



The 20th IEEE International Conference on
APPLICATION of INFORMATION and
COMMUNICATION TECHNOLOGIES

CONFERENCE PROGRAM

14-16 October 2026

Time Zone: GMT + 4 (Baku local time)

PROGRAM AT A GLANCE

14 October 2026

Location: ADA University, Conference Hall (C101)

Address: 61 Ahmadbay Agha-Oglu Street, Baku

08:30 – 09:30	Registration
09:30 – 10:00	Opening and Welcoming Addresses
10:00 – 11:00	Keynote Session
11:00 – 11:30	Coffee Break / Networking Session
11:30 – 12:00	Keynote Session
12:00 – 13:30	Panel Discussion: AI in Higher Education and Science: Opportunities and Challenges
13:30	Group Photo (all participants)
13:30 – 14:30	Lunch
15:00 – 19:00	Social Program: City Tour (for international participants)

15 October 2026

Location: ADA University, Building F (rooms: F102, F106, F107)

Address: 61 Ahmadbay Agha-Oglu Street, Baku

10:00 – 11:00	Concurrent Technical Sessions
11:00 – 11:30	Coffee Break / Networking Session
11:30 – 13:00	Concurrent Technical Sessions
13:00 – 14:00	Lunch
14:00 – 15:00	Concurrent Technical Sessions
15:00 – 15:30	Coffee Break / Networking Session
15:30 – 17:00	Concurrent Technical Sessions
18:00	Dinner (by invitation)

16 October 2026

Location: ADA University, Building F (rooms: F103, F106, F107)

Address: 61 Ahmadbay Agha-Oglu Street, Baku

10:00 – 11:00	Concurrent Technical Sessions
11:00 – 11:30	Coffee Break / Networking Session
11:30 – 13:00	Concurrent Technical Sessions
13:00 – 14:00	Lunch
14:00 – 15:00	Wrap-up / Closing of AICT2026 (room: F103)

AICT2026 International Conference



OCTOBER, 2026

Time Zone: GMT + 4 (Baku local time)

Location:

ADA University, Conference Hall (C101)

61 Ahmadbay Agha-Oglu Street, Baku

14 October 2026

Location: Conference Hall (C101)

**For Virtual Participation
VIRTUAL ROOM – 1**

08:30–09:30	Registration
09:30–10:00	OPENING AND WELCOMING ADDRESSES

Dr. Abzetdin Adamov, *AICT2026 General Chair / IEEE Azerbaijan Chapter / ADA University, Azerbaijan*

Prof. Hafiz Pashayev, *Rector, ADA University, Azerbaijan*

Prof. Tarek El-Ghazawi, *Chair of Electrical and Computer Engineering, George Washington University, US*

Prof. Aldo Canova, *Department of Energy, Politecnico di Torino, Italy*

Dr. Maja Grbic, *Head of Department, Nikola Tesla Institute of Electrical Engineering, Serbia*

10:00–11:00	KEYNOTE SESSION
	Moderator: Dr. Abzetdin Adamov

10:00–10:30	Speaker: Prof. Erol Gelenbe <i>IEEE Fellow, Institute of Theoretical and Applied Informatics, Polish Academy of Science, Poland</i> Title: AI Viewed as Optimization and Simulation
10:30–11:00	Speaker: Prof. Huseyin Atakan Varol <i>Institute of Smart Systems and Artificial Intelligence, Nazarbayev University, Kazakhstan</i> Title: Creating Generative AI Models for Low-Resource Contexts: Dataset Preparation, Model Training and Service Deployment

11:00–11:30	Coffee Break / Networking Session
11:30–12:00	KEYNOTE SESSION
	Moderator: Dr. Jamaladdin Hasanov

11:30–12:00	Speaker: Prof. Luca Sterpone <i>Chair of Control and Computer Engineering Department (DAUIN), Politecnico di Torino, Italy</i> Title: Multi-Core Clustered Computing Architectures in Aerospace: Towards the New Space Era
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12:00–13:30	Panel Discussion: AI in Higher Education and Science: Opportunities and Challenges
	Moderator: Dr. Vafa Kazdal, Vice-Rector for Strategy and Advancement, ADA University, Azerbaijan
Speakers	Prof. Erol Gelenbe <i>IEEE Fellow, Institute of Theoretical and Applied Informatics, Polish Academy of Science, Poland</i> Prof. Tarek El-Ghazawi <i>Chair of Electrical and Computer Engineering, George Washington University, US</i> Prof. Aldo Canova <i>Department of Energy, Politecnico di Torino, Italy</i> Prof. Huseyin Atakan Varol <i>Institute of Smart Systems and Artificial Intelligence, Nazarbayev University, Kazakhstan</i> Prof. Lasha Ephremidze <i>Kutaisi International University, Georgia</i>
13:30	Group Photo (all participants)
13:30–14:30	Lunch
15:00–19:00	Social Program: City Tour (for international participants)

