



11th International Conference on
APPLICATION of INFORMATION and
COMMUNICATION TECHNOLOGIES

CONFERENCE PROGRAM

20-22 September 2017, Moscow, Russia

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PROGRAM AT A GLANCE

20 September 2017

Location: V.A. Trapeznikov Institute of Control Sciences of RAS
Address: 65 Profsoyuznaya str., Moscow

09:00 – 17:30	
09:00 – 10:00	Registration (Reception)
10:00 – 10:40	Welcoming and Opening Ceremony
10:40 – 11:40	Keynote Session
11:40 – 12:00	Coffee Break
12:00 – 13:00	Keynote Session
13:00 – 13:10	
Group photo of all participants (location: Main Hall)	
13:10 – 14:00	Lunch
14:00 – 15:00	Tutorial Session 1
15:00 – 15:30	Coffee Break
15:30 – 16:30	Tutorial Session 2
16:30 – 17:30	Tutorial Session 3
17:30 – 21:00	Sightseeing City Tour

21 September 2017

Location: V.A. Trapeznikov Institute of Control Sciences of RAS
Address: 65 Profsoyuznaya str., Moscow

09:30 – 10:00	Registration
10:00 – 11:00	Keynote Session (Main Convention Hall)
11:00 – 11:30	Coffee Break
11:30 – 13:30	Concurrent Technical Sessions
13:30 – 14:30	Lunch
14:30 – 16:30	Concurrent Technical Sessions
16:30 – 17:00	Coffee Break
17:00 – 18:30	Concurrent Technical Sessions
19:00	Banquet Dinner (Dining Hall) – by invitation

22 September 2017

Location: V.A. Trapeznikov Institute of Control Sciences of RAS
Address: 65 Profsoyuznaya str., Moscow

09:30 – 11:00	Concurrent Technical Sessions
11:00 – 11:20	Coffee Break
11:20 – 13:15	Concurrent Technical Sessions
13:15 – 14:00	Lunch
14:00 – 14:20	Closing Ceremony
14:30 – 18:00	Social Program – Sightseeing Tour to Kremlin – by invitation

AICT2017 International Conference



SEPTEMBER, 2017

Location:

V.A. Trapeznikov Institute of Control Sciences of RAS

20 September 2017

**Location: V.A. Trapeznikov Institute of Control Sciences of RAS
Address: 65 Profsoyuznaya str., Moscow**

09:00–10:00 Registration

**10:00–10:30
Hall: Main
Convention**

WELCOMING AND OPENING CEREMONY

Professor Dmitry Novikov,

Director of V.A. Trapeznikov Institute of Control Sciences of RAS, Russia

Dr. Abzetdin Adamov,

AICT2017 General Chair / IEEE Azerbaijan Chapter / ADA University

Professor Sergey Nikitov,

IEEE Russia Section Chair, Russia

Dr. Sergei Shirinsky,

Director of Communications Department of National Research University "MPEI", Russia

Professor Anatoly Dmitrievsky,

Research Director of Oil and Gas Research Institute of RAS

Professor Askhat Diveev,

Head of Department of Peoples' Friendship University of Russia, Russia

**10:30–10:40
Hall: Main
Convention**

ACKNOWLEDGEMENT OF SUPPORTERS

Professor Dmitry Novikov,

Director of V.A. Trapeznikov Institute of Control Sciences of RAS, Russia

Professor Sergey Nikitov,

IEEE Russia Section Chair, Russia

**10:40–11:40
Hall: Main
Convention**

KEYNOTE SESSION

10:40-11:10

Speaker: Professor Dmitry Novikov

Director of V.A. Trapeznikov Institute of Control Sciences of RAS, Russia

Title: Interdisciplinarity in Control Sciences

11:10-11:40 **Speaker:** **Professor Janusz Kacprzyk**
PAS Academician, Member of European Academy of Sciences and Arts, Poland
Title: Towards a Constructive Human-Centric Multiagent Decision Making: a Crucial Role of Bipolarity in Affects, Judgments and Testimonies.

11:40–12:00 **Coffee Break**

12:00–13:00
Hall: Main Convention **Keynote Session**

12:00-12:30 **Speaker:** **Oleg Byakhov**
Business Development Executive, IBM East Europe/Asia, Russia
Title: ECO Science Foundation – A Catalyst for Promotion of STI in ECO Region

12:30-13:00 **Speaker:** **Dr. Alexander Pozdnev**
Research Software Engineer, IBM Science and Technology Center, Russia
Title: IBM Q: Quantum Computing in the Cloud.

13:00–13:10 **Group photo (location: Main Hall)**

13:10–14:00 **Lunch**

AFTERNOON – 20 September 2017

14:00–15:00 TUTORIAL SESSION 1

Location: **Speaker:** **Dr. Vitalijs Komasilovs**
Main *Faculty of Information Technologies, Department of*
Convention *Computer Systems, Latvia University of Agriculture,*
Hall *Latvia*
Title: Implementation of Smart Solutions in Jelgava City in Latvia.

15:00–15:30 Coffee Break

15:30–16:30 TUTORIAL SESSION 2

Location: **Speaker:** **Assoc. Prof. Abzetedin Adamov**
Main *Director, Center for Data Science Research &*
Convention *Training (CeDSRT), ADA University,*
Hall *Azerbaijan*
Title: Transformation of Storage, Computing Platforms and Architecture imposed by Big Data Era.

16:30–17:30 TUTORIAL SESSION 3

Location: **Speaker:** **Prof. Jibendu Sekhar Roy**
Main *School of Electronics Engineering, KIIT University,*
Convention *Bhubaneswar, India*
Hall **Title:** Millimeter Wave Technology for Broadband and Secure Mobile Communication.

17:30-21:00 Sightseeing City Tour

AICT2017 International Conference



SEPTEMBER, 2017

Location:

V.A. Trapeznikov Institute of Control Sciences of RAS

21 September 2017

Location: V.A. Trapeznikov Institute of Control Sciences of RAS

09:30–10:00 Registration

10:00–10:30 KEYNOTE SESSION

Hall: Main
Convention

Speaker: Professor Valery Meshalkin

*Director of II-LRSTI, National Research University
"MEPhi", Russia*

Title: Computer-aided Engineering Techniques of large
Technical, Processing and Socio-economic Systems..

10:30–11:00 KEYNOTE SESSION

Hall: Main
Convention

Speaker: Professor Sergey Glazyev,

Advisor to the president of the Russian Federation

Title: Information society in economics.

11:00–11:30 Coffee Break

11:30–18:30 CONCURRENT TECHNICAL SESSIONS

SESSION 1.1

BIG DATA MANAGEMENT AND APPLICATION

Session Co-Chairs:

Time: 11:30–18:30

Hall: A

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Analysis of User Influence Types in Online Social Networks: An Example of VKontakte

by Alexander G. Chkhartishvili, Dmitry A. Gubanov, Russian Academy of Sciences, Moscow, Russia.

2. Combining regression and cluster analyzes in the problem of forecasting

by Elena Mikhailova, Tatyana Afanasieva, Igor Yuhno, Alexander Morozov, Ulyanovsk State Technical University, Ulyanovsk, Russia.

3. An FHIR-based Framework for Consolidation of Augmented EHR from Hospitals for Public Health Analysis

by Fatima Khalique, Shoab Ahmad Khan, National University of Sciences and Technology, Islamabad, Pakistan.

4. Development of models and algorithms machine learning to optimize the control for the placement of virtual network functions in the infrastructure of the virtual data center

by Irina Bolodurina, Denis Parfenov, Orenburg State University, Orenburg, Russia.

