ICET 2026

IEEE International Conference on Emerging Technologies

Track Distribution Summary

Pre-Opening Session — Day 1 (09:00–10:50)

Track	Papers	Time	Chair	Co-Chair	Venue
T1 – Wearable Electronics	6	09:00–10:50	Dr. Haq Nawaz (Military Technological College, Muscat, Oman) (Online); Dr. Fazli Subhan	Dr. Muqeet Rehman	FEE Conf Room
T2 – Chip Design & Embedded Systems	6	09:00–10:50	Prof. Dr. T. Kuwang Chiang	Dr. Muhammad Irfan	MLH FEE
T3 – NLP & Generative AI	5	09:00–10:15	Dr. Omar Usman Khan	Dr. Muhammad Fawad Khan	FCSE Conf Room
Subtotal	**17**				

Opening Ceremony — Day 1 (11:00–13:30)

Time	Programme	Venue
11:00–11:15	Guests to be Seated	AHA Auditorium
11:15–11:20	Tilawat-e-Quran & National Anthem	AHA Auditorium
11:20–11:30	Conference Introduction — Conference Chair	AHA Auditorium
11:30–11:45	Address by IEEE Islamabad Section President	AHA Auditorium
11:45–12:05	Welcome Address – Prof. Dr. Fazal A. Khalid (Rector)	AHA Auditorium
12:05–12:25	**Keynote Talk:** “Semiconductor Industry and Global Supply Chain: Insights from East Asian Hubs” — Prof. Dr. Kuan-Wei Lee (I-Shou University, Taiwan)	AHA Auditorium
12:25–12:55	Chief Guest Address	AHA Auditorium
12:55–13:15	Shield Distribution to Speakers & Guests	AHA Auditorium
13:15–13:30	Group Photo	AHA Auditorium

Day 1 Afternoon Session — Day 1 (14:30–17:25)

Technical Tracks

Track	Papers	Time	Chair	Co-Chair	Venue
T4A – AI in Healthcare	9	14:30–17:05	Dr. Barry L. Bentley (Cardiff Met., UK) (Online); Dr. Qasim Mehmood	Dr. Shahab Ansari	NAB Conf Room-1
T4B – AI in Healthcare	9	14:30–16:45	Dr. Bilal Jan	Dr. Muhammad Hanif	NAB Conf Room-2
T5 – Robotics & Control	9	14:30–17:25	Dr. Javed Iqbal	Dr. Dure Zehra Baig	LH-1 FCSE
T6 – Cyber Security	9	14:30–17:20	Prof. Dr. Mohammad Haseeb Zafar (Cardiff Met., UK) (Online); Dr. Zunera Jalil	Dr. Zubair Ahmed	FCSE Conf Room
T7 – Digital Twin & IoT	9	14:30–17:05	Dr. Pardeep Kumar	Dr. Waleed Tariq Sethi	FEE Conf Room
T8 – Computer Vision	9	14:30–17:05	Dr. Agata Manalova (Online); Prof. Dr. Bhawani Shankar Chaudry	Dr. Khurram Jadoon	NAB Conf Room-3
Subtotal	**54**				

Workshops

Code	Workshop	Time	Coordinator	Venue
W1	Chip-DV H/W Design and Verification	14:30–17:30	Dr. Muhammad Irfan	NAB ESIC Lab
W2	Design of PV Systems Using Open Source Tools	14:30–17:30	Dr. Hadeed Ahmed Sher	NAB Simulation Lab
W3	Symposium: Emerging AI Trends	14:30–17:30	Dr. Salman Ahmed	NAB CS&AI Lab

Day 2 Morning Session — Day 2 (09:30–12:20)

Technical Tracks

Track	Papers	Time	Chair	Co-Chair	Venue
T9 – 5G-6G Comm & Networking	7	09:30–11:55	Prof. Dr. Syed Ali Hassan	Dr. Ahmad Kamal Hassan / Dr. Qamar Abbas	FEE Conf Room
T10 – Machine Learning & XAI	9	09:30–12:05	Dr. Latif Jan	Dr. Zaiwar Ali	NAB Conf Room-1
T11 – Data Science & Software Eng.	9	09:30–11:45	Dr. Habib Mahmood	Dr. M. Waqas	FCSE Conf Room

