

ICEPT '23

2nd INTERNATIONAL CONFERENCE ON EMERGING
POWER TECHNOLOGIES

MAY 06-07, 2023

GHULAM ISHAQ KHAN INSTITUTE OF
ENGINEERING SCIENCES AND TECHNOLOGY

INAUGURATION CEREMONY

| Activities | Schedule | Venue |
|---|----------------|---|
| Registration of on-campus speakers, session chairs and guests | 8:30–9:00 AM | Venue: Faculty of Electrical Engineering |
| Mic and camera check for participants | 10:30–10:45 AM | AHA |
| Guests to be seated at the Venue | 10:45 AM | AHA |
| Recitation of the Holy Qur'an | 10:50 AM | AHA |
| National Anthem | 10:55 AM | AHA |
| Welcome Address by Patron in Chief, Rector GIK Institute, Prof. Dr. Fazal Ahmed Khalid, SI, Pakistan. | 11:00 AM | AHA |
| Address by Pro-Rector (Academic), Prof. Dr. Syed Muhammad Hassan Zaidi | 11:20 AM | AHA |
| Address by Conference Chair ICEPT 2023 (Electrical), Prof. Dr. Muhammad Akbar | 11:35 AM | AHA |
| Address by Technical Program Chair (Mechanical), Dr. Khalid Rehman | 11:50 AM | AHA |
| Address by Chief Guest Prof. Dr. Mohammad Mujahid, Rector Pak-Austria Fachhochschule | 12:00 PM | AHA |
| Address by the Invited Speaker (Mr. Khurram Hameed Mughal, UET Lahore) | 12:20 PM | AHA |
| Presentation of Shield to the Guests | 12:40 PM | AHA |
| Group Photo | 12:45 PM | AHA |

LUNCH AND PRAYER BREAK (1:00PM – 2:00PM)

Day One

May 06, 2023

SESSION 1A (Lecture Hall 5)

(Renewable and Sustainable Energy Technologies)

SESSION CHAIR: Prof. Dr. Nisar Ahmed

02:30-02:50

Power Harvesting towards Sustainable Energy Technology through Ambient Vibrations and Capacitive Transducers

Umar Jamil, Nouman Ghafoor, Faisal Nawaz, Muhammad Sulaiman, Rana Iqtidar Shakoor

02:50-03:10

What is Stopping EVs? A Different Approach to Analyze the Challenges

Farhan Hameed Malik, Zunaib Maqsood Haider, Saqib Ali, Shakeel Akram, Mohammad Khalid, Sawsan Dagher

03:10-03:30

Enhancing Sustainability of Solar Irrigation Pumping Systems: A Technical and Economic Evaluation of Single and Multi-Crystalline Silicon Solar Panels Using System Advisory Model

Altamash Shabbir, Talha Hussain Shah

03:30-03:50

Optimization of Non-Toxic Inorganic CsSnGeI₃ Perovskite Solar Cell with TiO₂ and CNTS

Charge Transport Layers using SCAPS-1D

Ihsan Nawaz Khan, Muhammad Noman, Shayan Tariq Jan

03:50-04:10

Performance Investigation of Photovoltaic Panel under Cotton Dust Environment: Insights from Statistical Analysis

Basit Ali, Muhammad Faisal Khan, Kashif Ishaque

04:10-04:30

Comparative analysis of two level and multilevel CHB topologies for EV drivetrain

Akhtar Ali, Hasan Abdullah Khalid

Day One

May 06, 2023

SESSION 1B (Lecture Hall 6)

(Power Electronics Applications)

SESSION CHAIR: Dr. Arbab Abdur Rahim

02:30-02:50

Design of Double Closed-Loop Boost Converter Controller to Reduce Transient Voltage Dip for Sudden Load Connection

Muhammad Ishaq, Muhammad Waqar, Muhammad Hammad Afzal

02:50-03:10

Wideband Switching Power Amplifier for Imaging SONAR

Shahid Ali, Adnan Amin Paracha, Haider Zaman, Faraz Maqsood, Ali Sabir, and Muhammad Nisar

03:10-03:30

Design of Disturbance Observer Based Adaptive Backstepping Sliding Mode Controller for Single Phase Inverter

Zumair Hussain, Umar Farooq, Khurram Karim Qureshi

03:30-03:50

Design of Active Power Filter in Cascaded Power Converters for Harmonic Mitigation

Shahzeb Ahmad Khan, Muhammad Junaid, Majid Ali

03:50-04:10

Optimal Fractional order PID control of a Buck-Boost converter using Mayfly algorithm (MA)

Muhammad Hamza, Arsalan Irfan, Zalaan Khan

04:10-04:30

A single switch boost converter with unique series resonant network

Ali Faisal Murtaza, Hadeed Ahmed Sher

Day Two

May 07, 2023

SESSION 2A (Lecture Hall 5)

(Smart Grid Planning, Design and Operation)

SESSION CHAIR: Dr. Shahid Alam

09:30-10:50

An overview of the current challenges and issues in Smart Grid Technologies

Zahid Ullah, Rafiq Asghar, Bilawal Shaker, Muhammad Harris Hashmi, Muhammad Tariq, Haider Saleem

10:50-11:10

Artificial Hummingbird Algorithm based Dynamic Generation Expansion Planning considering Renewable Energy Sources

