



2019 IEEE EAST-WEST DESIGN & TEST SYMPOSIUM
Batumi, Georgia, September 13 - 16, 2019



13.09 (Friday)		14.09 (Saturday)		15.09 (Sunday)		16.09 (Monday)	
8:30	Registration	Regular Papers Session 28(1), Conference Hall	Regular Papers Session 2C(1), Room B	Regular Papers Session 38(1), Conference Hall	Regular Papers Session 3C(1), Room B	Plenary Session 4A, Conference Hall	Plenary Session 4A, Conference Hall
9:00		Coffee Break	Plenary Session 2A, Conference Hall	Regular Papers Session 38(2), Conference Hall	Regular Papers Session 3C(2), Room B		
9:45						Plenary Session 1A, Conference Hall	Regular Papers Session 2C(2), Room B
10:00		Break	Excursion	Lunch	Free Time		
10:30						Regular Papers Session 1B, Conference Hall	Free Time
11:00	Welcome Cocktail	Free Time	Lunch	Parallel Session Room B	Free Time		
11:45						Opening Session	Excursion
12:00	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
13:00						Plenary Session 1A, Conference Hall	Excursion
14:00	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
15:00						Plenary Session 1A, Conference Hall	Excursion
15:15	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
16:00						Plenary Session 1A, Conference Hall	Excursion
16:15	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
16:30						Plenary Session 1A, Conference Hall	Excursion
17:00	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
17:15						Plenary Session 1A, Conference Hall	Excursion
17:30	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
18:00						Plenary Session 1A, Conference Hall	Excursion
18:30	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
18:00						Plenary Session 1A, Conference Hall	Excursion
19:30	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
20:00						Plenary Session 1A, Conference Hall	Excursion
20:30	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		
21:00						Plenary Session 1A, Conference Hall	Excursion
21:30	Plenary Session 1A, Conference Hall	Excursion	Lunch	Parallel Session Room B	Free Time		



FROM THE ORGANIZING COMMITTEE

We have great pleasure to invite you to 17-th 2019 IEEE EAST-WEST DESIGN & TEST SYMPOSIUM (EWDTDS-2019)!

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 EWDTDS 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, Victor Djigan, Dmitry Efanov, Nikolay Prokopenko for taking an active role in organizing the conference technical program, international activity in the field of higher education and support the preparation and operation of the symposium. The greatest appreciation to the official IEEE EWDTDS – 2019 sponsors: IEEE, Computer Society, Test Technology Technical Council – TTTC.

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



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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 IEEE Computer Society Test Technology Technical Council (TTTC) consists of all aspects of test as they pertain to test implementation, test design, manufacturing test and standardization in semiconductor, software, magnetic and optical devices and systems. Specific technical areas of interest include test of analog, digital and memory semiconductor integrated circuits, automatic test program generation, testability methods, built-in-test structures, automatic test equipment, board and



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<http://tab.computer.org/ttcc/index.html>

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- National Instruments;
- Yerevan Telecommunication Research Institute. JSC (YeTRI);
- Tomsk Polytechnic University.



BANKING

Generally, everywhere in Georgia you pay in the Georgian Lari (GEL).

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 = 2.93 Georgian Lari (100 USD = 292.50 Georgian Lari), 1 EURO = 3.29 Georgian Lari (100 EURO = 328.78 Georgian Lari).

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 EWDT-2019 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 Batumi is warm. The temperature can be typically 18-27 degrees Centigrade during days. During nights, the temperature can drop to 16-18 degrees Centigrade.



GENERAL INFORMATION

Total number of authors: 326.

Number of accepted papers: 110.

Number of participating countries: 23 (Armenia, Azerbaijan, Belarus, China, Estonia, France, Georgia, Germany, Iran, Israel, Italy, Myanmar, Poland, Russian Federation, Serbia, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom, USA, Uzbekistan).

Number of keynotes is 1 and number of invited talk is 3.

Number of Universities and Companies is 90.

Number of cities is 87.