AICT2026 International Conference



OCTOBER, 2026

Time Zone: GMT + 4 (Baku local time)

Location:

*ADA University, Building F
61 Ahmadbay Agha-Oglu Street, Baku*

15 October 2026

Location: Building F; Rooms: F102, F106, F107

10:00–11:00

CONCURRENT TECHNICAL SESSIONS

SESSION 1.1

DATA SCIENCE AND ADVANCED ANALYTICS

Location: **Building F / room F102**

Session Co-Chairs: Dr. John Burns, Dr. Kamila Orynbekova

Time: 10:00 – 11:00

Room F102

10:00–10:15 Detecting Fake News Using Natural Language Processing Techniques in Azerbaijani Language

Azar Hasanzade, Ibrahim Huseynov, ASOIU; ADA University, Azerbaijan

10:15–10:30 Token-Efficient SentencePiece Tokenizers for Turkic Languages

Eljan Mahammadli, Samir Rustamov, Khazar University; ADA University, Azerbaijan

10:30–10:45 Domain-Adaptive CycleGAN Training for Text Style Transfer

Hadi Ibrahim, Giuseppe Gallipoli, Luca Cagliero, Politecnico di Torino, Italy

SESSION 2.1

MACHINE LEARNING AND OTHER AI TECHNIQUES

Location: **Building F / room F106**

Session Co-Chairs: Dr. Jamaladdin Hasanov, Prof. Aldo Canova

Time: 10:00 – 11:00

Room F106

10:00–10:15 Temporal Urban Region Evolution Forecasting with Graph Neural Networks and Adaptive Quantile Labeling

Etibar Vazirov, Simone Monaco, Daniele Apiletti, ADA University; Politecnico di Torino, Azerbaijan, Italy

10:15–10:30 Inference-Time Monitoring of Edge LLMs via Kerimov–Alekbberli Surface-Proxy Token-Budget Gating: A Phase 1 Empirical Validation on Apple Silicon

Rahid Alekbberli, Hikmat Karimov, ADA University; Azerbaijan Technical University, Azerbaijan

10:30–10:45 Time Series Foundation Models Meet Variational Autoencoders for Anomaly Detection

Ali Yassine, Luca Cagliero, Van Thanh Nguyen, Hassan Jaber, Massimiliano Carli, Giovanbattista Tarantino, Politecnico di Torino, Italy

SESSION 1.2**DATA SCIENCE AND ADVANCED ANALYTICS**Location: **Building F / room F107**

Session Co-Chairs: Dr. Samir Rustamov, Dr. Maja Grbic

Time: 10:00 – 11:00**Room F107****10:00–10:15 A Hybrid Spherical Fuzzy Clustering Framework Based on Reliability, Stability, and Risk Filtering***Gunel Babanli, Rana Amirova, Mustafa Eminov, Azerbaijan Technical University, Azerbaijan***10:15–10:30 A Hybrid Partition–Density Clustering Approach for Cluster Quality Enhancement under Uncertainty***Gunel Babanli, Rana Amirova, Etibar Seyidzade, Chingiz Hajizade, Azerbaijan Technical University, Azerbaijan***10:30–10:45 A Behavioral Characterization of Electricity Theft on the SGCC Smart-Meter Benchmark***Hafiz Muhammad Azeem Akram, Siamak Talatahari, Department of Computer Science Khazar University; School of Computing Macquarie University, Azerbaijan, Australia***10:45–11:00 Empirical Assessment of E-Government Engagement: the case of Azerbaijan***Elvin Gurbanov, Institute of Information Technology, Azerbaijan National Academy of Sciences, Azerbaijan***11:00–11:30 Coffee Break / Networking Session**

11:30–13:00**CONCURRENT TECHNICAL SESSIONS****SESSION 3.1****CYBER SECURITY AND BEST PRACTICE**Location: **Building F / room F102**

