<table>
<tr><th></th><th>14.09 (Friday)</th><th>16.09 (Saturday)</th><th>16.09 (Sunday)</th><th>17.09 (Monday)</th></tr>
<tr><td>8:30</td><td rowspan="8">Registration and Coffee Break, KFU</td><td></td><td></td><td></td></tr>
<tr><td>9:00
9:30</td><td>Regular Papers Session 2B(1), Room B</td><td>Regular Papers Session 2C(1), Room C</td><td>Regular Papers Session 2D, Room D</td><td>Regular Papers Session 2E(1), Room E</td><td>Regular Papers Session 3B(1), Room B</td><td>Regular Papers Session 3C(1), Room C</td><td>Regular Papers Session 3D(1), Room D</td><td colspan="3">Plenary Session 4A, Conference Hall</td></tr>
<tr><td>10:00</td><td colspan="4" rowspan="2">Coffee Break</td><td colspan="3" rowspan="2">Coffee Break</td><td colspan="3">Coffee Break</td></tr>
<tr><td>10:30
11:00</td><td rowspan="2">Regular Papers Session 4B, Room B</td><td rowspan="2">Regular Papers Session 4C, Room C</td><td rowspan="2">Poster Session</td></tr>
<tr><td>11:30
12:00</td><td colspan="4" rowspan="2">Plenary Session 2A, Conference Hall</td><td colspan="3">Plenary Session 3A, Conference Hall</td></tr>
<tr><td>12:30
13:00</td><td colspan="3" rowspan="2">Regular Papers Session 3B(2), Room B
Regular Papers Session 3C(2), Room C
Regular Papers Session 3D(2), Room D</td></tr>
<tr><td>13:30
14:00</td><td>Regular Papers Session 2B(2), Room B</td><td>Regular Papers Session 2C(2), Room C</td><td></td><td>Regular Papers Session 2E(2), Room E</td><td colspan="3">Closing Session, Conference Hall</td></tr>
<tr><td>14:30</td><td colspan="4" rowspan="6">Volga River Excursion</td><td colspan="3">Lunch</td><td colspan="3">Lunch</td></tr>
<tr><td>15:00
15:15</td><td colspan="3">Opening Session, KFU</td><td colspan="3" rowspan="3">City tour</td><td colspan="3" rowspan="5">Departure</td></tr>
<tr><td>15:30</td><td colspan="3">Plenary Session 1A, Conference Hall</td></tr>
<tr><td>16:00
16:30</td><td>Regular Papers Session 1B, Room B</td><td>Regular Papers Session 1C, Room C</td><td>Regular Papers Session 1D, Room D</td></tr>
<tr><td>17:00</td><td colspan="3">Coffee Break</td><td colspan="3" rowspan="3">Gala Dinner</td></tr>
<tr><td>17:30
18:00
18:30
19:00</td><td>Regular Papers Session 1B, Room B</td><td>Regular Papers Session 1C, Room C</td><td>Regular Papers Session 1D, Room D</td></tr>
<tr><td>19:30
20:00
20:30
21:00
21:30</td><td colspan="3">Welcome Cocktail, KFU</td></tr>
</table>

FROM THE ORGANIZING COMMITTEE

We have great pleasure to invite you to 16-th 2018 IEEE EAST-WEST DESIGN & TEST SYMPOSIUM (EWDTS-2018)!

The purpose of the symposium is to coordinate and exchange experiences between leading scientific organizations and experts of the Eastern and Western Europe, as well as North America and other parts of the world, in the field of design, design automation and test of electronic circuits and systems.

From the one side, an overview of the state-of-the-art and of the most important progress trends of the industrial design and test will be presented by leading researchers and practitioners.

On the other side, an overview of recent achievements obtained by the scientists and technologists will be presented by the researchers and practitioners from countries in the region.

We are happy that IEEE EWDTS is becoming a world-renown event, as we have seen the interest of Eastern and Western scientists in mutual collaboration. As a result of this collaboration we can see the penetration of new technologies in the Eastern Europe market and educational system.

We would like to thank: Yervant Zorian, Sergey Mosin, Victor Djigan, Dmitry Efanov, Nikolay Prokopenko for taking an active role in organizing the conference technical program and finances, in international activity in the field of higher education and in support the preparation and operation of the symposium. The greatest appreciation to the official IEEE EWDTS – 2018 sponsors: IEEE, Computer Society, Test Technology Technical Council – TTTC. We especially thank the Rector of the Kazan Federal University Ilshat Gafurov for overall support and active personal participation in preparation and holding of the symposium.

We welcome all the participants of the symposium and wish you successful discussions and a pleasant stay in Kazan!

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The IEEE Computer Society is the computing professional's single, unmatched source for technology information, inspiration and collaboration. By making the most up-to-date and advanced information in the computing world easily accessible, we are the source that computing professionals trust to provide high quality, state-of-the-art information on an on-demand basis. http://www.computer.org

The Test Technology Technical Council is a volunteer professional organization sponsored by IEEE Computer Society. Its mission is to contribute to members' professional development and advancement and to help them solve engineering problems in electronic test, and help advance the state-of-the-art in test technology. TTTC is a prime source of knowledge about electronic test via its conferences, workshops, standards, tutorials and education programs, web site, newsletters, and electronic broadcasts. All its activities are led by volunteer members. TTTC membership is open to all individuals directly or indirectly involved in test technology at a professional level. You may enroll as TTTC member for 2018 (no dues or fees). To learn more about TTTC offerings and membership benefits, please visit: http://tab.computer.org/tttc

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- Russian A.S. Popov Society for Radioengineering, Electronics & Communications;
- The Institute for Design Problems in Microelectronics of the Russian Academy of Science (Moscow, Russia);
- National Instruments;
- Yerevan Telecommunication Research Institute. JSC (YeTRI);
- Tomsk Polytechnic University (Russia).

BANKING

Generally, everywhere in Russian Federation you pay in the Russian ruble (RUB).

Foreign currency exchange facilities are available at major airports, railway stations, at large hotels, as well as in many private offices, called “Currency exchange”. Credit cards can be used in such places as banks and branch banks. Approximate currency exchange rate: 1 USD = 67.4 RUB (100 USD = 6740 RUB), 1 EURO = 78.27 RUB (100 EURO = 7827 RUB).

CREDIT CARDS: Visa Card and Master Card are the most common cards. However, other cards are also accepted.

PROGRAM OF THE SYMPOSIUM

The program of IEEE EWDTS-2018 symposium will consist of presentations of contributed keynotes, invited and regular papers. The language of the conference is English, neither translation nor interpretation will be provided.

The presentation time for regular papers is 10-15 minutes and keynotes/invited talks are 20-30 minutes.

REGULAR REGISTRATION PACKAGE includes the pass and full participation of all technical sessions for conference program (Plenary Sessions, Panels and Parallel Sessions) plus Social Program and Networking Sessions Package.

Student fee includes the pass and full participation of all technical sessions for conference program (Plenary Sessions, Panels and Parallel Sessions) plus a participant set and coffee breaks.

WEATHER

September in Kazan is warm. The temperature can be typically 15-16 degrees Centigrade during days. During nights, the temperature can drop to 5-13 degrees Centigrade.

