# Technical Session Schedule in Detail

## Detail Technical Program

*All times are in BST (GMT +6:00)*

### Technical Sessions: Day 1, Sunday, 8 November 2026

| **TS-1A: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 1** | | |
|---|---|---|
| **Venue:** C201, CSE | | **Time:** 08:45 – 09:45 |
| **Session Topic:** *Explainable, Fair, Federated, and Ethical AI* | | |
| **Session Chairs:**<br>**Prof. Muhammad Anwarul Azim**, CU<br>**Prof. Dr. Md. Monirul Islam,** IIUC | | |
| **Moderators:**<br>Mr. Abdul Aziz, Lecturer, CSE<br>Md. Badiuzzaman Biplob, Lecturer, CSE | | |
| **Invited Talk**<br>08:45 – 09:15 | | **AI for ALL: Mapping out the Journey from Diversity Errors to Inclusion Excellence**<br><br>**Dr. Rifat Ara Shams**<br>Postdoctoral Fellow, CSIRO's Data61 / Monash University, Australia<br>*Mode: In-person* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 520 | 09:15 – 09:30 | Deep Feature Fusion and Machine Learning for Facial Emotion Recognition: A VGG-Based PCA Approach |
| 579 | 09:30 – 09:45 | Comparative Evaluation of Lightweight YOLO Models for Real-Time Fire and Smoke Detection |

| **TS-1B: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 2** | | |
|---|---|---|
| **Venue:** C301, CSE | | **Time:** 08:45 – 10:00 |
| **Session Topic:** *Object Detection, Segmentation, and Human-Centric Computer Vision* | | |
| **Session Chairs:**<br>**Prof. Dr. Mohammed Jahirul Islam**, SUST<br>**Dr. Muhammad Kamal Hossen**, CUET | | |
| **Moderators:**<br>Mr. Mujibur Rahman Maruf, Lecturer, CSE<br>Mr. Md Sadman Hafiz, Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 401 | 08:45 – 09:00 | Degradation-Aware Augmentation for Robust Multi-Person 2D Human Pose Estimation Using YOLOv8s-Pose |
| 505 | 09:00 – 09:15 | BAGFD-Net: Multimodal Boundary-Aware Fusion for Crack Segmentation and Geometric Quantification. |

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|---|---|---|
| 550 | 09:15 – 09:30 | Edge-Optimized Small Object Detection for Motorcycle Safety: Simultaneous Identification of Helmet and Number Plate |
| 738 | 09:30 – 09:45 | BattleNet: A Resource-Conscious Multi-Label Vision Pipeline for Military Object Recognition in Miniature-Art Imagery |
| 905 | 09:45 – 10:00 | Quantifying Augmentation-Induced Data Leakage in Pre-Augmented Object Detection Datasets: A Controlled Study on FabricSpotDefect |

**TS-1C: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 3**

**Venue:** C401, CSE **Time:** 08:45 – 10:00

**Session Topic:** *Biomedical Image and Signal Analysis for Clinical Diagnosis*

**Session Chairs:**
**Prof. Dr. Md. Shahnur Azad Chowdhury**, IIUC
**Dr. Mohammad Azam Khan**, DIU

**Moderators:**
Sultana Tasnim Jahan, Lecturer, CSE
Miskatul Jannat, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 140 | 08:45 – 09:00 | Deep Learning Based Ranked Ensemble Framework for Multiclass Alzheimer's Disease Classification |
| 396 | 09:00 – 09:15 | Few-Shot Based Lung Cancer Classification from CT Images via Entropy-Guided Multi-Stream Embeddings and Siamese Networks |
| 571 | 09:15 – 09:30 | Multimodal Deep Learning Approach for Multi-Class Oral Disease Detection and Classification |
| 573 | 09:30 – 09:45 | LCP-Net: Enhancing Prototypical Networks with Lesion Consistency Learning for Few-Shot Retinal Disease Classification |
| 889 | 09:45 – 10:00 | EzOpNet: A Lightweight Convolutional Neural Network Architecture for Automated Pneumonia Classification in Chest X-ray Images |

**TS-1D: Data Science, NLP, and Software Systems – 1**

**Venue:** C402, CSE **Time:** 08:45 – 10:00

**Session Topic:** *Natural Language Processing; Large Language Models, Retrieval-Augmented Generation, and Conversational AI*

**Session Chairs:**
**Dr. Hadaate Ullah**, VC (Acting), Dean, FSET, USTC
**Dr. Mohammad Aman Ullah**, IIUC

**Moderators:**
Ms. Mysha Sarin Kabisha, Lecturer, CSE
Mrs. Ayesha Julekha, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 121 | 08:45 – 09:00 | KothonBERT: A Focal-Loss Ensemble Based Framework for Chittagonian, Sylheti, and Standard Bangla Dialect Classification |
| 250 | 09:00 – 09:15 | An Empirical Study of Chunk Size and Overlap in Cybersecurity Retrieval-Augmented Generation Systems |
| 268 | 09:15 – 09:30 | Zero-Shot and Few-Shot Learning for Rare Disease Text Classification: A Comparative Study Against Supervised Fine-Tuning |

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|---|---|---|
| 310 | 09:30 – 09:45 | Layer Optimization Leveraging CrossCoT-QLoRA-Qwen3 Framework with LIME Explainability for Multilingual Disentangling Content and Formal Reasoning in LLMs |
| 864 | 09:45 – 10:00 | A Machine Learning Pipeline for ESG Pillar Attribution: From Prediction to Causal Validation |

| **TS-1E: Data Science, NLP, and Software Systems – 2** | | |
|---|---|---|
| **Venue:** C501, CSE | | **Time:** 08:45 – 10:00 |
| **Session Topic:** *Natural Language Processing and Data Analytics* | | |
| **Session Chairs:**<br>**Dr. M. Jamshed Alam Patwary**, CU<br>**Dr. Tanjim Mahmud**, RMSTU | | |
| **Moderators:**<br>Mrs. Farzana Tasnim, Assistant Professor, CSE<br>Mrs. Subrina Akter, Assistant Professor, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 70 | 08:45 – 09:00 | A Lightweight and Explainable Multimodal Deep Learning Framework for Bangla Disaster Classification |
| 125 | 09:00 – 09:15 | BongoBarta: A GRU-Attention Model with FastText Embeddings for Bengali News Headline Classification |
| 157 | 09:15 – 09:30 | Probabilistic Forecasting of Safety Car Deployment in Formula 1 using Event-Stratified Machine Learning |
| 390 | 09:30 – 09:45 | Bangladesh's Uneven Urban Warming: A National-Scale Land Surface Temperature Study Using Explainable Machine Learning |
| 693 | 09:45 – 10:00 | Rethinking Architectural Complexity in Multimodal Learning Analytics: A Lightweight Sequence Model Matches Deeper Fusion Networks for Student Performance Prediction |

| **TS-1F: Communication and Computer Networks – 1** | | |
|---|---|---|
| **Venue:** R422, ETE | | **Time:** 08:45 – 10:05 |
| **Session Topic:** *Computer, Wireless and Fiber Optic Networks* | | |
| **Session Chairs:**<br>**Dr. Touhidul Alam**, RMSTU<br>**Dr. Md. Ismail Hoque, IIUC** | | |
| **Moderators:**<br>Mr. Mohammad Woli Ullah, Assistant Prof, ETE<br>Mr. Ahmad, Lecturer, ETE | | |
| **Invited Talk**<br>08:45 – 09:05 | | **Experimental Investigation on Miniaturized MIMO Antennas for Sub-6 GHz 5G Systems**<br><br>**Dr. Khaleda Ali**<br>Associate Professor, Department of EEE, University of Dhaka; WIE Coordinator, IEEE APS-MTTS Bangladesh Joint Chapter<br>*Mode: In-Person* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 225 | 09:05 – 09:20 | Design of an L-Slotted Circular Patch Antenna for Multiband Application |

