

20TH INTERNATIONAL CONFERENCE ON EMERGING TECHNOLOGIES 2025

November 18-19, 2025
UET Peshawar



CONFERENCE SCHEDULE

DAY 1 / 18 NOVEMBER, 2025

Time	Venue	Program
09:00-10:00 AM	Electrical Main Hall	► Registration
10:00-11:00 AM	Electrical Main Hall	► Opening Ceremony
11:00-12:00 PM	Video Conference Hall	► Keynote Session 1 Careers for Engineers in AI, Climate Tech, and Sustainable Development
12:00-01:00 PM	Video Conference Hall	► Keynote Session 2 eBPF Meets AI: Intelligent Security Enforcement in Cloud Containers
Lunch / Namaz Break		
02:00-03:00 PM	Video Conference Hall	► Keynote Session 3 Vehicle as a Resource (VaaR): Towards Intelligent and Experience-Centric Smart Cities
03:00-04:00 PM	Video Conference Hall	► Keynote Session 4 AI for Social Good: Transforming Healthcare, Housing Accessibility, and Sustainability through Emerging Technologies
02:00-04:00 PM	Hall 1 & Hall2	► Conference Session 1 (See the below table for details)

Conference Session 1

Hall 1		
Paper ID	Paper Title	Timings
26	A Federated Learning Framework with GAF-CNNs for Robust Sensor Fault Detection in WSN	02:00-02:10 PM
193	Framework to Mitigate SRS Ambiguity Incorporating Formal Methods	02:10-02:20 PM
28	Comparative Deep Learning Approaches for Segmentation of Parthenium hysterophorus in Open Field Agriculture: YOLO vs. Mask R-CNN Performance Analysis for Precision Weed Management in Khyber Pakhtunkhwa, Pakistan	02:20-02:30 PM
32	Towards Lightweight and Reliable Deep Learning Models for Automated Kidney Stone Prediction	02:30-02:40 PM
77	Dual-Band Wearable Antenna with AMC for SAR Reduction and Gain Enhancement in ISM Bands	02:40-02:50 PM
89	A LightGBM-Transformer Hybrid Model for Traffic Flow Prediction Using Temporal Features	02:50-03:00 PM
122	Land Scene Classification using Remote Sensing: A Feature Fusion Framework of Lightweight Deep Neural Networks	03:00-03:10 PM
125	Random Forests as a Lightweight Alternative to Deep Neural Networks in Antenna Design	03:10-03:20 PM
130	TRUST-X: Real-Time Explainable Decision-Making Framework for Reinforcement Learning-Based UAV Control	03:20-03:30 PM
142	Top-Down Approaches for Generating Semantically Rich Captions Using Deep Learning	03:30-03:40 PM
147	A Deep Learning Framework for Cervical Cancer Screening Using Pap Smear Image Analysis	03:40-03:50 PM

Hall 2		
Paper ID	Paper Title	Timings
149	Targeted Augmentation for Imbalanced Dashcam-Based Road Crack Detection Using RT-DETR	02:00-02:10 PM
157	Enhancing Cloud Security Through an Advanced AES-Based Approach	02:10-02:20 PM
173	Performance Monitoring in Optical Code Division Multiple Access Based Free Space Optical Networks Using Machine Learning	02:20-02:30 PM
177	Paper Toward Natural Walking: A lightweight 3 DOF Bionic Leg for Gait Assistance	02:30-02:40 PM
178	Smart Surveillance for Blinds: A YOLOv5-Based Assistive Vision System	02:40-02:50 PM
181	Digital Twin Enabled Control of a 4-DOF Robotic Arm	02:50-03:00 PM
187	Enhancing Pashto NER Using Machine-Labeled Data and Transformer-Based Models	03:00-03:10 PM
198	FedMon: Federated eBPF Monitoring for Distributed Anomaly Detection in Multi-Cluster Cloud Environments	03:10-03:20 PM
257	A Metamaterial-Enabled Reconfigurable Conformal Array with Nano-Magnetic Particles Integration for THz Wireless Systems	03:20-03:30 PM
82	Scalable UVM Verification Components (UVCs) to Accelerate Functional Verification of SoCs	03:30-03:40 PM
259	Transformer-Based Title Generation for Pashto Texts Using Topic Modeling Techniques	03:40-03:50 PM

