ICALP 2017

44th International Colloquium on Automata, Languages and Programming
10-14 July 2017, Warsaw, Poland
http://icalp17.mimuw.edu.pl/

CALL FOR PAPERS

The 44th International Colloquium on Automata, Languages, and Programming (ICALP) will take place in Warsaw, Poland, on 10-14 July 2017. ICALP is the main conference and annual meeting of the European Association for Theoretical Computer Science (EATCS). As usual, ICALP will be preceded by a series of workshops, which will take place on July 10.

Important dates

Submission deadline: Friday, February 17, 2017, 23:59 PST (Pacific Standard Time, UTC-8)
Author notification: April 14, 2017
Final manuscript due: April 30, 2017

Deadlines are firm; late submissions will not be considered.

Proceedings

ICALP proceedings are published in the Leibniz International Proceedings in Informatics (LIPIcs) series. This is a series of high-quality conference proceedings across all fields in informatics established in cooperation with Schloss Dagstuhl - Leibniz Center for Informatics. LIPIcs volumes are published according to the principle of Open Access, i.e., they are available online and free of charge.

Invited Speakers

Mikołaj Bojanczyk (University of Warsaw, Poland)
Monika Henzinger (University of Vienna, Austria)
Mikkel Thorup (University of Copenhagen, Denmark)

Topics

Papers presenting original research on all aspects of theoretical computer science are sought. Typical but not exclusive topics of interest are:

Track A: Algorithms, Complexity and Games

- Algorithmic Game Theory

- Approximation Algorithms

- Combinatorial Optimization

- Combinatorics in Computer Science

- Computational Biology

- Computational Complexity

- Computational Geometry

- Cryptography

- Data Structures

- Design and Analysis of Algorithms

- Machine Learning

- Parallel, Distributed and External Memory Computing

- Randomness in Computation

- Quantum Computing

Track B: Logic, Semantics, Automata and Theory of Programming

- Algebraic and Categorical Models

- Automata, Games, and Formal Languages

- Emerging and Non-standard Models of Computation

- Databases, Semi-Structured Data and Finite Model Theory

- Principles and Semantics of Programming Languages

- Logic in Computer Science, Theorem Proving and Model Checking

- Models of Concurrent, Distributed, and Mobile Systems

- Models of Reactive, Hybrid and Stochastic Systems

- Program Analysis and Transformation

- Specification, Refinement, Verification and Synthesis

- Type Systems and Theory, Typed Calculi

Track C: Foundations of Networked Computation: Models, Algorithms and Information Management

- Algorithmic Aspects of Networks and Networking

- Formal Methods for Network Information Management

- Foundations of Privacy, Trust and Reputation in Networks

- Mobile and Wireless Networks and Communication

- Network Economics and Incentive-Based Computing Related to Networks

- Networks of Low Capability Devices

- Network Mining and Analysis

- Overlay Networks and P2P Systems

- Specification, Semantics, Synchronization of Networked Systems

- Theory of Security in Networks

Submission Guidelines

Authors are invited to submit an extended abstract of no more than 12 pages, excluding references, in the LIPIcs style (http://www.dagstuhl.de/en/publications/lipics/instructions-for-authors/) presenting original research on the theory of Computer Science. The usage of pdflatex and the LIPIcs style file (see http://drops.dagstuhl.de/styles/lipics-v2016/lipics-v2016-authors/lipics-v2016-sample-article.tex and http://drops.dagstuhl.de/styles/lipics-v2016/lipics-v2016-authors.tgz) are mandatory: papers that deviate significantly from the required format may be rejected without consideration of merit. All submissions are electronic via EasyChair: https://easychair.org/conferences/?conf=icalp2017

All technical details necessary for a proper evaluation of a submission must be included in the 12-page submission or in a clearly-labelled appendix, to be consulted

at the discretion of program committee members. Authors are encouraged to also make full versions of their submissions freely accessible in an on-line repository such as ArXiv, HAL, ECCC.

Submissions should be made to the appropriate track of the conference. No prior publication or simultaneous submission to other publication outlets (either a conference or a journal) is allowed.

Should I submit my paper to Track A or Track C?

While the scope of Tracks A and B are generally well understood given their long history, the situation for Track C may be less obvious. In particular, some clarifications may be helpful regarding areas of potential overlap, especially between Tracks A and C.

The aim for Track C is to be the leading venue for theory papers truly motivated by networking applications, and/or proposing theoretical results relevant to real networking, certified analytically, but not necessarily tested practically. The motivation for the track was the lack of good venues for theory papers motivated by applications in networking. On the one hand, the good networking conferences typically ask for extended experiments and/or simulations, while the TCS community is hardly able to do such experiments or simulations. On the other hand, the good conferences on algorithms tend to judge a paper based only on its technical difficulty and on its significance from an algorithmic perspective, which may not be the same as when judging the paper from the perspective of impact on networks.

