: Tuesday, December 3, 2019**

**Key-Note Session 2**

<b>Hall-A</b>	09:00 – 09:40 pm	<b>“Latest Trends in Blockchain Technologies”</b> <i>Dr. Gautam Srivastava</i> <i>Associate Professor</i> <i>Brendon University, Canada.</i>
	09:40 – 10:20 pm	<b>“Microsoft Engaging in Global Change”</b> <i>Keith Loeber</i> <i>Senior Technology Evangelist at Microsoft</i>
	10:20 – 11:00 pm	<b>“Frontiers of Open Source Technologies - Khyber Pakhtunkhwa the Digital Heart of Pakistan”</b> <i>Dr. Akif Khan</i> <i>Deputy Coordinator E-Governance</i>

**Parallel Sessions 2(A, B, C,D)**

**Session 2A (Control Systems I)**

<b>Room 1</b>	09:40 – 10:00 am	<b>5</b> - Postural Regulation with Feedback Linearization and $H_{\infty}$ Augmentation in the Presence of Multiple Delayed Feedbacks <i>Nadia Sultan, Muhammad Najam Ul Islam, Asif Mahmood Mughal</i>
	10:00 – 10:20 am	<b>167</b> - Synchronization of Chaotic System via Adaptive Integral Sliding Mode Control <i>Qaiser Khan, Umar Farooq, Abd Ullah, Arshad Karim</i>
	10:20 – 10:40 am	<b>125</b> - Design of Linear Quadratic Regulator Controller for Sepic Converter <i>Munib Ullah, Abasin Ulasyar, Haris Sheh Zad, Abraiz Khattak</i>
	10:40 – 11:00 am	<b>126</b> - Observer Based Higher Order Sliding Mode Control Scheme for PMSG-WECS <i>Malak Adnan Khan, Shafaat Ullah, Laiq Khan, Qudrat Khan, Zain Ahmed Khan, Haider Zaman, Saghir Ahmed</i>
	11:00 – 11:30 am	Break

**Session 2B (Bio-Medical & Bio-Informatics)**

<b>Room 4</b>	09:40 – 10:00 am	<b>34</b> - BSite-pro: A Novel Approach for Binding Site Prediction in Protein Sequences <i>Malik Yasrub Bashir, Khalid Muneer, Rashid Mustafa, Hafeez Ur Rehman</i>
	10:00 – 10:20 am	<b>35</b> - Arduino Based Cost-Effective Design and Development of a Digital Stethoscope <i>Muhammad Waqar, Shehla Inam</i>

	10:20 – 10:40 am	<b>86</b> - Prosthetic Hand Modelling, Analysis and Comparison <i>Nimra Irshad, Joudat Bint Khalil</i>
	10:40 – 11:00 am	<b>227</b> - Evaluation of Multi-Modal MRI Images for Brain Tumor Segmentation <i>Safia Fatima, Hafeez Ur Rehman, Aizaz Sharif, Usman Habib</i>
	11:00 – 11:30 am	Break
<b>Session 2C (Smart Grid)</b>		
<b>Room 3</b>	09:40 – 10:00 am	<b>267</b> - Voltage Profile Enhancement due to Large Scale Renewable Integrated System with V2G <i>Bushra Tahir, Muhammad Tariq</i>
	10:00 – 10:20 am	<b>205</b> - Micro Hydro Power Plant using Sewage Water of Hayatabad Peshawar <i>Ali Mujtaba Durrani, Omer Mujahid, Muhammad Uzair</i>
	10:20 – 10:40 am	<b>287</b> - Smart Grid (SG) and Data Center (DC) Integration: A New Conceptual Framework <i>Z. Ullah, F. Mehmood, S. M. Ali, T. Mujahid, I. Khan, B. Khan, M. Jawad</i>
	10:40 – 11:00 am	<b>237</b> - A Probabilistic Approach for Power Network Stability in Smart Grid <i>Muhammad Adnan, Mansoor Ali, Muhammad Tariq</i>
	11:00 – 11:30 am	Break
<b>Session 2D (IoT and Networks II)</b>		
<b>Room 2</b>	09:40 – 10:00 am	<b>48</b> - Automated Language Scoring System by Employing Neural Network Approaches <i>Anne Kwong, Junaid Hussain Muzamal, Muhammad Usman Ghani Khan</i>
	10:00 – 10:20 am	<b>50</b> - Smart-Genie: An IoT-enabled Predictive Health Monitoring System for Power Generators <i>Muhammad Ibtisam Bin Iqbal, Mujahid Mohsin, Faryal Gula</i>
	10:20 – 10:40 am	<b>138</b> - Energy Efficient Clustering Based Routing Technique in WSN using Brain Storm Optimization <i>Samson Hansen Sackey, James Adu Ansere, Joseph Henry Anajemba, Mohsin Kamal, Celestine Iwendi</i>
	10:40 – 11:00 am	<b>191</b> - On MOS-Enabled Differentiated VoIP Provisioning in Campus Software Defined Networking <i>Taimur Bakhshi, Ibrahim Nadir</i>
	11:00 – 11:30 am	Break