Umar Waleed, Muhammad Mansoor Ashraf, Ammar Arshad

11:10-11:30

Data driven approach for power system state estimation with consideration of multi-level noise

Shariq Shaikh, Muhammad Mohsin Aman, Usman Ahmed

11:30-11:50

Emission Constrained Generation Expansion Planning considering Site-dependent Renewable Energy Sources of Pakistan

Abdul Haseeb, Muhammad Mansoor Ashraf, Ammar Arshad

11:50-12:10

Fault Detection & Classification in 230 kV Transmission Networks Using Hybrid-filtering Approach

Mahum Jamil, Dr Kashif Imran, Faisal Mumtaz

12:10-12:30

Supervisor Control of Power System for Stability Problems and Improvements Using Computer Control Technology

M Yaqoob, M. Usman Sardar, M. Usama Shahid, Tanzeela Khalid, S. Imran Ahmad Shah, Tayyaba Mutloob

12:30-12:50

A Novel Machine Learning-Based Power Trading Algorithm (MLPTA) for Demand Side Management (DSM)

Yousaf Ali

Day Two

May 07, 2023

SESSION 2B (Lecture Hall 6)

(Innovative Hardware and Components)

SESSION CHAIR: Dr. Zia ul Haq Abbas

09:30-10:50

Design and Experimental Analysis of Parabolic Dish Solar Cooker at Different Climatic Conditions

Taymoor Hassan, Mariam Mahmood, Majid Ali, Naveed Ahmed, Asif Hussain Khoja

10:50-11:10

Design and Experimental Verification of a Laser Engraving Machine

Malik Shahaan Khalid, Syed Muhammad Jaleed, Arslan Zafar, Sohaib Ali Khan, Hafiz Zia Ur Rehman, Zeashan Hameed Khan

11:10-11:30

Experimental and Numerical Investigation of Thermoelectric Cooling Module

Muhammad Naveed Gull, Shahvaiz Khan, Hafiz Muhammad Rizwan, Atif Muzaffar, Taqi Ahmad Cheema

11:30-11:50

Installation of Solar Thermal Adsorption Chiller and its Test Bench Performance Analysis

Syed AbdurRehman, Faisal Umer, Hassan Nazir, Adeel Waqas, Omer Mirza

11:50-12:10

Performance Evaluation of the Flat Plate Solar Air Collector Assisted Desiccant Dehumidification System

Wasif Iqbal, Mariam Mahmood, Adeel Waqas, Majid Ali, Naveed Ahmed, Muhammad Haroon Iqbal

12:10-12:30

Solar Powered Automated Grass Cutter Machine With Lawn Coverage

Noman Sharif, Maaz Bin Salman, Abdullah Khan, Muhammad Ammar, Afaq Hussain

Day Two

May 07, 2023

SESSION 3 (Main Lecture Hall)

(Power Systems and Electrical Machines)

SESSION CHAIR: Prof. Dr. Muhammad Akbar

02:30-02:50

Impact of Photovoltaic Ingress on Power Distribution System

Asif Gulraiz, Noor e Batool, Rimsha Saher Bano, Ruksana, Sajjad Haider Zaidi

02:50-03:10

Intelligent Passive Islanding Detection Strategy For Microgrids Using a State Observer with Artificial Intelligence

Faisal Mumtaz, Maqsood Ahmad Shah, Haseeb Hassan Khan, Hammad Ali Qureshi, Syed Junaid Iqbal, Asadullah

03:10-03:30

Optimization of industrial hybrid renewable energy system using HOMER

Muhammad Haseeb Khalid, Sehar Shakir, Adeel Waqas, Rabia Liaquat, Abdul Kashif Janjua

03:30-03:50

Study and Compare the Feasibility of a Renewable Energy System for Power Generation in Pakistan

Ahmad Hayyat, Safdar Raza, Kaynat Fayyaz, Saima Akram, Muhammad Nouman Khan

03:50-04:10

Development and Deployment of Programmable Logic Controller-Based Switched Capacitor Banks to Enhance Power Factor of Three-Phase Induction Motors

Amir Hamza, Mohammad Hamza, Muhammad Awais, Zahid Rehman

04:10-04:30

IoT & ML-Based Parameter Monitoring of 3- ϕ Induction Motors for Industrial Application

Zohair Ahmed Shehzad, Mubeen Ahmad Shaikh, Muhammad Ariz, Muhammad Zakariya, Afaq Hussain

ORGANIZING TEAM

Conference Chair:

- Prof. Dr. M. Akbar

Technical Program Chair:

- Prof. Dr. Nisar Ahmed

Organization / Publication Chair:

- Dr. Hadeed Ahmed Sher

General Chair:

- Dr. Ammar Arshad

Finance Chair:

- Dr. Shahid Alam

Operation / Local Arrangement Chair:

- Dr. Attique Ur Rehman

Workshop Chair:

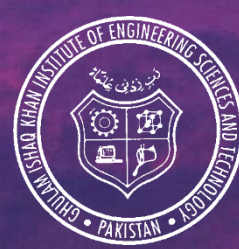
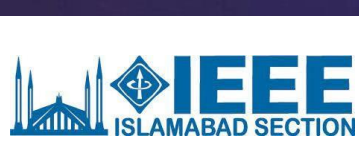
- Dr. Arbab Abdur Rahim

Registration Chair:

- Mr. Afaq Hussain

Web Team:

- Mr. Shakir Ahmed



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