COLOSSEUM MARINA HOTEL



Batumi is the capital of the Autonomous Republic of Adjara and the second largest city of Georgia.

<https://en.wikipedia.org/wiki/Batumi>

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SYMPOSIUM PROGRAM

First Day: September 13th, 2019 (Friday)

09:00 — 14:45	Registration, Conference Hall
15:00 — 15:15	Opening Session, Conference Hall Dr. Yervant Zorian — <i>General Chair, Chief Architect and Fellow at Synopsys, USA</i> Vladimir Hahanov — <i>General Chair</i>
15:15 — 16:00	Plenary Session 1A, Conference Hall Moderator: <i>Alexander Adamov</i>
15:15 — 16:00	Invited Talk
	Back-annotation of Physical Properties for a More Detailed System-Level Modeling: Considering Crosstalk in Interconnects <i>Zainalabedin Navabi – Worcester Polytechnic Institute, USA</i>
16:00 — 16:30	Coffee Break
16:30 — 19:00	Regular Papers Session 1B, Conference Hall Moderator: <i>Dmitry Efanov</i>
	#98. Voltage Regulation Analysis in Energy Transmission Systems Using STATCOM <i>Hamza Feza Carlak and Ergin Kayar</i>
	#5. Self-Dual Complement Method up to Constant-Weight Codes for Arrangement of Combinational Logical Circuits Concurrent Error-Detection Systems <i>Dmitry Efanov, Valery Sapozhnikov, Vladimir Sapozhnikov, German Osadchy and Dmitry Pivovarov</i>



First Day: September 13th, 2019 (Friday)

#6. Terms of Arrangement Reckoning Self-Checking Embedded Check Circuits Based on Boolean Complement up to Constant-Weight Code '1-out-of-3'

Dmitry Efanov, Valery Sapozhnikov, Vladimir Sapozhnikov, German Osadchy and Dmitry Pivovarov

#7. Polynomial Code with Detecting the Symmetric and Asymmetric Errors in the Data Vectors

Ruslan Abdullaev, Dmitry Efanov, Valery Sapozhnikov and Vladimir Sapozhnikov

#138. Power Supply Noise Rejection Improvement Method in Modern VLSI Design
Vazgen Melikyan, Artur Mkhitarian, Hakob Kostanyan, Hayk Grigoryan, Harutyun Kostanyan, Mushegh Grigoryan and Ruben Musayelyan

#42. Modeling and debugging tools development for recurrent architecture

Dmitry Khilko, Yuri Stepchenkov, Yury Shikunov and George Orlov

#22. Advanced Indication of the Self-Timed Circuits

Yuri Stepchenkov, Yuri Diachenko, Yury Rogdestvenski, Yury Shikunov and Denis Diachenko

#69. Elaboration of the Functioning Algorithm of Three – Dimensional Model of Computer System Safety

Victor Zhilin, Irina Drozdova, Ivan Sakharov, Larissa Cherckesova, Vitaliy Porksheyev, Olga Safaryan, Andrey Lobodenko and Sergey Morozov



First Day: September 13th, 2019 (Friday)

#70. Cross–Platforming Web–Application of Electronic On–line Voting System on the Elections of Any Level
Evgeniy Palekha, Irina Trubchik, Olga Manaenkova, Olga Safaryan, Vitaliy Porksheyan, Sergey Morozov, Larisa Cherkesova and Boris Akishin

#130. SCOAP-based Directed Random Test Generation for Combinational Circuits
Seyyede Maryam Ghasemy, Maryam Rajabalipanah, Saeideh Sarmadi and Zainalabedin Navabi

16:30 — 19:00 **Regular Papers Session 1C, Room B**
Moderator: *Hovhannes Hakobyan*

#17. The Fault Tolerant CMOS Logical C-Element for Digital Devices Resistant to Single Nuclear Particles
Yuri Katunin and Vladimir Stenin

#18. Processing an Effective Method for Clock Tree Synthesis
Narek Avdalyan and Kamo Petrosyan

