

## 14<sup>th</sup> International Conference on APPLICATION of INFORMATION and

# COMMUNICATION TECHNOLOGIES

# CONFERENCE PROGRAM

07-09 October 2020

## PROGRAM AT A GLANCE

## **07** October 2020

Location: Zoom Session

10:00 - 10:20	<b>Opening and Welcoming Addresses</b>
10:20 - 12:30	Keynote Session
12:30 - 13:30	Virtual Networking Session / Break
13:30 - 17:15	<b>Concurrent Technical Sessions</b>

## **08** October 2020

Location: Zoom Session

09:00 - 10:30	Keynote Session
10:30 - 11:00	Virtual Coffee Break / Networking Session
11:00 - 13:00	Concurrent Technical Sessions
13:00 - 13:30	Virtual Coffee Break / Networking Session
13:30 - 16:00	Concurrent Technical Sessions

## **09** October 2020

Location: Zoom Session

10:00 - 11:30	Keynote Session
11:30 - 12:00	Virtual Coffee Break / Networking Session
12:00 - 14:00	<b>Concurrent Technical Sessions</b>
14:00 - 14:30	Virtual Coffee Break / Networking Session
14:30 - 16:30	<b>Concurrent Technical Sessions</b>
16:30 - 17:00	Wrap-up / Closing of AICT2020
16:30 - 17:00	Wrap-up / Closing of AIC12020

## Time Zone: Tashkent time (GMT + 5)



## AICT2020 International Conference

# OCTOBER, 2020

Platform: **Zoom Session** 

## 07 October 2020

## 10:00–10:20 WELCOMING MESSAGES

#### Dr. Abzetdin Adamov,

AICT2020 General Chair / IEEE Azerbaijan Chapter / ADA University, Azerbaijan

#### Dr. Komil Tashev,

Vice-rector, Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Uzbekistan

### Dr. Fariz Ismailzade

Executive vice-rector, ADA University, Azerbaijan

#### Professor Ricardo Baeza-Yates,

AICT2020 Program Chair, Northeastern University, US

### 10:20–12:30 KEYNOTE SESSION

10:20-11:00		<b>Professor Pavel Pevzner</b> Chair and Distinguished Professor of Computer Science and Engineering, University of California, San Diego, US, Open Algorithmic Problems in Immunogenomics.
11:00-11:40	Speaker:	Dr. Mufti Mahmud
	Title:	Senior Lecturer, Computing at the Nottingham Trent University, UK Towards Artificially Intelligent Devices for Healthcare and Rehabilitation.
11:40-12:20	Speaker:	<b>Professor Marat Rakhmatullaev</b> <i>Tashkent University of Information Technology</i> ,
	Title:	Uzbekistan Expert system with fuzzy logic for protecting scientific information resources.

#### 12:30–13:30 Virtual Networking Session / Break

## 13:30–17:15 CONCURRENT TECHNICAL SESSIONS

# VIRTUAL ROOM – 1

## SESSION 1.1

## ALGORITHMS

### Time: 13:30–15:30

Room 1

Implementation of the Reinforcement Learning Mechanism in the Random Access Channel Procedure

Amirsaidov U.B., Qodirov A.A., Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan.

On a Nature-like Technology for Treatment of Human Viral Diseases Based on the use of Simulated Microwave Radiation from the Sun

Darovskih Stanislav Nikiforovich, Shonazarov Parviz, South Ural State University, Chelyabinsk, Russia; Kholov Fozil Tolibovich, Tomsk state University of Control Systems and Radioelectronics, Tomsk, Russia

Parallel Algorithm For Constructing a Cubic Spline on Multi-Core Processors in a Cluster

Hakimjon Zaynidinov, Oybek Mallayev, Javohir Nurmurodov, TUIT, Tashkent, Uzbekistan

Accident & Emergency Informatics Terminologies and Standards are needed for Digital Health in the Early Rescue Chain