Track	Papers	Time	Chair	Co-Chair	Venue
T12A – Smart Grids & Power Electronics	8	09:30–12:20	Prof. Laiq Khan	Dr. Ammar Arshad	NAB Conf Room-2
T12B – Smart Grids & Power Electronics	10	09:30–12:00	Dr. Waqar Ahmad Malik	Dr. Shahid Alam	NAB Conf Room-3
T13 – Signal Processing	8	09:30–11:50	Dr. Aamir Shahzad	Dr. Omer Saeed	LH-1 FCSE
Subtotal	**51**				

Workshops

Code	Workshop	Time	Coordinator	Venue
W4	Responsible AI in Healthcare	09:30–11:50	Dr. Muhammad Hanif	NAB CS&AI Lab
W5	Modeling and Intelligent Control of Cube Servo Inverted Pendulum Using Reinforcement Learning	09:30–11:50	Dr. Dure Zehra Baig	Controls and Robotics Lab FEE

Day 2 Closing Session (14:00–16:10)

Time	Programme	Venue
14:00–15:00	**Invited Industry–Academia Panel Discussion:** "Future of Higher Education in the age of AI". Moderator: Chairs of the Conference (Deans, FEE & FCSE). Panelists: Dr. Faisal M. Kashif	AHA Auditorium
15:00–16:00	**Closing Keynote:** "AI Edge Deployment in Healthcare" — Dr. Faisal M. Kashif (Co-Founder, Signal Ring)	AHA Auditorium
16:00–16:10	**Concluding Remarks** — Conference Chair	AHA Auditorium
∼16:10	**Conference Formally Concludes**	—

Technical Sessions — Day 1

Pre-Opening Session (09:00 – 10:50)

FEE Conf Room — T1: Wearable Electronics (+Online Talk)

Chair: Dr. Haq Nawaz (Military Technological College, Muscat, Oman) (Online); Dr. Fazli Subhan Co-Chair: Dr. Muqeet Rehman

Time	ID	Paper Title
09:00–09:20	–	Online Talk (20 min): "Monostatic antenna systems with high interport isolation for in-band full duplex applications" — Dr. Haq Nawaz (Military Technological College, Muscat, Oman)
09:20–09:35	340	Smart IoT-Based Insole for Real-Time Plantar Pressure Monitoring with Vibration-Based Massage Therapy Feedback
09:35–09:50	409	Dual-Loop PID Control System for Swallowing Rehabilitation Using EMG and EGG Biosignals
09:50–10:05	426	A High-Fidelity Multi-Channel sEMG Acquisition using Cascaded Preconditioning for ADS1298
10:05–10:20	476	Are Easy Gestures Universal? Leak-Free Per-Fold Movement Selection on NinaPro DB1
10:20–10:35	488	Comparative Evaluation of Copper, Stainless Steel and Ag/AgCl Electrodes for sEMG Acquisition for Electrode Grid Development
10:35–10:50	526	Enhancing Outlier Detection in Multi-Channel EMG Signals through Advanced Hybrid Deep Learning Architectures

MLH FEE — T2: Chip Design & Embedded Systems (+Invited Talk)

Chair: Prof. Dr. T. Kuwang Chiang Co-Chair: Dr. Muhammad Irfan

Time	ID	Paper Title
09:00–09:20	–	Invited Talk (20 min): "A New Drain Current Model Induced by Short-Channel and Quantum-Mechanics Effects for the Undoped Nanosheet (NS) Transistors and Its Application to Assess the Degraded Noise Margin of CFET" — Dr. Te-kuang Chiang
09:20–09:35	285	Evaluation of RISC-V Zc (Code Size Reduction) Extension on Ascon-128 for Extremely Constrained IoT Nodes
09:35–09:50	333	ONNX-to-Hardware Design Flow for the Deployment of a Quantized DistilBERT Classification Accelerator on a Zynq MPSoC (Online Mode)
09:50–10:05	363	Metastability and Jitter Based True Random Number Generator for AES (Online Mode)
10:05–10:20	387	Wideband Operational Amplifier with Integrated Current-Adjusting Auto-Zero Offset Cancellation (Online Mode)
10:20–10:35	397	Dynamic Power and Area Reduction in the PicoRV32 RISC-V Core
10:35–10:50	515	Exhaustive Configuration-Memory SEU Characterization of LUT-Based Approximate Multipliers on SRAM-Based FPGAs

