



LIST OF EVENTS

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NEW SLETTER

ELECTRICAL AND COMPUTER ENGINEERING

Term: Fall 2019

Engineering at CUI, Lahore caters to all the requirements of the current technological innovations and industrial advancements. The faculty of the department is well poised to turn the department into a centre of excellence while incorporating the specializations of Wireless Systems, Electronics, Control Systems, Signal Processing, Data Communications, Computer Networks, VLSI, Photonics, Optical Communication, and Power Systems.



BALLOKI HIGHLIGHTS



MEMORANDUM OF UNDERSTANDING (MOU)



A Memorandum of Understanding (MoU) was signed between Descon Technical Institute (DTI) and CUI Lahore Campus on Tuesday, 8th October, 2019 for establishment of mutual cooperation and facilitate each other to bridge the gap between the industry and academia through research & development and training.

INDUSTRIAL TOUR- BALLOKI POWER PLANT-II

Collaboration Outreach Committee (COC) arranged an industrial tour towards Balloki Power Plant-II for students of Fall 2016 batch of BS Computer Engineering program and

BS Electrical Engineering program on Friday, 15th November, 2019 and on Friday, 6th December, 2019 respectively





VISIT OF PAKISTAN ENGINEERING COUNCIL

COMPUTER ENGINEERING



Pakistan Engineering Council (PEC) visited department on Wednesday, 27th November, 2019 for re accreditation of BS Computer Engineering program. Departmental PEC-OBE-SAR Committee prepared the necessary arrangements and finalized the documents for the visit of Pakistan Engineering Council (PEC) team for re accreditation of BS Computer Engineering program. Pakistan Engineering Council (PEC) visited the Department of Electrical and Computer Engineering on Thursday-Friday, 28th & 29th November, 2019 for re accreditation of BS Computer Engineering (BS-CE) program under OBE (Outcome Based Education) System Level-II (Washington Accord).



- The officials of Pakistan Engineering Council (PEC) welcomed by the worthy Director, CUI Lahore Campus along-with, Dean, Faculty of Engineering (FoE), Chairman (ECE), HoD (ECE), Associate Head (ECE), Program Incharge-BSCE for opening meeting. Wherein a detailed presentation about COMSATS University Islamabad (CUI), Lahore Campus was delivered by the worthy Director, CUI Lahore Campus.
- Another presentation regarding Department of Electrical and Computer Engineering and its undergraduate program BS Computer Engineering was delivered by Dr. Saleem Akhtar, HoD-ECE and Program Incharge-BSCE.
- PEC delegation visited the ECE Labs, Library, Hostels, Sports Center, Health Centre, Day Care Center, IT Center, Student Service Center and Transport Section etc.
- Officials of Pakistan Engineering Council interacted with concerned Faculty & Students of BS Computer Engineering program.
- PEC Officials held a meeting with the Incharges of Examination Section, Quality Enhancement Cell, Job Placement Cell/Placement Bureau, Security Section/Safety Committee, Registrar and Treasurer Offices.
- Officials of Pakistan Engineering Council interacted with Alumni of BS Computer Engineering program. In this regard, a session with employer was also held by the PEC team members.
- PEC Team inspected the Course Folders, Lab Manuals and other relevant documents during the visit.



The officials of Pakistan Engineering Council (PEC) held a closing meeting with the worthy Director, CUI Lahore Campus, Dean Faculty of Engineering (FoE), Chairman (ECE), HoD (ECE), Associate Head (ECE) and Program Incharge-BSCE. In the honor of Pakistan Engineering Council (PEC) team, lunch was also offered, wherein the worthy Director, Dean, Faculty of Engineering (FoE), Chairman (ECE), HoD (ECE) and Associate Head (ECE) accompanied to the delegation. Souvenirs were presented to the officials of Pakistan Engineering Council (PEC).





USAGE OF FIRE EXTINGUISHER AND DEALING WITH EMERGENCY IN CASE OF FIRE

Health and Safety Committee of the Department of Electrical and Computer Engineering (ECE Dept.) organized a drill on Fire Extinguishing and Operating the Fire Extinguishers on Tuesday 22nd Oct. 2019 at 11 AM in the basketball court, CUI Lahore Campus. Lab engineers and lab staff

from the ECE Dept. participated in the drill. Drill was monitored by Col. Shahzad Anwar, the In-charge Security, CUI Lahore Campus. Participants were described about the procedure of operating the extinguishers upon flames by the team of In-charge Security. Lab engineers and lab staff performed

hands-on exercise to operate and extinguish the fire. They were also guided about checking the health of a fire extinguisher before operating it.