Thomas M. Deserno, Peter L. Reichertz Institute for Medical Informatics of TU Braunschweig and Hannover Medical School, Brunswick, Germany; Robert Jakob, World Health Organization, Geneva, Switzerland

A new dynamic algorithm for Petri Nets Slicing

Albana Roci, Reggie Davidrajuh, University of Stavanger, Stavanger, Norway Application of machine learning in the development of databases of

recommendation resources and music services

Kseniya V. Tcyguleva, Anna E. Stepanova, Dmitry S. Silnov, National Research Nuclear University MEPhI, Moscow, Russian Federation

Temporal Automaton RVTI-Grammar for the Diagrammatic Design Workflow Models Analysis

Nikolay Voit, Semen Bochkov, Sergey Kirillov, Ulyanovsk State Technical University, Ulyanovsk, Russia

Numerical algorithm for modeling turbulence in a jet with diffusion combustion

Jumayev Jura, Bukhara State University, Bukhara, Uzbekistan; Mustapakulov

14th International Conference on Application of Information and Communication Technologies

Yazdonkul, Kuldoshev Hakim, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan

### **SESSION 5**

## SOFTWARE ENGINEERING

### Time: 15:30-17:15

An Empirical Study of Goal Setting in UX/UI-design

Vitaly Kompaniets, Alexander Lyz, Alina Kazanskaya, Southern Federal University Taganrog, Russia

Development of a geographic information system for managing university campus

Yury B. Gritsenko, Pavel V. Senchenko, Konstantin A. Kalentiev, Tomsk State University of Control Systems and Radioelectronics Tomsk, Russian Federation

Information models of information systems on electronic document exchange and the attestation process related to scientific degrees

Makhmanov Orif Kudratovich, Latifov Feruzjon Mukhammadjon, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Uzbekistan, Tashkent

**Industrial Messaging Middleware: Standards and Performance Evaluation** *Kirill Krinkin, Gavrilov Andrei, Bergaliyev Marlen, Tinyakov Sergey, Saint Petersburg Electrotechnical University "LETI", St. Petersburg, Russia* 

**Towards Decomposing Monolithic Applications into Microservices** Dilshodbek Kuryazov, Dilshod Jabborov, Bekmurod Khujamuratov, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Urgench, Uzbekistan

The role of blockchain for increase trust on software components and services

Vaidas Giedrimas, Siauliai University, Siauliai, Lithuania

Strategies of the Social Network Immunization: An Experience of an Investigation by Simulation Tools

Ilya Zimin, Perm State University, Perm, Russian Federation; Elena Zamyatina, Perm State University, Perm, Russian Federation

GOMS-TLM and Eye Tracking Methods Comparison in the User Interface Interaction Speed Assessing Task

Vitaly Kompaniets, Alina Kazanskaya, Alexey Tselykh, Southern Federal University, Taganrog, Russia; Valery Grigoryev, LLC Heapp Games, Taganrog, Russia

Room 1

# VIRTUAL ROOM – 2

## **SESSION 2.1**

## DATA SCIENCE AND ADVANCED ANALYTICS

#### Time: 13:30–15:30

#### **Operational Risk Estimation Using Probabilistic Model**

Trofimchuk Oleksandr, Prosiankina-Zharova Tetyana, Terentiev Oleksandr, The National Academy of Sciences of Ukraine, Kyiv, Ukraine; Bidiuk Petro, National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute», Kyiv, Ukraine

The approach to building a graph knowledge base using social media data Vadim Moshkin, Ulyanovsk State Technical University, UlSTU, Ulyanovsk, Russia

#### Information Extraction from Arabic Law Documents

Samah Abu Shamma, Aseel Ayasa, Walaa Sleem, Birzeit University, Birzeit, Palestine

### **On The Distributed Determinization Of Large NFAs**

Abdoulaye GUEYE, Cheikh BA, Universite Gaston Berger de Saint-Louis, Saint-Louis, Senegal