GENERAL INFORMATION

Total number of authors: 463.

Number of accepted papers: 156.

Number of participating countries: 24 (Armenia, Azerbaijan, Belarus, Canada, China, Czech Republic, Estonia, France, Georgia, Germany, India, Iran, Iraq, Italy, Netherlands, Poland, Romania, Russian Federation, Saudi Arabia, Serbia, Taiwan, USA, Uzbekistan, Viet Nam).

Number of keynotes is 2 and number of invited talk is 3.

Number of Universities and Companies is 112.

Number of cities is 93.

KAZAN FEDERAL UNIVERSITY (KFU)

Kazan is the capital of Tatar Republic and one of the ancient cities in Russian Federation with more than 1000-year history. Kazan Kremlin as well as Island-town Sviyazhsk and Bolgar were included in the list of UNESCO world heritage sites. There are famous local football, hockey and basketball clubs winners of Russian, European and World competitions. In 2018 the city will held the FIFA football World Championship.

Kazan Federal University (KFU) is the second oldest university in Russia after Moscow State University. It was founded on November 17, 1804 by Emperor Alexander I. The University proud of many famous people who studied and worked there: Nikolay Lobachevsky, Vladimir Ul'janov (Lenin), Leo Tolstoy, Alexander Butlerov and many others.

KFU has partner agreements with approximately 200 universities and research centers from more than 53 countries all over the world. KFU has taken advantage of participating in various research programs and implementing double diploma programs. Kazan University Scientific Library named after Nikolay Lobachevsky has one of the world's most important

bibliographical collections, including 15 000 manuscripts and 3 000 rare books.

ADDRESS: 35 Kremlin Street, Kazan, Republic of Tatarstan, Russia, 420008, (KFU Second High-Rise Building).

Phone: 8 (843) 233-71-09

E-Mail: smosin@ieee.org

SYMPOSIUM PROGRAM

First Day: September 14th, 2018 (Friday)	
09:00 — 14:45	**Registration, Conference Hall**
15:00 — 15:25	**Opening Session, Conference Hall** **Danis Nurgaliev** — *Vice-Rector for Research of the Kazan Federal University, Russian Federation* **Sergey Mosin** — *Head of the Department, Institute of Computational Mathematics and Information Technologies, Kazan Federal University, Russian Federation*
15:30 — 16:00	**Plenary Session 1A, Conference Hall** Moderator: **Sergey Mosin** — *Institute of Computational Mathematics and Information Technologies, Kazan Federal University, Russian Federation*

First Day: September 14th, 2018 (Friday)	
15:30 — 16:00	**Keynote Address** **Cross-Layer reliability: a reality or a promise never coming true?** Stefano Di Carlo — *Control and Computer Engineering at Politecnico di Torino, Italy*
16:00 — 19:00	**Regular Papers Session 1B, Room B** Moderator:
	#17. A New Family of Controlled Ternary True Random Number Generators Rustam Latypov and Evgeni Stolov — *Kazan Federal University, Russian Federation*
	# 87. Test Derivation for the Software Defined Networking Platforms: Novel Fault Models and Test Completeness Nina Yevtushenko — *Tomsk State University / Institute for System Programming of the Russian Academy of Sciences, Russian Federation;* Igor Burdonov, Alexandre Kossachev — *Institute for System Programming of the Russian Academy of Sciences, Russian Federation;* Jorge Lopez, Natalia Kushik and Djamal Zeghlache — *Institut Mines-Télécom/Télécom SudParis, CNRS UMR 5157 SAMOVAR, Russian Federation*
	# 57. Usage of Genetic Algorithms for Educational Tests Adaptation Nikolai Prokopyev — *Kazan Federal University, Russian Federation*
	#67. Designing a Koch-type wire antenna by regression analysis Garnik Abgaryan and Dmitrii Tumakov — *Kazan Federal University, Russian Federation*
	# 69. Method of selecting an optimal activation function in perceptron for recognition of simple objects Regina Latypova and Dmitrii Tumakov — *Kazan*

First Day: September 14th, 2018 (Friday)	
	Federal University, Russian Federation
	# 70. Designing a symmetrical eight-teeth-shaped microstrip antenna for Wi-Fi applications Angelina Markina, Dmitrii Tumakov and Nikolai Pleshchinskii — *Kazan Federal University, Russian Federation*
17:00 — 17:15	**Coffee Break**
	# 76. Digital Recursive Filters for Building Thermal Modelling Iskander Gilmanshin, Ramil Shaimukhametov and Vladimir Strekalov — *Kazan Federal University, Russian Federation*
	# 84. Development of Intellegent Smart Bicycle Control System Irina Makarova, Polina Buyvol, Aleksey Boyko, Eduard Tsybunov and Ksenia Shubenkova — *Kazan Federal University, Russian Federation*
	# 44. Getting the emotional coloring of videos for further teaching of neural networks Olga Medvedeva — *Kazan Federal University, Russian Federation;* Dmitry Petrov, Sofia Mustafina, Rustam Salavatov and Svetlana Mustafina — *Bashkir State University, Russian Federation*
	# 61. Estimation of storage life of electronic components based on degradation analysis Oleg Yushin, Andrei Koulibaba, Alexander Shtukarev and Alexander Sashov — *JSC "Russian Space Systems", Russian Federation*
	# 45. A Design of the Integrated Photonic Receiver with 20 GHz Bandwidth Based on 0.25-μm SiGe BiCMOS technology Artyom Koryakovtsev, Andrey Kokolov, Feodor Sheyerman and Leonid Babak — *Tomsk State University of Control System and Radio Electronics, Russian Federation*

First Day: September 14th, 2018 (Friday)	
16:00 — 19:00	**Regular Papers Session 1C, Room C** Moderator: Vazgen Melikyan, *Synopsys Armenia CJSC, Armenia*
	# 122. High quality factor 5.0 Gbps CTLE circuit for SERDES serial links Vazgen Melikyan, Arman Petrosyan, Karen Khachikyan, Arman Trdatyan, Armen Martirosyan, Ruben Musayelyan, Arshavir Matevosyan and David Hakobyan — *Synopsys Armenia CJSC, Armenia*
	# 30. Cost Effective Adaptive Voltage Scaling Using Path Delay Fault Testing Mahroo Zandrahimi, Zaid Al-Ars — *Delft University of Technology, Netherlands;* Philippe Debaud, Armand Castillejo — *ST-Microelectronics, France*
	#182. A Journey from STIL to Verilog Slimane Boutobza, Sorin Popa and Andrea Costa — *Synopsys, France*
	#129. Process Variation Detection and Self-Calibration Method for High-Speed Serial Links Vazgen Melikyan, Armen Martirosyan, Arthur Sahakyan, Arman Trdatyan, Karen Khachikyan, Manvel Grigoryan, Arman Petrosyan and Zaven Avetisyan — *Synopsys Armenia CJSC, Armenia*
	# 65. An Experimental Evaluation of Fault-Tolerant FPGA-based Robot Controller Jakub Podivinsky, Jakub Lojda and Zdenek Kotasek — *Brno University of Technology, Czechia*
	# 53. Low Power, Low Offset, Area Efficient Comparator Design in Nanoscale CMOS Technology Vazgen Melikyan, Artur Mkhitaryan, Andranik Hayrapetyan, Simon Gharibyan, Zaven Avetisyan, Gegham Petrosyan — *Synopsys*