Session Co-Chairs: Dr. Rashad Aliyev, Dr. Rasmiyya Mahmudova

Time: 11:30 – 13:00**Room F102****11:30–11:45 Fine-Tuned Vision Models for Video Deepfake Detection: A Comparative Architecture Study with Selective Prediction***Abbas Aliyev, Samir Rustamov, ADA University, Azerbaijan***11:45–12:00 Hybrid Watermark Embedder and Dual-Layer Extractor Pipeline based on DWT and GAN's Attention Module***Nigar Valiyeva, Elyana Ismayilzada, Leyla Huseynli, Sabina Ismayilova, ADA University, Azerbaijan***12:00–12:15 Comparative Analysis of Machine Learning Algorithms for Malicious URL Detection***Rza Alasgarli, Aftandil Aliyev, ADA University, Azerbaijan***12:15–12:30 Benchmarking Zero-Knowledge Machine Learning Frameworks***Agha Aghayev, Ziyad Muradov, Yadigar Imamverdiyev, Azerbaijan Technical University, Azerbaijan***12:30–12:45 An Intuitive Visualization of Aggregation Strategies in Federated Learning using InSDN Dataset: An Experimental Study***Faizan Qamar, Syed Hussain Ali Kazmi, Kashif Nisar, Rosilah Hassan, Shuaib Memon, Vaidas Giedrimas, Universiti Kebangsaan Malaysia; Center for Cyber Security, Universiti Kebangsaan Malaysia, Selangor, Malaysia; School of Computing, Mathematics and Engineering Charles Sturt University, Sydney, NSW; Computing and Data Science, York St John University, Lord Mayor's Walk, UK; Panevėžio kolegija/State Higher Education Institution Panevezys, Lithuania, Malaysia, Australia, United Kingdom, Lithuania***12:45–13:00 A Multi-Parameter Adaptive Model For Managing Children's Internet Access***Konul Dashdamirova, Rasim Alguliyev, Rasmiyya Mahmudova, Institute of Information Technology; Institute of Information Technology of Azerbaijan National Academy of Sciences, Azerbaijan*

SESSION 5.1

COMMUNICATION, NETWORK AND HARDWARE

Location: **Building F / room F106**

Session Co-Chairs: Dr. Orkhan Karimzada, Dr. Ramis Akhmedov

Time: 11:30 – 13:00

Room F106

11:30–11:45 IoT and machine learning based framework for leak onset detection in urban drinking water distribution networks of Uzbekistan

Giyosbek Rakhimov, Abdusobirjon Saidov, Sanjarbek Rakhimberdiev, Rustamjon Nasridinov, Orif Makhmanov, Tashkent University of Information Technologies; TUIT; Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Uzbekistan

11:45–12:00 Digital twin-driven sensor fusion approach for jamming detection and fault isolation in avionics navigation

Fidan Shiralizada, Amin Hasanli, Bakhtiyar Sadigov, Aygun Zeynalova, National Aviation Academy, Azerbaijan

12:00–12:15 Detour: A Predictive Routing Scheme for Battery-Free Wireless Sensor Networks

Franklin Boachie-Yiadom, Sain Saginbekov, Nazarbayev University, Ghana, Kazakhstan

12:15–12:30 Comparative Evaluation of Distributed Stream Processing Frameworks for Industrial IoT System Log Analytics

Elnar Ashrafov, Ibrahim Huseynov, Latafat Guliyeva, ADA University, Azerbaijan

12:30–12:45 Cycle-Safe Fuzzy Confidence Propagation for Microservice Root-Cause Analysis

Allahshukur Mirzazada, Latafat Gardashova, Pavel Kosov, Azerbaijan State Oil and Industry University, Azerbaijan

SESSION 7.1

ICT IN EDUCATION AND RESEARCH

Location: **Building F / room F107**

Session Co-Chairs: Dr. Mykhailo Medvediev, Assoc. Prof. Romeu Sequeira

Time: 11:30 – 13:00

Room F107

11:30–11:45 Forseti: A GitLab-Based Framework for Objective Assessment of Individual Contributions in Collaborative Programming Assignments

Romeu Sequeira, José Exposto, Instituto Politécnico de Bragança, Portugal

11:45–12:00 Integrating Unity Game Engine and Blackboard Learning Management System Using Proprietary REST Protocols: Ender's Game

Araz Yusubov, Michael Bechtel, Tangiz Alizada, ADA University; K16 Solutions, Azerbaijan, United States