Machine Learning Approaches to Predict New Mobile Internet Customers Aktham Sawan, Rashid Jayousi, Al-Quds University, Jerusalem, Palestine

A new dataset for the detection of hand movements based on the SEMG signal

Adilbek Turgunov, Karshi branch of the Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Karshi, Uzbekistan; Kudratjon Zohirov, Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Tashkent, Uzbekistan; Bobur Muhtorov, Tashkent Pediatric Medical Institute, Tashkent, Uzbekistan

#### Application of Data Layering in Precision Beekeeping: The Concept

Nikolajs Bumanis, Olvija Komasilova, Vitalijs Komasilovs, Armands Kviesis, Aleksejs Zacepins, Latvia University of Life Sciences and Technologies, Jelgava, Latvia

# Gender variation in the discourse of online hotel reviews: A corpus-based semantic analysis

Viacheslav Lanin, Elizaveta Smirnova, National Research University Higher School of Economics, Perm, Russia

Room 2

### SESSION 6

## **CYBER SECURITY AND PRACTICE**

### Time: 15:30-17:30

#### Room 2

Method of Constructing a Visualization of Threath Model of Information Security

A.V. Manzhosov, I.P. Bolodurina, Orenburg State University, Orenburg, Russia

Improving user experience with TOTP hardware tokens by implementing QR codes and HID keyboard emulation

Emin Huseynov, Université de Genève Geneva, Switzerland

**Cybersecurity Assessment Using Delay from Backlog Bound Calculation** A.A. Baybulatov, V.G. Promyslov, V. A. Trapeznikov Institute of Control Sciences

of Russian Academy of Sciences, Moscow, Russia

**Detection of Sybil Attack in Wireless Sensor Networks** Zhukabayeva T.K., Mardenov E.M., Abdildaeva A.A, Eurasian National University named after L.N. Gumilyov, Nur Sultan, Republic of Kazakhstan

Threats Classification Method for the Transport Infrastructure of a Smart City

Konstantin Izrailov, Andrey Chechulin, Lidia Vitkova, St. Petersburg Institute for Informatics and Automation of Russian Academy of Sciences, Saint-Petersburg, Russia

Blockchain-based open infrastructure for URL filtering in an Internet browser

Obadah R. Hammoud, Ivan A. Tarkhanov, National University of Science and Technology, Moscow, Russia

Improvement the schemes and models of detecting network traffic anomalies on computer systems

Yusupov Sabirjan Yusupdjanovich, Gulomov Sherzod Rajaboevich, TUIT, Tashkent, Uzbekistan

**UNICODE For Hiding Information In A Text Document** 

N.R. Zaynalov, O.N. Mavlonov, A.N. Muhamadiev, Qilichev Dusmurod, I.R. Rahmatullaev, Samarkand branch of Tashkent University of Information Technologies named after Muhammad al-Khwarizmi. Samarkand, Uzbekistan

Expert system with Fuzzy logic for protecting Scientific Information Resources

Marat Rakhmatullaev, Sherbek Normatov, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Uzbekistan

## AICT2020 International Conference



# **OCTOBER**, 2020

Platform: Zoom Session

## 08 October 2020

09:00-10:20	KEYNOTE SESSION
09:00-09:40	Speaker: Professor Jeanna Matthews, Founding co-chair of the ACM Technology Policy   Subcommittee, Clarkson University, US   Title: Algorithmic Accountability and the Securing of our Decision-Making Landscape.
09:40-10:20	Speaker:Professor Mark Last, Head of Ben-Gurion University Data Science Research Center, Ben-Gurion University of the Negev, IsraelTitle:Mining Multi-label, Multi-target, and Evolving Data with Info-Fuzzy Networks.
10:30-11:00	Virtual Networking Session / Break