5. Principles of Implementation and Estimation of Influence Factors in Network Centric Systems

by Trahtengerts E.A., Pashchenko A.F., Institute of Control Sciences, Moscow, Russia.

6. Accelerating R Data Analytics in IoT Edge Systems by Memory Optimization

by De-Yin Liou, Chien-Chih Chen, Tien-Fu Chen, National Chiao Tung University Hsinchu, Taiwan ROC; Tay-Jyi Lin, National Chung Cheng University Chiayi, Taiwan ROC.

7. Intellectual Obsolescence Detection Method of Spatial Data Using Historical Data

by Andrey Glushkov, Stanislav Belyakov, Marina Belyakova, South Federal University, Taganrog, Russia.

8. Identification of the Asynchronous Electric Motor Defects Based on Neural Networks

by Skorobogatchenko Dmitry, Shcherbakov Maxim, Zelyakovskiy Dmitry, Volgograd State Technical University, Volgograd, Russia.

9. The model of semantic similarity estimation for the problems of Big Data search and structuring

by Victoria Bova, Vladimir Kureichik, Dmitry Leshchanov, Southern Federal University, Rostov-on-Don, Russia.

10. Hashing for privacy protection

by Alessandro Lofaro, IEEE.

11. Machine Translation from Big Data Perspective

by Bagdat Myrzakhetov, Zhandos Yessenbayev, Aibek Makazhanov, National Laboratory Astana, Astana, Kazakhstan.

12. Inverse Sets in Big Data Processing

by Alexei Mikhailov, Mikhail Karavay, Mais Farkhadov, ICS, Russian Academy of Sciences, Moscow, Russia.

13. Modeling NoSQL Systems in Many-nodes Hybrid Environments

by M.M. Rovnyagin, F.N. Chernilin, A.V. Guminskaia, V.M. Kinash, O.V. Myltsyn, A.P. Orlov, National Research Nuclear University MEPhI, Moscow, Russia; A.V. Kuzmin, Penza State University, Penza, Russia.

14. Combined Algorithm for Decision Making

by Vladimir Kureichik, Dmitry Zaporozhets, Elmar Kuliev, Yury Kravchenko, Southern Federal University, Rostov-on-Don, Russia.

SESSION 2.1
DATA MINING AND DATA ENGINEERING

Session Co-Chairs:

Time: 11:30–18:30

Hall: B

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Architectural Principles of Common Information Space Development for Control of Complex Production Processes

by Pavel Senchenko, Yury Gritsenko, Oleg Zhukovsky, Roman Mescheryakov, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia.

2. Term Extraction from Chinese Texts Without Word Segmentation

by Alexey Platonov, Ma Pengyu, Chuqiao Yu, I. A. Bessmertny, E.A. Poleschuk, ITMO University, Saint Petersburg, Russia.

3. The Summarization of Search Results

by Yuliya Bidulya, Alexey Spryiskov, Tyumen State University, Tyumen, Russia.

4. On selecting the Initial Cluster Centers in the K-means Algorithm

by Deniz Tanir, Ege University, Izmir, Turkey; Fidan Nuriyeva, Dokuz Eylul University, Izmir, Turkey; Institute of Control Systems of ANAS, Baku, Azerbaijan.

5. Finding the dependencies of the parameters of the forecast models on the characteristics of the output sets of administrative monitoring data

by Pavel Lukianov, Alexey Frolov, Varvara Frolova, Orel State University, Orel, Russia.

6. Forecasting Stock Market Turnovers with Boosted Decision Trees

by Vladimir Soloviev, Financial University under the Government of the Russian Federation, Moscow, Russia.

7. Control Cost in Linear-Quadratic Systems under Disturbance Description Uncertainties

by Alexander Bunich, V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

8. Expert-Statistical Data Processing Using the Method of Analogs

by Alexander Mandel, V.A. Trapeznikov Institute of Control Sciences RAS, M.V. Lomonosov Moscow State University, Moscow, Russia.

9. Using Uncertainty Theory in Optimal Robust Design with Uncertain Parameters

by Georgy Veresnikov, Eduard Trahtengerts, Ludmila Pankova, Valeria Pronina, V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia".

10. Genetic Algorithms for The Development of Queuing Networks

by Konstantin Gusev, Victor Burkovsky, Semen Podvalny, Alexandr Danilov, Voronezh Technical State University, Voronezh, Russia.

11. DAFUL technique for anomalies detection using a fuzzy linguistic time series

by Denis Zavarzin, Tatyana Afanasieva, Igor Yhno, Ulyanovsk State Technical University, Ulyanovsk, Russia.

12. Application of Fractal Analysis for Acoustic Nondestructive Defect Detection Methods

by Almira Chervova, V.A. Trapeznikov Institute of Control Sciences of RAS; Gennadiy Filaretov, National Research University "Moscow Power Engineering Institute"; Fedor Pashchenko, V.A. Trapeznikov Institute of Control Sciences of RAS, Moscow Institute of Physics and Technology (State University), Moscow, Russia; Yuriy Vankov, Kazan State Power Engineering University, Kazan, Russia.

13. Algorithms of a logical conclusion of knowledge in difficult technical systems on the basis of indistinct rules

by Tatiana Averina, Vadim Belousov, Pavel Kurochka, Voronezh State Technical University, Voronezh, Russia.

14. Articulatory uncertainty as a result of visual recognition of modified sounds in Russian speech

by Maria Myasoedova, Zinaida Myasoedova, Mais Pasha Farkhadov, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

15. Articulatory uncertainty as a result of visual recognition of modified sounds in Russian speech

by Maria Myasoedova, Zinaida Myasoedova, Mais Pasha Farkhadov, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

16. The Log Data Collection Service for Cloud Robotics

by Dmitry A. Liman, Alexander A. Dyumin, Larisa I. Shustova, Ilya V. Chugunkov, National Research Nuclear University MEPhI; Alexander A. Dyumin, National University of Science and Technology MISiS, Moscow, Russia.

17. Development of a Model of Nonisothermal Vulcanization of Rubber Compounds

by S.G. Tikhomirov, O.V. Karmanova, Y.V. Pyatakov, A.A. Maslov, Voronezh State University of Engineering Technologies, Voronezh, Russia.

SESSION 3
CYBER SECURITY ISSUES

Session Co-Chairs:

Time: 11:30–18:30

Hall: C

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Enhancing RADIUS Based Multifactor-Factor Authentication Systems with RESTful API for Self-service Enrolment

by *Emin Huseynov, Jean-Marc Seigneur, University of Geneva, Geneva, Switzerland.*

2. Memory Obfuscation by Stack Randomization for Android Applications

by *Vyacheslav Zolotarev, Reshetnev Siberian State University; Daria Doronina, Siberian Federal University, Krasnoyarsk, Russia.*

3. Analysis of cyber-Attacks on IEC 61850 Networks

by *Ahmed Elgargouri, Mohammed Elmusrati, University of Vaasa, Vaasa, Finland.*

4. Threshold and Network generalizations of Muddy Faces Puzzle

by *Denis Fedyanin, Laboratory 57, ICS RAS, Moscow, Russia.*

5. A Frequency Approach to Creation of Executable File Signatures for their Identification

by *Kseniya Salakhutdinova, Ilya Lebedev, Irina Krivtsova, Nurzhan Bazhayev, Mikhail Sukhoparov, Pavel Smirnov, Dmitry Markelov, Alexander Davydov, Sergey Pecherkin, Dmitry Kolcherin, Yuriy Shaparenko, ITMO University; Yuriy Iskanderov, SPIRAS, Saint-Petersburg, Russia.*

6. Framework for Quantitative Information Security Risks Assessment and Management Based on Fuzzy Logic

by *Igor Anikin, Kazan National Research Technical University named after A.N. Tupolev, Kazan, Russia.*

7. Application of Algebraic Cryptanalysis to MAGMA and PRESENT Block Encryption Standards

by *Ekaterina Maro, Ludmila Babenko, Maksim Anikeev, Southern Federal University, Taganrog, Russia.*

8. Critical View at Quality Evaluation Systems of Stochastic Algorithms for Information Security

by *Ilya Chugunkov, Alexander Dyumin, Dmitry Liman, Artem Maksutiv, National Research Nuclear University MEPhI; Vladimir Chugunkov, National Research University MPEI, Moscow, Russia.*

9. Methods of Keyboard Users Analysis Based on Reference Gaussian Signals

by Rifat Sharipov, Ayrat Abzalov, Marina Tumbinskaya, Kazan National Research Technical University named after A.N. Tupolev; Anna Safullina, Inna Davydova, Kazan Innovational University. V.G. Timiryasova, Kazan, Russia.