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|---|---|---|
| 601 | 09:20 – 09:35 | HARP-TS: Confidence-Driven Two-Timescale Parameter Adaptation for ACO Routing in Hierarchical Vehicular Delivery Networks |
| 647 | 09:35 – 09:50 | AI-Assisted Fair Resource Allocation and Interference Management in Energy-Efficient Angle-Domain SWIPT MIMO Systems |
| 787 | 09:50 – 10:05 | Polarization Insensitive Fourfold Symmetric Hybrid Circular-Square Split-Ring Shaped Metamaterial Absorber for Sensing Application |

**Plenary Session 1: Day 1, Sunday, 8 November 2026**

**Venue:** IIUC Auditorium **Time:** 14:15 – 16:15

**Session Chairs:**
**Prof. Dr. Mohammed Jahirul Islam, SUST**
**Prof. Dr. Md. Azad Hossain,** CUET

**Moderators:**
Dr. Saifur Rahman, Assistant Professor, CSE
Md. Mostafa Amir Faisal, Assistant Professor, ETE

| Time | Name of Keynote Speaker | Topic of Speech |
|---|---|---|
| **K1** 14:15 – 14:55 | **Prof. Dr. Sudan Jha, SMIEEE** Professor, Department of Computer Science & Engineering, Kathmandu University, Nepal | **AI-Augmented Research: Foundations of Efficient Architecture & Real-World Systems** *Mode: In-Person* |
| **K2** 14:55 – 15:35 | **Prof. Mohamed-Slim Alouini, FIEEE** Distinguished Professor, Electrical and Computer Engineering, King Abdullah University of Science and Technology (KAUST), Saudi Arabia | **Tapping into the full potential of the Stratosphere** *Mode: Online* |
| **K3** 15:35 – 16:15 | **Dr. Azni Haslizan Binti Ab Halim** Associate Professor; Deputy Dean (Research and Innovation), Faculty of Science and Technology, Universiti Sains Islam Malaysia (USIM) | **Securing the Post-Quantum Internet: An Adaptive Hybrid Certificate-Based Protocol for TLS and PKI** *Mode: In-person* |

**TS-2A: Power and Green Energy System – 1**

**Venue:** Online (Zoom Room 1) **Time:** 18:30 – 19:45

**Session Topic:** *Advanced Control, Smart Grid and Renewable Energy; Robotics and Automation*

**Session Chairs:**
**Dr. Mohammad Tawhidul Alam**, Professor, EEE, AIUB
**Dr Asim Ullah Nabil**, Associate Prof and Chairman, EEE, DIU
**Dr Md. Yasir Arafat**, Associate Professor, Dept of EEE, IIUC

**Moderators:**
Mr. Md. Rasheduzzaman, Associate Professor, EEE
Mr. Meraz Ahmed Ohi, Lecturer, EEE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 305 | 18:30 – 18:45 | A Solar-Powered Robot for Evaluating Body Temperature and Spraying Disinfectant: A First Line of Defense against Airborne Pathogens |
| 496 | 18:45 – 19:00 | Optimal Battery Sizing for a Grid-Connected Residential Rooftop PV System: A HOMER-Based Techno-Economic Study in Savar, Dhaka |
| 671 | 19:00 – 19:15 | Advanced IoT-Driven Distribution Transformer Monitoring System Using Multi-Sensor Fault Analysis and Automatic Protection |

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| 673 | 19:15 – 19:30 | Group-Disjoint and Conformal Evaluation of Surrogates for Synthetic High-Level Radioactive Waste Disposal Indices |
| 880 | 19:30 – 19:45 | Techno-Economic and Ecological Feasibility of a Grid-Coupled Rooftop Solar PV System for HSIA Third Terminal, Bangladesh: A Tilt Angle Optimization Approach |

**TS-2B: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 4**

**Venue:** Online (Zoom Room 2) **Time:** 18:30 – 19:45

**Session Topic:** *Computer Vision for Agriculture and Food Security*

**Session Chairs:**
**Prof. Dr. Md. Ashraful Islam**, MIST
**Prof. Dr. Md. Shakowat Zaman Sarker**, UU

**Moderators:**
Mr. Md Sadman Hafiz, Lecturer, CSE
Mr. Md. Badiuzzaman Biplob, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 26 | 18:30 – 18:45 | SpectralWhispers: Unmasking AI-Generated Imagery Through Frequency-Domain Fingerprints |
| 104 | 18:45 – 19:00 | Explainable Ensemble Learning for Potato and Mango Leaf Disease Classification Using Lightweight and Transfer Learning Models |
| 587 | 19:00 – 19:15 | BanglaShakNet: Fine-Grained Classification of Bangladeshi Leafy Vegetables Using Transfer Learning |
| 626 | 19:15 – 19:30 | MangoLens: An XAI-Powered Real-Time Edge Application Using EfficientNet-B0 for Offline Mango Variety Identification |
| 806 | 19:30 – 19:45 | Explainable Multi-Head Deep Learning Framework with Soft-Voting Ensemble for Multi-Crop Nitrogen Deficiency Detection |

**TS-2C: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 5**

**Venue:** Online (Zoom Room 3) **Time:** 18:30 – 20:00

**Session Topic:** *Deep Learning for Cancer and Tumor Image Analysis*

**Session Chairs:**
**Prof. Dr. Golam Rabiul Alam**, BRAC
**Dr. Md. Khaliluzzaman**, IIUC

**Moderators:**
Miskatul Jannat, Lecturer, CSE
Asmaul Hosna Sadika, Lecturer, CSE

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|---|---|---|
| **Invited Talk**<br>18:30 – 19:00 | | **Artificial Intelligence in Critical Infrastructure: Insights from a Norwegian Wastewater Treatment Case**<br><br>**Dr. Zia Uddin, SMIEEE**<br>Senior Research Scientist, Human Computer Interaction Group, Sustainable Communication Technologies Department, SINTEF Digital, Oslo, Norway<br>*Mode: Online* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 214 | 19:00 – 19:15 | An Explainable ConvNeXt-CBAM Framework for Multi-Class Skin Lesion Classification and Monkeypox Detection |

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|---|---|---|
| 260 | 19:15 – 19:30 | DeepFuseALL: Adaptive Multi-scale Feature Fusion with Coordinate and Self-Attention Mechanisms for the Classification of Acute Lymphoblastic Leukemia |
| 372 | 19:30 – 19:45 | Normalization-Based Architectural Harmonization for Robust Federated Brain Tumor Segmentation under Preprocessing Heterogeneity |
| 530 | 19:45 – 20:00 | Effect of Prompt Length on AI Response Quality: An Evidential Reasoning Approach |

| **TS-2D: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 6** | | |
|---|---|---|
| **Venue:** Online (Zoom Room 4) | | **Time:** 18:30 – 19:30 |
| **Session Topic:** *Quantum Computing, Quantum Algorithms, and Quantum Machine Learning* | | |
| **Session Chairs:**<br>**Prof. Dr. Taskeed Jabid**, EWU<br>**Prof. Dr. Muhammad Abul Hasan**, AIUB | | |
| **Moderators:**<br>Mr. Mohammmad Sakif Ibn Yousuf, Lecturer, CSE<br>Mr. Mohammod Sazid Zaman Khan, Assistant Professor, CSE | | |
| **Invited Talk**<br>18:30 – 19:00 | | **Beyond Generative AI: The Rise of Agentic AI and Context-Aware Intelligent Systems**<br><br>**Prof. Dr. Hafiz Mahfooz Ul Haque**<br>Department of Software Engineering, Faculty of Information Technology & Computer Science, University of Central Punjab, Lahore, Pakistan<br>*Mode: Online* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 120 | 19:00 – 19:15 | QRSafeXAi: Quantum Machine Learning for Malicious QR Code Detection with Explainable Classical Benchmarking |
| 912 | 19:15 – 19:30 | A Hybrid Quantum Graph Neural Network with Adjacency Masked Quantum Self Attention |