#19. Unit Regression Test Selection Mechanism Based on Hashing Algorithm
Vazgen Melikyan, Hovhannes Hakobyan, Taron Kaplanyan and Arsen Momjyan

#23. A Technique for Semiconductor Devices Modeling Using Physical Templates
Alexandr M. Pilipenko, Vadim N. Biryukov and Alexander I. Serebryakov

#44. A novel technique for atomic instructions functional verification using lock contention analysis
Nikita Grevtsev and Peter Chibisov

#105. Complementary JFETs Integrated into the Microwave Complementary Bipolar Double Self-Aligned Technology



First Day: September 13th, 2019 (Friday)	
	<i>Dmitry Drozdov, Nikolay Prokopenko, Evgeny Savchenko, Andrey Grushin and Pavel Dukanov</i>
	#48. Ternary Questionnaires <i>Valerii Khoroshev and Dmitry Efanov</i>
	#50. Ternary Parity Codes: Features <i>Dmitry Efanov</i>
	#114. Development of Method for Automation of SPICE Models Generation <i>Vazgen Melikyan and Meruzhan Martirosyan</i>
	#126. From Abstract Modeling of ADAS Applications to an Accelerator-based Hardware Realization <i>Samira Ahmadi, Katayoon Basharkhah, Amin Mohaghegh and Zainalabedin Navabi</i>
	#82. OR2-NoC: OffLine Robust Routing Algorithm for 2-D Mesh NoCs Architectures <i>Arezoo Beheshti Soodian, Mina Zolfy Lighvan and Zahra Eghbali</i>
19:00 — 21:00	Welcome cocktail

Second Day: September 14th, 2019 (Saturday)	
09:00—10:30	Regular Papers Session 2B(1), Conference Hall Moderator: Victor Djigan
	#102. Non-Canonical Topography of the z-Plane Discretized due to Quantization of the IIR Digital Filter Coefficients <i>Vladislav Lesnikov, Tatiana Naumovich and Alexander Chastikov</i>
	#111. The Discrete Structure of the Zeros and Poles Location in the z-Plane of the of Arbitrary Order IIR Digital Filters with a Finite Word Length <i>Vladislav Lesnikov, Tatiana Naumovich, Alexander Chastikov and Alexander Metelyov</i>



Second Day: September 14th, 2019 (Saturday)	
	#83. Comparison of Phoneme-to-Grapheme Conversion For Spoken Document Retrieval <i>Dmitriy Prozorov and Alexandra Tatarinova</i>
	#104. Modification of the U-Net neural network in the task of multichannel satellite images segmentation <i>Vladimir Khryashchev, Roman Larionov, Anna Ostrovskaya and Alexander Semenov</i>
	#123. Forest Areas Segmentation on Aerial Images by Deep Learning <i>Vladimir Khryashchev, Vladimir Pavlov, Anna Ostrovskaya and Roman Larionov</i>
	#16. Algorithm for Extraction of the Iris Region in an Eye Image <i>Shavkat Fazilov and Ozod Yusupov</i>
10:30 — 11:00	Coffee Break
11:00 — 11:45	Plenary Session 2A, Conference Hall Moderator: <i>Vladislav Lesnikov</i>
	Invited Talk Adaptive Signal Processing: Science and Technology Victor Djigan – <i>Institute for Design Problems in Microelectronics of Russian Academy of Sciences, Russia</i>
12:00 — 14:00	Regular Papers Session 2B(2), Conference Hall Moderators: Victor Djigan, Vladislav Lesnikov
	#30. Protograph Sieving Method for Construction Moderate Length Multi-Edge Type QC-LDPC codes <i>Svistunov German, Vasily Usatyuk and Sergey Egorov</i>
	#57. Construction of Length and Rate Adaptive MET QC-LDPC Codes by Cyclic Group Decomposition



