

## PROGRAM

**1st International Workshop on Advanced Information and Computation Technologies and Systems**  
(AICTS, <https://aicts.icc.ru/>) co-located with the Lyapunov Readings Conference  
(<http://idstu.irk.ru/ru/content/lyapunovskie-chteniya-2020>), December 7-11, 2020, Irkutsk, Russia

The schedule of events indicated Moscow time (GMT+3)

<b>December 7, 2020</b>	<b>Event</b>
04:00 – 12:00	Lyapunov Readings
04:00 – 04:10	Opening Ceremony (online, in Russian)
04:10 – 05:10	Competitive reports (online, in Russian)
05:10 – 07:10	Regular reports (online, in Russian)
07:10 – 08:00	Break
08:00 – 12:00	Regular reports
12:00	Meeting of the competition committee
<b>December 8, 2020</b>	<b>Event</b>
04:00 – 12:00	Lyapunov Readings
04:00 – 07:00	Regular reports (online, in Russian)
07:00 – 08:00	Break
08:00 – 12:00	Regular reports (online, in Russian)
<b>December 9, 2020</b>	<b>Event</b>
04:00 – 12:00	Lyapunov Readings
04:00 – 07:20	Regular reports (online, in Russian)
07:20 – 08:30	Break
08:30 – 12:00	Section of young researchers (online, in Russian)
12:00	Closing Ceremony (online, in Russian)
<b>December 10, 2020</b>	<b>Event</b>
04:30 – 20:00	<b>1st International Workshop on Advanced Information and Computation Technologies and Systems (AICTS)</b>
04:30 – 4:40	Opening Ceremony (online) Co-Chairs:

	<p style="text-align: center;"><b>Igor Bychkov</b>  <b>Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia</b>  <b>Andrei Tchernykh</b>  <b>CICESE Research Center, Ensenada, México</b></p> <p style="text-align: center;"><b>Technical secretary:</b>  <b>Evgeniy Fereferov, <a href="mailto:fereferov@icc.ru">fereferov@icc.ru</a></b>  <b>Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia</b></p>
	<p><i>Bychkov I.V., Tchernykh A. Greetings to the Workshop</i></p>
	<p style="text-align: center;"><b>Section I (online)</b></p> <p style="text-align: center;"><b>Co-Chairs:</b>  <b>Igor Bychkov</b>  <b>Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia</b>  <b>Andrei Tchernykh</b>  <b>CICESE Research Center, Ensenada, México</b></p> <p style="text-align: center;"><b>Technical secretary:</b>  <b>Evgeniy Fereferov, <a href="mailto:fereferov@icc.ru">fereferov@icc.ru</a></b>  <b>Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia</b></p>
04:40 – 07:00	<p><i>Peng Jiang, Igor Bychkov, Jun Liu and <a href="#">Alexei Hmelnov</a>. Predicting of air pollutant concentrations based on spatio-temporal attention convolutional LSTM networks</i></p>
	<p><i>Peng Jiang, Igor Bychkov, Tianjiao Li and <a href="#">Alexei Hmelnov</a>. Traffic flow prediction for vehicle emission calculation based on graph convolutional networks</i></p>
	<p><i><a href="#">Alexei Hmelnov</a>, Gennadiy Ruzhnikov, Tianjiao Li and Huan Xu. An approach to information export from database for complex master-detail table hierarchies into a single at table form</i></p>
	<p><i><a href="#">Anastasia Popova</a>. Estimation of water quality parameters from space images</i></p>
	<p><i><a href="#">Evgeny Cherkashin</a> and <a href="#">Alexey Shigarov</a>. Construction techniques of Baikal microbiome research information-computational environment</i></p>
	<p><i><a href="#">Nikita Dorodnykh</a> and <a href="#">Aleksandr Yurin</a>. A domain-specific notation for modeling fuzzy rules</i></p>
	<p><i><a href="#">Stepan Kochemazov</a>. Analysis of comparative effectiveness of state-of-the-art CDCL heuristics</i></p>
07:00 – 08:00	<b>Break</b>
08:00 – 09:20	<p><i><a href="#">Leonid Arshinskiy</a>, <a href="#">Marina Nitezshuk</a>, <a href="#">Vadim Arshinskiy</a> and <a href="#">Mikhail Dunaev</a>. Features of inference for abnormal truth values of premises in VTF-logics</i></p>
	<p><i><a href="#">Vitaly Karmadonov</a>. Development user interface for virtual reality applications</i></p>
	<p><i><a href="#">Anton Pashinin</a>, <a href="#">Vera Bogdanova</a> and <a href="#">Gennady Oparin</a>. Application of binary dynamical systems in the problem of classification of Boolean vectors</i></p>
	<p><i><a href="#">Anton Pashinin</a> and <a href="#">Vera Bogdanova</a>. Application of user dew agent in hybrid-computing environment</i></p>
09:20 – 18:00	<b>Break</b>
18:00 – 20:00	<p style="text-align: center;"><b>Section II (online)</b></p> <p style="text-align: center;"><b>Co-Chairs:</b>  <b>Andrei Tchernykh</b>  <b>CICESE Research Center, Ensenada, México</b></p>

