<table>
<thead>
<tr>
<th>TIME (Moscow time)</th>
<th>ICS RAS</th>
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<tbody>
<tr>
<td>12:30–18:30</td>
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</table>
| 12:30–13:00         | Conference Opening  
Chairman: Vladimir Vishnevsky, ICS RAS  
Welcome Speech: Dmitry Novikov, Director, ICS RAS  
Welcome Speech: Konstantin Samouylov, Director, AMCT Institute, RUDN |
| 13:00–14:00         | Crystal Ball and Magic Wand Combined: Predicting Situations and Making them Happen  
Arkady Zaslavsky, Deakin University, Australia |
| 14:00–15:00         | Beyond 5G: use-cases, applications and design specifics of terahertz band communications  
Dmitrii Molchanov, Tampere University, Finland |
| 15:00–16:00         | Investigation of Interdependent Process — a Semi-Markov Approach  
Achyutha Krishnamoorthy, Centre for Research in Mathematics, CMS College, Kottayam, India |
| 16:00–16:30         | Break |
| 16:30–17:30         | RAIN RFID Technology: Past, Present and Future  
Pavel Nikitin, Impinj, Seattle, WA, USA |
| 17:30–18:30         | Queues and their applications in service industries  
Srinivas R. Chakravarthy, Kettering University, USA |

**Tracks**

- **Track B. Modeling of Distributed Systems and Networks. Chair: Konstantin Samouylov. Co-chair: Irina Kochetkova.**
- **Track C. Distributed Systems Applications. Chair: Andrey Koucheryavy. Co-chair: Daria Ostrikova.**

**Venues**

- **September 14 (Monday), 2020 at ICS RAS** 65 Profsoyuznaya street, Moscow 117997, Russia
- **September 15 (Tuesday) – September 17 (Friday), 2020 at RUDN** Faculty of Science, Ordzhonikidze str. 3, 115419 Moscow, Russia
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<tr>
<th>Time</th>
<th>Session</th>
<th>Details</th>
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<tr>
<td>11:00–11:15</td>
<td>Malcolm Egan, Laurent Clavier</td>
<td>Multivariate $\alpha$-Stable Models in OFDM-Based IoT Networks with Interference From a Poisson Spatial Field of Interferers (ID 137)</td>
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<tr>
<td>11:15–11:30</td>
<td>Angesom Atalit Tesfay, Eric Simon, Laurent Clavier</td>
<td>Multi-user Detection to Improve Downlink Communication of CSS-based LoRa-like Networks (ID 163)</td>
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<td></td>
<td>Artem Volkov, Ali R. Abdellah, Ammar Muthanna, Andrey Koucheryavy</td>
<td>IoT traffic prediction with Neural networks learning based on SDN infrastructure (ID 55)</td>
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<tr>
<td>11:30–11:45</td>
<td>Aminu Adamu, Vsevolod Shorgin, Yuliya Gaidamaka</td>
<td>Flexible Random Early Detection Algorithm for Queue Management in Routers (ID 148)</td>
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<td>11:45–12:00</td>
<td>Nadezhda Chukhno, Olga Chukhno, Giuseppe Araniti, Antonio Iera, Antonella Molinaro, Sara Pizzi</td>
<td>Delivering Multicast Traffic in mmWave Systems: Challenges and Performance Analysis (ID 151)</td>
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<tr>
<td>12:00–12:15</td>
<td>Abdukodir Khakimov, Konstantin Samouylov, Ammar Muthanna</td>
<td>Dynamic Algorithm for Building Future Networks Based on Intelligent Core Network (ID 108)</td>
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<tr>
<td>12:15–12:30</td>
<td>Vitali Beschantnyi, Daria Ostrikova, Yuliya Gaidamaka</td>
<td>Modelling Multi-connectivity in 5G NR Systems with Mixed Unicast and Multicast Traffic (ID 53)</td>
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<td>12:30–12:45</td>
<td>Amir Mukhtarov, Andrey Larionov, Oleg Pershin, Vladimir Vishnevsky</td>
<td>On optimal placement of base stations in wireless broadband networks to control a linear section with end-to-end delay limited (ID 32)</td>
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<tr>
<td>12:45–13:00</td>
<td>Semyon Dorokhin</td>
<td>Synchronisation of ISS-OFDM signals (ID 95)</td>
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<td>13:00–13:30</td>
<td>Break</td>
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<tr>
<td>13:30–13:45</td>
<td>Eduard Sopin, Alexandra Darmolad, Dinara Bixalina</td>
<td>Alexander Dudin, Sergei Dudina, Olga Dudina</td>
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<td>Ekaterina Markova, Dmitri Molchanov, Rustam Pirmagomedov, Daria Ivanova, Yevgeni Koucheryavy, Konstantin Samouylov</td>
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<tr>
<td>13:45–14:00</td>
<td>Pavel Pristupa</td>
<td>Valentina Klinenkov, Alexander Dudin, Vladimir Vishnevsky</td>
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<td>Eduard Sopin, Vyacheslav Begishev, Dmitri Molchanov, Andrew Samouylov</td>
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<tr>
<td>14:00–14:15</td>
<td>Viacheslav Kulik, Van Dai Pham, Ruslan Kirichek</td>
<td>Valentina Klinenkov, Alexander Dudin, Vladimir Vishnevsky</td>
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<td>Dmitriy Sazonov, Ruslan Kirichek</td>
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<td>Yury Rassadin, Sergey Dushin</td>
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<td>Natalia Apatova, Oleg Boychenko, Oleg Korolyov, Ilya Gavrikov, Timur Uzakov</td>
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<tr>
<td>14:45–15:00</td>
<td>Van Dai Pham, Tran Duc Le, Ruslan Kirichek</td>
<td>Stepan Rogozin</td>
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<td>Van Dai Pham, Ilia Grishin, Ruslan Kirichek</td>
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<tr>
<td>15:00–15:15</td>
<td>Van Dai Pham, Tran Duc Le, Ruslan Kirichek</td>
<td>Rostislav Razumchik</td>
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<td>Viacheslav Kulik, Denis Gallyamov, Ruslan Kirichek</td>
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<tr>
<td>15:15–15:30</td>
<td>Viacheslav Kulik, Denis Gallyamov, Ruslan Kirichek</td>
<td>Tatiana Milovanova, Dmitry Koznorev, Rostislav Razumchik</td>
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<td>Natalia Markovich, Maksim Ryzhov</td>
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<tr>
<td>15:30–16:00</td>
<td></td>
<td>Vladimir Vishnevsky, Truong Duy Dinh, Anastasia Vybornova, Ruslan Kirichek</td>
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**Tuesday, September 15, 2020**