First Day: September 14th, 2018 (Friday)	
	Armenia CJSC, Armenia; Nune Beglaryan — *National Polytechnic University of Armenia, Armenia;* Vardan Grigoryants — *AOByte LLC, Armenia*
17:00 — 17:15	**Coffee Break**
	# 24. An FPGA-optimized Architecture of Variational Optical Flow Pavel Belyakov and Michael Nikiforov — *Ryazan State Radio Engineering University, Russian Federation*
	# 62. Incoming inspection of FPGAs Alexander Ogurtsov, Michael Krasnov and Oleg Martynov — *JSC "Russian Space Systems", Russian Federation*
	# 51. Transmitter Output Impedance Calibration Method Vazgen Melikyan, Artur Mkhitaryan, Bagrat Baghramyan, Andranik Hayrapetyan, Arman Trdatyan, Ara Mkrtchyan — *Synopsys Armenia CJSC, Armenia;* Anush Ramazyan — *Alaverdi high school number 8 named after Sayat-Nova, Armenia;* Shavarsh Melikyan — *Physics and mathematics specialized school after A. Shahinyan Yerevan, Armenia*
	# 135. Input and Output Generation for the Verification of ALU: a Use Case Ondrej Cekan, Richard Panek and Zdenek Kotasek — *Brno University of Technology, Czechia*
	# 154. The Technique of Fast Power Analysis for FinFET Standard Cells Andrey Korshunov — *National Research University of Electronic Technology (MIET), Russian Federation;*

First Day: September 14th, 2018 (Friday)	
	Sergey Ilin — *JSC "Molecular Electronics Research Institute", Russian Federation*
	# 156. Compact SPICE Models of the Standard Layout Fragments in LSI Interconnections Konstantin Petrosyants, Nikita Ryabov and Ekaterina Batarueva — *MIEM HSE, Russian Federation*
16:00 — 19:00	**Regular Papers Session 1D, Room D** Moderator:
	# 92. Assurance of Fault-Tolerance in Bit-Stream Computing Converters Olga Bureneva, Nikolay Safyannikov, Anton Kaydanovich — *Saint Petersburg Electrotechnical University "LETI", Russian Federation;* Artur Gulin — *Ufa State Petroleum Technological University, Russian Federation*
	#112. Pseudo-exhaustive random access memory testing based on march tests with random background variation Ireneusz Mrozek — *Faculty of Computer Science, Bialystok University of Technology, Poland;* Vyacheslav Yarmolik — *Department of Computer Science, Belarusian State University of Informatics and Radioelectronics, Belarus*
	# 102. Multi-run march tests for Pattern Sensitive Faults in RAM Eugenia Buslowska — *Bialystok University of Technology, Faculty of Computer Science, Poland;* Vyacheslav Yarmolik — *Belarusian State University of Informatics and Radioelectronics, Belarus*
	# 93. Estimation to Efficiency of the Using of Anti-Alias Filter in the A/D Interface of Instrumentation and Control Systems Leontiy Samoylov — *Southern Federal*

First Day: September 14th, 2018 (Friday)	
	University, Russian Federation; Nikolay Prokopenko — *Don State Technical University; Institute for Design Problems in Microelectronics of Russian Academy of Sciences, Russian Federation;* Anna Bugakova — *Don State Technical University, Russian Federation*
	# 128. Method for Speeding a Differential Operational Amplifier in the Invert Connection Circuit Nikolay Prokopenko — Don State Technical University; Institute for Design Problems in Microelectronics of Russian Academy of Sciences; Anna Bugakova — Don State Technical University, Russian Federation; Petr Budyakov — Don State Technical University; JSC "SPE"Pulsar", Russian Federation; Aleksandr Serebryakov — JSC "Milandr", Russian Federation
	# 140. Design and Test Issues of a SOI CMOS Voltage Controlled Oscillators for Radiation Tolerant Frequency Synthesizers Denis Sotskov, Vadim Elesin, Galina Nazarova, Konstantin Amburkin, Dmitry Amburkin, George Chukov, Nikolay Usachev and Alexander Nikiforov — *National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*
17:00 — 17:15	**Coffee Break**
	# 98. Use of Systematic Code Based on Data Bits Weighing for Concurrent Error Detection Considering Error Structure Analysis Anton Bliudov, Vyacheslav Dmitriev, Ilya Nazarov and Konstantin Kovalyov — *Emperor Alexander I St.Petersburg State Transport University,*

First Day: September 14th, 2018 (Friday)	
	Russian Federation
	# 108. Development of Resynthesis Flow for Improving Logical Masking Features of Combinational Circuits Alexander Stempkovskiy, Dmitry Telpukhov and Vladislav Nadolenko — *Institute for Design Problems in Microelectronics of Russian Academy of Sciences, Russian Federation*
	# 101. Automated Data Acquisition System from Industrial Machines Sergei Kalabanov, Rinat Shagiev — *Kazan (Volga Region) Federal University, Russian Federation;* Rashid Ishmuratov — *Kazan State Power Engineering University, Russian Federation*
	# 105. Circuit Partitioning Problem Clustering Method Based on Adjacency Matrix Unification Irina Safronenkova and Viktor Kureichik — *Autonomous Federal State Institution of Higher Education «Southern Federal University», Taganrog, Russian Federation*
	# 107. Cryogenic Operational Amplifier on Complementary JFETs Oleg Dvornikov — *Minsk Research Instrument-Making Institute, Belarus;* Nikolay Prokopenko — *Don State Technical University; Institute for Design Problems in Microelectronics of Russian Academy of Sciences, Russian Federation;* Anna Bugakova — *Don State Technical University, Russian Federation;* Vladimir Tchekhovski — *Institute for Nuclear Problems of Belarussian State University, Belarus;* Igor Maliy — *JSC "Integral", Belarus*
	# 116. Research and Design of Differential

First Day: September 14th, 2018 (Friday)	
	Gas Temperature Measurement System for Gas-Turbine Engines Zhanna Sukhinets, Artur Gulin — *Ufa State Petroleum Technological University, Russian Federation;* Anton Sukhinets, Mikhail Mekhrengin — *ITMO University, Russian Federation;* Nikolai Prokopenko — *Don State Technical University, Russian Federation;* Oleg Dvornikov — *Research Institute for Nuclear Problems of Belarusian State University, Russian Federation*
19:00 — 21:00	**Welcome cocktail**

