



15th International Conference on
APPLICATION of INFORMATION and
COMMUNICATION TECHNOLOGIES

CONFERENCE PROGRAM

13-15- October 2021

Time Zone: Eastern European Time (GMT + 3)

PROGRAM AT A GLANCE

13 October 2021

Location: Zoom Session

10:30 – 11:00	Opening and Welcoming Addresses
11:00 – 12:30	Keynote Session
12:30 – 13:30	Virtual Networking Session / Break
13:30 – 14:30	Tutorial Session
14:30 – 16:30	Concurrent Technical Sessions

14 October 2021

Location: Zoom Session

11:00 – 12:00	Keynote Session
12:00 – 13:00	Virtual Coffee Break / Networking Session
13:00 – 14:30	Concurrent Technical Sessions
14:30 – 15:00	Virtual Coffee Break / Networking Session
15:00 – 16:30	Concurrent Technical Sessions

15 October 2021

Location: Zoom Session

13:00 – 14:30	Concurrent Technical Sessions
14:30 – 15:00	Virtual Coffee Break / Networking Session
15:00 – 16:30	Concurrent Technical Sessions
16:30 – 17:00	Wrap-up / Closing of AICT2021

AICT2021 International Conference



OCTOBER, 2021

Time Zone: Eastern European Time (GMT + 3)

Platform:
Zoom Session

13 October 2021

VIRTUAL ROOM – 1

10:30–11:00

WELCOMING MESSAGES

Dr. Abzetdin Adamov,

AICT2021 General Chair / IEEE Azerbaijan Chapter / ADA University, Azerbaijan

Prof. Sencer Yeralan,

Dean, School of IT & Engineering, ADA University, Azerbaijan

Prof. Robert Pless

Chair, Computer Science, George Washington University, US

Prof. Raffaele Perego,

Director of HPC Lab, Institute for Information Science and Technologies "Alessandro Faedo", Italy

Prof. Witold Pedrycz,

AICT2021 Program Chair, University of Alberta, Canada

11:00–12:30

KEYNOTE SESSION

Moderator: Dr. Abzetdin Adamov,

School of IT & Engineering, ADA University, Azerbaijan

11:00-11:30

Speaker: Professor Schahram Dustdar

IEEE Fellow, Head of the Research Division of Distributed Systems at the TU Wien (Vienna University of Technology), Austria

Title: Edge Intelligence – Engineering the New Fabric of IoT, Edge, and Cloud.

11:30-12:00

Speaker: Professor Cecilia Metra

IEEE Fellow, University of Bologna, IEEE Computer Society President 2019, IEEE Director 2022-2023, Italy

Title: Safety, Reliability and Resiliency Challenges for Highly Autonomous Intelligent Systems.

12:00-12:30

Speaker: Professor Robert Pless

Patrick & Donna Martin Professor of Computer Science, George Washington University, US

Title: Computer Vision, Glitter and Geometry

12:30–13:30 Virtual Networking Session / Break**13:30–14:30 TUTORIAL SESSION**

13:30-14:30 *Speakers: Professor Valeri Skliarov,*
Institute of Electronics and Informatics of Aveiro,
Portugal, Almaty University of Energy and
Communications, Kazakhstan
Professor Iouliia Skliarova,
Electronics, Telecommunications and Informatics
Department, University of Aveiro, Aveiro, Portugal.
Professor Irbulat Utepbergenov,
Department of Automation and Control, Almaty
University of Energy and Communications named
after Gumarbek Daukeev, Almaty, Republic of
Kazakhstan.

Title: Hardware Accelerators for Data Processing in High-
Performance Computing Systems.

14:30–16:30

CONCURRENT TECHNICAL SESSIONS

VIRTUAL ROOM – 1

SESSION 1.