10. Modeling and Analysis of Cloud Computing Security

by Zico Mutum, Jazan University, Jazan, Saudi Arabia.

11. Software Defined Internet of Things: Cyber Antifragility and Vulnerability Forecast

by Mikhail Buinevich, Pavel Fabrikantov, Ekaterina Stolyarova, Konstantin Izrailov, Andrei Vladyko, The Bonch-Bruевич Saint-Petersburg State University of Telecommunications, Saint Petersburg, Russia.

12. New results in a research of GOST R 34.12-2015

by Evgeniya Ishchukova, Ludmila Babenko, Southern Federal University, Taganrog, Russia.

13. Algorithms of Authentication and Authorization by Proxy in Distributed Information-Computing Environment

by Alexander Demidov, Daniil Polovinkin, Tatyana Potlova, Roman Shateev, Eugenia Sopina, Orel State University, Orel, Russia.

14. Spam E-Mail Classification by Utilizing N-Gram Features of Hyperlink Texts

by Selman Bozkir, Esra Sahin, Murat Aydos, Ebru Akcapinar Sezer, Hacettepe University, Ankara, Turkey; Fatih Orhan, COMODO Group, New Jersey, USA.

15. SDN-Based Firewall Implementation for Large Corporate Networks

by N.F. Bakhareva, Povolzhskiy State University of Telecommunications & Informatics, Samara; P.N. Polezhaev, Yu.A. Ushakov, A.E. Shukhman, Orenburg State University, Orenburg, Russia.

SESSION 4.1
LATEST TRENDS IN ICT APPLICATION

Session Co-Chairs:

Time: 11:30–18:30

Hall: D

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Uncaused Semantic Interpretation of Cognitive Models in Networked Decision Support Systems

by Alexander Raikov, Institute of Control Sciences Russian Academy of Sciences, Moscow, Russia.

2. Information and Analytical Support of Management Activities

by Pavel Senchenko, Anatoly Sidorov, Yuri Ekhlakov, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia.

3. Network Solutions for the Internet of Things: A Review of Publications

by Nina Petukhova, Mais Farkhadov, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

4. Combined Frequency Domain and Time Domain Data Processing in Airborne Electromagnetics

by John Moilanen, Evgeny Karshakov, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

5. A Technique for Envelope Regression in Network Calculus

by Artur Baybulatov, Vitaly Promyslov, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

6. Kazakh and Russian Languages Identification Using Long Short-Term Memory Recurrent Neural Networks

by Zhanibek Kozhirbayev, L.N. Gumilyov Eurasian National University, Nazarbayev University, National Laboratory Astana; Zhandos Yessenbayev, Muslima Karabalayeva, Nazarbayev University, National Laboratory Astana, Astana, Kazakhstan.

7. Multi-commodity Maximum Flow Determining in a Fuzzy Graph with Vitality Degrees

by Evgeniya Gerasimenko, Viktor Kureichik, Southern Federal University, Taganrog, Russia.

8. Development of A Corporate Network by Including Speech Recognition System

by Mais Farkhadov, Sergey Vaskovsky, V. A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

9. A Novel Approach to The Reconfigurable Distributed Information and Control Systems Load-Balancing Improvement

by Anna Klimenko, Southern Federal University, Taganrog, Russia; Eduard Melnik, Southern Scientific Center of the Russian Academy of Sciences, Rostov-on-Don, Russia.

10. A Modified Poincare Method for Information Support of Predictive Control of Large-Scale Systems

by Vadim Kleparskiy, Ekaterina Kleparskaya, V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

11. Synthesis of Control for Group of Quadrotors in Task of Area Monitoring

by Askhat Diveev, Federal Research Center "Computer Science and Control" of Russian Academy of Sciences, Engineering Academy, RUDN University; Elizaveta Shmalko, Federal Research Center "Computer Science and Control" of Russian Academy of Sciences; Nurbek Konyrbaev, Engineering Academy, RUDN University, Moscow, Russia; Sabit Ibadulla, The Korkyt Ata Kyzylorda State University, Kyzylorda, Kazakhstan.

12. Major Principles of Unmanned Robotic Production Decentralized Dispatcher

by Igor Kalyaev, Anatoly Kalyaev, Iakov Korovin, Southern Federal University, Taganrog, Russia.

13. The Methodology of Implementation and Simulation of Quantum Algorithms and Processes

by Victor Potapov, Sergey Gushanskiy, Maxim Polenov, Southern Federal University, Taganrog, Russia.

14. Intelligent Control Systems for the Rolling Equipment Maintenance of Rail Transport

by Ekaterina Zakharova, JSC NIIAS; Fedor Paschchenko, Institute of Control Sciences V.A. Trapeznikov Academy of Sciences; Andrey Takmazian, Lomonosov Moscow State University; Inna Minashina, Moscow Institute of Physics and Technology (State University); Nikolay Kuznetsov, The Institute of Radioengineering and Electronics, Moscow, Russia.

15. Numerical Method to Analysis of Perishable Queuing-Inventory Systems with Server Vacations

by Anar Rustamov, Baku Engineering University; Abzeturdin Adamov, Center for Data Science Research & Training, ADA University, Baku, Azerbaijan.

SESSION 5.1
COMMUNICATION, NETWORK AND HARDWARE

Session Co-Chairs:

Time: 11:30–18:30

Hall: E

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Performance Assessment of Various network via IEEE802.11.X and LTE Multi-homing framework in VANETs using Estinet 8

by Ghulam Yasin, University of Education, Multan, Pakistan; Syed Fakhar Abbas, Auckland University of Technology, Auckland, New Zealand; Waseem Iqbal, The University of Lahore, Pakistan.

2. Random Access Procedure Based on Low-Density Signatures

by Vladimir Lyashev, Andrey Malkov, Huawei Technologies Co. Ltd., Moscow, Russia.

3. Algorithm for Discourse Prosodic Feature Description

by Maxim Bessonov, Lyudmila Terechik, Russia's University for People Friendship; Sergey Vaskovsky, Mais Pasha Farkhadov, Institute of Control Sciences of RAS, Moscow, Russia.

4. Mathematical Model of Message Delivery in a Mobile Ad Hoc Network

by Kostiantyn Polshchikov, Igor Konstantinov, Sergej Lazarev, Olha Polshchikova, Belgorod State University, Belgorod, Russia.

5. Unequal Error Protection for Progressive Image Transmission using SPIHT and Saliency Maps

by Radoslav Vargic, Jaroslav Polec, Kvetoslava Kotuliakova, Slovak University of Technology, Bratislava, Slovakia.