Second Day: September 15th, 2018 (Saturday)	
09:00—11:00	**Regular Papers Session 2B(1), Room B** Moderator: Victor Djigan – *National Research University of Electronic Technology, Russian Federation*
	#169. DPSK-QAM Combination as a Signal Set for Spectrally Efficient Noncoherent Communication Alexander Sergienko — *Saint-Petersburg Electrotechnical University "LETI", Russian Federation*
	#151. An Approach to Autofocus in Car-borne Radar Imaging Systems Vyacheslav Androsov, Sergey Vityazev, Aleksei Kharin and Vladimir Vityazev — *Ryazan State Radio Engineering University, Russian Federation*
	#185. Stability Verification of Statistical Methods for Signal Separation Valery Zasov — *Samara State Transport University, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	#186. Recursive Identification of Complex-Valued Weights Linear Dynamical Systems of Fractional Order with Errors-in-Variables Dmitriy Ivanov, Sergey Nikishchenkov — *Samara State University of Transport, Russian Federation;* Anna Zharkova, Anton Kuchinsky and Alexey Ilmushkin — *Moscow State University of technologies and management, Russian Federation*
	#147. Estimation of navigation signal carrier phase in multipath environment Alexander Fridman — *Moscow Aviation Institute, Russian Federation*
	#190. Reconstruction Algorithm of Electromagnetic Field in Case of Elliptic Polarization of Near-Field probe Nikolay Anyutin, Ivan Malay and Alexey Malyshev — *All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements (VNIIFTRI), Russian Federation*
	#127. Estimation of the Cramer-Rao bound for radio direction-finding on the azimuth and elevation of planar antenna arrays of the symmetric form Yuri Nechaev — *Voronezh State University, Russian Federation;* Ilia Peshkov and Nataliya Fortunova — *Bunin Yelets State University, Russian Federation*
	#**189. Synthesis of Reflectivity Measurement Conditions for Pyramidal Radio Absorbing Materials in Free Space** Nikolay Anyutin, Ivan Malay, Andrey Titarenko and Alexey Malyshev — *All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements (VNIIFTRI), Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
11:00 —11:15	**Coffee Break**
11:15—12:50	**Plenary Session 2A, Conference Hall** Moderator:
11:15—11:45	**Invited Talk** **#138. Neural networks associated with the "black box" models of non-linear dynamic systems** Elena Solovyeva — *Saint-Petersburg Electrotechnical University "LETI", Russian Federation*
11:50—12:50	**Keynote Address** **Robustness Challenges in the Internet of Things** Dr. Yervant Zorian — *Chief Architect and Fellow at Synopsys, USA*
13:00—14:00	**Regular Papers Session 2B(2), Room B** Moderator: Victor Djigan – *National Research University of Electronic Technology, Russian Federation*
	#187. Algorithm for Separating GNSS Signals Into Components Alexey Malyshev, Ivan Malay and Mikhail Ozerov — *All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements (VNIIFTRI), Russian Federation*
	#115. Parallel Computations in Two-Dimensional Adaptive Antenna Arrays Victor Djigan — *National Research University of Electronic Technology, Russian Federation*; Boris Shakhtarin, Konstantin Likhoedenko and Yuliya Sidorkina — *Bauman Moscow State Technical University, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	#188. Methods of EVM Measurement and Calibration Algorithms for Measuring Instruments Alexey Malyshev, Ivan Malay and Leonid Selin — *All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements (VNIIFTRI), Russian Federation*
09:00—11:00	**Regular Papers Session 2C(1), Room C** Moderator: Vladislav Lesnikov – *Vyatka State University, Russian Federation*
	#48. Sampling Theorem in Frequency Domain for the Finite Spectrum Gamlet S. Khanyan — *Central Institute of Aviation Motors, Russian Federation*
	#56. Evolution of Forward and Inverse Discrete Fourier Transform Olga Ponomareva, Alexey Ponomarev and Vladimir Ponomarev — *Kalashnikov Izhevsk State Technical University, Russian Federation*
	#117. Closed form average ROC curve expression for energy-based signal detection in presence of κ–μ shadowed fading Aleksey Gvozdarev and Tatiana Artemova — *P.G. Demidov Yaroslavl State University, Russian Federation*
	#33. Model and FPGA Implementation of Pseudorandom Sequence Generators Based on Invertible Matrices Vjacheslav Zakharov, Sergei Shalagin and Bulat Eminov — *KNRTU-KAI, Russian Federation*
	#34. Generators of the binary inverse-segment pseudo-random sequences Valery A. Pesoshin, Valery M. Kuznetsov, Artyom I. Gumirov and Daria V. Shirshova — *KNRTU-KAI, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	#58. Window-presum parametric discrete Fourier transform Olga Ponomareva, Alexey Ponomarev and Natalia Ponomareva — *Kalashnikov Izhevsk State Technical University, Russian Federation*
	#100. Security Threats in Mobile Cognitive Radio Networks Igor Trubin — *Vyatka State University, Russian Federation*
	#64. The deterministic-statistical model of a MIMO system signal propagation indoors Anastasia A. Vaganova, Natalia N. Kisel and Andrey I. Panychev — *Southern Federal University, Russian Federation*
11:00 —11:15	**Coffee Break**
13:00—14:00	**Regular Papers Session 2C(2), Room C** Moderator: Vladislav Lesnikov – *Vyatka State University, Russian Federation*
	#95. Taxonomy of Small-Scale Fading Models Vladislav Lesnikov, Tatiana Naumovich and Alexander Chastikov — *Vyatka State University, Russian Federation*
	#130. Direct Sequence Spread Spectrum System Noise and Interference Immunity Analysis Anastasia Semenova, Elena Omelyanchuk, Andrey Tikhomirov, Alexander Bakhtin and Alexey Smirnov — *National Research University of Electronic Technology, Russian Federation*
	#184. Sensitivity analysis of the equivalent direct form of IIR digital filters Vladislav Lesnikov, Tatiana Naumovich and Alexander Chastikov — *Vyatka State University, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
09:00—11:00	**Regular Papers Session 2D, Room D** Moderator: Vladimir Khryaschev – *P.G. Demidov Yaroslavl State University, Russian Federation*
	#9. Generalization of Floor Lifting for QC-LDPC Codes: Theoretical Properties and Applications Vasiliy Usatyuk, Sergey Egorov — *South-West State University, Russian Federation;* Ilya Vorobyev, Nikita Polyanskii — *Institute for Information Transmission Problems, Russian Federation;* German Svistunov — *Omsk State Technical University, Russian Federation*
	#**132. Speed increasing of FOE calculation in autonomous vehicle control systems** Alexander Metelyov, Alexander Kolupaev, Dmitry Prozorov, Ekaterina Kurbatova and Natalia Kharina — *Vyatka State University, Russian Federation*
	#133. Analysis of the computational complexity of algorithms for phonemic transcription Dmitriy Prozorov and Alexandra Tatarinova — *Vyatka State University, Russian Federation*
	#136. Building Test Speech Dataset on Russian Language for Spoken Document Retrieval Task Alexandra Tatarinova and Dmitriy Prozorov — *Vyatka State University, Russian Federation*
	#120. Modification and Acceleration of the Detection Objects Algorithm by Interactively Set Color and Texture Attributes Aleksander Maksimovskiy, Andrey Priorov and Yuriy Bryukhanov — *P.G. Demidov Yaroslavl State University, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	#52. Statistical Investigation of Image Processing Algorithms Characteristics Automation Dmitry Kolchaev, Aleksander Loginov and Michael B. Nikiforov — *Ryazan State Radio Engineering University, Russian Federation*
	#167. Image search by content system development Nataliya Grinchenko, Andrey Tarasov and Valentina Potapova — *Ryazan State Radio Engineering University, Russian Federation*
	#183. Deep learning for region detection in high-resolution aerial images Vladimir Khryashchev, Vladimir Pavlov, Andrey Priorov — *P.G. Demidov Yaroslavl State University, Russian Federation;* Anna Ostrovskaya — *People's Friendship University of Russia, Russian Federation*
	# 63. Formula Markup Algorithm for Search in Scientific Documents Eugeny Birialtsev — *Gradient Ltd, Kazan; Kazan (Volga Region) Federal University, Russian Federation;* Alexander Gusenkov, Polina Gusenkova and Yana Palacheva — *Kazan (Volga Region) Federal University, Russian Federation;* Olga Zhibrik — *Gradient Ltd, Kazan, Russian Federation*
09:00—11:00	**Regular Papers Session 2E(1), Room E** Moderator:
	# 80. Compact microstrip antenna with an air gap Denis Letavin — *Ural Federal University, Yekaterinburg, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	# 82. Antenna in microstrip version for use in RFID applications Hung Luu Quang — *Vietnam Maritime University, Viet Nam*
	# 81. Development of compact coupler devices on microstrip structures with different substrate thicknesses Denis Letavin — *Ural Federal University, Yekaterinburg, Russian Federation*
	# 141. A Model of LoRaWAN Communication in Class A for Design Automation of Wireless Sensor Networks Based on the IoT Paradigm Sergey Mosin — *Kazan Federal University, Institute of Computational Mathematics and Information Technologies, Russian Federation*
	# 179. Compact four-stub coupler Denis A. Letavin, Victor A. Chechetkin, Yuriy E. Mitelman — *Institute of Radioelectronics and Information Technologies, Ural Federal University, Russian Federation*
	# 83. Band-pass filter with two L-shaped resonators Hung Luu Quang — *Vietnam Maritime University, Viet Nam*
	# 150. SubTHz and THz–bands Radioelectronic Devices Creation Working in Low Temperatures Conditions of Near Space and Arctic/Antarctic Regions Dmitry Bezuglov — *Rostov-on-Don Branch of Russian Customs Academy, Russian Federation;* Julia Shokova, Larisa Cherkesova, Boris Akishin, Marina Zvezdina, Vitaly Porksheyan and Nikolay Prokopenko — *Don State Technical University, Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	# 145. The compact digital module for well logging orientation Kamil Yusupov, Victor Kosarev, Elena Philippova, Aleksandr Gavrilov, Anvar Safiullin, Alexander Starovoytov — *Kazan Federal University, Russian Federation;* Airat Mukhametzyanov — *Limited Liability Company "Gazprom transgaz Kazan", Russian Federation;* Maksim Vakhitov, Denis Klygach — *South Ural State University, Russian Federation*
11:00 —11:15	**Coffee Break**
13:00—14:00	**Regular Papers Session 2E(2), Room E** Moderator:
	# 144. About Possibility of Magnetooptical / Magnetophotonic Structures Making of Micro– and Nano– Level Dmitry Bezuglov — *Rostov–on–Don Branch of Russian Customs Academy, Russian Federation;* Julia Shokova, Larisa Cherkesova, Boris Akishin, Marina Zvezdina, Vitaly Porksheyan, Irina Trubchik and Peotr Budyakov — *Don State Technical University, Russian Federation*
	# 139. Analysis of the amplitude and phase-manipulated signals of automation devices via Bluetooth technology Michael Gordon — *Giprotranssignalsvyaz, Russian Federation*; Dmitry Sedykh, Denis Zuyev — *Emperor Alexander I St. Petersburg State Transport University, "Automation and Remote Control on Railways" Department, Russian Federation;* Alexandr Skorokhodov — *Group of Companies «IMSAT», Russian Federation*