Second Day: September 14th, 2019 (Saturday)	
	<i>Vasily Usatyuk, Sergey Egorov, German Svistunov</i>
	#46. Calculation of Phase Center of Arbitrary Electromagnetic Radiation Sources in Near Field Zone <i>Alexey Malyshev, Nikolay Anyutin and Ivan Malay</i>
	#24. Statistical Analysis of Discriminators under the Influence of Additive Correlated non-Gaussian Noise Described by Markov Processes <i>Vladimir Mikhaylovich Artyushenko and Vladimir Ivanovich Volovach</i>
	#4. Technique to Simulate Oscillator Circuits with the Degradation Models <i>Mark Gourary, Sergey Rusakov, Sergey Ulyanov and Michael Zharov</i>
	#27. Accurate Soft Error Rate Reduction using Modified Resolution Method <i>Alexander Stempkovskiy, Dmitry Telpukhov and Vladislav Nadolenko</i>
	#62. A Technique for the Accounting of Surrounding Circuitry During Generation of the Simplified Models <i>Mark Gurariy, Sergey Rusakov, Sergey Ulyanov and Michael Zharov</i>
	#91. Antenna Array Calibration Algorithm Based on Phase Perturbation <i>Victor Djigan and Vladisav Kurganov</i>
09:00—10:30	Regular Papers Session 2C(1), Room B Moderator: Nikolay Prokopenko
	#2. Intelligent flow meter on acoustic multivibrator <i>Artur Gulin, Zhanna Sukhinets, Olga Valiamova, Nikolay Prokopenko and Olga Bureneva</i>
	#28. Neural Net as Pseudo-Inverse Filter in Speech Coding Problem



Second Day: September 14th, 2019 (Saturday)	
	<i>Rustam Latypov and Evgeni Stolov</i>
	#36. A Template Model of Junction Field-Effect Transistors for a Wide Temperature Range <i>Alexandr M. Pilipenko, Vadim N. Biryukov and Nikolay N. Prokopenko</i>
	#38. All-Pass Second-Order Active RC-Filter with Pole Q-Factor's Independent Adjustment on Differential Difference Amplifiers <i>Darya Denisenko, Nikolay Prokopenko and Nikolay Butyrlagin</i>
	#39. Silicon Photomultipliers' Analog Interface with Wide Dynamic Range <i>Oleg Dvornikov, Nikolay Prokopenko, Vladimir Tchekhovski, Yaroslav Galkin, Alexey Titov and Anna Bugakova</i>
	#51. Harmonic Distortions in Analog Interfaces Based on Differential Difference Amplifiers <i>Nikolay Butyrlagin, Anna Bugakova, Nikolay Prokopenko, Mikhail Mitsik and Alexey Titov</i>
10:30 — 11:00	Coffee Break
12:00 — 14:00	Regular Papers Session 2C(2), Room B Moderator: <i>Zurab Meskhidze</i>
	#60. Optimized time-delayed feedback control of fractional chaotic oscillator with application to secure communications <i>Amir Rikhtegar Ghiasi, Mona Saber Gharamaleki, Elaheh Mohammadi Asl Khasraghi and Zahra Sattarzadeh Kalajah</i>
	#63. A Signal Processing Approach for the Failure Analysis of Rolling-Element Bearing of Vehicle Brake Tester Used at a Vehicle Inspection Station <i>Selman Kulaç</i>
	#64. Modified Modular Unit Bits Sum Codes with Arbitrary Account Modules