6. Classification GMM based Binary Error Generation Model

by Radoslav Vargic, Jaroslav Polec, Juraj Kacur, Tibor Csoka, Slovak University of Technology, Bratislava, Slovakia.

7. Multimedia Messages Transmission Modeling in a Mobile Ad Hoc Network

by Kostiantyn Polshchikov, Sergey Lazarev, Andrei Zdorovtsov, Belgorod State University, Belgorod, Russia.

8. The Impact of Various Weather Conditions on Vertical FSO Links

by Kassen Dautov, Nurzhan Kalikulov, Refik Caglar Kizilirmak, Nazarbayev University, Astana, Kazakhstan.

9. More efficient IoT communication through LoRa network with LoRa@FIIT and STIOT protocols

by Ondrej Peresini, Tibor Krajcovic, Slovak University of Technology, Bratislava, Slovakia.

10. The Impact of Data Link Layer Standards on Ad-Hoc Routing Protocols

by Ahad Mammadov, Baku Engineering University; Abzetdin Adamov, Center for Data Science Research & Training, ADA University, Baku, Azerbaijan.

11. Location Estimation for DCO-OFDM based VLC in Realistic Indoor Channel

by Nurzhan Kalikulov, Kassen Dautov, Refik Caglar Kizilirmak, Nazarbayev University, Astana, Kazakhstan.

12. A Cross Layer Protocol for Optimal Performance of Software Defined Radios in Mission Critical Networks

by Irum Noshveen, Center for Advanced Studies in Engineering, Shoab Ahmed Khan, National University of Sciences and Technology, Islamabad, Pakistan.

13. Profiling a Many-core Neuromorphic Platform

by Indar Sugiarto, Luis A. Plana, Steve Temple, Basabdatta S. Bhattacharya, Steve B. Furber, University of Manchester; Patrick Camilleri, Crypto Quantique Ltd., United Kingdom.

14. Euclidean Distance Matrices Application In Sound Source Localization

by Ali Pourmohammad, Ali Kafaei Zad Tehrani, Amirkabir University of Technology, Tehran, Iran.

15. Communication Technologies for Force-Feedback Teleoperation of On-Ground Robots from the International Space Station in the Frame of the “Kontur-2” Experiment

by Vladimir Muliukha, Mikhail Guk, Aleksandr Silinenko, The Russian State Scientific Center for Robotics and Technical Cybernetics; Vladimir Zaborosky, Peter the Great Saint-Petersburg Polytechnic University, Saint-Petersburg, Russia.

16. Research of Information Flows Features in the Backbone Internet-Channel: Distribution of Packet Size

by Porshnev S.V., Kuposov A.S., Bozhalkin D.A., Ural federal university named after the first President of Russia B. N. Yeltsin, Ekaterinburg, Russia.

SESSION 6.1
ICT IN BUSINESS ADMINISTRATION, GOVERNANCE, FINANCE
AND ECONOMY

Session Co-Chairs:

Time: 11:30–18:30

Hall: F

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Advanced Analytics Software for Performance Analysis and Visualization of Financial Institutions

by Andrey Lychev, National University of Science and Technology MISiS; Aleksei Rozhnov, Trapeznikov Institute of Control Sciences of RAS, Moscow, Russia.

2. The Stability Assessment Model of Financial and Economic Indicators

by Dmitry Sizykh, Trapeznikov Institute of Control Sciences RAS; Alexander Mandel, M.V. Lomonosov State University, Trapeznikov Institute of Control Sciences RAS; Natalia Sizykh, National Research University Higher School of Economics, Trapeznikov Institute of Control Sciences RAS, Moscow, Russia.

3. Improvement of Automotive Service Management as a Factor of Competitiveness of the Automaker

by Irina Makarova, Vadim Mavrin, Ksenia Shubenkova, Polina Buyvol, Eduard Mukhametdinov, Kazan Federal University, Naberezhnye Chelny, Russia.

4. A Heuristic-Based Approach to Improve the Quality of BPMN Business Process Models

by Fernando Nogueira, Hilda Oliveira, Sao Paulo State University (Unesp), Rio Claro, Brazil.

5. Mathematical Methods and Information Technologies in the Investment Problems

by Tatiana Zolotova, Financial University under the Government of the Russian Federation; Victor Gorelik, Dorodnicyn Computing Centre, FRC CSC RAS, Moscow, Russia.

6. The Businesses Process Reengineering Methods based on the Theory of Programming

by Georgyi Kalyanov, Institute of Control Sciences Russian Academy of Sciences, Moscow, Russia.

7. Expert Analysis of Risks associated with Control of the Intangible Assets

by Vladislav Gusev, Russian Academy of Sciences Institute of Control Sciences by name of V.A. Trapeznikov, Moscow, Russia.

8. Development and Analysis of Design-Engineering Workflows (mentioned as an instance a radio engineering enterprise)

by Nikolay Voit, Alexander Afanasyev, Maria Ukhanova, Irina Ionova, Ulyanovsk State Technical University, Ulyanovsk, Russia.

9. Modeling of Company's Assets Financing Structure on the Basis of the Matrix "Assets-Capital"

by Dmitry Sizykh, Trapeznikov Institute of Control Sciences RAS; Natalia Sizykh, National Research University Higher School of Economics HSE, Trapeznikov Institute of Control Sciences RAS; Evgeny Isaev, National Research University Higher School of Economics HSE, Moscow, Russia.

10. Development of An Econometric Model of The Crisis

by Vera Ivanyuk, Niyaz Abdikeev, Vladimir Soloviev, Financial University under the Government of the Russian Federation; Fedor Pashchenko, Institute of control science RAS Moscow Institute of Physics and Technology, Moscow, Russia.

11. To Cut the Gordian Knot of The Moscow Road Network Problems

by Kemer Norkin, Institute of control sciences RAS; Yu. M. Luzhkov, International University in Moscow, Russia.

12. Development of Composite Indicators System for the Comparative Assessment of the Activity of Innovative Technoparks

by Alovzat Aliyev, Roza Shahverdiyeva, Institute of Information Technology of Azerbaijan National Academy of Sciences; Akif Musayev, Institute of Economy of Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

13. Model of Fuzzy Assessment of Student Loyalty in A Collaborative Economy

by Dmitrii Nazarov, Svetlana Begicheva, Ural State University of Economics, Yekaterinburg, Russia.

14. A Simulation-Optimization Approach using for Investment Solutions Selection

by Anatoly Tsvirkun, Valery Akinfiyev, Institute of Control Sciences of RAS, Moscow, Russia.

15. Social Media Marketing in Russia: Evidences from St Petersburg

by Ilya Bykov, Vera Achkasova, Saint Petersburg State University; Anna Kuzmina, North-West Institute of Management RANEPRA, Saint Petersburg, Russia.

16. Measuring Efficiencies of Regional Eco-Management Systems with DEA

by Svetlana Ratner, Pavel Ratner, Institute of Control Sciences Russian Academy of Sciences, Moscow, Russia.

17. Measuring Efficiency of Regional Innovation System with DEA and PCA

by Alexander Didenko, Niyaz Abdikeev, Olga Loseva, Financial University under the Government of the Russian Federation, Moscow, Russia.

SESSION 7.1
ICT IN EDUCATION, HUMANITIES, SOCIAL SCIENCES AND
RESEARCH

Session Co-Chairs:

Time: 11:30–18:30

Hall: G

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Double-threshold Model of the Activity Spreading in a Social Network
by Liudmila Zhilyakova, Dmitry Gubanov, V. A. Trapeznikov Institute of Control Sciences of RAS, Moscow, Russia.