Drilling session ended with the vote of thanks to all the attendees and the Security team of CUI Lahore Campus.



DEPARTMENTAL WELCOME PARTIES FOR NEW BATCHES

Department arranged welcome parties for new batches (Fall 2019) of BS Electrical Engineering and BS Computer Engineering on Tuesday, 29th October, 2019 and Wednesday, 30th October, 2019 respectively



DEPARTMENTAL SEMINARS



Career guidance for Engineers- with Special Emphasis on Freelancing

Department conducted a seminar on Thursday, 11th July, 2019 delivered by guest speaker Engr. Ghulam Shabbir, Assistant Professor, University of Lahore (UOL), Lahore and Dr. Muhammad Yaqoob Javed, Assistant Professor (ECE).

Machine Learning and Artificial Intelligence Engineering Graduate Studies in Germany

A seminar was conducted on "Thursday, 12th September, 2019 where in the guest speaker Mr. Najam Saleem, COM-SATS Alumni shared his experience regarding the topic with the students of undergraduate programs.



OBE Training Session:

The session was conducted for allied faculty of Management Sciences and Mathematics Departments was conducted on Friday, 20th September, 2019.

Final Year Project Selection, Execution and Report Writing:

A seminar was conducted on Friday, 20th September, 2019 for students of undergraduate programs.



DEPARTMENTAL SEMINARS CONT'D.....



Role of S&T Education for Industrial Development:

CUI Lahore Campus enthusiastically participated in Expo at PCSIR Laboratories Complex, Lahore from September 22-24, 2019. Dr. Ali Nawaz Khan, AP ECE, was assigned to manage the activity, participation of researchers/ innovators, commercial products, funded projects and student representation. CUI stall received significant attention for Chief Guest Prince Muhammad Nawaz Illahi (Parliamentary Secretary MoST) and distinguished guests, delegates, government officials and visitors.



- **Collaboration Outreach Committee (COC)** arranged a series of seminars for attainment of Program Learning Outcomes (PLOs) for students of undergraduate programs to fulfill the requirements of Outcome Based Education (OBE) as per directions of Pakistan Engineering Council (PEC). For this, following sessions were conducted:
 - ***"DevNet (Modern tool usage for Engineers)"*** delivered by Mr. Fakhar Mirza on November 19, 2019.
 - ***"Digital Transformation"*** delivered by Mr. Fakhar Mirza on November 20, 2019.



DEPARTMENTAL SEMINARS CONT'D.....



- **"Graduate Employ-ability"** delivered by Mr. Moaz-zam Shahbaz, CEO Naqeeb's Consulting on November 05, 2019.
- **"Business Process Management (for Engineers)"** delivered by Mrs. Shaela Safwan, Sr. Manager Quality Assurance on November 06, 2019.
- **"Communication Skills"** delivered by Col. (R) Saad on Tuesday, 3rd December, 2019.
- **"Engineers and the Society - Dos & Don'ts of Cyber Space Laws of Pakistan"** delivered by Advocate Supreme Court Mr. Hamad Yousaf on Wednesday, 4th December, 2019.



- Collaboration Outreach Committee (COC) conducted two seminars on **"Project Management for Engineers"** delivered by Mr. Qamar Abbas Bukhari, PMO, Jazz Pvt. Ltd. and Mr. Ahsan Akhtar, Head of Corporate Sales, Wateen Telecom Pvt. Ltd. for students of undergraduate programs for attainment of Program Learning Outcomes (PLOs) to fulfill the requirements of Outcome Based Education (OBE) on Tuesday-Wednesday, 26th and 27th November, 2019.



DEPARTMENTAL SEMINARS CONT'D.....