12:00–12:15 Comparative Analysis of Collaborative Filtering Methods for Personalized Learning Pathway Recommendations

Andrei Novoseltsev, Arsenii Karmazin, ITMO University, Russia

12:15–12:30 Large Language Models for Educational Assessment Generation: A Survey of Taxonomies, Pipelines, and Evaluation Practices

Kamila Orynbekova, Maksat Maratov, Meraryslan Meraliyev, SDU University, Kazakhstan

12:30–12:45 Efficient Candidate Retrieval for Large Corpus Extrinsic Plagiarism Detection

Ahmad Ahmadzada, Azerbaijan State Oil and Industry University, Azerbaijan

13:00–14:00 Lunch

14:00–15:00**CONCURRENT TECHNICAL SESSIONS****SESSION 2.2****MACHINE LEARNING AND OTHER AI TECHNIQUES**Location: **Building F / room F102**

Session Co-Chairs: Dr. Jamaladdin Hasanov, Prof. Aldo Canova

Time: 14:00 – 15:00**Room F102****14:00–14:15 Geometry Identification of Overhead Transmission Lines from Electric Field Measurements***Aldo Canova, Maja Grbic, Ajdin Alihodzic, Adnan Mujezinovic, Politecnico di Torino; Nikola Tesla Electrical Engineering Institute; University of Sarajevo, Italy, Serbia, Bosnia and Herzegovina***14:15–14:30 Dataset analysis of V-shaped IPM motors for automotive applications***Luigi Solimene, Simone Ferrari, Gianmarco Lorenti, Guillaume Mermaz-Rollet, Gianmario Pellegrino, Vittorio Ravello, Maurizio Repetto, Politecnico di Torino; Stellantis Auto; CRF-Stellantis, Italy, France***14:30–14:45 Calibrated Machine-Learning Surrogates for Finite-Horizon Pull-in Screening of Electrostatic MEMS Resonators***Olimjon Eshkobilov, Shirali Kadyrov, New Uzbekistan University; SDU University, Uzbekistan, Kazakhstan***14:45–15:00 Advances in the Implementation of Lumped Parameter Models for the Human Cardiovascular System***Burcu Ramazanli, Azer Mukhtarov, ADA University; ADA University, George Washington University, Azerbaijan*

SESSION 4.1

**EMERGING TRENDS AND TECHNOLOGIES IN ICT
APPLICATION**

Location: **Building F / room F106**

Session Co-Chairs: Dr. Orkhan Karimzada, Dr. Ramis Akhmedov

Time: 14:00 – 15:00

Room F106

14:00–14:15 A Dataset-Driven Deep Learning Framework for Multi-Class Tomato Leaf Disease Classification

Vasif Maharramli, Murad Hajiyeve, ADA University, Azerbaijan

14:15–14:30 Comparative Performance Analysis of Unsupervised Clustering Algorithms for NDVI Image Classification Using V-Measure Similarity Analysis

Gunay Hasanli, Mehrin Azizli, Turan Hajiyeve, Alma Mater Studiorum - University of Bologna; Agroservice OJSC, Ministry of Agriculture, Azerbaijan, Italy, Azerbaijan

14:30–14:45 Diagnosing Cultural Bias in AVA-Trained Aesthetic Scoring: A Ground-Truth-Free Framework

Nargiz Aghayeva, ADA University, Azerbaijan

14:45–15:00 Boota-S2A: A Structured Multi-Modal Framework and Synthetic Dataset for Sketch-Based 3D Anime Character Reconstruction

Sadig Malikov, Aynur Jabbarova, Azar Hasanov, Jafar Sadig, Institute of Mathematics; AzShield Defense; National Aviation Academy, Azerbaijan

ONLINE SESSION I

MACHINE LEARNING AND OTHER AI TECHNIQUES

Location: **Building F / room F107**
 For Virtual Participation: **VIRTUAL ROOM – 1**

Session Co-Chairs: Dr. Wisam Al-Dayyeni, Prof. José Expósito

Time: 14:00 – 15:00

Room F107

14:00–14:15 @ Temporal Modelling for Burn Scars on Sentinel-3

Luca Barco, Edoardo Arnaudo, Andrea Bragagnolo, Claudio Rossi, Paolo Garza, Politecnico di Torino; Fondazione LINKS; LINKS Foundation, Italy