2. Remote Laboratory to Study Mobile Robot Odometry
by Alexander Abdulov, Alexander Abramnikov, V.A. Trapeznikov Institute of Control Sciences of the RAS, Moscow, Russia.

3. Structural Knowledge as an Evaluation Instrument of Trainees Progress in Learning
by Victor Dozortsev, Vladimir Nazin, JSC “Honeywell”; Alexander Oboznov, Institute of Psychology Russian Academy of Sciences, Moscow; Anastasia Mironova, Moscow Institute of Physics and Technology, Dolgoprudny, Russia.

4. Simulation Modeling of Adaptive Control System for Scalar Plant with Delay and Input Saturation
by Evgeniy Shelenok, National University, Khabarovsk; Eugenie Eremin, Amur State University, Blagoveshchensk, Russia.

5. Human Face Thermal Images Library for Laboratory Studies of the Algorithms Efficiency for Bioinformation Processing
by Mikhail Alyushin, Alexander Alyushin, Lyubov Kolobashkina, National Research Nuclear University «Moscow Engineering Physics Institute», Moscow, Russia.

6. Fuzzy Sets for the Forecasting of Recidivism
by Valentina Marenko, Sobolev Institute of Mathematics, IM SO RAN; A. Romanenko, Omsk State Technical University, Omsk, Russia.

7. Computer-Based Testing as Linguistic Competence Evaluation Method
by Natalia Kashirina, Victoria Ovcharenko, Yulia Privalova, Southern Federal University, Taganrog, Russia.

8. Development of Expert Systems for Evaluating User’s Actions in Training Systems and Virtual Laboratories
by Nikolay Voit, Alexander Afanasyev, Dmitriy Kanev, Ulyanovsk State Technical University, Ulyanovsk, Russia.

9. Design of The Industrial Virtual Worlds Based on The OpenSim Platform

by Nikolay Voit, Alexander Afanasyev, Vladimir Gulshin, Semen Bochkov,
Ulyanovsk State Technical University, Ulyanovsk, Russia.

**10. Construction of Optimal Space-time Mappings for Automatic
Parallelization of Loop Nests with Static Control Flow**

by Artem Lebedev, Institute for Systems Analysis, Federal Research Center
“Computer Science and Control” of RAS, Moscow, Russia.

**11. The Structure of the Automated System for the Occupational Risks
Assessment with Allowances to Human Factor**

by Irina Dmitrieva, Natalia Kashirina, Larisa Gordienko, Southern Federal
University, Taganrog, Russia.

**12. Decision Support Method for Human Resource Management of the
Virtual Organization**

by Zarifa Jabrayilova, Masuma Mammadova, Institute of Information Technology of
ANAS, Baku, Azerbaijan.

13. An Approach to Formal Verification of Programs for Post Machine

by Elena Cherepovskaya, Andrey Lyamin, ITMO University, Saint-Petersburg,
Russia.

**14. Influence of ICT Supported Vocational Training in the Motor-Car
Repair Area on the Quality of the Training Results**

by Martin Zatkalik, Upper Secondary Vocational School for Transport, Bratislava;
Alena Haskova, Constantine the Philosopher University, Nitra, Slovak Republic.

15. Using Latent Semantic Models in E-education and E-commerce

by Saltykov S.A., Rusyaeva E.Yu, V. A. Trapeznikov Institute of Control Sciences of
Russian Academy of Sciences, Moscow, Russia.

SESSION 8
ICT IN MEDICINE AND HEALTH CARE

Session Co-Chairs:

Time: 11:30–18:30

Hall: H

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Decision Support for the Recruitment of Medical Specialists

by Zarifa Jabrayilova, Masuma Mammadova, Institute of Information Technology of ANAS, Baku, Azerbaijan.

2. Detection of Schizophrenia Spectrum Disorders Using Saliency Maps

by Filip Csoka, Jaroslav Polec, Radoslav Vargic, Maria Bielikova, Martin Svrcek, Robert Moro, Slovak University of Technology; Eva Smolejova, Anton Heretik, Comenius University, Bratislava, Slovakia.

3. Development of Hardware and Software for Impedance Calibration in Rheophtalmography

by Dmitry Shamaev, Petr Luzhnov, Bauman Moscow State Technical University; Elena Iomdina, Moscow Helmholtz Research Institute of Eye Diseases, Moscow, Russia.

4. Deep Learning Approach for QRS Wave Detection in ECG Monitoring

by Andrey Kuzmin, Maxim Mitrokhin, Natalia Mitrokhina, Sergey Zakharov, Penza State University, Penza; Mikhail Rovnyagin, National Research Nuclear University MEPhI, Moscow, Russia.

5. Design and Development of a Mobile Application for a Robotic Rehabilitation Process: DiagnoConn

by Mehmet Emin Aktan, Erhan Akdogan, Yıldız Technical University, Istanbul, Turkey.

6. A New Method of Mixed Digital Regulation for Medical Equipment

by Olga Zakharova, Vladimir Rakov, Orel State University named after I.S. Turgenev, Orel, Russia.

7. Splitting of Aggregated Medical and Demographic Data

by Anatolii Mikhailskii, Vasilii Gorlischev, ICS RAS, Moscow, Russia; Dmitri Jdanov, Pavel Grigoriev, MPIDR, Rostock, Germany

8. Application of Modern Technologies of Mathematical Simulation for the Development of Medical Equipment

by Darya Chupina, Bauman Moscow State Technical University; Mikhail Sedankin, MRTRC MD; Sergey Vesnin, RES Company, Moscow, Russia.

9. Parkinson's Disease: Network Analysis of Patents and Publications' Activity

by Alexander Buldyaev, Aibulat Yamilov, National Research University Higher School of Economics; Aleskerov Fuad, National Research University Higher School of Economics, Institute of Control Sciences of RAS, Olga Khutorskaya, Institute of Control Sciences of RAS, Moscow, Russia.

10. Estimation of Survival Parameters in Heterogeneous Population

by Anatolii Mikhalskii, Janna Novoseltseva, ICS RAS, Moscow; Gennady Cherepanov, BIFIP, Borovsk, Russia.

11. Analysis of the Clinical Data in the Jupyter Environment

by Konstantin Laufer, Sechenov Universit; Olga Agapova, Moscow State University of Medicine and Dentistry named after A.I. Evdokimov, Moscow; Zurab Otarashvili, Anton Zuev, Innopolis University, Innopolis, Tatarstan, Russia.

12. Classification of the Clinical Morphological Form of Destructive Pancreatitis on the Basis Derived from the Analysis of the Results of a Full Cycle of Diagnostic Patient Studies and the Identification of the Most Significant Factors by Machine Learning

by Viktor Vlasov, Andrian Mamoshin, Alexander Alyanov, Alexander Demidov, Pavel Silaev, Polina Kanatnikova, Orel State University, Orel, Russia; Alexey Borsukov, Clinical City Hospital №1, Smolensk, Russia.

13. A New Method for Diagnosing Breast Cancer using Firefly Algorithm and Fuzzy Rule Based Classification

by Mehdi Sadeghzadeh, Islamic Azad University, Mashahr, Iran.

SESSION 9
ICT IN FUEL AND ENERGY INDUSTRY

Session Co-Chairs:

Time: 11:30–18:30

Hall: I

13:30–14:30 Lunch

16:30–17:00 Coffee Break

1. Multi-Alternativity Information Technologies in Thermal Processes Control Systems

by Semen Podvalny, Eugeny Vasiljev, Voronezh State Technical University, Voronezh, Russia.