| **TS-2E: Data Science, NLP, and Software Systems – 3** | | |
|---|---|---|
| **Venue:** Online (Zoom Room 5) | | **Time:** 18:30 – 19:45 |
| **Session Topic:** *Explainable Machine Learning for Clinical Decision Support and Cybersecurity* | | |
| **Session Chairs:**<br>**Prof. Dr. Mahfuzul Hoq Chowdhury**, CUET<br>**Dr. Mohammad Kamal Hossain Foraji**, DIU | | |
| **Moderators:**<br>Mr. Tanvir Ahammed Shawon, Lecturer, CSE<br>Mr. Mohammad Nazmul Islam, Assistant Professor, PHAR | | |
| **Invited Talk**<br>18:30 – 19:00 | | **Predicting the Unpredictable: Computational Approaches to Tuberculosis Drug Safety**<br><br>**Dr. Yuslina Zakaria**<br>Associate Professor, Department of Clinical Pharmacy, Faculty of Pharmacy, Universiti Teknologi MARA (UiTM), Selangor, Malaysia<br>*Mode: Online* |
| **Paper ID** | **Time** | **Title of the Paper** |

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|---|---|---|
| 205 | 19:00 – 19:15 | Confidence-Aware Self-Training for Coronary Heart Disease Risk Prediction Under Label Scarcity and Class Imbalance |
| 269 | 19:15 – 19:30 | Two-Stage Hybrid Feature Selection for Multiclass Intrusion Detection Using Optimized mRMR and Alpha-Guided Binary GWO |
| 663 | 19:30 – 19:45 | A Privacy-preserving Personalized Federated Learning Model for In-Hospital Mortality Prediction in Hypotensive ICU Patients Using Clinical Time-Series Data |
| 744 | 19:45-20:00 | SACRE-HD: Stability-Aware Calibration and Risk-Explicit Heart Disease Screening on Clinical Data |

**TS-2F: Internet of Things (IoT), Smart Connectivity, and Security – 1**

**Venue:** Online (Zoom Room 6) **Time:** 18:30 – 19:45

**Session Topic:** *IoT Architecture, Sensor Networks and Embedded Systems; AI-Driven IoT, Blockchain and Data Analytics*

**Session Chairs:**
**Dr. Shahid Md. Asif Iqbal**, Dean, FE, Premier University
**Dr. Md. Sajjatul Islam**, Associate Professor & Head, Department of CSE, CIU
**Prof Razu Ahmed**, Dean, FSE, IIUC

**Moderators:**
Mr. Md. Abdullah Al Masud, Lecturer, CCE
Mr. Md. Hasan Mia, Lecturer, CCE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 198 | 18:30 – 18:45 | An Explainable Ensemble Learning Framework for Static Malware Detection Using PE Features |
| 230 | 18:45 – 19:00 | A Crop and Fertilizer Recommendation System Using IoT and Machine Learning |
| 538 | 19:00 – 19:15 | An Adaptive Congestion-Aware Routing Framework Integrating EWMA-Based Queue Estimation and Dynamic Load Balancing |
| 575 | 19:15 – 19:30 | Packet Perturbation-Based Evasion Attacks from Network to CAN Bus in Connected Vehicles |
| 576 | 19:30 – 19:45 | EA-FedProtoIDS: Energy-Aware Federated Prototype Learning for Heterogeneous and Zero-Day IoMT Intrusion Detection |

## Technical Sessions: Day 2, Monday, 9 November 2026

| **Plenary Session 2: Day 2, Monday, 9 November 2026** | | |
|---|---|---|
| **Venue:** IIUC Auditorium | | **Time:** 08:45 – 10:45 |
| **Session Chairs:**<br>**Prof. Dr. Mohammad Osiur Rahman, CU**<br>**Prof. Mohammed Shamsul Alam, IIUC** | | |
| **Moderators:**<br>Dr. Saifuddin, CCE<br>Engr. Sk Md. Golam Mostafa, Associate Professor, EEE | | |
| **Time** | **Name of Keynote Speaker** | **Topic of Speech** |
| **K4**<br>08:45 – 09:25 | **Prof. Dr. A.K.M. Azharul Islam, FInstP, CPhys, FBAS, ISESCO Laureate**<br>Professor Emeritus; Former Vice-Chancellor, International Islamic University Chittagong; Senior Grade Professor of Physics (Retd.), Rajshahi University | **MXenes as Transformative Nanostructures for Healthcare & Sustainable Processes**<br>*Mode: In-person* |
| **K5**<br>09:25 – 10:05 | **Professor Tek Tjing Lie, SMIEEE**<br>Department of Electrical and Computer Engineering, Auckland University of Technology, New Zealand | **Artificial Intelligence Applications in Power Systems**<br>*Mode: Online* |
| **K6**<br>10:05 – 10:45 | **Prof. Dr. Shaowei Wang**<br>Distinguished Professor, State Key Laboratory of Precision Spectroscopy Science and Technology, East China Normal University, Shanghai, China | **Research on thin-film-based micro-nano photonic devices**<br>*Mode: Online* |

| **TS-3A: Electronics, Materials Science, VLSI and Real Time Systems – 1** | | |
|---|---|---|
| **Venue:** R323, EEE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *Perovskite and Thin-Film Solar Cells (SCAPS-1D Simulation)* | | |
| **Session Chairs:**<br>**Prof Dr. Muhibul Haque Bhuyan**, Dept of EEE, AIUB<br>**Prof. Dr. Mohammad Osiur Rahman, CU** | | |
| **Moderators:**<br>Mr. Riazul Islam, Lecturer, EEE<br>Mr. Mahi Rashid Chowdhury, Lecturer, EEE | | |
| **Invited Talk**<br>11:00 – 11:30 | | **Micro and Nano Refractive Index Photonic Sensing Technologies: Current Progress, Challenges, and Future Perspective**<br><br>**Prof. Dr. Dulal Haque**<br>Department of Electronics and Communication Engineering, Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh<br>*Mode: In-person* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 271 | 11:30 – 11:45 | Impact of $Nb_2O_5$ Electron Transport Layer with Organic and Inorganic Buffer Layers in CNT-Based Solar Cells. |
| 654 | 11:45 – 12:00 | Numerical investigation of non-toxic buffer layers for high performance CZTS thin-film solar cells using SCAPS1D |
| 687 | 12:00 – 12:15 | Simulation-Based Performance Evaluation of High Efficiency CIGS-Based Tandem Solar Cell Utilizing Tin Perovskite(MASnI3) |

| TS-3B: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 7 | | |
|---|---|---|
| **Venue:** C201, CSE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *Deep Learning for Cancer and Tumor Image Analysis* | | |
| **Session Chairs:**<br>**Prof. Dr. Atiqur Rahman**, CU<br>**Dr. Md. Khaliluzzaman**, IIUC | | |
| **Moderators:**<br>Mr. Mohammad Sakif Ibn Yousuf, Lecturer, CSE<br>Mr. Tanvir Ahammed Shawon, Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 204 | 11:00 – 11:15 | FedHisto: An Explainable Federated Learning Framework For Breast Cancer Detection Using EfficientNet-B0 With Contrastive Loss And Confidence Aware Prediction |
| 540 | 11:15 – 11:30 | Dual-Stream Attention Fusion: A Unified Deep Learning Architecture for Robust Lung Cancer Detection |
| 804 | 11:30 – 11:45 | A Simulation-Based Evaluation of Cross-Modal Attention Fusion for Multimodal Colorectal Polyp Recurrence Risk Modeling |
| 860 | 11:45 – 12:00 | Attention-Enhanced Semi-Supervised Learning for Annotation-Efficient Ovarian Cancer Histopathology Classification |
| 871 | 12:00 – 12:15 | Adaptive Multi-Attention Deep Learning for Lung and Colon Histopathology Classification with Improved Calibration and Visual Interpretability |