Second Day: September 15th, 2018 (Saturday)	
	# 119. Development of a Complex Model for VoIP Technology with the Possibility of Application in 5G Networks Alexey Volkov, Alexander Bakhtin, Said Muratchaev, Aleksandr Baskakov and Elena Volkova — *MIET TCS Department, Russian Federation*
	# 86. Implementation of Software-Defined Network Nodes Based on Ultra-Low Power Microcontrollers for VANET Mikhail Yurchenko, Mikhail Buinevich, Andrey Laptev, Andrey Stepanov, Kirill Tarasov and Andrei Vladyko — *The Bonch-Bruevich Saint - Petersburg State University of Telecommunications, Russian Federation*
	# 161. The high resolution ultrasonic well imager Kamil Yusupov, Victor Kosarev, Adel Akchurin, Bulat Nasyrtdinov, Alexander Starovoytov, Ekaterina Yachmeneva, Marsel Khamiev — *Kazan Federal University, Russian Federation;* Airat Mukhametzyanov — *Gazprom Transgaz Kazan Ltd, Kazan, Russian Federation*
14.00 – 21.00	**Volga River Excursion**

Third Day: September 16th, 2018 (Sunday)	
09:00—11:00	**Regular Papers Session 3B(1), Room B** Moderator:
	#1. Implementation of the Continuous Monitoring System for Technical Condition of the St. Petersburg Arena Stadium Sliding Roof Dmitry Efanov, German Osadchy — *Russian University of Transport, Department of*

Third Day: September 16th, 2018 (Sunday)	
	Automation, Remote Control and Communication on Railway Transport, Russian Federation; **Andrei Belyi,** Dmitry Shestovitskliy — *Emperor Alexander I St. Petersburg State Transport University, "Bridges" department, Russian Federation*
	#2. The Use of Codes with Fixed Multiplicities of Detected Unidirectional and Asymmetrical Errors in the Process of Organizing Combinational Circuit Testing **Dmitry Efanov** — *Russian University of Transport, Department of Automation, Remote Control and Communication on Railway Transport, Russian Federation;* Valery Sapozhnikov and Vladimir Sapozhnikov — *Emperor Alexander I St. Petersburg State Transport University, "Automation and Remote Control on Railways" department, Russian Federation*
	#4. Practical Recommendations for Controlling of Angular Displacements of High-Rise and Large Span Elements of Civil Structures **Andrei Belyi**, German Osadchy — *Emperor Alexander I St. Petersburg State Transport University, "Bridges" department, Russian Federation;* Kirill Dolinskiy — *"Monitoring of bridges" CJSC STC, Russian Federation*
	#3. The Evaluation of Error Detection Probability at the Outputs of Combinational Circuits Under Concurrent Error Detection on the Basis Of Summation Codes **Dmitry Efanov**, German Osadchy — *Russian University of Transport, Department of Automation, Remote Control and Communication on Railway Transport, Russian Federation;*