FCSE Conf Room — T3: NLP & Generative AI

Chair: Dr. Omar Usman Khan Co-Chair: Dr. Muhammad Fawad Khan

Time	ID	Paper Title
09:00–09:15	198	BiXplain: A Gated Rationale-Fusion Framework for Explainable Bilingual Hate Speech Detection
09:15–09:30	314	A Factorial Ablation Study of Activation Functions and Normalization Layers in Small-Scale Transformer Language Models (Online Mode)
09:30–09:45	357	Cross-Lingual Hallucination Detection for Urdu Summarization: A Synthetic NLI Approach with Human Validation
09:45–10:00	414	Elaboration Bias in LLM Fact-Checkers: Non-Diagnostic Context Inflates Credence in False Claims
10:00–10:15	427	Evidence-Unit Fairness and the Limits of Query-Adaptive Sparse-Dense Fusion in Financial Document Retrieval (Online Mode)

Day 1 Afternoon Session (14:30 – 17:25)

NAB Conf Room-1 — T4A: AI in Healthcare (+Invited Talk)

Chair: Dr. Barry L. Bentley (Cardiff Met., UK) (Online); Dr. Qasim Mehmood Co-Chair: Dr. Shahab Ansari

Time	ID	Paper Title
14:30–14:50	–	Invited Talk (20 min): “Engineering Longevity: Technologies for an Ageing World” — Dr. Barry L. Bentley (Online)
14:50–15:05	45	Artificial Intelligence: Transforming Health in Smart Cities (Online Mode)
15:05–15:20	206	Human Activity Recognition for Rehabilitation and Elderly Assistance Using HARIS-Hawks with Bi-directional GRU Networks (Online Mode)
15:20–15:35	209	MLETCP-Net: A Multi-Level Texture and Semantic Scene Understanding Framework for Elderly Activity Recognition
15:35–15:50	223	CatarAI-Net: Fine-Grained Cataract Grading via Physics-Informed Augmentation and Uncertainty-Calibrated Multimodal Models
15:50–16:05	239	ElderActNet: Attention Enabled Elderly Activity Recognition using Landmarks Detection and LSTM Classifier
16:05–16:20	272	SQEU-Net: A Squeeze-and-Excitation Attention U-Net for Automated Kidney Stone Segmentation in Abdominal CT Radiography
16:20–16:35	331	A Unified Deep Learning Framework for MR-Guided Adaptive Radiotherapy: OAR Segmentation, Tumour Tracking, Dose Prediction (Online Mode)
16:35–16:50	352	Multi-Stream Identity-Aware Late Fusion for Leak-Proof Parkinson’s Disease Detection from Spiral and Wave Drawings
16:50–17:05	484	Ant Colony Optimization-Based Interleaved Sensor Event Selection for Multi-Resident Human Activity Recognition