| TS-3C: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 8 | | |
|---|---|---|
| **Venue:** C301, CSE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *Generative AI, Large Language Models, and Applied Machine Learning* | | |
| **Session Chairs:**<br>**Prof. Dr. Rashed Mustafa**, CU<br>**Prof. Muhammad Anwarul Azim**, CU | | |
| **Moderators:**<br>Mr. Muhammad Mizanur Rahman Mizan, Lecturer, CSE<br>Mr. Saif Sabbir, Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 46 | 11:00 – 11:15 | EduBloom-RAG++: Multi-agent Alignment of Bloom's Taxonomy for Educational Question Classification |
| 380 | 11:15 – 11:30 | A Recall-Prioritized Stacking Ensemble for Suicide-Risk Detection in Mental-Health Analytics |
| 570 | 11:30 – 11:45 | Human-Centered Digital Wellbeing through a Multi-Agent Actor–Critic Framework for Social Media Addiction Mitigation |
| 581 | 11:45 – 12:00 | Physics-Informed Fourier Neural Operators for Gravitational Potential Reconstruction: A Study of Zero-Shot Resolution Generalization |
| 680 | 12:00 – 12:15 | PromptShield-LSTM: An Explainable Deep Learning Framework for Detecting Prompt Injection Attacks in Large Language Models |

| TS-3D: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 9 |
|---|

**Venue:** C401, CSE **Time:** 11:00 – 12:15

**Session Topic:** *Deep Learning for Cancer and Tumor Image Analysis*

**Session Chairs:**
**Prof. Dr. Mohammed Jahirul Islam**, SUST
**Prof. Nihad Karim Chowdhury, CU**

**Moderators:**
Mr. Mahadi Hasan, Lecturer, CE
Mr. Sahariar Reza, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 108 | 11:00 – 11:15 | A Lightweight Multi-Scale MobileNet Attention Network for Lung and Colon Cancer Diagnosis from Histopathological Images |
| 245 | 11:15 – 11:30 | Explainable Brain Tumor Classification from MRI Using a Hybrid VGG16–EfficientNetB0–SE Attention Network |
| 284 | 11:30 – 11:45 | An Explainable Brain Tumor Diagnosis Framework Using Unified Grad-CAM, LIME, and Enhanced VGG19 with Attention Mechanism |
| 317 | 11:45 – 12:00 | Comparative Analysis of State-of-the-Art Methods for Brain Tumor Segmentation on the BraTS 2020 Dataset |
| 553 | 12:00 – 12:15 | NeuroStack: A Hybrid Concept Bottleneck Stacking Ensemble for Interpretable Brain Tumor Triage on BraTS 2024 |

**TS-3E: Data Science, NLP, and Software Systems – 4**

**Venue:** C402, CSE **Time:** 11:00 – 12:15

**Session Topic:** *Cybersecurity, Intrusion Detection, and Software Vulnerability Analytics; Financial and Fraud Analytics*

**Session Chairs:**
**Prof. Dr. Mohammad Shamsul Arefin**, CUET
**Professor Dr. Farah Jahan**, CU

**Moderators:**
Farzana Tasnim, Assistant Professor, CSE
Ms. Raisa Nuzhat, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 102 | 11:00 – 11:15 | Drift-Aware Hierarchical Federated Learning for Intrusion Detection Under Non-IID Environments |
| 603 | 11:15 – 11:30 | A Machine Learning-Based Framework for Software Vulnerability Detection and Risk Prioritization Using Static Analysis Alert Fusion |
| 604 | 11:30 – 11:45 | Does Reported Intrusion Detection Performance Survive Honest Evaluation Label Correction and Leakage-Free Splits on CICIDS2017 |
| 646 | 11:45 – 12:00 | Predicting Self-Financing Among Graduate Applicants: A Leakage-Aware Machine Learning Framework on Bangladeshi Admissions Data |
| 908 | 12:00 – 12:15 | BDMFSSim: A Synthetic Benchmark Calibrated to Public Statistics for Fraud Detection in Bangladesh Mobile Financial Services |

**TS-3F: Data Science, NLP, and Software Systems – 5**

**Venue:** C501, CSE **Time:** 11:00 – 12:15

**Session Topic:** *Bioinformatics, Genomics, and Computational Biology*

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|---|---|---|
| **Session Chairs:**<br>**Prof. Dr. Abdul Kadar Muhammad Masum**, SEU<br>**Dr. Abu Nowshed Chy**, CU | | |
| **Moderators:**<br>Mrs. Ayesha Julekha, Lecturer, CSE<br>Ms. Mysha Sarin Kabisha, Lecturer, CSE | | |
| **Invited Talk**<br>11:00 – 11:30 | | **A Comparative Analysis of Enhanced and Baseline Cycle GAN Models for Robust Audio Steganography**<br><br>**PM Dr. Farida Hazwani Mohd Ridzuan**<br>Associate Professor, Information Security & Assurance Program, Faculty of Science and Technology, Universiti Sains Islam Malaysia (USIM)<br>*Mode: In-person* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 409 | 11:30 – 11:45 | Cox-Guided Entropy-Weighted TOPSIS for Interpretable Breast Cancer Survival Risk Stratification Using Clinicogenomic Data |
| 450 | 11:45 – 12:00 | An Evaluation of Machine Learning, Deep Learning, and Transformer Approaches for Protein Sequence Classification |
| 835 | 12:00 – 12:15 | xMELD: An Explainable Multimodal Learning Framework for Early Cancer Detection Using cfDNA Molecular Signatures |

| **TS-3G: Civil and Environmental Engineering** | | |
|---|---|---|
| **Venue:** R207, AB-5, Civil (Physical) + Zoom (Online) | | Time: 11:00 – 12:45 |
| **Session Topic:** *Water Resource, Environmental and Structural Engineering; Transportation Engineering and Construction Materials* | | |
| **Session Chairs:**<br>**Prof. Dr. Swapan Kumar Palit,** IIUC<br>**Prof. Dr. Reaz Akter Mullick,** CUET | | |
| **Moderators:**<br>Mr. Ashrar Al Washi, Lecturer, CE<br>Mr. Md Abdullah Al Mamun, Lecturer, CE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| ***Online Presentations (via Zoom)*** | | |
| 212 | 11:00 – 11:15 | Performance of Rice Husk Ash Blended Concrete in Normal, Acidic, and Saline Environments |
| ***In-person Presentations (R207, AB-5, Civil)*** | | |
| 326 | 11:15 – 11:30 | Coastal Water Quality and Risk Screening in Sitakunda, Bangladesh |
| 330 | 11:30 – 11:45 | Heavy Metal Contamination and Ecological Risk Assessment of Shipbreaking Coastal Sediments in Bangladesh (2014–2024) -A Review. |
| 359 | 11:45 – 12:00 | Physicochemical Water Quality Assessment of the Karnaphuli River Near the Karnaphuli Paper Mill Discharge Outlet. |
| 602 | 12:00 – 12:15 | Multi-Hazard Response of Plan-Irregular Reinforced Concrete Buildings in Coastal Bangladesh |
| 662 | 12:15 – 12:30 | Interannual Variability of $NO_2$, CO, $SO_2$, $CH_4$, and $O_3$ over Bangladesh Using Sentinel-5P/TROPOMI Observations: A January 2022–2026 Assessment |
| 713 | 12:30 – 12:45 | Improving Pedestrian Safety In High-Density Cities: A Review Of Risk Factors, Strategies, And Safe System Approaches |