14:15–14:30 @ The Impact of Mask Severity and Visual Domain on Image Inpainting Reconstructability

Gunel Aliyeva, Ismayil Shahaliyev, Jamaladdin Hasanov, ADA University, Azerbaijan

14:30–14:45 @ A Role-Agnostic Approach for Student Behavior Recognition using a Large-Scale Composite Dataset

Zilola Pirmqulova, Ibragim Atadjanov, Ulugbek Tuxtapulatov, Arsen Abdulali, Tashkent University of Information Technology; Central Asian University; Yeosu Technical University; Queen Mary University of London, Uzbekistan, United Kingdom

14:45–15:00 @ Structure Identification of One Class of Nonlinear Systems with Feedback

Besarion Shanshiashvili, Nugzar Kavlashvili, Giorgi Shanshiashvili, Georgian Technical University; Archil Eliashvili Institute of Control Systems of Georgian Technical University; Space International, Georgia

15:00–15:30 Coffee Break / Networking Session

15:30–17:00**CONCURRENT TECHNICAL SESSIONS****SESSION 4.2****EMERGING TRENDS AND TECHNOLOGIES IN ICT APPLICATION**Location: **Building F / room F102**

Session Co-Chairs: Dr. Alexzander Farrall, Assoc. Prof. Amine El Moutaouakil

Time: 15:30 – 17:00**Room F102**

15:30–15:45 Comparative performance evaluation of traditional and robust control strategies for a grid-connected photovoltaic microgrid system
Yasaman Mammadli, Nijat Hasanov, Baku Higher Oil School, Azerbaijan

15:45–16:00 Custom full-coordinate dynamical simulation for a quadrupedal robot
Pasha Pashazada, Orkhan Karimzada, ADA University, Azerbaijan

16:00–16:15 A Low-Cost Average Speed Enforcement System Using Multi-Sensor Fusion and Edge Processing
Amine El Moutaouakil, Jana Mohammed Ali, Mariam Alshamsi, Rayan Alkaabi, Sheikha Alnteiri, Waad Hassan, UAE University; Department of Electrical and Communication Engineering, College of Engineering, United Arab Emirates, United Arab Emirates

16:15–16:30 Proximal Policy Optimization for Adaptive Traffic Signal Control on Baku Networks
Nigar Alishzade, Abdullah Kazimov, Jamaladdin Hasanov, Garabagh University; ADA University, School of IT and Engineering; ADA University, Azerbaijan

16:30–16:45 Comfort-Aware Pedestrian Navigation for Visually Impaired Users via Hierarchical Federated Reinforcement Learning
Fatima Alakbarli, Hamida Jafarova, ADA University, Azerbaijan

16:45–17:00 Intelligent Structural Hazard Detection and Adaptive Hydraulic Response for Underground Coal Mines
Anar Najafli, Kamala Oghuz, Fidan Karimli, Yasaman Mammadli, Ravan Khidirov, Emil Abdullayev, Baku Higher Oil School, Azerbaijan

ONLINE SESSION II

ICT IN MEDICINE AND HEALTH CARE

Location: **Building F / room F106**
 For Virtual Participation: **VIRTUAL ROOM – 1**

Session Co-Chairs: Dr. Burcu Ramazanli, Assoc. Prof. Olimjon Eshkobilov

Time: 15:30 – 17:00

Room F106

15:30–15:45 @ Constraint-Preserving PINNs for Semi-Supervised Discovery of Spatially Heterogeneous Transmission in Reaction–Diffusion SEIR Models

Sherbek Razaqov, Shirali Kadyrov, New Uzbekistan University; SDU University, Uzbekistan, Kazakhstan

15:45–16:00 @ Explainable Machine Learning Framework for Multi-Stage Arterial Hypertension Prediction

Aisulu Igimbayeva, Adel Kunuspekova, Abilmansur Alibekov, Aknur Mansurkhan, Gaukhar Igimbayeva, Bakhtiyor Meraliyev, SDU University; Almaty Management University, Kazakhstan

16:00–16:15 @ Interpretable Models versus Black-Box Models with Post-hoc Explanations for Clinical Alzheimer’s Disease Classification on the OASIS Cohorts

Nuray Nurbolat, Khaled Mohamad, Kazakh-British Technical University, Kazakhstan

16:15–16:30 @ SEGMENTATION OF SPINAL COMPUTER TOMOGRAPHY IMAGES USING THE U-NET DEEP LEARNING MODEL

Nodirbek Jurakulov, Marguba Akbarova, Shamil Mukhsinov, Khusan Shoraimov, Alisher Nurdullayev, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Uzbekistan