Third Day: September 16th, 2018 (Sunday)	
	Valery Sapozhnikov, Vladimir Sapozhnikov — *Emperor Alexander I St. Petersburg State Transport University, "Automation and Remote Control on Railways" Department, Russian Federation;* Dmitry Plotnikov — *Peter the Great St. Petersburg Polytechnic University, Russian Federation*
	#7. Prognosis Service for Navigation Systems Regarding Time Parameters of Railroad Crossing Dmitry Efanov — *"LokoTech-Signal" LLC, Russian Federation;* Dmitry Plotnikov— *Peter the Great St. Petersburg Polytechnic University, Russian Federation;* **German Osadchy** — *"Integrated Monitoring Systems" LLC, Russian Federation*
	#41. New Architecture of Monitoring Systems of Train Traffic Control Devices at Wayside Stations **Dmitry Efanov** — *"LocoTech-Signal" LLC, Russian Federation*
	#13. Paradigms for Building Control Systems on Railroad Transport: from the Systems of Electrical Interlocking of Points and Light Signals to Smart Grid Train Movements Controlling Systems Dmitry Efanov — *"LocoTech-Signal" LLC, Russian Federation;* **German Osadchy** — *RSC "Monitoring of Bridges", Russian Federation*

Third Day: September 16th, 2018 (Sunday)	
	#94. Triple Modular Sum Code as a New Code for the Tasks of Checkable Automation System Synthesis **Dmitry Efanov** — *Russian University of Transport (MIIT), Russian Federation*
11:00 —11:15	**Coffee Break**
11:15—12:30	**Plenary Session 3A, Conference Hall** Moderator:
11:15—11:50	**Keynote Address** **Integrated Circuits and Systems for Reliable Communications** Dr. Zoran Stamenković — *IHP GmbH, Frankfurt (Oder), Germany*
11:55 —12:30	**Invited Talk** **Design of "ideal" local system networks** Mikhail Karavay — *V.A. Trapeznikov Institute of Control Scienses of Russian Academy of Sciences, Russian Federation*
12:30—14:00	**Regular Papers Session 3B(2), Room B** Moderator:
	#126. Average Number of Orders Calculation Concerning Diagnostic Test of Measuring Controllers During Permanent Monitoring Performance Based on Stationary Model of Queueing System Dmitry Efanov, German Osadchiy — *Russian University of Transport, Department of Automation, Remote Control and Communication on Railway Transport, Russian Federation;* Dmitry Plotnikov — *Peter the Great St. Petersburg Polytechnic University, Russian Federation*

Third Day: September 16th, 2018 (Sunday)	
	#8. The Fault Tolerant CMOS Logical Element of Matching for a Content-Addressable Memory Artem Antonyuk — *Scientific Research Institute of System Analysis, Russian Academy of Sciences, Russian Federation;* Vladimir Stenin — *National Research Nuclear University MEPhI, Russian Federation*
	#10. Formation of Interference from Power Circuits to Apparatus of Automation and Remote Control Shamanov Viktor — *Federal State Institution of Higher Education «Russian University of Transport» (RUT – MIIT), Russian Federation*
	#11. Using of interval analysis algorithms for technical systems optimization problem solving Olga Medvedeva — *Kazan Federal University, Russian Federation;* Svetlana Mustafina — *Bashkir State University, Russian Federation*
	#15. System of Designing Test Programs and Modeling of the Memory Microcircuits Aleksej Melikov, Aleksej Evdokimov, Aleksandr Shubovich and Sergej Volobuev — *Volgograd State Agrarian University, Russian Federation*
	#19. Application of Monte-Carlo method in the construction of copolymerization process modeling algorithm for the continuous mode in the reactors cascade Olga Medvedeva, Vladimir Mikhailov — *Kazan Federal University, Russian Federation;* Svetlana Mustafina, Tatiana Mikhailova, Sofia Mustafina — *Bashkir State University, Russian Federation*

Third Day: September 16th, 2018 (Sunday)	
	#20. Design and Test of an Interference Canceller for a GPS/GLONASS User's Navigation Equipment Ilya Kornilov — *Ural Federal University, Russian Federation*
09:00—11:00	**Regular Papers Session 3C(1), Room C** Moderator:
	#5. Self-Checking Concurrent Error Detection System Design Based on Boolean Complement Method to "1 out of 3" Code with Hardware Cost Optimization Dmitry Efanov — *Russian University of Transport, Department of Automation, Remote Control and Communication on Railway Transport, Russian Federation;* Valery Sapozhnikov, Vladimir Sapozhnikov and Dmitry Pivovarov — *Emperor Alexander I St. Petersburg State Transport University, "Automation and Remote Control on Railways" department, Russian Federation*
	#77. The development of automated systems of the vehicle input flow operation at multimodal terminal complexes as a way to increase the terminal process's rhythmicity Natalia Goncharova — *Emperor Alexander I St. Petersburg State Transport University, Russian Federation*
	#6. Experimental Studies of Polynomial Codes in Concurrent Error Detection Systems of Combinational Logical Circuits Dmitry Efanov — *Russian University of Transport, Department of Automation, Remote Control and Communication on Railway Transport, Russian Federation;* Valery Sapozhnikov, Vladimir Sapozhnikov, Ruslan Abdullaev — *Emperor Alexander I St.*

Third Day: September 16th, 2018 (Sunday)	
	Petersburg State Transport University, "Automation and Remote Control on Railways" Department, Russian Federation; Dmitry Plotnikov — *Peter the Great St. Petersburg Polytechnic University, Russian Federation*
	# 164. Prediction of High-Temperature Operation (up to +300°C) of Reference Voltage Source Built with Temperature-Tolerant Production Technology Lev M. Sambursky, Dmitry A. Parfenov, Mamed. R. Ismail-Zade, Alexander S. Boldov and Borislav S. Dubyaga — *National Research University Higher School of Economics (Moscow Institute of Electronics and Mathematics), Russian Federation*
	#14. Testing of Optical Sensors in Measuring Systems on Railway Marshalling Yard Dmitrii Efanov, German Osadchy and Valerii Khóroshev — *Department of Automation, Remote Control and Communication on Railway Transport, Russian University of Transport, Russian Federation*
	# 22. Testing the Short-term Blood Glucose Prediction Algorithm Using DirecNet Clinical Database Pavel A. Rudenko — *MIEE, Russian Federation;* Evgeniia Litinskaia, Maxim V. Denisov — *MIET, Russian Federation;* Kirill V. Pozhar and Nikolai A. Bazaev — *I.M. Sechenov First Moscow State Medical University, Russian Federation*
	#21. Optimization of Conditional Diagnostics Algorithms for Railway Electric Switch Mechanism Using the Theory of Questionnaires with Failure Statistics Dmitrii Efanov, Valerii Khoroshev, German

Third Day: September 16th, 2018 (Sunday)	
	Osadchii — *Department of Automation, Remote Control and Communication on Railway Transport, Russian University of Transport, Russian Federation;* Andrei Belyi — *Department of Bridges, Emperor Alexander I St. Petersburg State Transport University, Russian Federation*
11:00 —11:15	**Coffee Break**
12:30—14:00	**Regular Papers Session 3C(2), Room C** Moderator:
	# 31. Checking Robustness of Web Services based on the Parallel Composition of Partial Timed Finite State Machines Ekaterina Shirokova — *National Research Tomsk State University, Russian Federation*
	# 42. Computational Fluid Dynamics Simulation of the Sputnik Pediatric Rotary Blood Pump Maxim Denisov, Dmitry Telyshev — *MIET, Russian Federation;* Anna Satyukova and Tatyana Le — *Bakoulev Scientific Center for Cardiovascular Surgery, Russian Federation*
	# 55. Wearable artificial kidney design principles Nikolai Bazaev — *I.M. Sechenov First Moscow State Medical University, Zelenograd innovative-technological centre, Russian Federation;* Boris Putrya, Nikita Zhilo and Victor Grinval'd — *Zelenograd innovative-technological centre, Russian Federation*
	# 71. Ant algorithm for determining of critical connections in VLSI Daria Zaruba, Dmitry Zaporozhets and Elmar Kuliev — *Southern Federal University, Russian Federation*

