

A.P. Ershov Informatics Conference (the PSI Conference Series, 12th edition) is the premier international forum in Russia for research and applications in computer, software and information sciences. The conference brings together academic and industrial researchers, developers and users to discuss the most recent topics in the field. PSI provides an ideal venue for setting up research collaborations between the Russian informatics community and its international counterparts, as well as between established scientists and younger researchers.

Organizers

- A.P. Ershov Institute of Informatics Systems, Siberian Branch of the Russian Academy of Sciences
- Novosibirsk State University

Conference Chair

Alexander Marchuk

A.P. Ershov Institute of Informatics Systems & Novosibirsk State University, Novosibirsk, Russia

Steering Committee

Kim Guldstrand Larsen

Aalborg University, Denmark

Bertrand Meyer

ETH, Zurich, Switzerland & Innopolis University, Kazan, Russia

Vladimiro Sassone

University of Southampton, UK

Michael Gerard Hinchey

Limerick, Ireland

Sriram Rajamani

Microsoft Research India

Program Committee Chairs

Nikolaj Bjørner

Microsoft Research, Redmond, USA

Irina Virbitskaite

A.P. Ershov Institute of Informatics Systems & Novosibirsk State University, Novosibirsk, Russia

Andrei Voronkov

University of Manchester, UK

Keynote Speakers

Moshe Vardi, Rice University, USA

Sören Auer, Leibniz Information Centre for Science and Technology and University Library, Germany

Joost-Pieter Katoen, Aachen University, Germany

Marta Kwiatkowska, Oxford University, UK

Margus Veanes, Microsoft Research, Redmond, USA

Important Dates

- **February 3, 2019**: abstract submission
- **February 17, 2019**: submission deadline
- **April 1, 2019**: notification of acceptance
- **July 2–5, 2019**: the conference dates

Conference Topics

1. *Foundations of Program and System Development and Analysis*

- specification, validation, and verification techniques,
- program analysis, transformation and synthesis,
- semantics, logic and formal models of programs,
- partial evaluation, mixed computation, abstract interpretation, compiler construction,
- theorem proving and model checking,
- concurrency theory,
- static program analysis
- modeling and analysis of real-time and hybrid systems.

2. *Programming Methodology and Software Engineering*

- object-oriented, aspect-oriented, component-based and generic programming,
- programming by contract,
- program and system construction for parallel and distributed computing,
- constraint programming,
- multi-agent technology,
- system re-engineering and reuse,
- integrated programming environments,
- software architectures,
- software development and testing,
- agile software development,
- software engineering methods and tools,
- service engineering, service-oriented architecture,
- reverse engineering,
- reflection techniques,
- software bugs, aging and reliability models and countermeasures,
- program understanding and visualization.

3. *Information Technologies*

- database and information systems,
- data models,
- distributed data storage and processing,
- data science and data analytics: machine learning, data mining, knowledge discovery,
- knowledge-based systems and knowledge engineering,
- integration of data and knowledge,
- computer models and algorithms for bioinformatics,
- digital libraries, collections and archives, Web publishing.

More generally, the conference welcomes novel contributions in the areas of computer, software and information sciences, and application papers showing practical use of research results.