DATA SCIENCE AND ADVANCED ANALYTICS

Session Chair: **Dr. Samir Rustamov**

Time: 14:30–16:30

Room 1

Metric for evaluate of machine translated Text Quality based on Editorial Distances and Reverse Translation <i>Kornilov V.S., Glushan V.M., Lozovoy A.Yu., Southern Federal University, Taganrog, Russia</i>
Simulation-Based Capacity Analysis of a Circle Metro Line <i>Nikolay A. Kuznetsov, Alexandr S. Arkhipov, Denis S. Fomichev, National Research University, Moscow, Russia; Konstantin V. Semenikhin, Russian Academy of Sciences, Moscow, Russia</i>
Points-of-Interest Recommendation Algorithms for a COVID-19 Restrictions Scenario in the Catering Industry <i>Gleb Glukhov, Ivan Derevitskii, ITMO University, Saint-Petersburg, Russia</i>
Application of BG / NBD and Gamma-Gamma Models to Predict Customer Lifetime Value for Financial Institution <i>Asiman Mammadzada, School of Information Technologies and Engineering, ADA University, Baku, Azerbaijan; Emin Alasgarov, Agasalim Mammadov, Unibank, Baku, Azerbaijan</i>
Context-aware Recommender System Based on Content Filtering <i>Mai Abusair, Mohammad Sharaf, Mosab Bozeya, Abdulrhman Beiruti, An-Najah National University, Palestine</i>
Emotion Analysis based on Incremental Online Learning in Social Networks <i>E. Egorova, D. Tsarev, A. Surikov, ITMO University, Saint-Petersburg, Russia</i>
Cross-Content Recommendation between Movie and Book using Machine Learning <i>Afra Nawar, Nazia Tabassum Toma, North South University, Dhaka, Bangladesh; Shamim Al Mamun, M. Shamim Kaiser, Jahangirnagar University, Dhaka, Bangladesh; Mufti Mahmud, Muhammad Arifur Rahman, Nottingham Trent University, Nottingham, UK;</i>

VIRTUAL ROOM – 2

SESSION 5. SOFTWARE ENGINEERING

Session Chair: **Dr. Fuad Hajiye**

Time: 14:30–16:30

Room 2

Combined Energy Harvesting Simulation

Mahmoud Alahmad, Ammar Ziad Abusal, United Arab Emirates University, Al Ain, UAE

An Ontology-Based Approach to the Domain Specific Languages Design

Lyudmila N. Lyadova, Alexander O. Sukhov, Marsel R. Nureev, National Research University Higher School of Economics Perm, Russia

Development of a system for designing wireless networks with incomplete coverage and specified subscriber routes

Blinova Olga, Institute of Control Sciences of RAS, Moscow, Russia

Investigation of Algorithms for the Functioning and Interaction of Robots Using Simulation Tools

Aleksey Ushakov, Perm State University, Perm, Russian Federation; Elena Zamyatina, National Research University Higher School of Economic, Perm, Russian Federation

Consistent MDA for Workflow Development

Timur Umarov, International IT University, Almaty, Kazakhstan; Fuad Hajiye, ADA University, Baku, Azerbaijan

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11:00–12:00	KEYNOTE SESSION
	<p>Moderator: Dr. Araz Yusibov, <i>School of IT & Engineering, ADA University, Azerbaijan</i></p>
11:00-11:30	<p>Speaker: Professor Raffaele Perego, <i>Institute for Information Science and Technologies "Alessandro Faedo", Italy</i></p> <p>Title: High-throughput AI in large-scale systems</p>
11:30-12:00	<p>Speaker: Professor Tofigh Allahviranloo, <i>Bahcesehir Unibersity, Turkey</i></p> <p>Title: Complete Uncertainty in Dynamic System</p>
12:00–13:00	Virtual Networking Session / Break

13:00–16:30

CONCURRENT TECHNICAL SESSIONS

VIRTUAL ROOM – 1

SESSION 2

BIG DATA ENGINEERING

Session Chair: **Dr. Mufti Mahmud**

Time: 13:00–14:30

Room 1

Forecasting of Radar Technologies Using Patent Information <i>Nermin Sökmen, A. Evgenyevich Petrov, National University of Science and Technology, Moscow, Russia</i>
A Comparative Machine Learning Study To Predict Drug Addiction In Bangladesh <i>Alam K. M. Rashedul, Daffodil International University, Dhaka, Bangladesh; Khair Ahammed, Noakhali Science and Technology University, Chittagong, Bangladesh; Md. Inzamam-Ul Hossain, Technical University of Dortmund, Germany; Zannatul Ferdousi, Southeast University, Dhaka, Bangladesh</i>
Design and Development of Student Digital Health Profile <i>Madina Mansurova, Nurgali Kadyrbek, Gulnur Tyulepberdinova, Talshyn Sarsembayeva, Lazzat Sarsenova, Bekasyl Sailau, al-Farabi Kazakh National University Almaty, Kazakhstan</i>
Dataset for Fake News in the Arabic Language <i>Rasha Assaf, Mahmoud Saheb, Palestine Polytechnic University, Hebron, Palestine</i>
Module For Detection And Elimination Of Contractions In Big Data In The Intellectual Information System Of Public Transport <i>I.T. Utepbergenov, S.V. Konshin, Almaty University of Energy and Communications named after Gumarbek Daukeev, Almaty, Republic of Kazakhstan; Kasymova D.T., Academy of Logistics and Transport, ALT, Almaty, Republic of Kazakhstan</i>
The Lexico-Semantic Pattern Extraction Automation Based on the Analysis of Text Corpora <i>Vladislav A. Borovin, Perm State National Research University Perm, Russia; Viacheslav V. Lanin, Lyudmila N. Lyadova, National Research University Higher School of Economics Perm, Russia</i>