16:30–16:45 @ A Probabilistic Three-Dimensional Visual Paradigm for Real Time P300 Spellers

Onder Aydemir, Onur Erdem Korkmaz, Karadeniz Technical University; Ataturk University, Turkey

16:45–17:00 @ Risk-Aware Evaluation of Domain-Adaptive Language Models in Sensitive Public-Sector Applications

Ahsan Habib Shihab, Aman Mussa, Madina Mansurova, Al-Farabi Kazakh National University, Kazakhstan

ONLINE SESSION III

MACHINE LEARNING AND OTHER AI TECHNIQUES

Location: **Building F / room F107**

For Virtual Participation: **VIRTUAL ROOM – 2**

Session Co-Chairs: Dr. Samir Rustamov, Dr. Kamila Orynbekova

Time: 15:30 – 17:15

Room F107

15:30–15:45 @ Script-Aware Byte-Level Morphological Segmentation for Uzbek: A Latin-Cyrillic ByT5 Fine-Tuning

Maksud Sharipov, Abdusobirjon Saidov, Ogabek Sobirov, Urgench State University named after Abu Rayhan Biruni; TUIT; Tashkent State University of Economics, Uzbekistan, Afghanistan

15:45–16:00 @ Terminology-Consistent English-Azerbaijani Technical Translation via Non-Destructive State Layers

Elliott Ahn, GIST, South Korea

16:00–16:15 @ A multi-level approach to adapting ASR models for low-resource Turkic languages

Aidana Karibayeva, Vladislav Karyukin, Adina Karybayeva, KazNU; Farabi University; Kazakh Ablai Khan University of International Relations and World Languages, Kazakhstan

16:15–16:30 @ Knowledge Injection for Robust Multimodal Hate Speech Detection with Large Language Models

Lorenzo Vaiani, Riccardo Pisanu, Luca Cagliero, Politecnico di Torino, Italy; Politecnico di Torino, Italy

16:30–16:45 @ AI-Assisted Cyberbullying Prevention in Digital Education: A Privacy-Aware Framework for Risk Detection and School-Based Intervention

Rabiga Suleimenova, Nursulu Algozhaeva, Kyrmyzy Zhumabekova, Leila Salykova, Farabi University; Al Farabi KazNU; Almaty Humanities and Economics University (AHEU); Astana IT University, Kazakhstan

16:45–17:00 @ Enhancing Small Language Models with Controllers: Efficient and Constrained Token Generation for Structured Task

Ualikhan Sadyk, Aleem Alam, Mohammad Wajahat Beg, Selcuk Cankurt, SDU University; Vistula University, Kazakhstan, Poland

17:00–17:15 @ Robust Night-Time UAV Detection in Infrared Imagery Using Attention–Transformer Networks

Nasir Saeed, Maham Misbah, Namya Musthafa, Department of Electrical and Communication Engineering, UAEU, United Arab Emirates; United Arab Emirates University, United Arab Emirates

18:00

Dinner (by invitation)

AICT2026 International Conference



OCTOBER, 2026

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*ADA University, Building F
61 Ahmadbay Agha-Oglu Street, Baku*

16 October 2026

Location: Building F; Rooms: F103, F106, F107

10:00–11:00

CONCURRENT TECHNICAL SESSIONS

SESSION 4.3

EMERGING TRENDS AND TECHNOLOGIES IN ICT APPLICATION

Location: Building F / room F103

Session Co-Chairs: Dr. Alexzander Farrall, Assoc. Prof. Muazzam Artikova

Time: 10:00 – 11:00

Room F103

10:00–10:15 Terrain-Stratified Comparison of Pixel-Wise and Convolutional Deep Learning for SAR Flood Mapping in the South Caucasus

Dmitriy Kuramshin, Maryam Akhundova, French-Azerbaijani University (UFAZ), Azerbaijan

10:15–10:30 An Integrated Multi-Output Machine Learning Framework for Satellite Conjunction Risk Assessment and Collision Avoidance Maneuver Planning

Farid Guliyev, Ismail Ismailov, Emil Sadigov, Khatayi Rustamov, Ilham Mirzayev, National Aviation Academy, Azerbaijan

10:30–10:45 Towards a Unified Benchmarking Pipeline for Satellite Image Restoration