Second Day: September 14th, 2019 (Saturday)	
	<i>Dmitrii Efanov, Anna Filippochkina and Mariia Ivanova</i>
	#47. Method of calculating the spare parts system availability for electronic means Bogdan Pankovsky and Sergey Polesskiy
	#134. Solution of the Dynamic Problem of Optimal Design of Electronic Devices Based On the Gravity Center Method <i>Mikheil Donadze and Zurab Meskhidze</i>
	#135. Making System Level Test Possible by a Mixed-mode, Multi-level, Integrated Modeling Environment <i>Nooshin Nosrati, Katayoon Basharkhah, Rezgar Sadeghi, Carna Zivkovic, Christoph Grimm and Zainalabedin Navabi</i>
	#136. An Accelerator-based Architecture Utilizing an Efficient Memory Link for Modern Computational Requirements <i>Saba Yousefzadeh, Katayoon Basharkhah, Nooshin Nosrati, Rezgar Sadeghi, Jaan Raik, Maksim Jenihhin and Zainalabedin Navabi</i>
	#139. Fast and Efficient Implementation of Lightweight Crypto Algorithm PRESENT on FPGA through Processor Instruction Set Extension <i>Abdullah Varıcı, Gurol Saglam, Seckin Ipek, Abdullah Yildiz, Sezer Goren, Aydin Aysu, Deniz Iskender, T. Baris Aktemur and H. Fatih Ugurdag</i>
14:00 — 15:00	Lunch
15.00 – 18.00	Excursion



Third Day: September 15th, 2019 (Sunday)	
09:00—10:30	Regular Papers Session 3B(1), Conference Hall Moderator: <i>Oleksandr Drozd</i>
	#15. Development of a simulation tool to estimate final electricity consumption and determine the optimum cooling system for data centers <i>Beyzanur Toprak, Beyzanur Bora and Gül Nihal Güğül</i>
	#67. Modeling Technique of Large Signal Dynamics for Electromagnetic Levitation Melting System <i>Idan Sassonker, Moria Elkayam and Alon Kuperman</i>
	#127. Increasing the Effective Volume of Digital Watermark Used in Monitoring the Program Code Integrity of FPGA-Based Systems <i>Kostiantyn Zashcholkin, Oleksandr Drozd, Ruslan Shaporin, Olena Ivanova and Yulian Sulima</i>
	#129. Multidimensional hierarchical model of behavioral check of distributed information systems <i>Oleksandr Martynyuk, Oleksandr Drozd, Hanna Stepova, Dmitry Martynyuk and Lyudmila Sugak</i>
	#79. Deriving Low Power Test Sequences Detecting Robust Testable PDFs <i>Anzhela Matrosova, Valentina Andreeva and Vyacheslav Tychinskiy</i>
10:30 — 11:00	Coffee Break



Third Day: September 15th, 2019 (Sunday)	
11:00 — 11:45	Plenary Session 3A, Conference Hall Moderator: <i>Vladimir Hahanov</i>
	11:00—11:45 Keynote Address New Trends in Design and Test Dr. Yervant Zorian — <i>Chief Architect and Fellow at Synopsys, USA</i>
12:00 — 14:00	Regular Papers Session 3B(2), Conference Hall Moderator: <i>Alexander Adamov</i>
	#133. An Analysis of LockerGoga Ransomware <i>Alexander Adamov, Anders Carlsson and Tomasz Surmacz</i>
	#31. Caution: GALS-ification as a Means against SCA Attacks <i>Zoya Dyka, Ievgen Kabin, Dan Klann, Frank Vater and Peter Langendoerfer</i>
	#53. Researching Resilience a Holistic Approach <i>Zoya Dyka, Ievgen Kabin and Peter Langendoerfer</i>
	#55. Fast and Secure Unified Field Multiplier for ECC Based on the 4-Segment Karatsuba Multiplication <i>Ievgen Kabin, Zoya Dyka, Dan Klann and Peter Langendoerfer</i>
	#86. Unit Regression Test Selection According To Different Hashing Algorithms <i>Hovhannes Hakobyan, Arman Vardumyan and Harutyun Kostanyan</i>
	#65. Parametric Optimization Subsystem in LTspice Environment of Analog Microcircuits for Operation at Low Temperatures