| **TS-4A: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 10** | | |
|---|---|---|
| **Venue:** C201, CSE | | **Time:** 13:45 – 15:00 |
| **Session Topic:** *Computer Vision for Agriculture and Applied Machine Learning* | | |
| **Session Chairs:**<br>**Prof. Dr. Rashed Mustafa**, CU<br>**Dr. Touhidul Alam**, RMSTU | | |
| **Moderators:**<br>Mr. Mahadi Hasan, Lecturer, CE<br>Mr. Mohammad Sakif Ibn Yousuf, Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 163 | 13:45 – 14:00 | A Lightweight MobileNetV2 Model for Real-Time Rice Leaf Disease Recognition in Field Environments |
| 239 | 14:00 – 14:15 | LightWeedNetV2 for Ultra Lightweight Full Resolution UAV Crop and Weed Segmentation |
| 867 | 14:15 – 14:30 | An Explainable Hybrid Deep Learning Framework with Attention-Based Feature Fusion for Tomato Leaf Disease Classification |
| 872 | 14:30 – 14:45 | A Fusion-Based Deep Learning Framework Combining ConvNeXt and Swin Transformer for Leaf Disease Classification in Solanaceae Crops |
| 910 | 14:45 – 15:00 | Toward a Data-Driven Digital Twin Framework for Industrial Energy Monitoring Using Explainable Machine Learning and Scenario-Based Impact Analysis |

| **TS-4B: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 11** | | |
|---|---|---|
| **Venue:** C301, CSE | | **Time:** 13:45 – 14:45 |
| **Session Topic:** *Biomedical Image Analysis and Quantum Machine Learning* | | |
| **Session Chairs:**<br>**Prof. Muhammad Anwarul Azim**, CU<br>**Dr. Md. Khaliluzzaman**, IIUC | | |
| **Moderators:**<br>Mr. Saif Sabbir, Lecturer, CSE<br>Mr. Muhammad Mizanur Rahman Mizan, Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 123 | 13:45 – 14:00 | VCAF-Net: Voltage-Conditioned Cross-Architecture Fusion Network for AAV Capsid Classification |
| 314 | 14:00 – 14:15 | Automated End-to-End Signal Processing and Interpretable Machine Learning for Superconducting Qubits |
| 504 | 14:15 – 14:30 | A Fast Hybrid Feature-Fusion Framework Combining EfficientNetB4 Features and Metadata for Multiclass Skin Lesion Classification. |
| 865 | 14:30 – 14:45 | NeuroQ-Net: Parameter-Efficient Lightweight Quantum CNN for Multi-Class Brain Tumor Classification |

| **TS-4C: Data Science, NLP, and Software Systems – 6** | |
|---|---|
| **Venue:** C401, CSE | **Time:** 13:45 – 15:15 |
| **Session Topic:** *Health Analytics and Risk Prediction* | |

**Session Chairs:**
**Prof. Dr. Abdul Kadar Muhammad Masum**, SEU
**Prof. Dr. Engr. Mohammad Aman Ullah**, IIUC

**Moderators:**
Subrina Akter, Assistant Professor, CSE
Ms. Mysha Sarin Kabisha, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 240 | 13:45 – 14:00 | BanglaBERT-Based Recurrent-Attention Hybrid Framework for Bengali Depression Detection in Social Media Text |
| 281 | 14:00 – 14:15 | An Explainable Multi-Tier Fusion Stacking Framework for Multi-Class Psychological Distress Prediction |
| 385 | 14:15 – 14:30 | Early Postpartum Depression Detection with Soft Voting Ensemble and Explainable AI |
| 551 | 14:30 – 14:45 | MentalBERT-MOON: An Explainable Contrastive Federated Learning Framework for Non-IID Mental Health Text Classification |
| 878 | 14:45 – 15:00 | An Explainable Stacking Ensemble for Postpartum Depression Risk Prediction |

## TS-4D: Data Science, NLP, and Software Systems – 7

**Venue:** C402, CSE **Time:** 13:45 – 15:00

**Session Topic:** *Explainable Machine Learning, Software Systems, Databases, and Data Engineering*

**Session Chairs:**
**Professor Dr. Farah Jahan**, CU
**Dr. Abu Nowshed Chy**, CU

**Moderators:**
Sauda Adiv Hanum, Lecturer, CSE
Ms. Raisa Nuzhat, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 274 | 13:45 – 14:00 | Learning to Route: Machine Learning Based Query Routing in a Hybrid PostgreSQL MongoDB Environment |
| 479 | 14:00 – 14:15 | ClinTraj: Ontology-Grounded Clinical Trajectory Scoring for Proactive Detection of Adversarial Multi-Turn Attacks on Medical Language Models |
| 508 | 14:15 – 14:30 | ParityKD: A Novel Parity-Constrained Student Selection for Deployable Knowledge Distillation in Chronic Kidney Disease Screening |
| 643 | 14:30 – 14:45 | An Interpretable Fairness-Aware Multi-Task Adversarial Neural Network for Age-Stratified Anemia Prediction |
| 694 | 14:45 – 15:00 | A Benchmark for Cross-Project Early Contributor Disengagement Prediction in the NumFocus Open-Source Community |

## TS-4E: Internet of Things (IoT), Smart Connectivity, and Security – 2

**Venue:** R701, AB5, CCE **Time:** 13:45 – 15:15

**Session Topic:** *Information and Network Security, Privacy and Control; Industrial IoT, Automation, Cloud and Edge*

**Prof. Dr. Mohammad Osiur Rahman**, CU,
**Prof. Razu Ahmed**, IIUC

**Moderators:**
Mr. Hassan Jaki, Lecturer, CCE
Mr. Md Nurnobi Chowdhury Saddam, Lecturer, CCE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 28 | 13:45 – 14:00 | LeXNet:A Lightweight and Explainable AI Framework for Real-Time Cyber Threat Detection in Distributed Networks |
| 328 | 14:00 – 14:15 | A Machine Learning Approach for Phishing Website Detection with Comprehensive Multi-Method Feature Selection |
| 483 | 14:15 – 14:30 | PhishRAG: A Multi-Stage Retrieval-Augmented Phishing Detection Framework with XGBoost Stacking and LLM Explainability |
| 489 | 14:30 – 14:45 | HeteroXIDS: Heterogeneous Explainable Graph Neural Network for Intrusion Detection in Encrypted Network Traffic |
| 541 | 14:45 – 15:00 | ContrastiveTrust: Physics-Guided Contrastive Learning for Zero-Shot Industrial Control System Anomaly Detection |
| 852 | 15:00 – 15:15 | A Passive UHF RFID for Battery Power Monitoring in Long-Life NB-IoT Sensor Nodes |

**TS-4F: Communication and Computer Networks – 2**

**Venue:** R422, ETE **Time:** 13:45 – 15:00

**Session Topic:** *Microwave, Antenna, RF Engineering and Beamforming*

**Session Chairs:**
**Dr. Md. Azad Hossain**, Prof, CUET
**Dr. Sikder Sunbeam Islam**, Prof, EEE

**Moderators:**
Dr. Ismail Hoque, Associate Professor, EEE
Mr. Md. Mostafa Amir Faisal, Assistant Professor, ETE

| | |
|---|---|
| **Invited Talk**<br>13:45 – 14:15 | **Advances in Near-Field Meta-Steering Meta surfaces: Techniques, Materials, and High-Performance Antenna Applications**<br><br>**Dr. Foez Ahmed, SMIEEE**<br>Associate Professor, Department of Information and Communications Engineering, University of Rajshahi; Secretary, IEEE APS-MTTS Bangladesh Joint Chapter<br>*Mode: In-person* |

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 374 | 14:15 – 14:30 | Design of a Convoluted FSS Reflector-Based Dual-Band Microstrip Patch Antenna with Enhanced Gain for Ku-Band Applications |
| 758 | 14:30 – 14:45 | Robust angle-domain analog beamforming for SWIPT with nonlinear energy harvesting and bounded CSI uncertainty |
| 763 | 14:45 – 15:00 | Velocity-Aware Robust Analog Beamforming for Angle-Domain SWIPT-NOMA under Channel Aging and Bounded CSI Uncertainty |