14:30–15:00 Break

SESSION 3

HIGH PERFORMANCE COMPUTING

Session Chair: **Dr. Jamaladdin Hasanov**

Time: 15:00–16:30

Room 1

Maintenance of Hierarchical Information System in Conditions of Resource Constraints

Timur Sadykov, Elena Malofeeva, Sagit Valeev, Ufa State Aviation Technical University, Ufa, Russia; Natalya Kondratyeva, Sochi State University Sochi, Russia

Distributed Nonlinear-Polynomial Computing Based on a Group of Polynomials over a Galois Field in the FPGA Architecture

Sergei Shalagin, Vjacheslav Zakharov, KNRTU-KAI, Kazan, Russia

On Distributed Multiplication Of Large-Scale Matrices

Glushan V.M., Lozovoy A.Yu., South Federal University, Taganrog, Russia

Distribution of Operations in Heterogeneous Computing Systems for Processing Speech Signals

Mekhriddin Rakhimov, Manon Ochilov, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan

Development of an algorithm for data augmentation in the problem of object classification on SAR images using Convolutional Neural Networks

Aksamentov Egor, Ivan Tosloy, Oleg Basov, Alexey Dukhanov

Data Network Simulation Model of a Mining Enterprise

A.G. Okhrimenko, Belgorod State University, Belgorod, Russia

VIRTUAL ROOM – 2

SESSION 4.

MACHINE LEARNING AND OTHER AI TECHNIQUES

Session Chair: **Dr. Samir Rustamov**

Time: 13:00–14:30

Room 2

Sentiment Analysis Model for Fake News Identification in Arabic Tweets

Aktham Sawan, Palestine Polytechnic university, Hebron, Palestine; Thaer Thaher, Arab American University, Ramallah, Palestine; Noor Abu-el-rub, University of Kansas Medical Center, KS, USA

Subword speech recognition for agglutinative languages

Alakbar Valizada, Azerbaijan Technical University, Baku, Azerbaijan

End-To-End Neural Speaker Diarization Through Step-Function

Rustam Latypov, Evgeni Stolov, Kazan Federal University, Kazan, Russia

Natural Gas Quality Analysis by Recurrent Neural Networks

Brokarev I.A., Gubkin Russian State University of Oil and Gas, Moscow, Russia; Farkhadov M.P., Vaskovskii S.V., V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia

Named Entity Recognition for the Azerbaijani Language

Natavan Akhundova, ADA University, Baku, Azerbaijan

Autonomous surface craft continuous control with reinforcement learning

Sorokin Andrey, Farkhadov Mais Pasha Oglu, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia

Model of fuzzy assessment of the account's content in the TikTok social network

Dmitry Nazarov, Anton Nazarov, Aleksandra Nazarova

14:30–15:00 Break

SESSION 6.

CYBER SECURITY AND BEST PRACTICE

Session Chair: **Dr. Alexey Dukhanov**

Time: 15:00–16:30

Room 2

Detection of Cyberattacks in Cloud Computing Service Delivery Models using Correlation based Feature Selection

Fargana J. Abdullayeva, Azerbaijan National Academy of Sciences, Baku, Azerbaijan

About Development of a Secure Virtual Environment Model for the Administration of Information Exchange in the Scientific and Educational Organizations

S.A. Lazarev, K.A. Rubtsov, Belgorod State University, Belgorod, Russia;

Review of researches on malware detection

Elshan Baghirov, Institute of Information Technology of ANAS, Baku, Azerbaijan

Methods for emotional psychotyping of cyberspace actors based on their digital footprints

E. Pantelev, L. Gorokhovatskiy, D. Tsarev, A. Surikov, ITMO University, Saint-Petersburg, Russia

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CONCURRENT TECHNICAL SESSIONS

VIRTUAL ROOM – 1

SESSION 7.