Workshop		
Room 2	11:30 – 1:30 pm	<b>Tak: Life Long Machine Learning</b> <b>Dr. Taimoor Khan</b> <i>FAST NUCES, Peshawar</i>

### Parallel Sessions 2 (E, F, G)

Session 2E (Signals and Systems / Renewable Energy)		
Room 1	11:40 – 12:00 pm	<b>274</b> - Design and Development of a Weather Monitoring Satellite, CanSat <i>Tooba Islam, Ayesha Noureen, Muhammad Rizwan Mughal, Muhammad Asim Nadeem</i>
	12:00 – 12:20 pm	<b>282</b> - Flood Rescue Operations Using Artificially Intelligent UAVs <i>Altamash Afridi, Nasru Minallah, Irfan Sami, Maaz Allah, Zahoor Ali, Shafaat Ullah</i>
	12:20 – 12:40 pm	<b>119</b> - Enhancing the Separation of Sources in Close Proximity and Intense Reverberant Conditions by Integrating Spatial Cues with Spatial Covariance <i>Sania Gul, Muhammad Salman Khan, Syed Waqar Shah, Arif Rafi</i>
	12:40 – 01:00 pm	<b>55</b> - Integrating Pakistan's Electricity Demand with Demographic and Energy Indicators: Analysis and Forecast <i>Amjad Ali, Abdul Hameed Memon, Hassan Arif, Kashif Irshad</i>
	01:20 – 02:20 pm	Lunch & Prayers

Session 2F (Emerging Topics in Computing)		
Room 4	11:40 – 12:00 pm	<b>250</b> - A Novel Architecture to Integrate Multi-Source Data into Distributed Environment using Big Data Infrastructure <i>Sidra Zulfiqar, Amen Faridoon, Muhammad Imran</i>
	12:00 – 12:20 pm	<b>94</b> - Numerical Analysis of Multiphase Blood Flow within Carotid Artery & bifurcation using Mixture Model Theory <i>Nabeel Bhatti, Syed Irtiza Ali Shah, Aamer Shahzad</i>
	12:20 – 12:40 pm	<b>99</b> - On Nature-Inspired Dynamic Route Planning: Hammerhead Shark Optimization Algorithm



Asif Ali, Kashif Zafar, Taimur Bakhshi		
	12:40 – 01:00 pm	<b>192</b> - Smart Grid Block-Chain (BC) Conceptual Framework: Bi-Directional Models for Renewable Energy District and Utility <i>Z. Ullah, G. Mokryani, B. Khan, I. Khan, C. A. Mehmood, S. M. Ali</i>
	01:20 – 02:20 pm	Lunch & Prayers
<b>Session 2G (Control Systems II)</b>		
<b>Room 3</b>	11:40 – 12:00 pm	<b>131</b> - DC-link Voltage Regulation of Single-Phase Grid-Tied PV System using Fuzzy-PI Controller <i>Kamran Zeb, Saif Ul Islam, Waqar Uddin, Kaleem Ullah, Rafiq Asghar, Tiago Davi Curi Busarello, Hee Je Kim</i>
	12:00 – 12:20 pm	<b>196</b> - Modelling and Controller Design of Automotive Cruise Control System using Hybrid Model Predictive Controller <i>Muhammad Majid Gulzar, Bilal Sharif, Daud Sibtain, Laraib Akbar, Asma Akhtar</i>
	12:20 – 12:40 pm	<b>289</b> - GRNN Based Higher Order Sliding Mode MPPT Control Paradigms for Standalone PV system <i>Atiq Ur Rehman, Laiq Khan, Qudrat Khan, Fazal Wahab Karam</i>
	12:40 – 01:00 pm	<b>271</b> - Assessment of Energy Saving Potential in Residential Sector of Pakistan through Implementation of NEECA and PEC Building Standards <i>Muhammad Mahboob, Tanzeel Ur Rashid, Muhammad Amjad</i>
	01:20 – 02:20 pm	Lunch & Prayers
Panel Discussion		
Hall – A	02:30 – 04:00 pm	Title: TBA Panelist : TBA
<b>Closing</b>		
	04:00 – 04:10 pm	Conference Report
	04:10 – 04:30 pm	Closing Speech by Chief Guest
	04:30 – 04:45 pm	Presentation of Shields
	04:45 – 05:15 pm	Refreshments