Several areas of algorithmic study of interest to track C have a broad overlap with track A. Graph algorithmics can belong in either, though if the work is not linked to networking, it is more appropriate in track A. Algorithmic game theory is another area of major overlap. Aspects involving complexity, the computation of equilibria and approximations, belong more in Track A, while results with applications in auctions, networks and some aspects of mechanism design belong in Track C.

Finally, it should be noted that algorithms and complexity of message-passing based distributed computing belong squarely in track C, while certain other aspects of distributed computing do not fall under its scope.

Best Paper Awards

As in previous editions of ICALP, there will be best paper and best student paper awards for each track of the conference. In order to be eligible for a best student paper award, a paper should be authored only by students and should be marked as such upon submission.

Committees

Track A: Algorithms, complexity, and games

Piotr Indyk (MIT, USA, Chair)
Peyman Afshani (Aarhus University)
Pankaj Agarwal (Duke)
Karl Bringmann (Max-Planck-Institute)
Arkadev Chattopadhyay (Tata Institute of Fundamental Research)
Shiri Chechik (Tel-Aviv University)
Alina Ene (University of Warwick)
Yuval Filmus (Technion)
Parikshit Gopalan (Microsoft)
Roberto Grossi (Universitá di Pisa)
Anupam Gupta (CMU)
Yuval Ishai (Technion)
Michael Kapralov (EPFL)
Robert Kleinberg (Cornell)
Pinyan Lu (Shanghai University)
Frederic Magniez (Université Paris Diderot)
Mohammad Mahdian (Google)
Daniel Marx (Hungarian Academy of Sciences)
Danupon Nanongkai (KTH Royal Institute of Technology)
Jelani Nelson (Harvard)
Marcin Pilipczuk (University of Warsaw)
Piotr Sankowski (University of Warsaw)
Thomas Sauerwald (University of Cambridge)
Christian Scheidler (University of Paderborn)
Christian Sohler (TU Dortmund)
Kavitha Telikepalli (Indian Institute of Science)
Vinod Vaikuntanathan (MIT)
László A. Végh (London School of Economics)
Suresh Venkatasubramanian(Utah)
Thomas Vidick (Caltech)
Hoeteck Wee (ENS)
Seth Weinberg (Princeton)
Oren Weinmann (University of Haifa)

Track B: Logic, semantics, automata and theory of Programming

Anca Muscholl (Univ. of Bordeaux, chair)
Pablo Barcelo (Universidad de Chile)
Achim Blumensath (Masaryk Univ., Brno)
Thomas Brihaye (Univ. de Mons)
Krishnendu Chatterjee (IST Austria)

Thierry Coquand (Univ. of Gothenburg)
Anuj Dawar (Univ. of Cambridge)
Jörg Endrullis (Vrije Universiteit Amsterdam)
Dana Fisman (Univ. of Pennsylvania)
Martin Hoffmann (Ludwig-Maximilian Univ.)
Radha Jagadeesan (DePaul Univ.)
Stefan Kiefer (Univ. of Oxford)
Emanuel Kieronski (Univ. of Wrocław)
Stefan Kreutzer (TU Berlin)
Salvatore La Torre (Univ. degli Studi di Salerno)
Antony Widjaja Lin (Yale-NUS College, Singapore)
Wim Martens (Univ. of Bayreuth)
Paul-André Mellies (IRIF, Paris)
Luca Padovani (Univ. di Torino)
Catiuscia Palamidessi (INRIA Saclay, LIX)
Giovanni Pighizzini (Univ. of Milano)
Jean-Éric Pin (IRIF, Paris)
Alexandra Silva (University College London)
Jean-Marc Talbot (Aix-Marseille Univ.)
Thomas Wilke (Univ. of Kiel)
Mahesh Viswanathan (Univ. of Illinois)
James Worell (Univ. of Oxford)

Track C: Foundations of networked computation: Models, algorithms and information management

Fabian Kuhn (University of Freiburg, Germany, Chair)
Ittai Abraham (VMware Research, USA)
Antonio Fernandez Anta (IMDEA Research, Spain)
James Aspnes (Yale U., USA)
Keren Censor-Hillel (Technion, Israel)
Yuval Emek (Technion, Israel)
George Giakkoupis (INRIA Rennes, France)
Seth Gilbert (National U. of Singapore)
Mohsen Ghaffari (currently at MIT, will move to ETH Zurich)
Bernhard Haeupler (CMU, USA)
Amos Korman (CNRS & U. Paris Diderot, France)
Adrian Kosowski (INRIA, Paris)
Christoph Lenzen (MPI Saarbrücken, Germany)
Toshimitsu Masuzawa (Osaka U. Japan)

Konstantinos Panagiotou (LMU Munich, Germany)
Merav Parter (MIT)
Boaz Patt-Shamir (Tel Aviv U., Israel)
Yvonne-Anne Pigonlet (ABB Research, Switzerland)
Alessandro Panconesi (Sapienza U., Rome, Italy)
Sergio Rajsbaum (UNAM, Mexico)
Andrea Richa (Arizona State U., USA)
Hsin-Hao Su (MIT, USA)
Jukka Suomela (Aalto U., Finland)
Philipp Woelfel (U. Calgary, Canada)