EMERGING TRENDS AND TECHNOLOGIES IN ICT APPLICATION

Session Chair: **Dr. Araz Yusubov**

Time: 13:00–14:30

Room 1

Knowledge Based Approach to Form of the Assessment Means Fund

Gulnara Yakhyaeva, Novosibirsk State Technical University, Novosibirsk, Russian Federation

Computer Modeling of Boundary Value Problem of Loading of Copper Rod as a Part of Roadbed

Bakhyt Alipova, International Information Technology University (IITU), Almaty, Kazakhstan

Corpus Based Information Extraction Approach for Marine Ontology Development

Svetlana Strinyuk, Irina Scherbakova, Admiral Makarov State University of Maritime and Inland Shipping, Saint Petersburg, Russia; Viacheslav Lanin, Perm State University, Perm, Russia

Using Monte Carlo Calculation for Molybdenum-99 Production by Electron Accelerator

Ali Torkamani, Alexander Khelvas, Alexander Bugaev, MIPT, Dolgoprudny, Russian Federation; Farshad Ghasemi, NSTRI, Tehran, Iran

The Modern Symbolic Artificial Intelligence and Its Use in Medical Tourism

N. Sakipov, Civil Aviation Academy, Almaty, Kazakhstan; O.Vikhnin, Center for Software Development Azium, Bishkek, Kyrgyzstan

Analysis of how the features of homonymous speech elements of different language levels affect the way a person visually recognizes the elements

Myasoedova M.A., Myasoedova Z.P., Farkhadov M.P., V. A. Trapeznikov Institute of Control Sciences of RAS, Moscow, Russia

14:30–15:00 Break

SESSION 9.

ICT IN BUSINESS ADMINISTRATION, GOVERNANCE, FINANCE AND ECONOMY

Session Chair: **Dr. Jamaladdin Hasanov**

Time: 15:00–16:30

Room 1

Genetic Algorithm Based on Idempotent Algebra Methods for RCPS <i>Aleksandr M. Bulavchuk, Daria V. Semenova, Siberian Federal University, Krasnoyarsk, Russian Federation</i>
How digital transformation capabilities influence firm performance? A methodology for supporting decision-making <i>Selma Regina Martins Oliveira, Fluminense Federal University, Volta Redonda, Brazil; Sandro Trento, University of Trento, Trento, Italy</i>
Algorithm and Data Structures of the Agent-Based Model of Trade Wars <i>Aleksandra Mashkova, Orel State University named after I.S. Turgenev, Orel, Russia; Albert Bakhtizin, Central Economics and Mathematics Institute of RAS, Moscow, Russia</i>
Structure and Algorithms of the Agent-Based Model of Spreading the Norms and Values <i>Aleksandra Mashkova, Orel State University named after I.S. Turgenev, Orel, Russia</i>
Discovering the value of electronic gaming for comprehending the carbon emissions allowance trading market <i>Tomohiro Nakada, Daiichi Institute of Technology, Tokyo, Japan</i>
Innovation ecosystem and digital transformation: linking two emerging agendas through knowledge <i>Selma Regina Martins Oliveira, Fluminense Federal University, Volta Redonda, Brazil; Sandro Trento, University of Trento, Trento, Italy</i>

VIRTUAL ROOM – 2

SESSION 8.

COMMUNICATION, NETWORK AND HARDWARE

Session Chair: **Dr. Kashif Nisar**

Time: 13:00–14:30

Room 2

Mobility Robustness Optimization by using SON in Heterogeneous Network
Fereshteh Atri Niasar, Tehran Power Distribution Company; Amir Reza Momen, Islamic Azad University

A Novel Approach towards using Internet of Things in Smart Agriculture Monitoring System
Shrey Chirag Shah, Anwita Chakraborty, Yelithoti Sravana Kumar, Tapaswini Samant, Swati Swayamsiddha, Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, Bhubaneswar, Odisha, India

An Android-based Portable Smart Cane for Visually Impaired People
M.Adil Khan, Chang'an University, Xi'an, China; Kashif Nisar, University Malaysia Sabah, Sabah, Malaysia; Sana Nisar, Hanyang University, Seoul, South Korea; BS Chowdhry, Mehran University of Engineering & Technology, Jamshoro, Pakistan; Ehtisham Lodhi, Chinese Academy of Sciences, Beijing, China; Jawad khan, Abbottabad University of Science and Technology, Havelian, Khyber Pakhtunkhwa, Pakistan; Muhammad Reazul Haque, Multimedia University, Cyberjaya, Selangor, Malaysia

Design and Analysis of Multi Efficiency Motors Based High Endurance Multi Rotor with Central Thrust
Syed Hussain Ali Kazmi, Ammar Masood, Air University, Islamabad, Pakistan; Kashif Nisar, University Malaysia Sabah, Sabah, Malaysia

Construction of a lattice structure of some closed classes in four-valued logic with application to traffic transmission tasks
Elmira Yu. Kalimulina, V. A. Trapeznikov Institute of Control Sciences, Russian Academy of Sciences, Moscow, Russia,

14:30–15:00 Break

VIRTUAL ROOM – 1

16:30–17:00	WRAP-UP / CLOSING OF AICT2021
	VIRTUAL GROUP PHOTO (with open cameras)