11:00–16:00 CONCURRENT TECHNICAL SESSIONS

# VIRTUAL ROOM – 1

## **SESSION 1.2**

## ALGORITHMS

#### Time: 11:00–12:45

Room 1

The 3x+1 Problem For Rational Numbers Invariance of Periodic Sequences in 3x+1 Problem

Yagub N. Aliyev, ADA University, Baku, Azerbaijan

An Experimental Design Approach to Analyse the Performance of Island-Based Parallel Artificial Bee Colony Algorithm

Thaer Thaher, Badie Sartawi, Al-Quds University, Abu Dies, Palestine

Anomaly Detection Between Judicial Text-Based Documents

Mukhsimbayev Bobur, Kuralbayev Aibek, Bekbaganbetov Abay, Kazakh-British Technical University, Almaty, Kazakhstan; Fuad Hajiyev, ADA University, Baku, Azerbaijan

Self-organizing algorithm for pilot modeling the reaction of society to the phenomenon of the Black Swan

Michail Artemenko, Vladimir Budanov, Nicoly Korenevskiy, Southwest state university, Kursk, Russia

Algorithms for selecting the most efficient method for solving classification problems

Otabek Khujaev, Khudayshukur Kuzibaev, Muzaffar Artikov, Urgench branch of Tashkent University of Information Technologies, Urgench, Uzbekistan

Mathematical modeling of refractive index based on machine learning (kNN-QSPR) method

Rifkat Davronov, Fatima Adilova, Institute of Mathematics Academy of Sciences, Tashkent, Uzbekistan; Bakhtiyor Rasulev, North Dakota State University, North Dakota, USA

**Development of a Simulation Model of Fetal Activity Signal Source** *Yulia O. Bobrova, Olga N. Kapranova, Kseniya V. Filipenko, Saint Petersburg Electrotechnical University "LETI", St. Petersburg, Russia* 

12:45-13:20 Break

## SESSION 4.1

## MACHINE LEARNING AND OTHER AI TECHNIQUES

### Time: 13:20-15:00

Development of integral model of automatic word recognition in Uzbek language

Muhammadjon Musaev, Ilyos Khujayorov, Mannon Ochilov, Tashkent University of Information technologies named after Muhammad Al-Khwarizmi, Tashkent, Uzbekistan

Ray tracing simulation of wing mirrors for ultrasonic sensor based blind spot monitoring system

Jasurkhuja Kholkhujaev, Nodirbek Abdurakhmonov, Sanjarbek Ruzimov, Nurmukhammad Abdukarimov, Jamshid Inoyatkhodjaev, Abdulla Saidov, Turin Polytechnic University in Tashkent Tashkent, Uzbekistan

Artifact Detection in Chronically Recorded Local Field Potentials using Long-Short Term Memory Neural Network

Marcos Fabiett, Ahmad Lotfi, Nottingham Trent University, Nottingham, United Kingdom; David Guggenmos, Randolph Nudo, University of Kansas Medical Center, Kansas City, United States; Alberto Averna, Universita degli Studi di Milano, Milan, Italy; Michela Chiappalone, Italian Institute of Technology, Genoa, Italy

Multi-level lecture video classification using text content

Veysel Sercan Ağzıyağlı, Başkent University, Ankara, Turkey; Hasan Oğul, Østfold University College, Halden, Norway

Using Support Vector Regression in multi-target prediction of drug toxicity Fatima Adilova, Alisher Ikramov, Laboratory of Biomedinformatics, Tashkent, Uzbekistan

Algorithm of Automatic Differentiation of Miocardial Infarction from Cardiomyopathy based on Electrocardiogram

Rashid Nasimov, Bakhodir Muminov, Sabirjan Yusupov, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan

**Financial Services Credit Scoring System Using Data Mining** *Adel Hassan, Rashid Jayousi, Al Quds University, Ramallah, Palestine* 