Third Day: September 15th, 2019 (Sunday)	
	<i>Maxim Liashov, Nikolay Prokopenko, Andrei Ignashin, Oleg Dvornikov and Alexey Zhuk</i>
	#90. Secure Communication using the synchronization of time-varying complex networks by fuzzy impulsive method <i>Reza Behinfaraz, Sehraneh Ghaemi, Sohrab Khanmohammadi and Mohammadali Badamchizade</i>
	#92. SWIELD: An In Situ Approach for Adaptive Low Power and Error-Resilient Operation <i>Mitko Veleski, Rolf Kraemer and Milos Krstic</i>
09:00—10:30	Regular Papers Session 3C(1), Room B Moderator: <i>Sergei Ostanin</i>
	#14. Sum Codes of Weighted Data Bits for Objectives of Automation Logical Devices Technical Diagnostics <i>Dmitry Efanov, Valery Sapozhnikov, Vladimir Sapozhnikov, German Osadchy and Teng Teng</i>
	#68. On a Method for Segmentation of Memory Instances with Row Redundancies <i>Valerik Vardanyan and Karen Amirkhanyan</i>
	#80. Masking Internal Node Faults and Trojan Circuits in Logical Circuits <i>Anzhela Matrosova, Victor Provkin and Ekaterina Nikolaeva</i>
	#81. Masking Robust Testable PDFs <i>Anzhela Matrosova, Sergei Ostanin and Semen Chernyshov</i>
	#89. CFI: Control Flow Integrity or Control Flow Interruption? <i>Nicolò Maunero, Paolo Prinetto and Gianluca Roascio</i>
	#84. Associative Processors: Application, Operation, Implementation Problems



Third Day: September 15th, 2019 (Sunday)	
<i>Egor Kuzmin, Nikolay Levchenko and Anatoly Okunev</i>	
10:30 — 11:00	Coffee Break
12:00 — 14:00	Regular Papers Session 3C(2), Room B Moderator: <i>German Osadchy</i>
	#78. Reliability Issues in the Parallel Dataflow Computing System <i>Nikolay Levchenko, Anatoly Okunev and Dmitry Zmejev</i>
	#58. Implementation Variants of the Global Distributed Associative Computing Environment for the Parallel Dataflow Computing System "Buran" <i>Nikolay Levchenko, Anatoly Okunev and Dmitry Zmejev</i>
	#59. Simulation of Nodes and Blocks of Matching Processor of the Parallel Dataflow Computing System "Buran" <i>Nikolay Levchenko, Anatoly Okunev and Dmitry Zmejev</i>
	#96. Evaluating the length of distinguishing sequences for nondeterministic Input/Output automata <i>Igor Burdonov, Alexandre Kossachev, Nina Evtushenko and Alexey Demakov</i>
	#100. An Analysis of Sampling Effect on the Absolute Stability of Discrete-time Bilateral Teleoperation Systems <i>Amir Aminzadeh Ghavifekr, Seyedshahab Chehraghi and Giacomo De Rossi</i>
	#101. Deriving adaptive homing sequences for weakly initialized nondeterministic FSMs <i>Evgenii Vinarskii, Alexandr Tvardovskii, Larisa Evtushenko and Nina Yevtushenko</i>
	#106. USF: An Efficient Test Pattern Validation Approach for Compressed Scan Designs



Third Day: September 15th, 2019 (Sunday)	
	<i>Slimane Boutobza, Andrea Costa and Sorin Popa</i>
	#112. Permanent Monitoring Systems of the Contact-Wire of Railroad Catenary: the Main Tasks of Implementation <i>Dmitrii Efanov, German Osadchy, Dmitrii Barch and Andrei Belyi</i>
14.00 – 15.00	Lunch
15.00 – 17.00	Panel Session 3B(3), Room B Moderator: Katayoon Basharkhah
19.00 – 23.00	Gala Dinner

Fourth Day: September 16th, 2019 (Monday)	
9:00—9:45	Plenary Session 4A, Conference Hall Moderator: <i>Alexander Adamov</i>
	9:00 —9:45 Invited Talk #128. Use of Natural Information Redundancy in On-Line Testing of Computer Systems and their Components Oleksandr Drozd – <i>Odessa National Polytechnic University, Ukraine</i>
	Quantum-driven test computing Vladimir Hahanov #118. Qubit Test Synthesis Processor for SoC Logic <i>Vladimir Hahanov, Wajeb Gharibi, Eugenia Litvinova and Ivan Hahanov</i> #122. Qubit Fault Detection in SoC Logic <i>Mikhail Karavay, Vladimir Hahanov, Eugenia Litvinova, Hanna Khakhanova and Irina Hahanova</i>
9:45 —10:00	Coffee Break