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CONFERENCE SCHEDULE

DAY 2 / 19 NOVEMBER, 2025

Conference Session 2 10:00 AM - 02:00PM

Hall 1			Hall 2			Hall 3		
Google Meet Link: meet.google.com/wnb-sckb-hxh			Google Meet Link: meet.google.com/dst-uivr-wnv			Google Meet Link: meet.google.com/yqr-kbrb-sur		
Paper ID	Paper Title	Timings	Paper ID	Paper Title	Timings	Paper ID	Paper Title	Timings
2	An Enhanced Control Scheme for Voltage Regulation and Power Sharing in Islanded Microgrid	10:00-10:00 AM	110	A Deep Hybrid Approach for Automated Detection and Grading of Diabetic Retinopathy	10:00-10:00 AM	33	Automated Chicken Pox Detection Using Deep Learning: A Comparative Study of ConvNeXt and ResNet Architectures	10:00-10:10 AM
13	Exchange Rate Volatility Forecasting Using Hybrid Models	10:10-10:20 AM	113	Bi-Level Stackelberg-Based Demand Response with Incentivized Participation: A Modified Framework	10:10-10:20 AM	47	Real-Time Pothole Detection Across Diverse Road Conditions Using Attention-Enhanced YOLOv12	10:10-10:20 AM
22	Early Stage Fault Detection of Rolling Bearing Using a VMD-TEO-RF Framework	10:20-10:30 AM	124	Comparative Analysis of Closed-form and Metaheuristic-based Power Allocation in SISO VLC-NOMA Systems	10:20-10:30 AM	52	From Exact Search to Evolutionary Algorithms: Benchmarking N-Queens Solvers	10:20-10:30 AM
35	Efficient Reinforcement Learning for Autonomous Planetary Landing Tasks	10:30-10:40 AM	134	Synergistic Physics Integration In Deep Learning Architectures For High-Accuracy Suspended Solids Prediction Using Satellite And In-Situ Data	10:30-10:40 AM	57	Deployable AI for Public Safety: Weapon Detection in Challenging CCTV Scenarios	10:30-10:40 AM
37	Mobile-Friendly Dog Breed Recognition Using ResNet-18 with Structured Pruning	10:40-10:50 AM	143	House Price Prediction using Linear Regression, Random Forest, and Gradient Boosting	10:40-10:50 AM	61	Evaluating Scalability and Success Rates of Exact and Approximate N-Queens Solvers	10:40-10:50 AM
38	Algorithmic Insights into the N-Queens Problem: A Comparative Study Across Scales	10:50-11:00 AM	144	Real-Time Control of Static VAR Compensator for Dynamic Power Factor Improvement	10:50-11:00 AM	71	Highly Scalable and Flexible Accelerator Architecture for Vision based Applications	10:50-11:00 AM
48	Lightweight CNN with Visual Explanations for Parkinson's Detection from Handwriting	11:00-11:10 AM	190	Indoor Climate Monitoring and Forecasting with Agentic-RAG-LLM	11:00-11:10 AM	74	Grad-CAM Enhanced Explainability in Multi-Class Chest X-Ray Classification	11:00-11:10 AM
58	Benchmarking YOLOv8-Nano for Traffic Light Detection Under Challenging Conditions	11:10-11:20 AM	200	Data Driven Modeling of DC-DC Boost Converter Using Machine Learning	11:10-11:20 AM	76	Exhaustive Search, Heuristics, and Metaheuristics: A Unified Framework for N-Queens	11:10-11:20 AM
72	Water Safety Under the Lens: A Field Survey and Rapid AI-Powered Escherichia coli Detection in Peshawar and Swat Regions	11:20-11:30 AM	218	Big Data Analytics for Polio Surveillance in Balochistan: Insights from Apache Spark	11:20-11:30 AM	82	Scalable UVM Verification Components (UVCs) to Accelerate Functional Verification of SoCs	11:20-11:30 AM
80	Unleashing the Potential of WebAssembly (WASM) in Next-Generation Serverless Computing	11:30-11:40 AM	230	Digital Twin-Based Smart Metering Framework with Real-Time Monitoring via Microsoft Azure IoT	11:30-11:40 AM	105	MobileNetV2 for Real-Time Water Level Classification in Smart City Monitoring	11:30-11:40 AM