NAB Conf Room-2 — T4B: AI in Healthcare

Chair: Dr. Bilal Jan Co-Chair: Dr. Muhammad Hanif

Time	ID	Paper Title
14:30–14:45	46	Gear Fault Detection and Classification using Data Augmentation and Transfer Learning for Scarce Vibration Sensor Data
14:45–15:00	97	Explainable AI-Based Decision Model for ECG Data in Cardiac Disorder Detection (Online Mode)
15:00–15:15	242	An Optimized Multi-Layer Perceptron Framework for Early Diagnosis of Chronic Kidney Disease (Online Mode)
15:15–15:30	258	Advanced Electrohysterography Signal Analysis for Uterine Maturity Evaluation and Preterm Birth Risk Prediction
15:30–15:45	275	Gravitational and Postural Modulation of Post-Prandial Gastric Myoelectrical Activity: A Multi-Domain Cutaneous EGG Analysis
15:45–16:00	282	An Adaptive PID-Based Closed-Loop Control Framework for Artificial Pancreas Systems
16:00–16:15	297	A Data-Driven and Explainable AI Framework for Early Prediction of Perinatal Depression in Low-Resource Settings (Online Mode)
16:15–16:30	316	Record Independent Evaluation of Feature-Based Machine Learning for ECG Beat Classification
16:30–16:45	347	AI-Based Recognition of Digestive and Posture-Related Physiological States Using EGG Signals

LH-1 FCSE — T5: Robotics & Control (+2 Invited Talks)

Chair: Dr. Javed Iqbal Co-Chair: Dr. Dure Zehra Baig

Time	ID	Paper Title
14:50–15:10	–	Invited Talk (20 min): “Electromagnetic Behaviour of Metamaterials at Microwave Frequencies” — Dr. Jasim Ud Din
15:10–15:25	107	Simulation and Performance Analysis of a ADCS for a 3U CUBESAT (Online Mode)
15:25–15:40	204	Robust Control Of Under-actuated Electromechanical Systems
15:40–15:55	253	Real-time Path Planning for a Humanoid Robot to Avoid Obstacles (Online Mode)
15:55–16:10	349	Deep Learning-Based Robotic System For Efficient Object Recognition, Sorting, And Grasping On A Conveyor Belt
16:10–16:25	351	Development of an Open-Technology Multi-UAV Swarm Framework for Search-and-Rescue Applications with Edge-AI Target Detection
16:25–16:40	371	Enhancing KISS-SLAM Using Point-Density-Based Adaptive Voxel Downsampling
16:40–16:55	448	Multi-Controller Evaluation Framework for Obstacle Avoidance in UGVs Using ROS 2
16:55–17:10	457	Design and Development of a Low-Cost Social Robot for use in Autism Therapy

Time	ID	Paper Title
17:10–17:25	516	Integrated Tilt-Actuation and Thrust-Vectoring Control Architecture for a Bicopter Tilt-Rotor UAV

FCSE Conf Room — T6: Cyber Security (+Invited Talk)

Chair: Prof. Dr. Mohammad Haseeb Zafar (Cardiff Met., UK) (Online); Dr. Zunera Jalil Co-Chair: Dr. Zubair Ahmed

Time	ID	Paper Title
14:30–14:50	–	Invited Talk (20 min): "Resilient Cyber-Physical Systems: Digital Twins and Explainable AI for Proactive Cybersecurity" — Prof. Dr. Mohammad Haseeb Zafar (Online)
14:50–15:05	36	A Decentralized Framework for Multi-asset NFT Marketplace
15:05–15:20	212	Real-Time GPS Spoofing Detection for UAVs Using a Kalman Filter in ROS 2 and Gazebo
15:20–15:35	263	QED: A Decoy-Anchored Benchmark for Replayable SQL-Injection and XSS Finding Verification
15:35–15:50	281	Bypassing Windows Defender: Detection Gaps in USB Attack Chains
15:50–16:05	359	Rough Sets for Efficient NIDS: A Cross-Architecture Benchmark of Feature Selection for Tabular Deep Learning
16:05–16:20	413	P-DAG: A Robust Priority Directed Acyclic Graph Consensus Mechanism for Security-critical Applications
16:20–16:35	415	An Ensemble Learning Pipeline for IIoT Supply-Chain Intrusion Detection
16:35–16:50	433	Machine Learning Approaches for Network Intrusion Detection in IoT Environments
16:50–17:05	522	When Local Beats Cloud: Evaluating LLM Architectures for Privacy-First Automated Penetration Testing

FEE Conf Room — T7: Digital Twin & IoT (+Invited Talk)