Fourth Day: September 16th, 2019 (Monday)	
10:00—13:00	Regular Papers Session 4B, Conference Hall Moderator: <i>Eugenia Litvinova</i>
	#12. Technological Foundations of Traffic Controller Data Support Automation <i>Joseph Kokurin and Dmitrii Efanov</i>
	#72. Modification and Optimization of Pollards's Factorization ρ -Method by Means of Recursive Algorithm of Number Calculation Factorization <i>Ivan Smirnov, Pavel Razumov, Nikolay Boldyrikhin, Larisa Cherkesova, Yelena Revyakina, Vitaliy Porksheyev, Olga Safaryan and Andrey Lobodenko</i>
	#71. Modification and Optimization of Solovey – Strassen's Fast Exponentiation Probablistic Test Binary Algorithm <i>Nikita Myzdrikov, Ivan Semeonov, Vasiliy Yukhnov, Olga Safaryan, Irina Reshetnikova, Andrey Lobodenko, Larisa Cherkesova and Vitaliy Porksheyev</i>
	#74. Development of Modified Block Cifer Algorithm TEA, Free from Vulnerability of "Connected Keys Attack" <i>Sergey Klyokta, Nikita Chesnokov, Irina Pilipenko, Alexander Zhukov, Larisa Cherkesova, Olga Safaryan, Andrey Lobodenko and Vitaliy Porksheyev</i>
	#20. Development of Automation Systems at Transport Objects of MegaCity <i>Andrei Belyi, Dmitrii Shestovitskii, Valerii Myachin and Dmitrii Sedykh</i>
	#21. Main Solutions of Structural Health Monitoring in Managing the Technical Condition of Transport Objects



Fourth Day: September 16th, 2019 (Monday)	
	<i>Andrei Belyi, Dmitrii Shestovitskii, Eduard Karapetov, Dmitrii Sedykh and Vladimir Linkov</i>
#40.	Planar Butler matrix based on compact taps <i>Denis Letavin</i>
#41.	Planar compact directional coupler on artificial transmission lines <i>Denis Letavin</i>
#52.	Intelligent sensor measurement of GTE gas temperature with thermistors <i>Artur Gulin, Zhanna Sukhinets, Olga Valiamova, Nikolay Safyannikov, Olga Bureneva and Nikolay Prokopenko</i>
#54.	Application of Modern Microelectronic Technology in Marshalling Process of Railway Stations <i>Michael Gordon, Anton Movshin, Alexey Kovkin, Oleg Abramov and Dmitry Sedykh</i>
#137.	Intelligent Transport Systems as a Way to Improve the Quality of the Rail-Truck Multimodal Freight Transportation <i>Natalia Goncharova</i>
#76.	Interface and software for the system of automatic seeding of grain crops <i>Maksim Litvinov, Maksim Moskovskiy, Ilya Pakhomov and Igor Smirnov</i>
#77.	Theoretical bases of the course motion two axles agriculture transports vehicle according wheels slipping <i>Maksim Litvinov, Maksim Moskovskiy, Ilya Pakhomov and Anatoly Gulyaev</i>
#87.	Non-Invasive System for Determining the Level of Iron in the Blood <i>Andrej Azarov, Elena Shirokova and Igor Shirokov</i>



Fourth Day: September 16th, 2019 (Monday)

10:00—13:00 **Regular Papers Session 4C, Room B**

Moderator: *Zaza Davitadze*

#88. Automation of layout design of spiral conical scans

Marina Byrdina, Lema Bekmurzaev, Mikhail Mitsik, Dmitry Kelekhsaev and Anatoly Kondratenko