**Plenary Session 3: Day 2, Monday, 9 November 2026**

**Venue:** IIUC Auditorium **Time:** 15:00 – 16:20

**Session Chairs:**
**Prof Dr. Muhibul Haque Bhuyan,** AIUB
**Professor Razu Ahmad,** IIUC

**Moderators:**
Engr. Md Abdul Kader, Associate Professor, EEE
Dr. Saifur Rahman, Assistant Professor, CSE

| Time | Name of Keynote Speaker | Topic of Speech |
|---|---|---|
| **K7**<br>15:00 – 15:40 | **Dr. Bo Liu, FIET, SMIEEE**<br>Professor of Electronic Design Automation, James Watt School of Engineering, University of Glasgow, UK | **Automated Design of Microwave Antennas: An AI-empowered Approach**<br>*Mode: Online* |
| **K8**<br>15:40 – 16:20 | **Prof. Dr. Jianqing Wang, FIEEE**<br>Department of Electrical and Mechanical Engineering, Nagoya Institute of Technology, Japan | **In-Body Communications: From RF to Ultrasound**<br>*Mode: Online* |

**TS-5A: Power and Green Energy System – 3**

**Venue:** Online (Zoom Room 1) **Time:** 18:30 – 19:45

**Session Topic:** *Renewable Energy, Solar PV and Wind*

**Session Chairs:**
**Dr. Mohammad Tawhidul Alam**, Prof, EEE, AIUB
**Prof Dr. Md. Shamimul Haque Choudhury**, Dept of EEE, IIUC
**Dr Asim Ullah Nabil**, Associate Prof and Chairman, EEE, DIU

**Moderators:**
Mr. Md. Lokman Hossain, Lecturer, EEE
Mr. Meraz Ahmed Ohi, Lecturer, EEE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 160 | 18:30 – 18:45 | Techno-Economic Appraisal of Rooftop Solar PV Systems with Financial Feasibility Analysis |
| 174 | 18:45 – 19:00 | Feasibility Study of a Grid-Tied Rooftop Solar PV System at KUET Campus |
| 175 | 19:00 – 19:15 | SWOT Analysis of Rooftop Solar Photovoltaic Energy in Bangladesh |
| 605 | 19:15 – 19:30 | Comprehensive Transient Signature Characterization and Mitigation of Protective Relay Blinding in Weak Distribution Networks with High Inverter-Based Resource Penetration |
| 668 | 19:30 – 19:45 | Wind Field Variability and Offshore Wind Energy Potential in the Bay of Bengal Using Multi-Dataset Assessment |

**TS-5B: Power and Green Energy System – 4**

**Venue:** Online (Zoom Room 2) **Time:** 18:30 – 19:45

**Session Topic:** *EV, Transportation and Charging Systems; Robotics and Automation*

**Session Chairs:**
**Dr. Nur Mohammad**, Prof, CUET
**Dr. Yasir Arafat**, Asso Prof, EEE, IIUC
**Dr. Md. Zahid Hasan**, Associate Professor, EEE

**Moderators:**
Engr. Md Abdul Kader, Associate Professor, EEE
Engr. Khandakar Abdullah Al Mamun, Assistant Professor, EEE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 362 | 18:30 – 18:45 | A Distributed Compressed Sensing for LoRa Sensors in Smart Grid Communication System |

| | | |
|---|---|---|
| 557 | 18:45 – 19:00 | A Tariff- and Voltage-Responsive Energy Management System for Grid-Connected DC Fast Charging Stations in Bangladesh |
| 698 | 19:00 – 19:15 | Multi-Location Electric Vehicle Charging Demand Forecasting for Urban Transport Hubs |
| 778 | 19:15 – 19:30 | Design and Development of a Smart Robotic Arm for Industrial Product Sorting using QR Code and Color Recognition |
| 848 | 19:30 – 19:45 | Towards Sustainable Public Transportation: A Multi-Criteria Evaluation of Diesel, CNG, Electric, and PV-Integrated Electric Buses |

**TS-5C: Electronics, Materials Science, VLSI and Real Time Systems – 2**

**Venue:** Online (Zoom Room 3) **Time:** 18:30 – 20:00

**Session Topic:** *Semiconductor and Functional Materials; Sensors, Photonics and Electromagnetic Devices*

**Session Chairs:**
**Prof. Dr. Dulal Haque,** ECE, HSTU
**Dr M. Kabiruzzaman**, Associate Professor, Dept of EEE, AIUB

**Moderators:**
Mr. Md. Rasheduzzaman, Associate Professor, EEE
Mr. Mr. Md. Nazmus Sakib, Assistant Professor, EEE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 49 | 18:30 – 18:45 | Geometry-Optimized Integrated MEMS Calorimetric Flow Sensor for Simultaneous Water Flow Rate and Temperature Measurement Using COMSOL Multiphysics |
| 371 | 18:45 – 19:00 | Pressure-Induced Structural, Electronic, Optical, and Mechanical Evolution of KAlH3 Perovskite Hydride for Hydrogen Storage Applications: A First-Principles Study |
| 645 | 19:00 – 19:15 | Hole Transport Layer Optimization of Perovskite Absorber CsSnI3-Based Solar Cell via SCAPS-1D |
| 779 | 19:15 – 19:30 | Design of a Compact Dual-Band Implantable Antenna for In-Body Capsule Communication |
| 792 | 19:30 – 19:45 | Fabrication of $ZnMnO_3$:PANI Electrodes for High-Performance Supercapacitor Technology |
| 814 | 19:45 – 20:00 | TCAD-Based Design and Performance Analysis of Depletion Mode β-Ga2O3 MOSFET |

**TS-5D: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 12**

**Venue:** Online (Zoom Room 4) **Time:** 18:30 – 19:45

**Session Topic:** *Algorithms, Scheduling, and Machine Learning*

**Session Chairs:**
**Prof. Dr. Md. Shakowat Zaman Sarker**, UU
**Prof. Dr. Muhammad Abul Hasan**, AIUB

**Moderators:**
Mr. Md. Badiuzzaman Biplob, Lecturer, CSE
Mr. Md Sadman Hafiz, Lecturer, CSE

| | | |
|---|---|---|
| **Invited Talk**<br>18:30 – 19:00 | | **Predictive Validity of Safety Evaluations for LLM-Driven Robots Under Complex Operational Requirements**<br><br>**Gokhan Erdemir, Ph.D.**<br>Associate Professor, Mechatronics; Director, Robotics, Intelligent Systems and Control Laboratory (RISC-Lab), University of Tennessee at Chattanooga, USA<br>*Mode: Online* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 202 | 19:00 – 19:15 | Adaptive Priority Evolution: A Hybrid CPU Scheduling Algorithm for Responsive and Starvation-Resilient Systems |
| 203 | 19:15 – 19:30 | ScoreSched: A Score-Based Scheduling Framework for Responsive and Starvation-Free CPU Management |
| 610 | 19:30 – 19:45 | What If Domain Shift Breaks Transfer Learning? Can Instance Weighted Training Recover Building Cooling Load Prediction? |

