

Second Young Scientist's International Workshop  
on Trends in Information Processing,  
Dombai, Russian Federation,  
May 16-20, 2017  
Program

**Tuesday 16.5.**

Afternoon Travel to Dombai  
Dinner  
Welcome Reception

**Wednesday 17.5.**

- 9:00 - 9:15 Welcome
- 9:15 - 10:05 Invited Talk: Enabling Smart Data Services for Behavioural Change  
*Anna Fensel*
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- 10:05 - 10:30 Generic Mining of Condensed Pattern Representations under Constraints  
*Sergey Paramonov, Tao Chen and Tias Guns*
- 10:30 - 11:00 Break
- 11:00 - 12:15 An Application of the Cellular Automaton Method in Autowave Process Modeling of the Surface Layer of Magnetic Fluid  
*Natalya Kandaurova, Vladimir Chekanov, Sergey Mirzakhanov, Andrey Makovsky and Yury Kuznetsov*
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- A Mathematical Model of a Trusted Download Violator Process  
«Hardware Thin Client»  
*Kirill A. Butsik and Evgeniy N. Tishchenko*
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- A Model for Transformation of Self-Similar Trac into Poisson's Arrival Packets  
*Gennadiy I. Linets, Svetlana V. Govorova, Sergey V. Melnikov and Viktor V. Medenec*
- 12:15 - 15:30 Lunch and Walk
- 15:30 - 16:45 The Complexity of Contextual Abduction in Human Reasoning Tasks  
*Emmanuelle-Anna Dietz Saldanha, Steffen Hölldobler and Tobias Philipp*
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- Obligation versus Factual Conditionals under the Weak Completion Semantics  
*Emmanuelle-Anna Dietz Saldanha, Steffen Hölldobler and Isabelly Louredo Rocha*
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- Monadic Reasoning using Weak Completion Semantics  
*Ana Oliveira Da Costa, Emmanuelle-Anna Dietz Saldanha and Steffen Hölldobler*
- 16:45 - 17:15 Coffee and Tea
- 17:15 - 18:05 Invited Talk: Research Assessment: A Contribution to Solving the Publication Credit Allocation Problem  
*Marco Schaerf*

## Thursday 18.5.

- 9:15 - 10:05 Invited Talk: Challenges in Knowledge-Intensive Processes. Mining from Semi-Structured Information and Providing Run-time Automated Adaptation  
*Massimo Mecella*
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- 10:05 - 10:30 An Abstract Dual Propositional Model Counter  
*Armin Biere, Steffen Hölldobler and Sibylle Möhle*
- 10:30 - 11:00 Break
- 11:00 - 12:15 User Interface Design for a Web-based Image Processing and Analysis System  
*Aleksey Bragin, Alexander Dubanov and Alexander Rechitskiy*
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- Splitting Features of Rotation Shapes in the External Finite-Element Approximations Method  
*Michael Chizhov, Andrei Uspehov and Alexander Trotsenko*
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- A Fuzzy Model for Identifying Significant Subtle Effects within a System of Objects' Responses  
*Dmitry M. Nazarov, Dmitry A. Azarov and Viktor P. Ivanitsky*
- 12:15 - 15:30 Lunch and Walk
- 15:30 - 16:45 The GPU-Oriented Tree Representation Based on the Method of Finding the Remainder  
*Vladimir Voronkin, Andrey Malikov, Elmira Azarova and Aleksey Shchegolev*
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- Data Type Detection for Choosing an Appropriate Correlation Coefficient in the Bivariate Case  
*Anastasiia Yu. Timofeeva*
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- The Solution to the Problem of Optimal Control in an Unstable Economic System  
*Aleksandr S. Marahovskiy, Evgeni L. Toropcev, Anna V. Shadchneva and Evgenya A. Nekrasova*
- 16:45 - 17:15 Coffee and Tea
- 17:15 - 18:05 Processing Principles of Ionosphere Passive Monitoring Data  
*Dmitry M. Markov and Alexander F. Chipiga*
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- The Model of the Calculator for Estimation of Noise Immunity of Trans-ionospheric Communication Channel, Based on Theory of Residue Number System  
*Vitaliy Grankin, Gennady Linets and Roman Taranov*

## Friday 19.5.

- 9:15 - 15:30 Excursion
- 15:30 - 16:45 Mathematical Modeling for Systems of Large Dimension Through a Modification of the Method of Iterative Aggregation  
*Tatyana Grobova, Alexey Troyanov, Vladislav Lysov and Vladimir Antonov*
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- An Intelligent System for Content Generation  
*Evgeny I. Nikolaev, Pavel V. Dvoryaninov, Nikita S. Drozdovsky and Yaroslav Y. Lensky*
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- Lessons Learned from AlphaGo  
*Steffen Hölldobler, Sibylle Möhle and Anna Tigunova*
- 16:45 - 17:15 Coffee and Tea
- 17:15 - 18:05 Invited Talk: Deep Learning in Biometry  
*Peter Peer*

## Saturday 20.5.

- 9:15 - 10:30 The Use of Redundant Modular Codes for Improving the Fault Tolerance of Special Processors for Digital Signal Processing  
*Alyona V. Makarova, Elena P. Stepanova, Ekaterina V. Toporkova and Igor A. Kalmykov*
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- The Implementation of Information and Communication Technologies with the Use of Modular Codes  
*Dmitriy Yurdanov, Maksim Kalmikov, Dmitriy Gostev and Igor Kalmykov*
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- A Method of Forming Code Sets for CDMA in Communication, Navigation and Control Systems  
*Dmitrii Orel, Aleksandr Zhuk, Elena Zhuk and Liudmila Luganskaia*
- 10:30 - 11:00 Break
- 11:00 - 12:15 Mathematical Modelling of the Process for Impact on Automated Information System Security of Threats Access to Restricted Information  
*Alexandr P. Rosenko and Evgenya A. Nekrasova*
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- Image Recognition by a Second-Order Convolutional Neural Network with Dynamic Receptive Fields  
*Roman Nemkov, Oksana Mezentseva, Dmitriy Mezentsev and Maksim Brodnikov*
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- Closing and Farewell
- 12:15 - 13:15 Lunch  
Return to Stavropol