Program Committee Members

Farhad Arbab, CWI and Leiden University, Netherlands

David Aspinall, Edinburgh University, UK

Marcello M. Bersani, Politecnico di Milano, Italy

Leopoldo Bertossi, Carleton University, Canada

Andrea Cali, London University, UK

Marsha Chechik, Toronto University, Canada

Volker Diekert, Stuttgart University, Germany

Salvatore Distefano, Messina University, Italy

Hans van Ditmarsch, LORIA, France

Nicola Dragoni, Technical University of Denmark, Denmark

Schahram Dustdar, TU Wien, Austria

Dieter Fensel, STI Innsbruck, Austria

Carlo A. Furia, Università della Svizzera Italiana, Italy

Valentin Goranko, Stockholm University, Sweden

Sergei Gorlatch, Muenster University, Germany

Damas Gruska, Comenius University, Slovakia

Arie Gurfinkel, Carnegie Mellon University, USA

Konstantin Korovin, Manchester University, UK

Maciej Koutny, Newcastle University, UK

Laura Kovács, Vienna University of Technology, Austria

Manuel Mazzara, Innopolis University, Russia

Klaus Meer, Brandenburg University of Technology Cottbus-Senftenberg, Germany

Torben Aegidius Mogensen, DIKU, Denmark

Peter D. Mosses, Swansea University, UK

José Ramón Paramá Gabía, University of A Coruña, Spain

Gennady Pekhimenko, University of Toronto, Canada

Wojciech Penczek, Institute of Computer Science PAS, Poland

Alexander Petrenko, Ivannikov Institute for System Programming of the Russian Academy of Sciences, Russia

Alberto Pettorossi, University of Rome Tor Vergata, Italy

Qiang Qu, SIAT, China

Wolfgang Reisig, Humboldt-University of Berlin, Germany

Andrei Sabelfeld, Chalmers University of Technology, Sweden

Davide Sangiorgi, Bologna University, Italy

Cristina Seceleanu, Mälardalen University, Sweden

Natalia Sidorova, Technical University Eindhoven, Netherlands

Giancarlo Succi, Innopolis University, Russia

Mark Trakhtenbrot, Holon Institute of Technology, Israel

Enrique Herrera Viedma, University of Granada, Spain

Matthias Weidlich, Humboldt-Universität zu Berlin, Germany

Submissions

There are three categories of submissions:

- Regular papers describing fully developed work and complete results (15 pages / 30 minutes talks).
- Short papers reporting on interesting work in progress and/or preliminary results (9 pages / 15 minutes talks).

- System and experimental papers describing implementation or evaluation of experimental systems and containing a link to a working system (7 pages / 10 minutes presentations).

Submissions should

- Present original contributions that have not been previously published and are not being submitted to another publication.
- Clearly state the problem being addressed, the goal of the work, the results achieved, and the relation to other work.
- Be in good-quality English, in a form that can be immediately published without revision.
- Be sent electronically, as a PDF file formatted according to Springer LNCS Instructions for Authors (<http://www.springer.com/gp/computer-science/lncs/conference-proceedings-guidelines>) through submission site (<https://easychair.org/conferences/?conf=psi2019>) not later than February 17, 2019.

It is permissible to include a link to an appendix listing detailed results, proofs, or supporting data that do not fit within the page limits, as long as the paper can be evaluated without reading this appendix.

At least one author of each accepted paper has to register and attend the conference to present the paper.

Conference Proceedings

Preliminary proceedings will be available at the conference. Final versions of invited and accepted papers will be published by Springer after the conference in the *Lecture Notes in Computer Science* series. Proceedings of previous PSIs are volumes 1181, 1755, 2244, 2890, 4378, 5947, 7162, 8974, 9609 and 10742 of LNCS.

Location

The conference will be held in Akademgorodok, a picturesque town near Ob' Lake, 30 km south from Novosibirsk, the largest city of Siberia. This quiet place with its beautiful nature and pure air is sure to foster scientific activity and creativity of the conference participants.

Travelling

You can fly to Novosibirsk via Moscow by Aeroflot, S7, UTair or Ural Airlines. There are direct flights to Novosibirsk airport Tolmachevo from Frankfurt, Düsseldorf, Prague, Thessaloniki, Tbilisi, Yerevan, Tokyo, Seoul, Hongkong, Shanghai, Beijing or Bangkok. The Conference Organizing Committee provides a free transfer between the Novosibirsk airport Tolmachevo and Akademgorodok.

Conference Secretaries

Irina Adrianova

Natalia Cheremnykh

A.P. Ershov Institute of Informatics Systems,
Russian Academy of Sciences, Siberian Branch
6, Acad. Lavrentjev pr., Novosibirsk 630090, Russia
tel.: +7 383 3307352 fax: +7 383 3323494
e-mail: psiconf2019@gmail.com.

See for more information <https://psi.nsc.ru/>.