Third Day: September 16th, 2018 (Sunday)	
	# 131. IT Support for Non-Invasive Monitoring of Blood Glucose System Nikolay Kascheev — *NRU HSE Nizhny Novgorod, Russian Federation;* Oleg Kozyrev — *INTRAFAB Pte Ltd, Russian Federation;* Alexey Vanyagin — *Research Radiophysical Institute, Russian Federation*
	# 163. Design of digital gloves with feedback for VR Marat Shigapov, Vlada Kugurakova and Evgeniy Zykov — *Kazan Federal University, Russian Federation*
	#110. Development of Sensor for Spectral Monitoring of Combustion Processes in Gas-Turbine Engines Mikhail Mekhrengin, Igor Meshkovskii, Anton Sukhinets, Vladislav Guryev and Daniil Smirnov — *ITMO University, Russian Federation*
09:00—11:00	**Regular Papers Session 3D(1), Room D** Moderator:
	# 170. An Automatic Testbench Generator for Test Patterns Validation Slimane Boutobza, Sorin Popa and Andrea Costa — *Synopsys, France*
	# 85. Fault Tolerance Properties of Systems Generated with the Use of High-Level Synthesis Jakub Lojda, Jakub Podivinsky and Zdenek Kotasek — *Brno University of Technology, Czechia*
	# 106. Impact of Resistive Open and Bridge Defects on the SET Robustness of CMOS Combinational Logic Marko Andjelkovic, Zoran Stamenkovic, Milos Krstic and Rolf Kraemer — *IHP, Germany*

Third Day: September 16th, 2018 (Sunday)	
	# 143. Forming Patch Functions and Combinational Circuit Rectification Anzhela Matrosova, Semen Chernyshov — *National Research Tomsk State University, Russian Federation;* Gennadiy Goshin — *Tomsk State University of Control Systems and Radioelectronics, Russian Federation;* Kudin Dmitriy — *Geophysical Centre of the Russian Academy of Science, Russian Federation*
	# 146. A Processor Optimization Framework for a Selected Application Jakub Podivinsky, Ondrej Cekan, Martin Krcma, Radek Burget, Tomas Hruska and Zdenek Kotasek — *Brno University of Technology, Czechia*
	# 153. Inverse Sets in Pattern Recognition Alexei Mikhailov and Mikhail Karavay — *Institute of Control Sciences, RAS, Russian Federation*
	# 157. Using MISR as Countermeasure Against Scan-based Side Channel Attacks Satyadev Ahlawat, Darshit Vaghani, Virendra Singh — *Indian Institute of Technology (IIT) Bombay, India;* Naveen Bazard — *Directorate of Education, Delhi, India*
	# 158. Implementation of memory static, coupling and dynamic fault models at the register transfer level Davit Hayrapetyan — *Yerevan State University, Armenia;* Aleksandr Manukyan and Grigor Tshagharyan — *Synopsys Armenia, Armenia*
11:00 —11:15	**Coffee Break**

Third Day: September 16th, 2018 (Sunday)	
13:00—14:00	**Regular Papers Session 3D(2), Room D** Moderator:
	# 160. Firmware Generation Architecture For Memory BIST David Sargsyan — *Synopsys, Armenia*
	# 121. Partial Dynamic Reconfiguration in an FPGA-based Fault-Tolerant System: Simulation-based Evaluation Richard Panek, Jakub Lojda, Jakub Podivinsky and Zdenek Kotasek — *Brno University of Technology, Czechia*
	# 166. The Automatic Algorithms' Adaptation Method for Embedded Multi-Core Configurations Anna Troshina, Alexey Ivutin and Alexander S. Novikov — *Tula State University, Russian Federation*
	# 173. SPICE Simulation of Total Dose and Aging Effects in MOSFET Circuits Konstantin Petrosyants and Igor Kharitonov — *National Research University Higher School of Economics (Moscow institute of electronics and mathematics), Russian Federation*
	# 176. A Methodology to Validate the OnChip Buses of a Microcontroller Meghashyam Ashwathnarayan — *Infineon Technologies India Pvt Ltd, India;* Jayakrishna Guddeti — *Infineon Technologies, India*
14.00 – 15.00	**Lunch**
15.00 – 19.00	**City tour**
19.00 – 23.00	**Gala Dinner**

Fourth Day: September 17th, 2018 (Monday)	
9:00—9:45	**Plenary Session 4A, Conference Hall** Moderator:
9:00 —9:45	**Invited Talk**
9:45 —10:00	**Coffee Break**
10:00—13:00	**Regular Papers Session 4B, Room B** Moderator:
	# 123. Fault-tolerant Synchronous FSM Network Design for Path Delay Faults Sergei Ostanin, Valentina Andreeva, Natalia Butorina and Dmitriy Tretyakov — *Tomsk State University, Russian Federation*
	# 181. Study of the Subset of Code Words Providing the Self-testing Property of a Checker Natalya Butorina — *Tomsk State University, Russian Federation;* Yulia Burkatovskaya — *National Research Tomsk Polytechnic University, Russian Federation;* Elena Pakhomova — *National Research Tomsk State University, Russian Federation*
	# 25. Synthesis of the algorithms for adaptive nonlinear blocks in view of finite input signal-to-noise ratio Vladimir Artyushenko — *Technological University, Russian Federation;* Vladimir Volovach — *Volga Region State University of Service, Russian Federation*
	# 111. Improvement of the design of a microprocessor-based power supply control system of an internal combustion engine S.G. Solovyov, E.R. Milutin and V.A. Ryzhikov —

Fourth Day: September 17th, 2018 (Monday)	
	Institute of Service and Business (branch) Don State Technical University, Russian Federation
	# 26. Synthesis of the Algorithms of Adaptive Nonlinear Signal Processing Using Robust Approach Vladimir Artyushenko — *Technological University, Russian Federation;* Vladimir Volovach — *Volga Region State University of Service, Russian Federation*
	# 192. Numerical Model, Algorithms and Software for Quantitative Estimation of Implosion Impulse-Amplitude Action on Porous-Fractured Medium in Well Bottom Zone Vladimir Konyukhov, Anatolii Chekalin — *Kazan Federal University, Russian Federation;* Ivan Konyukhov — *Innopolis University, Russian Federation*
	# 27. Analysis of moment and cumulant description of non-Gaussian random processes, signals and noise Vladimir Artyushenko — *Technological University, Russian Federation;* Vladimir Volovach — *Volga Region State University of Service, Russian Federation*
	# 171 The Developing of Targets Tracking Complex Andrey Tarasov, Valentina Potapova and Michael Nikiforov — *Ryazan State Radio Engineering University, Russian Federation*
	# 29. Adaptive signal processing nonlinear block with quadrature generators under influence broadband noise Vladimir Artyushenko — *Technological University, Russian Federation;* Vladimir Volovach — *Volga Region State*