IEEE Orientation Seminar

Orientation Day as a part of IEEE Day 2019 celebration was held on 24th September, 2019 at CUI, Lahore campus by IEEE CUI Lahore Student Branch (ICLSB). The purpose of this event was to present the idea of empowering the society through a platform of IEEE and its various chapters of WIE, IAS and RAS. The following guests were attended the seminar. Dr. Ejaz Ahmed Ansari, Dr. Sobia Baig, Dr. Muhammad Yaqoob Javed, Dr. Wajahat Mahmood Qazi, Mr. Manzar Iqbal Malik, Miss Rameesha Fatima.



Dr. Sobia Baig, Associate Professor attended a Joint IEEE Sections meeting at the venue of INMIC 2019 as Vice Chair IEEE Lahore Section on Saturday, 30th November, 2019.

- Dr. Sobia Baig, Associate Professor (ECE) attended **“National Workshop on Big Data and Technologies”** on Thursday, 14th November, 2019 arranged by Department of Electrical Engineering, University of the Punjab, Lahore in collaboration with IEEE COM-SOC Society Lahore, IEEE PU Student Branch, IEEE IAS PU.



TECHFEST'19

Student Chapters of IEEE and IET of CUI Lahore Campus held a mega event named "TechFest'19" series of educational and recreational activities during the Student Week of Fall 2019 semester w.e.f. Monday-Wednesday, 21st to 23rd October, 2019. Dr. Muhammad Ahmad Farooqi, Head Academic and Research inaugurated and graced the occasion. Faculty/Staff and Students of the department participated in Student Week activities.

- Finger Painting
- Quiz of Money HEIST
- Wall of Planets
- Minute to Win It
- Tower Challenge
- Bubble Soccer
- Straight Drive
- Street Cricket
- Fi-Tek
- Snake and Ladder
- PUBG





Research

RESEARCH PUBLICATION

1. Mirza, Adeel Feroz, Qiang Ling, M. Yaqoob Javed, and Majad Mansoor. "Novel MPPT techniques for photovoltaic systems under uniform irradiance and Partial shading." *Solar Energy* 184 (2019): 628-648.
2. Du, Zhaobin, Zhuo Chen, Guanquan Dai, Mohammed Yaqoob Javed, Chuanyong Shao, and Haoqin Zhan. "Influence of DVR on Adjacent Load and Its Compensation Strategy Design Based on Externality Theory." *Energies* 12, no. 19 (2019): 3716.
3. Akram, Aftab, Chengzhou Fu, Yuyao Li, Muhammad Yaqoob Javed, Ronghua Lin, Yuncheng Jiang, and Yong Tang. "Predicting Students' Academic Procrastination in Blended Learning Course Using Homework Submission Data." *IEEE Access* 7 (2019): 102487-102498.
4. Anees, Junaid, Hao-Chun Zhang, Sobia Baig, and Bachirou Guene Lougou. "Energy-Efficient Multi-Disjoint Path Opportunistic Node Connection Routing Protocol in Wireless Sensor Networks for Smart Grids." *Sensors* 19, no. 17 (2019): 3789
5. Ijaz, Salman, Mirza Tariq Hamayun, Lin Yan, Hamdoon Ijaz, and Cun Shi. "Adaptive fault tolerant control of dissimilar redundant actuation system of civil aircraft based on integral sliding mode control strategy." *Transactions of the Institute of Measurement and Control* (2019): 0142331219835589.
6. Raza, Ali, Ali Mustafa, Kumars Rouzbehi, Mohsin Jamil, Syed Omer Gilani, Ghulam Abbas, Umar Farooq, and Muhammad Naeem Shehzad. "Optimal power flow and unified control strategy for multi-terminal HVDC systems." *IEEE Access* 7 (2019): 92642-92650.
7. Awais, Muhammad Naeem, and Muhammad Naeem Shehzad. "Prediction of the Current-Voltage Characteristics and the Bipolar Resistive Switching Mechanism in Polymer-Based Sandwiched Structures." *Journal of the Korean Physical Society* 75, no. 5 (2019): 409-414.
8. Farooq, Umer, Najam Ul Hasan, Imran Baig, and Naeem Shehzad. "Efficient adaptive framework for securing the Internet of Things devices." *EURASIP Journal on Wireless Communications and Networking* 2019, no. 1 (2019): 210.
9. Abbas, Ghulam, Muhammad Qumar Nazeer, Valentina E. Balas, Tsung-Chih Lin, Marius M. Balas, Muhammad Usman Asad, Ali Raza, Muhammad Naeem Shehzad, Umar Farooq, and Jason Gu. "Derivative-Free Direct Search Optimization Method for Enhancing Performance of Analytical Design Approach-Based Digital Controller for Switching Regulator." *Energies* 12, no. 11 (2019): 2183.
10. Jawaid, Iqra, Muhammad Yaqoob Javed, Mujtaba H. Jaffery, Aftab Akram, Umair Safder, and Sarmad Hassan. "Robotic system education for young children by collaborative project based learning." *Computer Applications in Engineering Education*. 2019, 1-15. Javed, Muhammad Yaqoob, Adeel Feroz Mirza, Ali Hasan, Syed Tahir Hussain Rizvi, Qiang Ling, Muhammad Majid Gulzar, Muhammad Umair Safder, and Majad Mansoor. "A Comprehensive Review on a PV Based System to Harvest Maximum Power." *Electronics* 8, no. 12 (2019): 1480.
- 11.