#93. Description of the spatial shape surface of an air supported dynamic figure

Mikhail Mitsik, Lema Bekmurzaev, Marina Byrdina, Olga Aleynikova and Victor Kokhanenko

#94. Automating of human resources management using genetic algorithms

Agata Markevich and Valentina Sidorenko

#95. Surface visualization of flexible elastic shells

Marina Byrdina, Mikhail Mitsik, Lema Bekmurzaev and Svetlana Rubtsova

#61. Systems for Reflectometry Analysis of Defects in Metal Structures of Transport Mobile Objects

Julia Alevetdinova

#99. Research of the effect of discrete light sources on seeds of vegetable and green cultures and the possibility of their approximation to modified sunlight

Danila Donskoy, Alexander Lukyanov, Eugenia Kluchka and Marko Petković

#117. The Using of Electronic Document Management Tools of Technical Documentation for the Assessment of the Life of the Train Traffic Control Devices

Dmitry Sedykh, Michael Gordon, Denis Zuyev, Michael Vasilenko and Andrei Belyi



Fourth Day: September 16th, 2019 (Monday)	
	#8. Diagnostics of Audio-Frequency Track Circuits in Continuous Monitoring Systems for Remote Control Devices: Some Aspects <i>Dmitrii Efanov, German Osadchii, Valerii Khóroshev and Dmitrii Shestovitskiy</i>
	#120. Emerging Culture of Social Computing <i>Anastasia Hahanova, Vladimir Hahanov, Svetlana Chumachenko, Vugar Hacimahmud Abdullayev, Ka Lok Man and Alexander Mishchenko</i>
	#124. Remote administration of information systems Via e-mail <i>Zaza Davitadze, Gregory Kakhiani and George Beria</i>
	#131. Method of Indirect Steganographic Embedding on the Basis of Use of Functionality for Adaptive Position Number <i>Vladimir Barannik, Dmitry Barannik and Nataliy Barannik</i>
	#66. Boosting Model of Bioinspired Algorithms for Solving the Classification and Clustering Problems <i>Ilona Kursitys, Alexander Natskevich and Elvira Tsyrunnikova</i>
09:00—13:00	Poster Session, Conference Hall
	#132. The Software Platform for Evaluation of Effectiveness of Network Systems Analysis Technologies <i>Olha Ponomarenko, Valeriy Gorbachov, Abdulrahman Kataeba Batiaa and Oksana Kotkova</i>
	#33. The Implementation of the Genetic Algorithm Using Cloud-Based Computing on the Internet <i>Viktor Kureichik and Julia Logunova</i>



Fourth Day: September 16th, 2019 (Monday)

#113. Design of real-time logic control system on FPGA

Maryna Miroshnyk, Alexander Shkil, Elvira Kulak, Dariia Rakhlis, Maksym Hoha, Mykyta Malakhov, Vladyslav Serhiienko and Inna Filippenko

#9. Length limiting of quantum key distribution at two-stage synchronization

Konstantin Rummyantsev and Hayder Shakir

#1. Decision making in VLSI components placement problem based on grey wolf optimization

Elmar Kuliev, Vladimir Junior Kureichik and Ilona Kursitys

#9. Length limiting of quantum key distribution at two-stage synchronization

Konstantin Rummyantsev and Hayder Shakir

#25. Calculating the Parameters of the Short-Range Microwave Information Channel Resistant to Signal Fading

Vladimir Mikhaylovich Artyushenko and Vladimir Ivanovich Volovach

#26. Synthesis of Signal Quadrature Processing Algorithms under the Influence of Band-limited non-Gaussian Noise

Vladimir Mikhaylovich Artyushenko and Vladimir Ivanovich Volovach

#41. Planar compact directional coupler on artificial transmission lines

Denis Letavin

#85. Formalized methods of analysis and synthesis of electronic document management of technical documentation

Dilshod Baratov, Aripov Nazirjon and Ruziev Davron



Fourth Day: September 16th, 2019 (Monday)

13:00 —14:00 Symposium Closing – Conference Hall

14:00 —15:00 Lunch