Nijat Alisoy, Royana Huseynova, Huseyn Sadatkhonov, Pasha Zulfugarli, Ismayil Shahaliyev, ADA University, Azerbaijan

10:45–11:00 Weighted QEM Modification and Dollhouse Visualization for Geometric Simplification of Museum Objects

Muazzam Artikova, Eldor Sayfiev, Daler Sharipov, Ural Raimkulov, Tashkent University of Information Technology; Department of Multimedia Technologies, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi; Department of Exact and Technical Sciences Angren University; Department of Robotics and Intelligent Systems, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Uzbekistan

SESSION 3.2

CYBER SECURITY AND BEST PRACTICE

Location: **Building F / room F106**

Session Co-Chairs: Dr. Vugar Musayev, Dr. Asif Ganbayev

Time: 10:00 – 11:00

Room F106

10:00–10:15 Adversarial Prompt Injection as a Supply Chain Attack Vector in Agentic AI Systems

Guilali Asadullaev, Peter the Great St. Petersburg Polytechnic University, Russia

10:15–10:30 HID-Based Attacks: Threat Landscape in Modern Systems and Machine Learning-Driven Prevention

Mahammad Garayev, Asif Ganbayev, Etibar Seyidzade, Rauf Suleymanli, Azerbaijan Technological University; Academy of the State Customs Committee; Azerbaijan Technical University; Baku Engineering University, Azerbaijan

10:30–10:45 Design and Implementation of a Live Threat Visualization Platform for SOC Environments

Rashad Aliyev, Sarfi Habibova, Ulviyya Mammadova, Khazar University; YER xSP MMC, Azerbaijan

SESSION 5.2

COMMUNICATION, NETWORK AND HARDWARE

Location: **Building F / room F107**

Session Co-Chairs: Dr. Wisam Al-Dayyeni, Dr. Maja Grbic

Time: 10:00 – 11:00

Room F107

10:00–10:15 Performance Benchmarking of Lightweight TinyML Object Detection Models on Raspberry Pi 4B for Edge Robotics Applications

Ilaha Niftaliyeva, Baku Engineering University and Inha University, Azerbaijan

10:15–10:30 Compile-Time Zero-Copy Data Distribution with Configurable Synchronization for Embedded Systems

Emil Sadigov, Ismail Ismailov, Farid Guliyev, Ilham Mirzayev, National Aviation Academy, Azerbaijan

10:30–10:45 Mobility-Assisted Reactive Self-Healing for UAV Swarm Connectivity After Node Failures

Ilham Mirzayev, Ismail Ismailov, Emil Sadigov, Farid Guliyev, National Aviation Academy, Azerbaijan

10:45–11:00 Microbatch-Centric Pipeline Parallelism for LLM Training with a Low-Precision-Aware Configuration Space

Alexey Balakin, Igor Polyakov, Alexey Dukhanov, ITMO University; ITMO, Russia

11:00–11:30 Coffee Break / Networking Session

11:30–13:00**CONCURRENT TECHNICAL SESSIONS****SESSION 2.3****MACHINE LEARNING AND OTHER AI TECHNIQUES**Location: **Building F / room F103**

Session Co-Chairs: Assoc. Prof. Islam Elgedawy, Prof. Shadi Atalla

Time: 11:30 – 13:00**Room F103****11:30–11:45 Echo-AUNet: A Deep Learning Network for Segmenting Cardiac Structures in Echocardiographic Images**

Azizbek Khojamurotov, Akmalbek Abdusalomov, Mekhridin Rakhimov, Makhliyo Turaeva, Shakhzod Javliev, Sanjar Bakhtiyorov, Tashkent University of Information Technologies; Department of Artificial Intelligence, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Uzbekistan

11:45–12:00 A Specificity-Focused Study of the Impact of Geometric Data Augmentation on Thyroid Ultrasound Image Classification

Nuraddin Sadili, Shahla Azizova, Jamaladdin Hasanov, ADA University, Azerbaijan

12:00–12:15 Single-Image Multimodal Facial Analysis for Autism Screening Support Using Deep Representations, Gaze, and Head-Pose Cues

Yassine Himeur, University of Dubai, United Arab Emirates

12:15–12:30 Dual-energy x-ray cargo inspection systems: Advanced material recognition, effective atomic number estimation, and anomaly detection