2. Control System Design for Plasma Unstable Vertical Position in a Tokamak by Linear Matrix Inequalities

by Yuri Mitrishkin, Evgeniia Pavlova, M.V. Lomonosov Moscow State University, V.A. Trapeznikov Institute of Control Sciences of RAS; Mikhail Khlebnikov, V.A. Trapeznikov Institute of Control Sciences of RAS, Moscow, Russia.

3. Optimal Control of Development of Oil Fields for The Buckley-Leverett Model

by Alexei Kushner, Lomonosov Moscow State University, Institute of Control Sciences of RAS; Atlas Akhmetzyanov, Andrey Shevlyakov, Institute of Control Sciences of RAS, Moscow, Russia; Valentin Lychagin, Institute of Control Sciences of RAS, Moscow, Russia, Arctic University of Norway, Tromso, Norway.

4. Analytical Linear, Digital Nonlinear Models and Experimental Processes of Nuclear Reactor

by Pikina Galina, National Research University "MPEI"/ Control Sciences Institute of Russian Science Academy; Le Van Dinh, National Research University "MPEI", Moscow, Russia.

5. Defect Search in Automatic Control Systems Based on Trial Deviations OF Model Parameters

by Sergey S. Shalobanov, Sergey V. Shalobanov, Pacific National University, Khabarovsk, Russia.

6. 3-D Geomechanical Modeling of Reservoir Properties Changes When Applying Plasma Pulse Treatment

by Desyatkin A.S., Georezonans Ltd.; Pashchenko A.F., Institute of Control Sciences; Zaytsev V.A., Moscow State University, Moscow, Russia

7. Predictive Modeling as A Basis for Monitoring, Diagnosis, Forecasting and Upgrading of a Technical System

by Ann Matokhina, Kizim Alexey, Panteleev Vladislav, Nikitin Nikita, Dragunov Stanislav, Volgograd State Technical University, Volgograd, Russia.

8. Current Inverter as Actuator for Plasma Position Control Systems in Tokamaks

by Yuri Mitrishkin, Lomonosov Moscow State University, Trapeznikov Institute of Control Sciences, Moscow; Vladimir Shcherbitsky, OJSC Moscow United Energy Company, Moscow; Evgeniy Kuznetsov, Vladimir Yagnov, Troitsk Institute for Innovation & Fusion Research, Troitsk, Russia.

9. Jet Devices for Optimal Control of Developing Multilayer Gas Fields

by Andrey Balabanov, V.A. Trapeznikov Institute of Control Sciences of RAS, Moscow; Andrey Kasyanenko, Open joint-stock company "Severneftegazprom", Novyy Urengoy, Russia.

10. On Energy Participation Factors in Sub-Gramians Method

by Igor Yadykin, Russian Academy of Sciences, Trapeznikov Institute of Control Sciences, Skolkovo Institute of Science and Technology, Moscow, Russia.

11. Integrated Modelling and Information Technology for Strategic Planning in The Energy Sector of Russia

by Andrey Khorshev, Fedor Veselov, Energy Research Institute of the Russian Academy of Sciences, Moscow, Russia.

12. Solving the Problem of Information Storage that Contains the Results of Monitoring Emissions and Dumping on Nuclear Power Station

by Vladislav Novikov, Maksim Parinov, Michail Chizhov, Voronezh State Technical University, Voronezh, Russia.

13. Long-Time Asymptotics for The Buckley-Leverett Models of Development of Oil and Gas Fields

by Alexei Kushner, Lomonosov Moscow State University, Institute of Control Sciences of RAS; Atlas Akhmetzhanov, Institute of Control Sciences of RAS, Moscow, Russia; Valentin Lychagin, Institute of Control Sciences of RAS, Moscow, Russia, Arctic University of Norway, Tromso, Norway.

AICT2017 International Conference



SEPTEMBER, 2017

Location:

V.A. Trapeznikov Institute of Control Sciences of RAS

09:30–13:15

CONCURRENT TECHNICAL SESSIONS

SESSION 1.2

BIG DATA MANAGEMENT AND APPLICATION

Session Co-Chairs:

Time: 09:30–13:15

Hall: A

11:00–11:20 Coffee Break

1. Centrality Measures and Clustering Analysis in a Retail Food Network

by *Fuad Aleskerov, Natalia Meshcheryakova, Sergey Shvydun, V.A. Trapeznikov*
Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia;
Zlata Sergeeva, National Research University Higher School of Economics,
Moscow, Russia.

2. Sign Language Static Gestures Recognition Tool Prototype

by *Alfarabi Imashev, National Laboratory Astana Nazarbayev University, Astana,*
Kazakhstan.

3. High-speed Pattern Matching Architecture on limited connectivity FPGA

by *Alyushin A.V., Alyushin S.A., National Research Nuclear University MEPhI,*
Moscow, Russia; Arkhangelsky V.G., Centre of Information Technologies and
Systems for Executive Power Authorities Moscow, Russia.

4. Method of the Reflexive Analysis of Expert Data

by *V.B. Gusev, N.A. Isaeva Laboratory of Intellectual Systems and Modeling ICS*
RAS by V.A. Trapeznikov name Moscow.

5. New approach for nontrivial knowledge extraction and processing

by *Semenova A.V., Kureichik V.M., Southern Federal University, Taganrog, Russia.*

6. Distributed Data Store Architecture Towards Colonial Data Replication

by *Bolatzhan Kumalakov, Timur Bakibayev, Almaty Management University,*
Almaty, Kazakhstan.

7. On the statistical method selection of unmanned aerial vehicle characteristics stable to multifactor uncertainty

by *Nguyen Quang Thuong, Nguyen Xuan Tien, Tran Minh Hai, Pham Tuan Anh,*
MIPT (State University), Moscow, Russia.

8. Decision support and autonomous decision systems using “big data”

by *Alessandro Lofaro, IEEE.*

9. Application of Convolutional Neural Network For Optical Character Recognition Designed For Kazakhstan Identity Cards

by *B. Y. Amirgaliyev, K. K. Kuvatov, Z. Y. Baibatyr, International Information Technologies University, Almaty, Kazakhstan.*

10. New methods of pattern analysis in the study of heterogeneity of innovation activity

by *Alexey Myachin, NRU HSE, ICS RAS, Moscow, Russia.*

11. Comparison of Deep Learning in Neural Networks on CPU and GPU-based frameworks

by *Kamil Aida-zade, Baku State University; Elshan Mustafayev, Institute of Control Systems of Azerbaijan National Academy of Sciences; Samir Rustamov, ADA University, Baku, Azerbaijan.*

12. Optimization of Fuzzy Parallel Settings of PID Mamdani Controller

by *Kudinov Y.I., Pashchenko A.F., Institute of Control Sciences RAS; Pashchenko F.F., Institute of Control Sciences RAS / Moscow Institute of Physics and Technology; Arakelyan E.K., Andryushin A.V, Moscow Power Engineering Institute, Moscow, Russia; Kelina A.Y., Bukhtiyarov A.V, Lipetsk State Technical University, Lipetsk, Russia.*

SESSION 2.2
DATA MINING AND DATA ENGINEERING

Session Co-Chairs:

Time: 09:30–13:15

Hall: B

11:00–11:20 Coffee Break

1. Aspect Extraction and Sentiment Analysis in User Reviews in Russian about Bank Service Quality

by Elena Brunova, Yuliya Bidulya, Tyumen State University, Tyumen, Russia.