#### Room 1

### **SESSION 8.1**

### COMMUNICATION, NETWORK AND HARDWARE

#### Time: 15:00–16:00

Room 1

# Impact of different optical cable length values on GPON access network parameters

Mubarak Abdujapparova, Svetlana Sadchikova, Dilbar Normatova, TUIT named after Muhammad Al-Khwarizmi, Tashkent, Uzbekistan

#### Automation Check Vulnerabilities Of Access Points Based On 802.11 Protocol

Danil Subbotin, Irina Babalova, Vadim Bazanov, Nikita Ivanov, National Research Nuclear University MEPhI, Moscow, Russian Federation

Flying Ad hoc Network Expedited by DTN Scenario: Reliable and Costeffective MAC Protocols Perspective

Sobiya Arsheen, Abdul Wahid, Khaleel Ahmad, Maulana Azad National Urdu University, Hyderabad, India; Khujamatov Khalim, Tashkent University of Information Technologies, Tashkent, Uzbekistan

On Developing a Framework for Modeling Cross-Layer Optimization Tasks for Mobile Communications

Usmanova N., Qodirov A., Tashkent University of Information Technologies, Tashkent, Uzbekistan

# VIRTUAL ROOM – 2

## **SESSION 2.2**

## DATA SCIENCE AND ADVANCED ANALYTICS

#### Time: 11:00–12:45

Room 2

Named Entity Recognition Algorithms Comparison For Judicial Text Data Kuralbayev Aibek, Mukhsimbayev Bobur, Bekbaganbetov Abay, Kazakh-British Technical University, Almaty, Kazakhstan; Fuad Hajiyev, ADA University, Baku, Azerbaijan

Transformation, Analysis and Visualization of Distributed Temperature Sensing Data generated by Oil Wells

Ilyas Karimov, Sevil Jafarova, Miradil Zeynalli, Samir Rustamov, Abzetdin Z. Adamov, ADA University, Baku, Azerbaijan; Aslan Babakhanov, BP Exploration (Caspian Sea), Baku, Azerbaijan

Reliability and chaotic risk modeling for real time data driven smart systems

Hamza EROL, Mersin University, Mersin, Turkey; Recep EROL, College of Engineering and Information Technology University of Arkansas, Arkansas, USA

Analysis and exploitation of Geospatial Big Data: State of art Yassine Loukili, Mohamed El Mehdi El Aissi, Sarah Benjelloun, Younes Lakhrissi, Hiba Chougrad, Safae Elhaj Ben Ali, Abdessamad El Boushaki, Abdellah University Fez, Morocco

Automatic generation of questions based on semantic text analysis Buldin Ilya, Murov Vadim, Dmitry Silnov, National Research Nuclear University, Moscow, Russian Federation

IDEF Models And Innovative System For Search Data In Stochastic Information Environment

Muminov B. B., Bekmurodov U.B., TUIT named after Muhammad al Khwarizmi, Tashkent, Uzbekistan

**Development of the N-gram Model for Azerbaijani Language** *Aliya Bannayeva, ADA University Baku, Azerbaijan* 

12:45-13:20 Break

## SESSION 7.1

## EMERGING TRENDS AND TECHNOLOGIES IN ICT APPLICATION

#### Time: 13:20-15:00

Room 2

**Full-scale Investigation of a Dielectric Conical Antenna Small Perturbation** *Kirill Zeyde, Alisa Vardugina, Ural Federal University, Ekaterinburg, Russia* 

Digital technologies in the formation the students' supra professional competencies

Anastasyia Pesha, Marina Shavrovskaya, Ural State University of economics, Yekaterinburg, Russia

Explained Artificial Intelligence helps to integrate Artificial and Human Intelligence into Medical Diagnostic Systems

Mais Farkhadov, Aleksander Eliseev, Nina Petukhova, V.A. Trapeznikov Institute of Control Sciences of RAS Moscow, Russia

Computerized web-based sound and speech trainer to help impairedhearing people

Mais Farkhadov, Nina Petukhova, V.A. Trapeznikov Institute of Control Sciences of RAS Moscow, Russia; Mukhabbat Farkhadova, RUDN University, Moscow, Russia