	<p style="text-align: center;"><b>Zeljko Stojanov</b>  <b>University of Novi Sad, Technical Faculty "Mihajlo Pupin", Zrenjanin</b></p> <p style="text-align: center;"><b>Technical secretary:</b>  <b>Roman Kostromin, <a href="mailto:kostromin@icc.ru">kostromin@icc.ru</a></b></p> <p style="text-align: center;"><b>Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia</b></p>
	<u>Zeljko Stojanov, Dalibor Dobrilovic, Gordana Jotanovic, Dragan Perakovic, Goran Jausevac and Vladimir Brtko.</u> Software architectures in smart manufacturing: Review and experiences
	<u>Diego Gabriel Rossit, Sergio Nesmachnow and Jamal Toutouh.</u> A multiobjective model for optimizing bus lines design considering pollution generation
	<u>Juan Chavat and Sergio Nesmachnow.</u> Elaboration of an index of electricity consumption based on statistics of household appliances ownership
	<u>Jamal Toutouh, Sergio Nesmachnow and Diego Gabriel Rossit.</u> Modeling air pollution under uncertainty by using deep generative models
	<u>Sergio Nesmachnow and Andrei Tchernykh.</u> Multiobjective Iterated Local Search for affinity multiprocessor scheduling
	<u>Sergio Nesmachnow, Claudio Paz, Andrei Tchernykh and Jamal Toutouh.</u> Multiobjective route planning of autonomous unmanned aerial vehicles for exploration and surveillance
<b>December 11, 2020</b>	<b>Event</b>
04:30 – 07:00	<b>1st International Workshop on Advanced Information and Computation Technologies and Systems (AICTS)</b>
	<p><b>Section III (online)</b></p> <p><b>Co-Chairs:</b>  <b>Alexei Adelev</b>  <b>Melentiev Energy Systems Institute of SB RAS, Russia</b>  <b>Alexander Feoktistov</b>  <b>Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia</b></p> <p><b>Technical secretary:</b>  <b>Roman Kostromin, <a href="mailto:kostromin@icc.ru">kostromin@icc.ru</a></b>  <b>Matrosov Institute for System Dynamics and Control Theory SB RAS, Russia</b></p>
04:30 – 06:50	<u>Alexander Feoktistov, Roman Kostromin, Olga Basharina, Andrei Tchernykh and Vladimir Dmitriev.</u> Agent-based approach to hybrid modeling queuing systems
	<u>Sergey Gorsky and Alexander Feoktistov.</u> Static-dynamic algorithm for managing asynchronous computations in distributed environments
	<u>Dmitriy Karamov, Konstantin Suslov, Ilya Minarchenko and Vasiliy Potapov.</u> Optimization of the installed capacity of battery inverters in power systems with renewable generation
	<u>Dmitriy Karamov, Konstantin Suslov, Ilya Minarchenko and Vasiliy Potapov.</u> Using a storage battery categorization technique to generate solutions for an energy storage system
	<u>Evgeniya Gorbachevskaya, David Gercekovich and Irina Shilnikova.</u> Identification of Basic Criteria of Portfolio Analysis Based on the Rolling Verification Principle
	<u>Yana Kurzibova.</u> Building user interfaces in e-learning resources
	<u>Alexei Edelev and Alexander Feoktistov.</u> Modeling multi-energy systems as generalized and pure networks

06:50 – 07:00

**Closing Ceremony (online)**

**Co-Chairs:**

***Alexei Adelev***

**Melentiev Energy Systems Institute of SB RAS, Russia**

***Alexander Feoktistov***

**Matrosov Institute for System Dynamics and Control Theory of SB RAS, Russia**

**Technical secretary:**

***Roman Kostromin, [kostromin@icc.ru](mailto:kostromin@icc.ru)***

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