2. Neural-Fuzzy Model for Gold Minerals Detection

by Andrey Kamenev, Fedor Pashchenko, Alexander Pashchenko, V.A. Trapeznikov Institute of Control Sciences RAS, Moscow, Russia.

3. About Estimation of the Maximum Correlation Coefficient

by Anton Slobodyan, V.A. Trapeznikov institute of control sciences of RAS, Radio research and development institute – FSUE NIIR, Moscow, Russia.

4. The PPF Technique of Periodic Pattern Forecasting in Linguistic Time Series

by Alexey Sapunkov, Tatyana Afanasieva, Ulyanovsk State Technical University, Ulyanovsk, Russia.

5. Information Selective Processing in the Complex Projects Examination

by Vladimir Tsyganov, Anver Enaleev, V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

6. Method of aggregation of heterogeneous factors for GIS decision support system for RES of Kazakhstan

by Kirill Yakunin, KBTU; Ravil Muhamedyev, KazNRTU, II&TT; Renat Mustakaev, Zhassulan Shokishalov, Institute of Information and Computational Technologies, CS MES RK, Almaty, Kazakhstan.

7. Classification Algorithm with Aggregation of Hierarchical Features

by Eugeny Kornoushenko, V.A. Trapeznikov Institute of Control Sciences of RAS, Moscow, Russia.

8. Semi-Supervised Evolving Approach for Data Streams Classification Based on Online Gustafson-Kessel Algorithm

by Ivan Gorbunov, Anna Yankovskaya, Maksim Kalmykov, Evgeny Rasskazov, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia.

9. Information Engineering for Rapid Recognition of Odors with the Help of "Electronic Nose"

by Ivanov A.I., Penza Research Electrotechnical Institute, Penza; Kaperko A.F., Kuznetsov Y.M., Kulagin V.P., Chulkova G.M., National Research University "Higher School of Economics"; Shustrov A.V., Manufacturing and Technology Center "UralAlmazInvest" Ltd., Moscow, Russia.

10. Face Recognition Based on Facial Landmarks

by Adil Sarsenov, Konstantin Latuta, Suleyman Demirel University, Kaskelen, Kazakhstan.

11. Mathematical Model of The Polymer Destruction Process Based on The Markov Chain

by Semyon Podvalny, Voronezh State Technical University; Anatoly Khvostov, Anatoly Nikitchenko, Zhukovsky - Gagarin Air Force Academy; Sergei Tikhomirov, Igor Khaustov, Olga Karmanova, Voronezh State University of Engineering Technology, Voronezh, Russia.

12. The Big Data ETL approach based on the principles of a two-phase state of actions

by Sergey Kucherov, Yuri Rogozov, Alexander Sviridov, Southern Federal University, Taganrog, Russia.

SESSION 4.2
LATEST TRENDS IN ICT APPLICATION

Session Co-Chairs:

Time: 09:30–13:15

Hall: C

11:00–11:20 Coffee Break

1. Requirement Elicitation of Real Time Systems by Case Base Reasoning

by Muhammad Aasid, Shaftique Ahmed, Zeeshan Asaf, National University of Sciences and Technology (NUST), H-12, Islamabad; Faisal Bhatti, University of Lahore, Lahore, Pakistan.

2. Evaluating the Usability of Unity Game Engine from Developers' Perspective

by Sahin Mercan, Pinar Onay Durdu, Kocaeli University, Izmit, Kocaeli, Turkey.

3. An Application of Design Thinking in a Creation of a Project Theory Supporting a Conceptual Design of a Software Intensive System

by Petr Sosnin, Ulyanovsk State Technical University, Ulyanovsk, Russia.

4. Synthesis of the Intelligent Information and Telecommunication System of Complex Security to Higher Educational Institution

by Oleg Amosov, Svetlana Baena, Komsomolsk-na-Amure State Technical University, Komsomolsk-on-Amur, Russia.

5. Programmable laser light modulators for Lidar systems

by Yashar Hajiyev, Baku Engineering University, Baku, Azerbaijan.

6. Motion Detection Using HD Camera of Microcomputer Raspberry Pi

by Zoltan Balogh, Stefan Koprda, Milan Turcani, Constantine the Philosopher University, Nitra, Slovakia.

7. Representing Maximal Pseudo-Random Sequences on the Basis of Non-Linear Vector-Valued Complication Function over a Finite Field

by Sergey Shalagin, Vjacheslav Zakharov, Bulat Eminov, KNRTU-KAI, Kazan, Russia.

8. Effective Use Method of Cloudlet Resources by Mobile Users

by Rashid Alakbarov, Oqtay Alakbarov, Institute of Information Technology of ANAS; Fahrad Pashayev, Institute of Control Systems of ANAS, Baku, Azerbaijan.

9. Methods for Increasing the Reliability of the Aircraft Brake-way Prediction

by Andrey Shevchenko, Boris Pavlov, Galina Nachinkina, Maria Prokazina, Institute of Control Sciences of RAS, Moscow, Russia.

10. An Adaptive ARQ – HARQ method with BCH Codes

by Filip Csoka, Kvetoslava Kotuliakova, Jaroslav Polec, Slovak University of Technology, Bratislava, Slovakia.

11. A Conception of the New Generation of Upper Level Control Systems of NPP APCS

by Elena Jharko, Alexey Poletykin, Nadir Mengazetdinov, Vitaly Promyslov, V.A. Trapeznikov Institute of Control Sciences of the Russian Academy of Sciences, Moscow, Russia.

12. Rail Transport Control by Combinatorial Optimization Approach

by Andrey Takmazian, Lomonosov Moscow State University; Alexander Shabunin, Vladimir Matyukhin, Research & Design Institute for Information Technology, Signaling and Telecommunications on Railway Transport; Nikolay Kuznetsov, Moscow Institute of Physics and Technology (State University), Moscow, Russia.

SESSION 5.2
COMMUNICATION, NETWORK AND HARDWARE

Session Co-Chairs:

Time: 09:30–13:15

Hall: D

11:00–11:20 Coffee Break

1. Hard and Soft Switching for Indoor Hybrid VLC/RF Systems

by Aigerim Ashimbayeva, Nurzhan Kalikulov, Refik Caglar Kizilirmak, Nazarbayev University, Astana, Kazakhstan.

2. Optimization of Schelkunoff Array Using Binary and Real Coded Genetic Algorithm

by Jibendu Sekhar Roy, Pampa Nandi, KIIT University, Bhubaneswar, Odisha, India.

3. A Study of the influence of The Structure of Heterogeneous Engineering Networks on The Reliable Operation of Large Consumes

by George Grebenuk, Manucher Dorri, Alexander Roshchin, Sergey Nikishov, Trapeznikov Institute of Control Sciences, Russian Academy of Sciences, Moscow, Russia.

4. Accurate and Robust Loran-C Cycle Identification

by Ali Kafaei Zad Tehrani, Ali Pourmohammad, Amirkabir University of Technology, Tehran, Iran.

5. The Construction of a Distribution Network Structure with the Redundancy Based on Measure of Information Uncertainty

by Denis Karandeev, Aleksander Dulesov, Tatyana Krasnova, Katanov Khakass State University; Natalia Dulesova, Khakass Technical Institute of Siberian Federal University, Abakan, Russia.

6. Principles of Constructing Polymodal Infocommunication Systems for Information Space User Service

by Ekaterina Pakulova, Artem Ryndin, Southern Federal University, Taganrog; Oleg Basov, Dmitry Struev, ITMO University, Saint-Petersburg, Russia.