**A.1.3. Computer and Communication Networks: Architecture, Protocols and Technologies**

**Chairs:** Prof. D. Namiot, Prof. L. Abrosimov

**B.1.3. Modeling of Distributed Systems and Networks**

**Chairs:** Prof. N. Markovich, Prof. U. Krieger

**C.1.3. Distributed Systems Applications**

**Chairs:** Prof. R. Kirichek, Dr. M. Makolkin
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<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
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<tr>
<td>16:30–16:45</td>
<td>Alexander Paramonov, Tatiana Tatarnikova, Regina Shamilova</td>
<td>The method for user localization in the local wireless network in an emergency (ID 18)</td>
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<tr>
<td></td>
<td>Alexander Mandel, Viktor Laptin</td>
<td>Channel Switching Strategies for multistep Markovian Controllable Queueing Systems Problems (ID 24)</td>
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<tr>
<td></td>
<td>Konstantin Vytovtov, Vladimir Vishnevsky, Elizaveta Barabanova</td>
<td>Model of Navigation and Control System of an Airborne Mobile Station (ID 178)</td>
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<tr>
<td>16:45–17:00</td>
<td>Margarita Rudenkova, Hussein Khayou, Leonid Abrosimov</td>
<td>Methodology for adapting wireless channel resources to the load by switching between shared media access protocols (ID 85)</td>
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<tr>
<td></td>
<td>Maria Nosova</td>
<td>Research of demographic processes by methods of queuing theory (ID 66)</td>
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<td></td>
<td>Sergey Vladimirov, Vladimir Vishnevsky, Andrey Larionov, Ruslan Kirichek</td>
<td>Concept of UFP based WBAN Data Acquisition Network (ID 55)</td>
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<tr>
<td>17:00–17:15</td>
<td>Abdulkodir Khakimov, Mohammed Muthanna, Konstantin Samouylov, Ammar Muthanna</td>
<td>Agriculture management based on LoRa Edge Computing System (ID 106)</td>
</tr>
<tr>
<td></td>
<td>Abdukodir Khakimov, Mohammed Muthanna, Konstantin Samouylov, Ammar Muthanna</td>
<td>Agriculture management based on LoRa Edge Computing System (ID 106)</td>
</tr>
<tr>
<td>17:15–17:30</td>
<td>Elizaveta Barabanova, Konstantin Vytovtov, Victor Podlazov, Vladimir Vishnevsky</td>
<td>High-capacity photon switching systems based on the two-stage 256x256 switch (ID 48)</td>
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<td></td>
<td>Vadim Fitsov, Boris Goldstein</td>
<td>The mathematical model of Front-End calculating in DPI system (ID 142)</td>
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<td>Alexey Shagraev, Andrey Efanov, Sergey Ivliev</td>
<td>Welford’s algorithm for accurate computation of weighted mean, variance, and covariance (ID 157)</td>
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<td>17:30–17:45</td>
<td>Hussein Khayou, Margarita Rudenkova, Leonid Abrosimov</td>
<td>An Algebraic Approach to Loop Free Routing (ID 139)</td>
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<td>17:45–18:00</td>
<td>Boris Goldstein, Sergey Kislyakov</td>
<td>Forecasting the incoming load of a contact center using chaos theory methods (ID 45)</td>
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<td>Lusine Meykhanadzhyan, Tatiana Milovanova, Ivan Zaryadov</td>
<td>Stationary Characteristics of the two-node Tandem Queueing System with Poisson Arrivals and General Renovation (ID 100)</td>
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<td></td>
<td>Arsenii Bakanov, Dmitry Volchkov, Nina Bakanova</td>
<td>Creation and visualization of the subject area model (ID 13)</td>
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<td></td>
<td>Konstantin Vytovtov, Elizaveta Barabanova, Vladimir Vishnevsky, Irina Kvyatkovskaya</td>
<td>The Analytical Model of Six-Dimensional Linear Dynamic Systems With Arbitrary Piecewise-Constant Parameters (ID 165)</td>
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**Tuesday, September 15, 2020**