**Towards Secured Service Provisioning for the Internet of Healthcare Things** Fahiba Farhin, M. Shamim Kaiser, Jahangirngar Univesity, Dhaka, Bangladesh; Mufti Mahmud, Nottingham Trent University, Nottingham, UK

A Sensor-Actor Coordination protocol for Variable Rate Irrigation Sapna, Aditya Trivedi, Kiran Kumar Pattanaik, Atal Bihari Vajpayee Indian Institue of Information Technology, Madhya Pradesh, India

## SESSION 8.2

## COMMUNICATION, NETWORK AND HARDWARE

### Time: 15:00–16:00

Room 2

Studying Optimal Configuration of Microwave-Photonics Long-Term Time Delay Circuit Based on Fiber-Optics Recirculating Loop

Mikhail E. Belkin, Dmitriy A. Fofanov, Boris A. Kartyshev, Alexander S. Sigov, MIREA - Russian Technological University, Moscow, Russia

Analysis of vehicle formations using the eigenprojection of the Laplacian matrix

Rafig Agaev, V.A. Trapeznikov Institute of Control Sciences of RAS, Moscow, Russian Federation

Quality of Service Analysis of the MANET routing protocols with Respect to Delay, Throughput and Network load

Ibrahim A. Lawal, Bayero University, Kano, Nigeria; Kashif Nisar, University Malaysia Sabah, Jalan UMS, Kota Kinabalu Sabah, Malaysia; Usman Ismail Abdulmalik, Maryam Abacha American University of Niger, Maradi, Niger; Abubakar Aminu Muazu, Ummaru Musa Yaraduwa University Katsina, Nigeria

Reliable Priority Based QoS Real-Time Traffic Routing in Vehicular Networks

Abubakar Aminu Muazu, Umaru Musa Yar'adua University, Katsina, Nigeria; Kashif Nisar, University Malaysia Sabah, Kota Kinabalu Sabah, Malaysia; Ibrahim A. Lawal, Bayero University Kano, Kano, Nigeria

## AICT2020 International Conference



# **OCTOBER**, 2020

Platform: Zoom Session

## 09 October 2020

10:00-11:20	KEYNOTE SESSION	
10:00-10:40	Speaker: Professor Ricardo Baeza-Yates, Professor at Northeastern University, Silicon Valley campus, Palo Alto, CA, US   Title: Bias on Search and Recommender Systems.	
10:40-11:20	Speaker:   Professor Bychkov Igor, Academician of Russian Academy of Sciences, Russia     Title:   Supercomputer Engineering for Supporting Decision- making on Energy Systems Resilience.	

11:30–12:00 Virtual Networking Session / Break

12:00–16:30 CONCURRENT TECHNICAL SESSIONS

# VIRTUAL ROOM – 1

## **SESSION 4.2**

### MACHINE LEARNING AND OTHER AI TECHNIQUES

#### Time: 12:00–14:00

#### Room 1

Prediction of Student's Academic Performance using Feedforward Neural Network Augmented with Stochastic Trainers

Thaer Thaher, Rashid Jayousi, Al-Quds University, Abu Dies, Palestine

Hadith Authenticity Prediction using Sentiment Analysis and Machine Learning

Farhana Haque, Anika Hossain Orthy, Shahnewaz Siddique, North South University, Dhaka, Bangladesh

**30-day Hospital Readmission Prediction using MIMIC Data** Rasha Assaf, Rashid Jayousi, Al-Quds University, Jerusalem, Palestine

Model structures and fitting criteria for system identification with neural networks

Marco Forgione, Dario Piga, IDSIA Dalle Molle Institute for Artificial Intelligence SUPSI-USI, Manno, Switzerland