7. Intermodulation Interferences Immunity in Receiving Path of Active Antenna Array Based on NI USRP-2943 SDR Transceivers

by Yury Parshin, Sergey Kolesnikov, Maxim Grachev, Ryazan State Radio Engineering University, Ryazan, Russia.

8. Simulation of Routing Algorithm for SDN and SON Networks

by Georgii Maltcev, Perm State National Research University; Elena Zamyatina, National Research University Higher School of Economics, Perm; Alexander Mikov, Kuban State University, Krasnodar, Russia.

9. Estimation of IEEE 802.11 DCF Access Performance in Wireless Networks with Linear Topology using PH Service Time Approximations and MAP Input

by Andrey Larionov, Vladimir Vishnevsky, Roman Ivanov, Olga Semenova, V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

10. Generating Electromagnetic Fields through Pulsed Energy Supply by PPM Pulse Position Modulation Control

by Nahum Nunez-Loredo, CINVESTAV Guadalajara. Zapopan, Jalisco; Francisco Javier Valdez-Cruz, ICEST Postgraduate; Luis Gerardo Mar-Espinoza, UVM Campus Tampico, Tampico, Tamaulipas, Mexico.

11. Improving the Quality of a Spherical Picture Area in Portable Digital Device UHDTV

by Konstantin Rubtsov, Igor Konstantinov, Sergey Lazarev, Yuriy Maslakov, Belgorod State National Research University, Belgorod, Russia.

12. Development of Obstacles that Influence Signal Propagation in NS3

by Said Muratchaev, Alexander Bakhtin, Alexey Volkov, Alexey Konoplev, Aleksandr Gorelik, National Research University of Electronic Technology, Moscow, Russia.

SESSION 6.2
ICT IN BUSINESS ADMINISTRATION, GOVERNANCE, FINANCE
AND ECONOMY

Session Co-Chairs:

Time: 09:30–13:15

Hall: E

11:00–11:20 Coffee Break

1. The Development of Indicators and Indices System Characterizing Information and Knowledge Economy

by Rasin Alguliyev, Alovzat Aliyev, Institute of Information Technology of Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

2. A Complex Process Transformation

by Igor Fiodorov, Plekhanov Russian University of Economics (PRUE), Moscow, Russia.

3. The Task of the Theory of Games with Variable Payments

by Sergey Uksusov, Sergey Barkalov, Alla Polovinkina, Voronezh State Technical University, Voronezh, Russia.

4. Agent Model for Evaluating Efficiency of Socially Oriented Federal Programs

by Aleksandra Mashkova, Olga Savina, Orel State University named after I.S. Turgenev, Orel; Sergey Lazarev, Belgorod State University, Belgorod, Russia.

5. On the Approach to Statement of Control Problems of the Situation with many active stakeholders to Support a Dynamic Goal Setting

by Zinaida Avdeeva, Svetlana Kogriga, Trapeznikov Institute of Control Sciences of RAS; Avdeeva Zinaida, National Research University Higher School of Economics, Moscow, Russia.

6. Innovations with the use of Electronic Invoices in Customs Procedure

by Ilknur Gur Nalcaci, Idea Technology Solutions Inc., Istanbul, Turkey.

7. Mathematical and Instrumental Improvement of Market Player Subsidization Mechanisms

by Sergey Barkalov, Voronezh State Technical University; Yulia Bondarenko, Tatiana Azarnova, Irina Kashirina, Voronezh State University, Voronezh, Russia.

8. Implementation of Smart Parking System in Jelgava City in Latvia

by Aleksejs Zacepins, Vitalijs Komasilovs, Armands Kviesis, Latvia University of Agriculture, Latvia; Arturs Gatins, Maris Skudra, Jelgava municipality operational information centre; Alvils Pierhurovics, Jelgava city council administration IT department, Latvia.

9. Drivers' Games and Road Carrying Capacity

by Vladimir Tsyganov, V.A. Trapeznikov Institute of Control Sciences of Russian Academy Sciences, Moscow, Russia.

10. E-Ticket and E-Passenger List Application on Intercity and International Transportation: Case of Turkey

by Hakan Kutluay, Idea Teknoloji Cozumleri Research Center, Istanbul, Turkey.

11. Toward Governance Revolution: The Strategy of "reverse" Informatization for Public Administration System Identification

by S.V. Zernov, Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

12. Example of Rational Solution in the Barents Sea

by Sergey Demin, Sergey Shvydun, V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia.

SESSION 7.2
ICT IN EDUCATION, HUMANITIES, SOCIAL SCIENCES AND
RESEARCH

Session Co-Chairs:

Time: 09:30–13:15

Hall: F

11:00–11:20 Coffee Break

1. Usage of the Software System based on Web Conferences for Distance Online Learning

by Andrey Panteleev, Tatiana Korotkova, Andrey Alekseychuk, Moscow Aviation Institute, Moscow, Russia.

2. Computer Linguistic and Technical Diagnostics of the Volga Car

by Alla Isakova, Sergey Manyashin, Tyumen Industrial University, Tyumen, Russia.

3. The Development of Digital Administration for Schools in Rural Area of Thailand

by Thongchai Yooyativong, Mae Fah Luang University, Chiang Rai, Thailand.

4. Teachers' Didactic Technological Competences: Results of The Pilot Research

by Jan Zahorec, Comenius University in Bratislava, Bratislava; Alena Haskova, Michal Munk, Constantine the Philosopher University, Nitra, Slovak Republic.

5. On the Numerical Solution of Linear Differential Equations with Interval Coefficients

by Nizami Gasilov, Baskent University; Shahin Emrah Amrahov, Ankara University, Turkey.

6. Self-Assessment System of Good Agricultural Practice and Sustainable Finance for Vegetable Farmers in Developing Country: Case Study of Thailand

by Roungsan Chaisricharoen, Mae Fah Luang University, Chiang Rai; Seksan Mathulapransan, Anumat Engkaninan, Kasetsart University Kamphaeng Saen Campus, Nakhonpathom, Thailand.

7. Concordant Approach for R&D Projects' Evaluation and Ranking

by Nikolay Korgin, V.A. Trapeznikov Institute of Control Sciences, Moscow Institute of Physics and Technology, Moscow; Sofia Rozhdestvenskaya, National research center "Institute named after N.E.Zhukovsky", Zhukovsky, Russia.

8. Numerical Assessment of Machine Translation Quality by Method of Near Duplicates Analysis

by Vasilii Kornilov, Valentin Glushan, Alexey Lozovoy, Southern Federal University, Taganrog, Russia.

9. Design Automation Based on Parametrization of Second Order Curves in CAD Software

by Marina Nesterenko, Stanislav Strashnov, RUDN University, Moscow, Russia.

10. NP-Hard Task Schedules and Methods of Its Decision

by Askhat Diveev, Peoples' Friendship University of Russia (RUDN University), Federal Research Center "Computer Science and Control" of Russian Academy of Sciences; Olga Bobr, Peoples' Friendship University of Russia (RUDN University), Moscow, Russia.

11. Information Technologies for Business Process Efficiency Management Considering Enterprise Strategic Goals

by Arkadiy Urintsov, Plekhanov Russian University of Economics; Boris Odintsov, Financial University under the Government of the Russian Federation, Moscow, Russia.

12. Ontology-Driven System for Monitoring Global Processes on Basis of Internet News

by Lyudmila Lyadova, Irina Shalyaeva, Viacheslav Lanin, National Research University Higher School of Economics, Perm, Russia.

13:15–14:00 Lunch

**14:00–14:20
Hall: Main
Convention**

CLOSING CEREMONY

14:30–18:00 Social Program – Sightseeing Tour to Kremlin – by invitation