Fourth Day: September 17th, 2018 (Monday)	
	University of Service, Russian Federation
	# 89. Conditions of stability of vertical cylindrical soft shell Lema Bekmurzaev, Mikhail Mitsik, Marina Byrdina and Gulmira Grigoryeva — *Don State Technical University, Russian Federation*
	# 50. Effect of Narrow-band Noise on Adaptive Signal Procssing by Nonlinear Blocks with Quadrature Generators Vladimir Artyushenko — *Technological University, Russian Federation;* Vladimir Volovach and Viktor Budilov — *Volga Region State University of Service, Russian Federation*
	# 104. Energy Saving Low Cost Autodyne Short-Range Motion Sensor Igor Shirokov, Elena Shirokova and Andrey Azarow — *Russian Federation*
	# 174. Experimental research of the mode of quantum keys distribution Anton Pljonkin — *Southern Federal University, Russian Federation*
	# 49. Parametrically excited microelectromechanical system in navigation problems Vladimir Bogoljubov — *KNITU-KAI, Russian Federation;* Lyalya Bakhtieva — *Kazan Federal University, Russian Federation*
10:00—13:00	**Regular Papers Session 4C, Room C** Moderator:
	# 165. Using a tableau method for checking the database logical structure correctness Aleksey I. Baranchikov, Natalya Grinchenko, Boris V. Kostrov — Ryazan State Radio Engineering University, Russian Federation;

Fourth Day: September 17th, 2018 (Monday)	
	Gennady V. Svetlov, Nataliy S. Fokina — Joint stock company "Ryazan Production and Tehnological enterprise "Granit", Russian Federation
	# 134. An Approach to Testing the Hardware Modules of Locomotive Driver Console Simulator Andrey Chernov, Dmitry Chupiy, Alexander Alexandrov and Artem Miroshnikov — *Rostov State Transport University, Russian Federation*
	# 88. Objects Discernibility Improvement as Part of Unmanned Vessel Control System Denis Nacharov, Yurii Mikhayluk and Vladimir Iskiv — *Russian Federation*
	# 28. Application of Adaptive Algorithms for Measuring Temperature Current- Voltage Characteristics of Electronic Elements Alexander Ermachikhin, Vladimir Litvinov, Yuri Vorobyov and Aleksei Maslov — *Ryazan State Radio Engineering University, Russian Federation*
	# 124. Solutions to Problem of CAM Overflow in the Parallel Dataflow Computing System "Buran" Nikolay Levchenko, Anatoly Okunev and Dmitry Zmejev — *IPPM RAS, Russian Federation*
	# 125. Global Distributed Associative Environment - Evolution of Parallel Data-flow Computing System "Buran" Alexander Ivannikov — *Institute for Design Problems in Microelectronics of Russian Academyof Sciences, Russian Federation;* Nikolay Levchenko, Anatoly Okunev, Alexander Stempkovsky and Dmitry Zmejev — *IPPM RAS,*

Fourth Day: September 17th, 2018 (Monday)
Russian Federation
178. Study of Execution Efficiency of Implementation Versions of Sparse Matrices Multiplication Algorithm on Parallel Dataflow Computing System "Buran" Nikolay Levchenko, Anatoly Okunev and Dmitry Zmejev — *IPPM RAS, Russian Federation*
23. The Implementation of High-Order Single-Step Integration Technique Into Circuit Simulator Mark Gourary, Sergey Rusakov, Sergey Ulyanov and Michael Zharov — *Institute for Design Problems in Microelectronics of Russian Academy of Sciences, Russian Federation*
99. Estimation of the significance of parameters variation in the electronic equipment monitoring and diagnostics system Sergey A. Panychev, Vyacheslav F. Guzik, Anatoly P. Samoylenko, Andrey I. Panychev and Anastasia A. Vaganova — *Southern Federal University, Russian Federation*
109. Some of the new indicators in Genetic Algorithms for the Traveling Salesman Problem Julia Logunova and Viktor Kureichik — *Southern Federal University Taganrog, Russian Federation*
#114. Localization of Barcodes Using Artificial Neural Network Nikolay Ventsov and Liubov Podkolzina — *Don State Technical University, Russian Federation*

Fourth Day: September 17th, 2018 (Monday)	
	# 148. The Low-temperature Radiation-Hardened Analog Interfaces of Sensors on the Base of BiJFET Array Chips Alexey E. Titov — *Southern Federal University, Taganrog, Russian Federation;* Ilya V. Pakhomov — Don State Technical University, Rostov-on-Don, Russian Federation; Aleksandr I. Serebryakov — JSC "Milandr", Zelenograd, Moscow, Russian Federation
	# 91. Development of Time-Varying PLL Macromodel for Jitter Evaluation Mark Gourary, Sergey Rusakov, Sergey Ulyanov and Mihail Zharov — *IPPM RAS, Russian Federation*
	# 32. Piezoelectric Cantilever in the Device for Extraction Energy from the Water Flow Valery Zibrov, Mikhail Molev, Irina Zanina and Aleksey Iliev — *Don State Technical University, Russian Federation*
09:00—13:00	**Poster Session, Conference Hall**
	#66. Design of Two-Valued and Multivalued Current Digital Adders Based on the Mathematical Tool of Linear Algebra Nikolay Butyrlagin, Nikolay Chernov and Vladislav Yugai — *Don State Technical University, Russian Federation;* Nikolay Prokopenko — *Don State Technical University, Institute of design problems in microelectronics RAS, Russian Federation*

Fourth Day: September 17th, 2018 (Monday)	
	# 36. About one mathematical model of project management Nino Devadze, George Abuselidze and Tamta Kakhidze — *Batumi Shota Rustaveli State University, Georgia*
	# 142. Automatic system of intelligent seed rate control for selection seeders Maksim Moskovskiy, Maksim Litvinov and Igor Smirnov — *Federal Scientific Agro Engeneering Center VIM, Russian Federation*
	# 155. Solution of an Optimal Control Problem for Helmholtz Equations with m-Point Nonlocal Boundary Conditions by means Mathcad Vakhtang Beridze and Marina Abashidze — *Batumi Shota Rustaveli State University, Georgia*
	# 180. Evolution of a Problem of the Hidden Faults in the Digital Components of Safety-Related Systems Oleksandr Drozd, Mykola Kuznietsov, Svetlana Antoshchuk, Oleksandr Martynyuk, Myroslav Drozd and Julian Sulima
	# 90. Algorithm for the formation of a training set for a neural network on the recognition of chart patterns Galim Vakhitov, Zulfira Enikeeva and Sumbel Enikeeva — *Kazan Federal University, Russian Federation*
	# 97. Formal Description of Possible Input Logical Signal Data Sequences for Digital Systems and Their Blocks Alexander Ivannikov, Nikolay Levchenko — *Institute for Design Problems in Microelectronics of Russian Academy of Sciences, Russian Federation;* Irina Romanova — *National Research University Higher School of Economics, Russian Federation*

Fourth Day: September 17th, 2018 (Monday)	
13:00 —14:00	**Symposium Closing – Conference Hall**
14:00 —15:00	**Lunch**