Chair: Dr. Pardeep Kumar Co-Chair: Dr. Waleed Tariq Sethi

Time	ID	Paper Title
14:30–14:50	–	Invited Talk (20 min): "IoT and Digital Twin" — Dr. Pardeep Kumar
14:50–15:05	240	Design and Experimental Evaluation of a Hybrid VLC-Based Smart Parking System for Indoor and Outdoor Environments
15:05–15:20	302	FitTwin: A Lightweight Cross-Platform 3D Avatar System for Online Fashion Size Assistance

Time	ID	Paper Title
15:20–15:35	323	Development of an IoT Enabled Portable Vortex Mixer for Automated Blood Sample Agitation
15:35–15:50	394	Perception-Driven Flight-Mode Switching for UAV-based Animal Intrusion Monitoring
15:50–16:05	398	A Congestion-Aware Consensus Framework for Coupled Compression and Transmission Scheduling in IoT Sensor Networks
16:05–16:20	438	Real-Time Digital Twins: A Hybrid RGB-LiDAR Framework for Torso Reconstruction
16:20–16:35	490	Adaptive Priority-Based Node Scheduling for UAV-Assisted ESP-NOW Data Collection in Precision Agriculture
16:35–16:50	501	A Sensorless Retrofit Architecture for Wired Condition Monitoring of Circular Knitting Machines
16:50–17:05	511	An IoT-Enabled Embedded System for Distribution-Line Fault Detection, Classification, and Discrete Localization

NAB Conf Room-3 — T8: Computer Vision (+Invited Talk)

Chair: Dr. Agata Manalova (Online); Prof. Dr. Bhawani Shankar Chaudry Co-Chair: Dr. Khurram Jadoon

Time	ID	Paper Title
14:30–14:50	–	Invited Talk (20 min): “Computer Vision” — Dr. Agata Manalova (Online)
14:50–15:05	34	Deep Learning Based Automatic Crack Detection Method in Civil Infrastructure Images
15:05–15:20	175	Remote Sensing-based Multi-Object Detection and Human Action Recognition via Swin Transformer and Faster R-CNN
15:20–15:35	200	Multi-Stage Human Objects Interaction using Semantic Segmentation and Fully CNN-LSTM Model
15:35–15:50	208	Drone Aerial Surveillance for Complex Action Understanding via Graph Neural Network and Transformer Attention
15:50–16:05	276	Real-Time Biomechanical Analysis of Cricket Spin Bowling Using MediaPipe Pose and Computer Vision
16:05–16:20	292	Multi-Class Road Surface Anomaly Detection Using Transformer Architecture
16:20–16:35	305	A Panoptic-Guided Dual-Branch Network for Joint Human Posture Recognition and Disaster Classification from UAV Imagery
16:35–16:50	406	A Real-Time Cost-Effective Computer Vision-based Framework for Wheel Alignment
16:50–17:05	524	When Recurrence Recovers Recall: A Study of Spatial Aggregation for Sparse Multi-Label Scene Recognition

Technical Sessions — Day 2

Day 2 Morning Session (09:30 – 12:20)

FEE Conf Room — T9: 5G-6G Comm & Networking (+2 Invited Talks)

Chair: Prof. Dr. Syed Ali Hassan Co-Chair: Dr. Ahmad Kamal Hassan / Dr. Qamar Abbas

Time	ID	Paper Title
09:30–09:50	–	Invited Talk (20 min): "Role of SDR in 5G /6G Research"-- Dr. Hesham Ali (Alter Tech. UAE/Egypt)
09:50–10:10	–	Invited Talk (20 min): "6G" — Prof. Dr. Syed Ali Hassan, Session Chair
10:10–10:25	22	Performance Evaluation of Wi-Fi 6 MU-MIMO and Wi-Fi 7 Multi-Link Operation in Dense Edge-Enabled IoT Networks (Online Mode)
10:25–10:40	51	Semantic-Aware Computation Offloading for AI-Native 6G Edge Networks (Online Mode)
10:40–10:55	118	An Attention-Enhanced CNN–LSTM Hybrid for Intrusion Detection in IoT/IIoT Networks (Online Mode)
10:55–11:10	244	An AI Based Real-Time Human Activity Recognition System for Healthcare using 5G Spectrum
11:10–11:25	262	Adaptive Robustness Auditing of RIS Defenses for AI-Native Beam Prediction: Do Reported Numbers Survive Stronger Attacks?
11:25–11:40	355	Enhancing Controller Reliability in Software-Defined Networking: A Discrete-Event Simulation Study of FHRP-Based Redundancy (Online Mode)
11:40–11:55	393	Energy-Efficient and Robust Coverage Analysis of STAR-RIS Networks with Adaptive Element Allocation (Online Mode)