Ilhom Rustamov, Tashkent University of Information Technologies, Uzbekistan

12:30–12:45 Training-Free Azerbaijani Sign Language Recognition with DTW and Real-Time Assessment

Gulshan Sariyeva, Rahima Karimova, Sama Mustafazada, ADA University; Brandenburg University of Technology, Azerbaijan

12:45–13:00 A Probabilistic Matrix Calculus Framework for Deep Edge Detection in Unstructured Urban Environments

Imran Mammadov, ADA University, Azerbaijan

SESSION 6.1

**ICT IN BUSINESS ADMINISTRATION, GOVERNANCE, FINANCE
AND ECONOMY**

Location: **Building F / room F106**

Session Co-Chairs: Dr. John Burns, Prof. Alexey Dukhanov

Time: 11:30 – 13:00

Room F106

11:30–11:45 Studying the functional impact of Artificial Intelligence on the work of IT specialists: an empirical study in the case of Azerbaijan
Shamil Humbatov, Tarana Aliyeva, Qarabağ University; Azerbaijan State University of Economics, Azerbaijan

11:45–12:00 Forecasting Uranium Prices under Geopolitical and Financial Uncertainty: An Explainable Machine Learning Approach Using XGBoost and SHAP

Neman Eylasov, Ayse Nur Sahinler, Fuzuli Aliyev, Baku Engineering University; Ankara Yıldırım Beyazıt University; ADA University, Azerbaijan, Turkey

12:00–12:15 FairTraceFormer: Causal and Counterfactual Bias Mitigation for Temporal Predictive Process Monitoring in AI-Based Business Automation

Emin Ismayilzade, Fatima Tahirli, ADA University, Azerbaijan

12:15–12:30 A Comparative Analysis of Gamification Approaches for Enhancing Employee Engagement in BPMN-Based Work Processes

Vadim Mukhtarullin, Alexey Dukhanov, Natig Aminov, Ian Uvarov, Alexander Ershov, ITMO University, Russia

12:30–12:45 Mathematical modeling of task allocation taking into account the resource provision of competence carriers in organizational systems

Kseniya Petrenko, St. Petersburg State Institute of Technology, Russia

ONLINE SESSION IV SOFTWARE ENGINEERING

Location: **Building F / room F107**
For Virtual Participation: **VIRTUAL ROOM – 1**

Session Co-Chairs: Dr. Araz Yusubov, Prof. José Exposto

Time: 11:30 – 13:15

Room F107

11:30–11:45 @ Discovering Hidden Transmission Laws with Physics-Constrained Neural Operators for Multiscale Epidemic Forecasting
Muattar Abdimuradova, Shirali Kadyrov, New Uzbekistan University; SDU University, Uzbekistan, Kazakhstan

11:45–12:00 @ Development of a Flood Prediction System for Rainfall Intensity in West Jakarta Based on the Concept of Gotong Royong
Sam Bryan Nixon, Fazril Syaveral Hillaby, Kent Afyan Diswara, Rooney Elvis Liu, Juan Kevin Utomo, Sitti Aaisyah, Binus University, Indonesia

12:00–12:15 @ Comprehensive Packet-Filter Firewall Design: A Case Study in Applied Network Security
Davide Piumatti, Andrea Galletto, Riccardo Zago, Bartolomeo Montrucchio, Fulvio Valenza, Politecnico di Torino, Italy, Afghanistan

12:15–12:30 @ Software Product Line Engineering: Adoption, Tooling and AI Era Challenges
Najam Nazar, Monash University, Australia

12:30–12:45 @ Cognitive Modeling of Complex Systems
Tea Todua, Archil Prangishvili, Vugar Aliyev, Zurab Gasitashvili, Teimuraz Murgulia, Georgian Technical University; Technical Services Company, Georgia, Azerbaijan

12:45–13:00 @ Improving Learned Video Codec Performance in Low-Latency Lossy Communication Scenarios
Enrico Masala, Politecnico di Torino, Italy

13:00–13:15 @ IoT-based cloud system for monitoring and predicting dissolved oxygen in the Black Sea
Lily Petriashvili, Tamar Lominadze, Nino Topuria, Gia Surguladze, Taliko Zhvania, Nona Otkhozoria, Georgian Technical University, Georgia

13:00–14:00 Lunch

Location: **Building F (F103)**

Moderator: **Dr. Abzetdin Adamov**

14:00–15:00	WRAP-UP / CLOSING OF AICT2026
	GROUP PHOTO