| **TS-5E: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 13** | | |
|---|---|---|
| **Venue:** Online (Zoom Room 5) | | **Time:** 18:30 – 19:45 |
| **Session Topic:** *Deep Learning, Neural Networks, and Fuzzy Systems in Computer Vision* | | |
| **Session Chairs:**<br>**Prof. Dr. Kaushik Deb, CUET**<br>**Prof. Dr. Taskeed Jabid**, EWU | | |
| **Moderators:**<br>Mr. Mujibur Rahman Maruf, Lecturer, CSE<br>Mr. Sahariar Reza, Lecturer, CSE | | |
| **Invited Talk**<br>18:30 – 19:00 | | **Reimagining Engineering and Technology Education in the Generative AI Era**<br><br>**Dr. Faisal Tariq, SMIEEE, FHEA**<br>Senior Lecturer, James Watt School of Engineering, University of Glasgow, UK<br>*Mode: Online* |
| **Paper ID** | **Time** | **Title of the Paper** |
| 624 | 19:00 – 19:15 | A Deep Learning Approach for Custom Image-Based Automated Waste Segmentation and Classification Using YOLO26 |
| 805 | 19:15 – 19:30 | fMRI-Based Schizophrenia Classification via Hybrid Convolutional and Transformer Feature Fusion |
| 808 | 19:30 – 19:45 | A Multimodal Deep Learning Framework for Multi-Horizon Solar PV Power Forecasting and Sky Condition Classification |

| **TS-5F: Data Science, NLP, and Software Systems – 8** | |
|---|---|
| **Venue:** Online (Zoom Room 6) | **Time:** 18:30 – 20:00 |
| **Session Topic:** *Natural Language Processing and Cybersecurity* | |
| **Session Chairs:**<br>**Prof. Dr. Syed Md. Galib**, JUST<br>**Prof. Dr. Md Abdul Based**, DIU | |
| **Moderators:**<br>Mr. Abdul Aziz, Lecturer, CSE<br>Mr. Khandaker Tayef Shahriar, Lecturer, CSE | |

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 17 | 18:30 – 18:45 | Deep Contextual Integration of Textual-Visual Modalities for Enhanced News Categorization Using Machine Learning Ensembles |
| 47 | 18:45 – 19:00 | An Explainable Transformer Based Framework for Bangla Public Service Grievance Classification |
| 82 | 19:00 – 19:15 | A Comparative Study of Transformer Models for Extremist Content Classification in Bangla |
| 661 | 19:15 – 19:30 | A Regression Model-Based Approach with Uncertainty-Aware Ensemble Learning to Identify Economic Determinants of Infant Mortality: A Cross-Country Panel Study for Bangladesh |
| 849 | 19:30 – 19:45 | Stylometric & Credibility-Aware Four-Way Human and AI-Generated Misinformation Classification |
| 882 | 19:45 – 20:00 | Beyond Point Accuracy: Regime-Conditional SHAP and Walk-Forward Validation for Australian GDP Growth Forecasting |

**TS-5G: Data Science, NLP, and Software Systems – 9**

**Venue:** Online (Zoom Room 7) **Time:** 18:30 – 20:00

**Session Topic:** *Natural Language Processing and Large Language Models, Retrieval-Augmented Generation*

**Session Chairs:**
Prof. Dr. Engr. Mohammad Aman Ullah, IIUC
**Dr. Tanjim Mahmud**, RMSTU

**Moderators:**
Miskatul Jannat, Lecturer, CSE
Asmaul Hosna Sadika, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 159 | 18:30 – 18:45 | Parameter Efficient Adaptation of Vision-Language Models for Bengali Medical Visual Question Answering with Patch Level Explainability. |
| 256 | 18:45 – 19:00 | Voices of the July Revolution: Benchmarking Sentiment Analysis Models to Decode Student-Led Digital Discourse in Bangla |
| 318 | 19:00 – 19:15 | Ensembling Chain-of-Thought Stacked and DocumentLSTM Embeddings with Explainable AI for Evaluating Educational Pedagogy System in LLMs |
| 535 | 19:15 – 19:30 | A Belief Rule-Base Decision-Support System for Match Hydration-Break Recommendation Under Uncertainty: Application to the 2026 FIFA World Cup |
| 588 | 19:30 – 19:45 | Automated Hate Speech Detection for Romanized Bengali Social Media Text |
| 706 | 19:45 – 20:00 | BanglaMobileABSA-AT: A Fine-Grained Re-annotated Dataset for Aspect-Term-Based Sentiment Analysis with Transformer Baselines |

**TS-5H: Internet of Things (IoT), Smart Connectivity, and Security – 3**

**Venue:** Online (Zoom Room 8) **Time:** 18:30 – 19:45

**Session Topic:** *Industrial IoT, Automation, Cloud, Edge and Autonomous Systems*

**Session Chairs:**
**Dr. Md. Sajjatul Islam**, Associate Professor & Head, Department of CSE, CIU
**Prof Razu Ahmed**, Dean, FSE

**Moderators:**
Mr. Md. Abdullah Al Masud, Lecturer, CCE
Mr. Mahi Rashid Chowdhury, Lecturer, EEE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 116 | 18:30 – 18:45 | Agentic AI-Driven Self-Healing LoRaWAN Mesh Network for Autonomous Disaster Response in Coastal Bangladesh |
| 676 | 18:45 – 19:00 | An Explainable Machine Learning Approach for Air Quality Prediction with PM2.5 Using SHAP and Environmental Big Data |
| 769 | 19:00 – 19:15 | Diverse Weather effects on 8 × 10 Gbps MDM-FSO Systems Using Laguerre-Gaussian Beams |
| 786 | 19:15 – 19:30 | AedesGuard: Multi-Sensor IoT Framework for Early Detection of Aedes Mosquito Breeding Conditions |
| 886 | 19:30 – 19:45 | Simulation-Based Latency Trade-Off Analysis Between Edge and Cloud Computing for Time-Sensitive Applications |

## Technical Sessions: Day 3, Tuesday, 10 November 2026

| **Plenary Session 4: Day 3, Tuesday, 10 November 2026** | | |
|---|---|---|
| **Venue:** IIUC Auditorium | | **Time:** 08:45 – 10:45 |
| **Session Chairs:**<br>**Prof. Dr. M. Moshiul Hoque,** CUET<br>Prof. Dr. Dulal Haque, HSTU | | |
| **Moderators:**<br>Dr. Saifuddin, Associate Professor,CCE<br>Mr. Md. Mostafa Amir Faisal, Assistant Professor, ETE | | |
| **Time** | **Name of Keynote Speaker** | **Topic of Speech** |
| **K9**<br>08:45 – 09:25 | **Prof. Dr. Xi-Zhao Wang, FIEEE, FCAAI**<br>Vice Director, Big Data Institute; College of Computer Science and Software Engineering, Shenzhen University, China | **Uncertainty modeling for calibrating confidence of LLM outputs**<br>*Mode: Online* |
| **K10**<br>09:25 – 10:05 | **Dr. Faisal Hossain**<br>Professor, Department of Civil and Environmental Engineering, University of Washing, Seattle, USA | **Electrifying Our Rain**<br>*Mode: Online* |
| **K11**<br>10:05 – 10:45 | **Professor Sisi Zlatanova**<br>GRID, School of Built Environment, UNSW Sydney, Australia | **Voxel modelling for environmental studies**<br>*Mode: Online* |
| | | |

| **TS-6A: Power and Green Energy System – 2** | | |
|---|---|---|
| **Venue:** R422, ETE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *EV, Transportation and Charging; Power System Analysis, Protection and Fault Diagnosis* | | |
| **Session Chairs:**<br>**Dr. Nur Mohammad**, Prof, CUET<br>**Dr Asim Ullah Nabil**, Associate Prof and Chairman, EEE, DIU | | |
| **Moderators:**<br>Mr. Md Sazidul Hoque, Lecturer, EEE<br>Mr. Mujibur Rahman Maruf**,** Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 511 | 11:00 – 11:15 | AC Load-Flow-Based Contingency Analysis and Ranking for Vulnerability Assessment of the South-East Power Grid of Bangladesh |
| 755 | 11:15 – 11:30 | Comparative Analysis of Archive-Based MOTLBO and MOEO for Multi-Objective Optimal Power Flow in the IEEE 57-Bus System |
| 836 | 11:30 – 11:45 | ML-Enhanced MPPT and Techno-Economic Assessment of a Solar-PV/Battery Series-Hybrid DC Propulsion System for Inland Ferries on Kaptai Lake, Bangladesh. |
| 870 | 11:45 – 12:00 | Operational Design and Performance Analysis of PV-to-EV-with-Battery, and PV-to-EV-with-Grid-Export Modes in a Solar–Grid Hybrid EV Charging Station. |
| 902 | 12:00 – 12:15 | Rooftop Solar PV Across New and Old Airport Facilities: A Techno-Economic Assessment of Hazrat Shahjalal International Airport |