NAB Conf Room-1 — T10: Machine Learning & XAI (+Invited Talk)

Chair: Dr. Latif Jan Co-Chair: Dr. Zaiwar Ali

Time	ID	Paper Title
09:40–10:05	111	An XAI-Enhanced Swin-Transformer Hybrid Model For Biometric Authentication In Smart Attendance
10:05–10:20	192	A Sustainable Agriculture Model for Plant Species Identification via Probabilistic Neural Network and Machine Learning
10:20–10:35	246	A Novel Feature Fusion and Optimization Framework using PEO and DNN for Sensor-based Activity Recognition
10:35–10:50	254	Observational Aliasing Bounds Generalization in Constrained Active-Sensing Multi-Agent Reinforcement Learning
10:50–11:05	291	Interpreting Time-Series Transformers for Traffic Forecasting: A Comparative Study of LIME and SHAP
11:05–11:20	307	ACTE-Former: Autocovariance Embedding and Tanh-Similarity Attention for Time Series Forecasting

Time	ID	Paper Title
11:20–11:35	446	Performance Enhancement of Backpropagation in Artificial Neural Networks Using a Least Mean Fourth Cost Function
11:35–11:50	468	iTransformer for Traffic Flow Prediction: A Hyperparameter Optimization Study
11:50–12:05	525	Spectral Entropy and Structural Evolution of Random Graphs

FCSE Conf Room — T11: Data Science & Software Eng.

Chair: Dr. Habib Mahmood Co-Chair: Dr. M. Waqas

Time	ID	Paper Title
09:30–09:45	91	Barriers to Design Pattern Usage in Agile Software Development Teams: An Empirical Study
09:45–10:00	182	Adaptive Fraud Detection on Imbalanced Transaction Data Using Ensemble Learning (Online Mode)
10:00–10:15	214	An Ordinal-Aware Ensemble Framework with Cost-Sensitive Decision Analysis for Imbalanced Road Accident Severity Classification (Online Mode)
10:15–10:30	243	LeanCFTA: A Lean 4 Framework for Verified Analysis of Coherent Fault Trees
10:30–10:45	252	A Hybrid Machine Learning Ensemble Framework for Human Resource Prediction Using Imbalanced HR Data
10:45–11:00	255	Urdu-C: A Localized Educational C-Like Compiler with Multi-Backend Code Generation and Program Visualization
11:00–11:15	290	Addressing Urban Data Scarcity: Predicting PM2.5 in Mardan Using a Peshawar-Trained GLM
11:15–11:30	294	ARES: An Autonomous End-to-End Web Workflow Testing Framework
11:30–11:45	295	HERMES: Hypothesis-Driven Stateful Workflow Fuzzing for Web Applications

NAB Conf Room-2 — T12A: Smart Grids & Power Electronics (+Tutorial)

Chair: Prof. Laiq Khan Co-Chair: Dr. Ammar Arshad

Time	ID	Paper Title
09:30–10:20	–	Tutorial Session on Cyber Security in Power Grids (50 min):– Prof. Laiq Khan, Session Chair
10:20–10:35	84	Towards Automated Solar Panel Integrity: Hybrid Deep Feature Extraction for Advanced Surface Defect Identification
10:35–10:50	112	Optimization Driven Machine Learning Framework for Accurate Health Index Prediction of XLPE Cables (Online Mode)
10:50–11:05	249	Hierarchical Multi-Agent Reinforcement Learning for Voltage-Secure EV Charging Coordination in Distribution Networks