**Uzbek speech commands recognition and implementation based on HMM** Shukurov Kamoliddin Elbobo, Kholdorov Shokhrukhmirzo Imomali, Khasanov Umidjon Komiljon, Tashkent University of Information technology, TUIT, Tashkent, Uzbekistan

Uzbek News Categorization using Word Embeddings and Convolutional Neural Networks

Ilyos Rabbimov, Sami Kobilov, Samarkand State University, Samarkand, Uzbekistan; Iosif Mporas, University of Hertfordshire, United Kingdom

The Support of aircraft pipeline production with precedent oriented skeleton models

P. Pavlov, Ulyanovsk State University, Ulyanovsk, Russia

**MRI video edge detection based on Fuzzy inference technique** Shaima Ibraheem Jabbar, Al Frurat Al Awsat Technical University, Babylon, Iraq; Abathar Qahtan Aladi, Mirjan Teaching Hospital, Babylon,Iraq

14:00-14:30 Break

## SESSION 7.2 EMERGING TRENDS AND TECHNOLOGIES IN ICT APPLICATION

### Time: 14:30-16:30

Room 1

### Development of a Smart Instrumentation for Analyzing Railway Track Health Monitoring Using Forced Vibration

BS Chowdhry, Ali Akbar Shah, Tayab Din Memon, National Center of Robotics and Automation -Condition Monitoring Systems Lab, Mehran University of Engineering & Technology, Jamshoro, Pakistan; Nick Harris, School of ECS, University of Southampton, UK; Imtiaz Hussain Kalwar, DHA Suffa University, Karachi, Pakistan

**Contribution of Temporal Sequence Activities to Predict Bug Fixing Time** *Nuno Pombo, Rui Teixeira* 

Biotechnical System for Control for Exoskeleton Limb Based on Surface Myosignals for Rehabilitation Complexes

A A Trifonov, A A Kuzmin, S A Filist, South-West State University, Kursk, Russia; E.V.Petrunina, Moscow State University of Humanities and Economics, Moscow, Russia

2D Amplitude-Only Microwave Tomography Algorithm for Breast-Cancer Detection

Sandra Costanzo, Giuseppe Lopez, University of Calabria, Rende, Italy

Networking and Computing in Internet of Things and Cyber-Physical Systems

Khalim Khujamatov, Ernazar Reypnazarov, Doston Khasanov, Nurshod Akhmedov, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan

Modelling of multi-path transmission system of various priority multimodal information

Artem Ryndin, Ekaterina Pakulova, Southern Federal University, Taganrog, Ruassian Federation; Oleg Basov, ITMO University, Saint-Petersburg, Russian Federation

Application of modern messengers for automation of business processes based on 1C: Enterprise

Anna E. Stepanova, Kseniya V. Tcyguleva, Dmitry S. Silnov, National Research Nuclear University MEPhI, Moscow, Russian Federation

Mathematical models of optimal distribution of water in main channels Shavkat Rakhimov, Scientific Research Institute of Irrigation and Water Problems, Tashkent, Uzbekistan; Aybek Seytov, Bahrom Xonimqulov, Chirchik State Pedagogical Institute, Chirchik, Uzbekistan; Nasiba Rakhimova, Tashkent Agrarian university, Tashkent

# VIRTUAL ROOM – 2

### SESSION 3.

### HIGH PERFORMANCE COMPUTING

Time: 12:00-14:00

Room 2

Synthesis Algorithm for Discrete Neuro fuzzy Regulator for a Nonlinear Object

Siddikov Isamiddin Xakimovich, Umurzakova Dilnoza Maxamadjonovna, Tashkent State Technical University, Tashkent, Uzbekistan

**Topological Interpolation Method for Modeling Dynamic Systems** Siddikov Isamiddin Xakimovich, Umurzakova Dilnoza Maxamadjonovna, Tashkent State Technical University, Tashkent, Uzbekistan

Supercomputer Engineering for Supporting Decision-making on Energy Systems Resilience