| TS-6B: Electronics, Materials Science, VLSI and Real Time Systems – 3 | | |
|---|---|---|
| **Venue:** R323, EEE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *Perovskite and Thin-Film Solar Cells (SCAPS-1D Simulation)* | | |
| **Session Chairs:**<br>**Dr. Muhibul Haque Bhuyan**, AIUB<br>**Dr. Md. Shamimul Haque Choudhury, IIUC** | | |
| **Moderators:**<br>Mr. Ahmad, Lecturer, ETE<br>Mr. Riazul Islam, Lecturer, EEE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 481 | 11:00 – 11:15 | Performance Optimization And Numerical Investigation Of Cs2sibr6-Based Lead-Free Perovskite Solar Cells Using SCAPS-1D |
| 585 | 11:15 – 11:30 | ETL Engineering and Parameter Optimization of All-Inorganic CsPbI3 Perovskite Solar Cells Using SCAPS-1D |
| 650 | 11:30 – 11:45 | DFT-Guided SCAPS-1D Design of a Lead-Free Na2AgAlBr6 Double-Perovskite Solar Cell |
| 840 | 11:45 – 12:00 | Numerical Investigation of Transport Layer Optimization in FrCdCl3 Perovskite Solar Cells Using SCAPS-1D |
| 913 | 12:00 – 12:15 | Performance Optimization of Lead-Free Mg3PBr3-Based n-i-p Perovskite Solar Cells: A SCAPS-1D Study |

| TS-6C: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 14 | | |
|---|---|---|
| **Venue:** C201, CSE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *Vision Transformers, Efficient Deep Learning, and Model Robustness* | | |
| **Session Chairs:**<br>**Prof. Dr. Mohammed Jahirul Islam**, SUST<br>**Prof. Dr. Abdul Kadar Muhammad Masum, SEU** | | |
| **Moderators:**<br>Mr. Md Sadman Hafiz, Lecturer, CSE<br>Mr. Mohammad Sakif Ibn Yousuf, Lecturer, CSE | | |
| **Paper ID** | **Time** | **Title of the Paper** |
| 294 | 11:00 – 11:15 | Benchmarking Vision Transformers against CNNs for Galaxy Morphology Classification on GalaxiesML |
| 495 | 11:15 – 11:30 | Are Quantization and Token Merging Orthogonal? A Mechanistic Study on Plain Vision Transformers |
| 526 | 11:30 – 11:45 | Does Quantization Break the Graph? Structure--Accuracy Dissociation in Vision GNNs under INT8 Post-Training Quantization |
| 733 | 11:45 – 12:00 | AdaptRepair-Vision: Empirically Bounded-Risk Adaptive Repair for Corruption-Shifted Image Classification |
| 862 | 12:00 – 12:15 | Does Graph Structure Earn Its Keep? Grid, Sequence, and Graph Vision Models for Galaxy Morphology under Quantization and Latency Constraints |

| TS-6D: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 15 | | |
|---|---|---|
| **Venue:** C301, CSE | | **Time:** 11:00 – 12:15 |
| **Session Topic:** *Multimedia Forensics, Deepfake Detection, and Visual Security* | | |

**Session Chairs:**
**Prof. Dr. Mohammad Sanaullah Chowdhury**, CU
**Dr. Foez Ahmed**, Associate Professor, ICE, RU

**Moderators:**
Mr. Md. Badiuzzaman Biplob, Lecturer, CSE
Mr. Muhammad Mizanur Rahman Mizan, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 218 | 11:00 – 11:15 | An Interpretable Siamese Network with Triplet Loss for Writer Independent Offline Signature Verification |
| 342 | 11:15 – 11:30 | Cross-Corpus Generalization in Bangla Deepfake Audio Detection: A Multi-Tier Evaluation with Pooled Training and Domain-Adversarial Mitigation |
| 453 | 11:30 – 11:45 | BioMotion-TRNG: A Computer Vision-Based Biological True Random Number Generator Using Fish Motion for Cryptographic Applications |
| 490 | 11:45 – 12:00 | DeepVoiceGuard: A Cross-Lingual Attention-Enhanced BiLSTM Framework for Explainable Deepfake Voice Detection in English and Bangla |
| 741 | 12:00 – 12:15 | An Intelligent Machine Learning-Based Intrusion Detection and Real-Time Attack Mitigation System |

**TS-6E: Artificial Intelligence, Algorithms, Vision, and Signal Processing – 16**

**Venue:** C401, CSE **Time:** 11:00 – 12:15

**Session Topic:** *Object Detection, Segmentation, and Human-Centric Computer Vision*

**Session Chairs:**
**Prof. Dr. Md. Shahnur Azad Chowdhury, IIUC**
**Dr. Shahid Md. Asif Iqbal**, Dean, FE, Premier University

**Moderators:**
Mr. Saif Sabbir, Lecturer, CSE
Mr. Sahariar Reza, Lecturer, CSE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 297 | 11:00 – 11:15 | The Ethical Landscape of Generative Artificial Intelligence: A Survey of Socio-Technical Risks, Mitigation Strategies, and Emerging Regulatory Frameworks |
| 591 | 11:15 – 11:30 | An Explainable Machine Learning Framework for Census Income Prediction: A Comparative Study with SHAP |
| 592 | 11:30 – 11:45 | Benchmarking Custom CNNs and EfficientNetB2 for 38-Class Bangladeshi Rice Variety Classification |
| 652 | 11:45 – 12:00 | Error-Aware Bias Mitigation under Uncertain Sensitive-Attribute Inference via Explicit Misclassification-Matrix Modeling |
| 801 | 12:00 – 12:15 | Rethinking GNN Interpretability for Multi-Task Toxicity Prediction: A Cross-Method Agreement Analysis on Tox21 |

**TS-6F: Internet of Things (IoT), Smart Connectivity, and Security – 4**

**Venue:** R701, AB5 **Time:** 11:00 – 12:30

**Session Topic:** *IoT Architecture, Sensor Networks and Embedded Systems; AI-Driven IoT, Blockchain and Data Analytics*

**Session Chairs:**
**Dr. Hadaate Ullah**, Asso Professor & Dean, FoS, USTC
**Dr. Md. Saiful Islam**, Dept of ETE, CUET

**Moderators:**
Mr. Md. Abdullah al Masud, Lecturer, CCE
Mr. Md Hasan Mia, Lecturer, CCE

| Paper ID | Time | Title of the Paper |
|---|---|---|
| 183 | 11:00 – 11:15 | Fed-XRL: A Federated eXplainable Reinforcement Learner for Backdoor-Resilient Aggregation in Non-IID Environments |
| 468 | 11:15 – 11:30 | Design and Evaluation of a GSM-Based Automatic Energy Meter Reading and Prepaid Load-Control Prototype |
| 484 | 11:30 – 11:45 | PromptPoison: A Backdoor Attack Model Targeting Instruction-Tuned LLMs via Trigger-Embedded System Prompts |
| 486 | 11:45 – 12:00 | Enhanced AutoPatch: Guided Reinforcement Learning for IoT Firmware Security |
| 528 | 12:00 – 12:15 | ShadowFL: A Membership Inference Attack Model Against Federated Learning Using Shadow Model Ensembles |
| 584 | 12:15 – 12:30 | Smart Autonomous Fire Fighting Robot Using Multi-Sensor Data Fusion and CatBoost-Based Fire Severity Classification |