Time	ID	Paper Title
11:05–11:20	250	Machine Learning-Driven Carbon Footprint Estimation of Lithium-Ion Batteries Using Degradation-Aware SOH and RUL Modelling (Online Mode)
11:20–11:35	265	Computationally Efficient SOH Estimation Using Lightweight Machine Learning Model for a Simulink-Based Battery Management System
11:35–11:50	320	Post-Outage Demand Rebound Forecasting in Load-Shedding Grids using a Wavelet-XGBoost
11:50–12:05	350	Degradation-Confounded Fault Isolation and Severity Estimation in Lithium-Ion Battery Packs
12:05–12:20	358	Temperature-Dependent Temporal Scaling for Physics-Informed Neural Network in Battery State-of-Health Estimation

NAB Conf Room-3 — T12B: Smart Grids & Power Electronics

Chair: Dr. Waqar Ahmad Malik Co-Chair: Dr. Shahid Alam

Time	ID	Paper Title
09:30–09:45	298	Deep Reinforcement Learning Based Cost-Optimal MESS Dispatch Under Extreme Weather Events in Active Distribution Networks
09:45–10:00	317	FEA-Supported COMSOL Simulink Modeling and DNN-Assisted Mixture-of-Experts Control of a Single-Phase PM BLDC External Rotor Motor
10:00–10:15	400	Evaluating BEM-Optimized Small Wind Turbine Blades Under Yawed Inflow Using Lifting-Line Free-Vortex Wake
10:15–10:30	417	Adaptive Protection Coordination of Overcurrent Relays in IEEE 33-Bus System Under Single and Multi-DG Penetration
10:30–10:45	419	Automatic Power Factor Correction Using a Synchronous Condenser
10:45–11:00	425	Adaptive Critical SCR-Based Equitable Active Power Curtailment for Voltage Regulation in PV-Rich LV Distribution Networks
11:00–11:15	434	Design and Analysis of BLDC Motor Comparing Laminated Steel and Soft Magnetic Composite Material for Hybrid Electric Motorcycle (Online Mode)
11:15–11:30	464	PSO–Pattern-Search Tuned Measured-Current Filtered PID Control for PLL-Synchronized Synchronous-Frame PQ Tracking
11:30–11:45	493	Artificial Intelligence-Based Heating Load Prediction for HVAC Energy Management Using Machine Learning
11:45–12:00	500	Preventive Maintenance of a 1500 MVA Short Circuit Generator in an ISO/IEC 17025 Accredited Laboratory

LH-1 FCSE — T13: Signal Processing (+Invited Talk)

Chair: Dr. Aamir Shahzad Co-Chair: Dr. Omer Saeed

Time	ID	Paper Title
09:30–09:50	–	Invited Talk (20 min): “Listening to Graphs: Spectral Graph Theory, Structure, and Learning in Complex Networks” — Dr. Aamir Shahzad, Session Chair

Time	ID	Paper Title
09:50–10:05	211	PHASE-Perfect Homomorphic Analog Sine Encoding for Bandwidth Reduction
10:05–10:20	247	Intelligent Multi-Humanoid Activity Recognition using DeepConvLSTM and Graph Modeling
10:20–10:35	278	Design and Implementation of an Analog Adaptive Notch Filter with Dynamic Frequency Tracking for ECG Signal Artifact Rectification
10:35–10:50	308	Deep Learning-based Occluded Prohibited Item Detection in Airport Security Surveillance for X-Ray Baggage Screening
10:50–11:05	420	A Spatiotemporal Transformer Framework for Multi-Source Earth Observation Based Flood Risk Prediction: Sialkot District (2018–2026) (Online Mode)
11:05–11:20	447	Bayesian Doppler Scale and Propagation Delay Estimation in Underwater Acoustic Channels
11:20–11:35	459	Extending QFT-Based Adaptive Image Compression: Joint Rate-Qubit Adaptation, Blind Estimation, Error Correction, Grover Decoding and Variational Classification (Online Mode)
11:35–11:50	512	Comparative Evaluation of Mel and Gammatone Cepstral Representations for COPD Detection from Respiratory Sounds