97	Semi-Supervised Contrastive Representation Learning for Sunflower Phenology Estimation	11:40-11:50 AM	233	Model Predictive Control-based Energy Management System of Microgrid with Fuel Cell	11:40-11:50 AM	108	Deployable Face Mask Detection for Security and Health Applications Using YOLOv8	11:40-11:50 AM
99	STRENGTHENING CYBERSECURITY TRUST: REDUCING HALLUCINATIONS FOR RELIABLE THREAT INTELLIGENCE AND RISK MANAGEMENT ACROSS CRITICAL SECTORS	11:50-12:00 PM	258	Advanced Octagonal Slot Antenna Array Design for 5G Smartphones and Massive MIMO Applications	11:50-12:00 PM	121	Numerical Analysis of Wind Turbine Performance through Blade Optimization and Winglet Integration	11:50-12:00 PM
100	AI-Powered Sentiment Analysis for Targeted Digital Marketing Campaigns with Big Data	12:00-12:10 PM	270	Comparative Evaluation of Conventional and Temperature-Corrected Performance Ratios for a 100 MW ...	12:00-12:10 PM	160	Comparative Analysis of Three Different 3 KW BLDC Motor Designs Using ANSYS- Maxwell	12:00-12:10 PM
5	Development of an Autonomous Medicine Delivery Robot For Hospital Applications	12:10-12:20 PM	27	Intelligent Protection System for Voltage Variations and Single Phase Faults with Temporary and Permanent Fault Differentiation	12:10-12:20 PM	240	Performance Analysis of Variable Frequency Drive for Surge Current Mitigation in Railway Point Machine Systems	12:10-12:20 PM
25	Cross-Domain Transfer Learning From Homogenous to Heterogenous Traffic Flow Forecasting	12:20-12:30 PM	87	Smart Agriculture Monitoring System	12:20-12:30 PM	246	Deep Learning Framework for Sparse Subband Fusion and Bandwidth Extrapolation in UWB Radar	12:20-12:30 PM
30	From Sensors to Insights: AI-Augmented IoT for Environmental Data Analysis	12:30-12:40 PM	91	Improved graphene-based sodium-ion battery anodes using low surface area and Tempreture	12:30-12:40 PM	256	Remote Robotic Intervention in Inaccessible Spaces Using Inverse Kinematics-Based Path Planning	12:30-12:40 PM
31	The CRM Data Quality Advantage - Driving Pharma Performance Through Data Engineering and AI	12:40-12:50 PM	104	Evaluating Deterministic and Stochastic Strategies for Large-Scale N-Queens Solutions	12:40-12:50 PM	202	Development of an Intelligent System for Accurate Identification of Indeginous Wood Species Using Microscopic Images	12:40-12:50 PM
			201	AI-Driven Adaptive Communication Framework for Phased Array Radars in Hypersonic Interception	12:50-01:00 PM	267	Segmentation, Area Estimation, and Clustering of Solar Panels for Solar Tubewell Mapping	12:50-01:00 PM

Time	Venue	Program
11:00-12:00 PM	Video Conference Hall	► Keynote Session 5 Resilient 6G Intelligence: Navigating LLM Threats and Future Research Directions
	Main Electrical Hall	► CPD Seminar 1 Immersive 3D Twins for Infrastructure Intelligence: Merging AI, Simulation, and Visualization of Real world unified Metaverse
12:00-01:00 PM	Video Conference Hall	► Keynote Session 6 Additive Manufacturing of Electric Machines: Performance Insights and Design Opportunities for Next-Generation Drives
	Main Electrical Hall	► CPD Seminar 2 Flutter: Your Bridge to Seamless Multi-Platform Apps
02:00-03:00 PM	Video Conference Hall	► Keynote Session 7 AI at the Edge: The Future of Distributed Intelligence
03:00-04:00 PM	USPCAS-E Hall	► Keynote Session 8 How AI Is Creating a New Generation of Solopreneurs and Micro Startups
Closing Ceremony 04:00 PM		