Igor Bychkov, Alexander Feoktistov, Sergey Gorsky, Ivan Sidorov, Roman Kostromin, Evgeniy Fereferov, Roman Fedorov, Matrosov Institute for System Dynamics and Control, Irkutsk, Russia; Alexei Edelev, Melentiev Energy Systems Institute of the Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

A High-Performance Parallel Approach to Image Processing in Distributed Computing

Mekhriddin Rakhimov, Doniyor Mamadjanov, Abulkosim Mukhiddinov, Tashkent University of Information Technologies named after Muhammad Al-Khwarizmi, Tashkent, Uzbekistan

QCA based Priority Encoder using Toffoli gate

Nuriddin Safoev, Ganiev Abdukhalil, Karimov Abduqodir Abdisalomovich, Tashkent University of Information Technologies named after Muhammad al-Khwarizmi, Tashkent, Uzbekistan

**Computation Model of Data Intensive Computing with MapReduce** *Abzetdin Z. Adamov, Center for Data Analytics Research (CeDAR), ADA University, Baku, Azerbaijan* 

14:00-14:30 Break

## **SESSION 9**

## ICT IN BUSINESS, PUBLIC SECTOR AND RESEARCH

#### Time: 14:30-16:30

Room 2

#### Simulation of Business Projects in the Agent Model of the Russian Federation Spatial Development

Aleksandra Mashkova, Ekaterina Novikova, Olga Savina, Orel State University named after I.S. Turgenev, Orel, Russia

## Efficient Information and Communication Technologies in the Design of Transport and Logistics Centers of the New Silk Road

Ismailov Zh.I., Kononov D.A., Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia; Furugyan M.G., Dorodnicyn Computing Center of Federal Research Center Computer Science and Control of Russian Academy of Sciences, Moscow, Russia

Association Analysis of Digital Transformation Processes of the B2G Trade Services Market Segment in Russia

E. A. Lenda, D.V. Semenova, A. K. Yakobson, Siberian Federal University, Krasnoyarsk, Russia; E. E. Goldenok, Krasnoyarsk state medical University, Krasnoyarsk, Russia

SAP Analytics Cloud: intellectual analysis of small and medium-sized business activities in Russia in the context of COVID-19

Nazarov D.M., Kovtun D.B., Reichert T.N., Ural State University of Economics, Yekaterinburg, Russia

**Multimedia technologies to teach Sign Language in a written form** *Myasoedova M.A., Myasoedova Z.P., Farkhadov M.P., V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia* 

Algorithm for the Abnormal Ventricular Electrical Excitation Detection Zafar M. Yuldashev, Anatoliy P. Nemirko, Darina S. Ripka, St. Petersburg State Electrotechnical University "LETI", St. Petersburg, Russia

Integrated approach to the development and implementation of distance advanced courses for computer science teachers

Manargul Mukasheva, Zhanbol Zhilbayev, Yekaterina Payevskaya, Education Research Center National Academy of Education named after Y.Altynsarin, Nur-Sultan, Kazakhstan; Olga Chorosova, North-Eastern Federal University, Yakutsk, Russia

An Approach to Prepare for and Realize the Learning Process in Conditions of Digital Transformations and Learning Trends with the Use of the Object-Oriented Approach and Reusable Abstractions

Alexey Dukhanov, Leonid Gorokhovatsky, Anna Lutsenko, ITMO University, St. Petersburg, Russian Federation

**Donabedian Approach for Simulation Modeling to Evaluate the Quality of Emergency Medical Services in a Large Metropolitan Area: A Case Study** *S.V. Begicheva, Ural State University of Economics, Ekaterinburg, Russia* 

### Models Of Integration Of Information Systems In Higher Education Institutions

Muminov B. B., Karimov U.U., Bekmurodov U.B., TUIT named after Muhammad al Khwarizmi, Tashkent, Uzbekistan

## 16:30–17:00 WRAP-UP / CLOSING OF AICT2020