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<tr>
<td></td>
<td>B.2.1. Modeling of Distributed Systems and Networks</td>
<td>Srinivas Chakravarthy, Alka Choudhary, Rakesh Meena, Queues with Markovian Arrivals, Phase type Services, Breakdowns, and Repairs (ID 50)</td>
</tr>
<tr>
<td></td>
<td>C.2.1. Distributed Systems Applications</td>
<td>Tatiana Atanasova, Kristina Dineva, Architectural ML Framework for IoT Services Delivery Based on Microservices (ID 58)</td>
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<td>11:15–11:30</td>
<td>Vahagn Abgaryan</td>
<td>Tatiana Atanasova, Arsenni Bakanov, Nina Bakanova, Applying of Machine Learning on The Data from Structured Database at Research Institute for Decision Making Support (ID 107)</td>
</tr>
<tr>
<td></td>
<td>B.2.1. Modeling of Distributed Systems and Networks</td>
<td>Evgeny Mikhailov, Vladimir Vishnevsky, Reserve navigation system of tether powered unmanned aerial vehicle in conditions of turbulent atmosphere (ID 136)</td>
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<td>11:45–12:00</td>
<td>Dhanesh Garg</td>
<td>Alexander Alexandrov, SARSA based method for WSN transmission power management (ID 90)</td>
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<tr>
<td>12:00–12:15</td>
<td>Vahagn Abgaryan</td>
<td>Tatiana Atanasova, Tuan Phung-Duc, Svetlana Paul, Olga Lizyn, Gaussian asymptotics for a multiclass M/M/1/1 retrial queueing system (ID 40)</td>
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<tr>
<td></td>
<td>B.2.1. Modeling of Distributed Systems and Networks</td>
<td>Eugene Mikhailov, Vladimir Vishnevsky, Reserve navigation system of tether powered unmanned aerial vehicle in conditions of turbulent atmosphere (ID 136)</td>
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<tr>
<td>12:15–12:30</td>
<td>Astghik Torosyan, Vahagn Abgaryan</td>
<td>Alexander Alexandrov, SARSA based method for WSN transmission power management (ID 90)</td>
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<td></td>
<td>B.2.2. Modeling of Distributed Systems and Networks</td>
<td>Eugene Mikhailov, Vladimir Vishnevsky, Reserve navigation system of tether powered unmanned aerial vehicle in conditions of turbulent atmosphere (ID 136)</td>
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<tr>
<td>12:30–12:45</td>
<td>Martin Bures, Vahagn Abgaryan, Astghik Torosyan</td>
<td>Andrey Ivanov, Natalia Ziazena, Antonova Veronika, Performance of MATLAB clustering algorithms (ID 36)</td>
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<tr>
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<td>B.2.2. Modeling of Distributed Systems and Networks</td>
<td>Eugene Mikhailov, Vladimir Vishnevsky, Reserve navigation system of tether powered unmanned aerial vehicle in conditions of turbulent atmosphere (ID 136)</td>
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<td>13:00–13:30</td>
<td>Break</td>
<td>Eugene Mikhailov, Vladimir Vishnevsky, Reserve navigation system of tether powered unmanned aerial vehicle in conditions of turbulent atmosphere (ID 136)</td>
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<td>B.2.2. Modeling of Distributed Systems and Networks</td>
<td>Eugene Yu. Shchetinin, Leonid Sevastianov, Dmitry Kulyabov, Edik Ayrjan, On improving the accuracy of the classification on imbalanced classes with machine learning (ID 26)</td>
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<tr>
<td>14:00–14:15</td>
<td>Elmira Yu. Kalimulina</td>
<td>Eugene Yu. Shchetinin, Leonid Sevastianov, Dmitry Kulyabov, Edik Ayrjan, On improving the accuracy of the classification on imbalanced classes with machine learning (ID 26)</td>
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<td>14:15–14:30</td>
<td>Sergey Melnikov, Konstantin Samouylov</td>
<td>Cesaro-heredity property in the shift register family</td>
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<td>14:30–14:45</td>
<td>Ali R. Abdeallah, Artem Volkov, Ammar Muthanna, Andrey Koucheryavyy</td>