RESEARCH PROJECTS

1. Final Year Project, "Dynamically Reconfigurable Photo voltaic Energy Harvesting System", supervised by Dr. Sobia Baig, Associate Professor, ECE Dept., CUI-Lhr and Co-Supervised by Dr. Muhammad Yaqoob Javed, Assistant Professor, ECE Dept., CUI-Lhr has been accepted for funding by IGNITE, National Technology fund.
2. Final Year Project, "DIP based beverage inspection on conveyor", supervised by Dr. Muhammad Yaqoob Javed, Assistant Professor, ECE Dept., CUI-Lhr has been accepted for funding by IGNITE, National Technology fund.
3. Final Year Project, "End to End framework for neurological health monitoring", supervised by Dr. Ali Nawaz Khan, Assistant Professor, ECE Dept., CUI-Lhr has been accepted for funding by IGNITE, National Technology fund.
4. Final Year Project, "Solar powered three-dimensional mapping and dimensional parameter computer for distance calculation and cloning architecture using LIDAR", supervised by Dr. Tariq Humayun, Assistant Professor, ECE Dept., CUI-Lhr has been accepted for funding by IGNITE, National Technology fund.
5. Final Year Project, "Vehicle tracking and security with Ecall standard framework", supervised by Engr Mian Ahmad Yasir, Assistant Professor, ECE Dept., CUI-Lhr has been accepted for funding by IGNITE, National Technology fund.
6. A Patent License Agreement titled "A Portable Single Unit Device for Ochratoxin A (OTA) Toxicity Analysis for Rice Quality Monitoring" was signed by the following Faculty Members of ECE Department and IRCBM with the contribution

as detailed below:

- a. Dr. Muhammad Yaqoob Javed, Assistant Professor-ECE (*with 20% contribution*)
 - b. Mr. Muhammad Umair Safdar, Lecturer-ECE (*with 20% contribution*)
 - c. Dr. Akhtar Hayat, Assistant Professor-IRCBM (*with 60% contribution*)
7. Project Advisory Committee (PAC) of the department submitted the following two Final Year Projects (FYPs) for participation in "16th Pakistan Auto Show 2020" to be held from Friday-Sunday, 21st to 23rd February, 2020 arranged by Pakistan Association of Automotive Parts & Accessories Manufacturers at Expo Center, Lahore: -
 - a. Rear Wheel Rooted Hybrid Bike
 - b. Solar Powered Three-Dimensional Mapping and Dimensional Parameter Computer for Distance Calculations and Cloning Architecture using LIDAR



**ELECTRICAL AND
COMPUTER
ENGINEERING (ECE)**

COMMITTEE MEMBERS



**DR. MUHAMMAD
YAQOOB JAVED**

(Convener)
Assistant Professor,
Electrical and Computer
Engineering



MS. AMNA ARIF

(Secretary)
Lecturer, Electrical and
Computer Engineering



**MS. TABASSUMNAWAZ
BAJWA**

(Member)
Lecturer, Electrical and
Computer Engineering



MS. WAJEEHA KHAN

(Member)
Lecturer, Electrical and
Computer Engineering



MR. IMTIAZ NAJAM

(Member)
Coordination Officer
Electrical and Computer
Engineering