<td>Deep Learning for IoT Traffic Prediction based on Edge Communications</td>
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<tr>
<td>14:45–15:00</td>
<td>Mikhail Dyachkov</td>
<td>Modifications of classic GMDH algorithm and proof of correctness modified algorithm</td>
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<td>15:00–15:15</td>
<td>Ivan Brokarev, Sergey Vaskovskii</td>
<td>Information-processing system for natural gas quality analysis</td>
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<td>15:15–15:30</td>
<td>Vladimir Vorobiev</td>
<td>Neuronal network for monitoring explosions in mines</td>
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<td>15:30–16:00</td>
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<td>B.2.3. Modeling of Distributed Systems and Networks Chairs: Prof. D. Efrosinin, Dr. S. Vasilyev</td>
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<tr>
<td>16:00–16:15</td>
<td>Saulius Japertas, Ruta Jankuniene</td>
<td>NFC Vulnerabilities Investigation</td>
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<td>16:30–16:45</td>
<td>Evgenia Anikina, Andrey Kalashnikov</td>
<td>Management of risks for complex computer network</td>
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<td>16:45–17:00</td>
<td>Anatoly Yermakov</td>
<td>The Markov Model for a Multiphase Security System with the Partial Concurrent Service</td>
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<td>17:00–17:15</td>
<td>Alexander Grusho, Nick Grusho, Elena Timonina, Michael Zabehzhalo</td>
<td>Generation of metadata for information technology control</td>
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<td>17:15–17:30</td>
<td>Viktor Nikolaevtsev, Sergei Suchkov, Dmitry Suchkov</td>
<td>Method of Frequency Coding in Microwave RFID</td>
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<td>17:30–17:45</td>
<td>Sergey Vasilyev, Mohamed Adel Bouatta, Galina Tsareva, Shakhmurad Kanzitdinov</td>
<td>Dobrushin mean-field approach for time-scaling queueing systems with a small parameter</td>
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<td>17:45–18:00</td>
<td>Sergey Vasilyev, Mohamed Adel Bouatta, Shakhmurad Kanzitdinov</td>
<td>Solving optimal control problems of large-scale queueing systems with a small parameter</td>
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<td>Sergey Stepanov, Mikhail Stepanov, Umer Andrabi, Juvent Ndayikunda</td>
<td>RUDN</td>
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<td>Sergey Stepanov, Mikhail Stepanov, Maxim Shishkin</td>
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<td>11:45–12:00</td>
<td>Vladimir Bogatyrev, Stanislav Bogatyrev, Anatoly Bogatyrev</td>
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<td>12:00–12:15</td>
<td>Nika Ivanova</td>
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<td>12:15–12:30</td>
<td>Anatoliy Botvinko, Konstantin Samouylov</td>
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<td>Alexey Simonov, Oleg Brekhov</td>
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<td>Alexandra Kuznetsova, Antonova Veronika</td>
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<td>Break</td>
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<td>Dmitry Kochetkov, Irina Kochetkova, Elena Makeeva</td>
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<td>13:45–14:00</td>
<td>Dmitry Kochetkov, Marat Almanganbetov</td>
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<td>Room 214</td>
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<td>11:00–12:00</td>
<td>Round Table: On applications of the distributed systems (Круглый стол по вопросам приложений распределённых систем)</td>
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<td>11:00–12:00</td>
<td>Chairs: Prof. Vladimir Vishnevsky, Prof. Konstantin Samouylov</td>
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<td>12:00–12:15</td>
<td>Conference Closing</td>
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Friday, September 18, 2020