
ICALP 2024

51st EATCS International Colloquium on Automata, Languages and
Programming
Tallinn, Estonia, July 8-12, 2024
<https://compose.ioc.ee/icalp2024/>

CALL FOR PAPERS

The 51st EATCS International Colloquium on Automata, Languages, and Programming (ICALP) will take place in:

Tallinn, Estonia, July 8-12, 2024

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 7.

The 2024 edition has the following features:

- Submissions are anonymous and there is a rebuttal phase. - The conference is planned as a physical, in-person event. - ICALP 2024 is co-located with Logic in Computer Science (LICS) 2024 and Formal Structures for Computation and Deduction (FSCD) 2024.

Important dates

Submissions: February 14, 2024 (1pm CET)

Rebuttal: March 26-29, 2024

Author notification: April 14, 2024

Camera-ready version: April 28, 2024

Early registration: TBA

Conference: July 8-12, 2024 (Workshops on July 7)

Deadlines are firm; late submissions will not be considered.

Conference website: <https://compose.ioc.ee/icalp2024/>

Submission guidelines:

- 1) Papers must present original research on the theory of computer science. No prior publication and no simultaneous submission to other publication outlets (either a conference or a journal) is allowed. Authors are encouraged to also make full versions of their submissions freely accessible in an on-line repository such as ArXiv, HAL, ECCC.
- 2) Submissions take the form of an extended abstract of no more than 15 pages, excluding references and a clearly labelled appendix. The appendix may consist either of omitted proofs or of a full version of the submission, and it will be read at the discretion of program committee members. The use of the LIPICs document class is an option, but not required. The extended abstract has to present the merits of the paper and its main contributions clearly, and describe the key concepts and technical ideas used to obtain the results. Submissions must provide the proofs which can enable the main mathematical claims of the paper to be verified.
- 3) Submissions are anonymous. The conference will employ a lightweight double-blind reviewing process. Submissions should not reveal the identity of the authors in any way. Authors should ensure that any references to their own related work are in the third person (e.g., not “We build on our previous work . . .” but rather “We build on the work of . . .”). The purpose of this double-blind process is to help PC members and external reviewers come to an initial judgment about the paper without bias, and not to make it impossible for them to discover who the authors are if they were to try. Nothing should be done in the name of anonymity that weakens the submission or makes the job of reviewing the paper more difficult. In particular, important references should not be omitted. In addition, authors should feel free to disseminate their ideas or draft versions of their paper as they normally would. For example, authors may post drafts of their papers on the web, submit them to arXiv, and give talks on their research ideas.
- 4) Submissions authored or co-authored by members of the program committee are allowed.
- 5) The submissions are done via EasyChair to the appropriate track of the conference (see topics below). The use of pdflatex or similar pdf generating tools is mandatory and the page limit is strict (see point 2.) Papers that deviate significantly from these requirements risk rejection without consideration of merit.
- 6) During the rebuttal phase, authors will have from March 26-29, 2024 to view and respond to initial reviews. Further instructions will be sent to authors of submitted papers before that time.
- 7) At least one author of each accepted paper is expected to register for the conference, and all talks are in-person. In exceptional cases, there may be support for

remotely presenting a talk.

8) Papers authored only by students should be marked as such upon submission in order to be eligible for the best student paper awards of the track.

Awards

During the conference, the following awards will be delivered:

- the EATCS award,
- the Gödel prize,
- the Presburger award,
- the EATCS distinguished dissertation award,
- the best papers for Track A and Track B,
- the best student papers for Track A and Track B.

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. The accepted papers will need to comply with the LIPIcs style.

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 and Complexity Aspects of Network Economics
- Algorithmic Aspects of Biological and Physical Systems
- Algorithmic Aspects of Networks and Networking
- Algorithmic Aspects of Security and Privacy
- Algorithmic Game Theory and Mechanism Design
- Approximation and Online Algorithms
- Combinatorial Optimization

- Combinatorics in Computer Science
- Computational Complexity
- Computational Geometry
- Computational Learning Theory
- Cryptography
- Data Structures
- Design and Analysis of Algorithms
- Distributed and Mobile Computing
- Foundations of Machine Learning
- Graph Mining and Network Analysis
- Parallel and External Memory Computing
- Parameterized Complexity
- Quantum Computing
- Randomness in Computation
- Sublinear Time and Streaming Algorithms
- Theoretical Foundations of Algorithmic Fairness

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

- Algebraic and Categorical Models of Computation
- Automata, Logic, and Games
- Database Theory, Constraint Satisfaction Problems, and Finite Model Theory
- Formal and Logical Aspects of Learning
- Formal and Logical Aspects of Security and Privacy
- Logic in Computer Science and Theorem Proving
- Models of Computation: Complexity and Computability

- Models of Concurrent, Distributed, and Mobile Systems
- Models of Reactive, Hybrid, and Stochastic Systems
- Principles and Semantics of Programming Languages
- Program Analysis, Verification, and Synthesis
- Type Systems and Typed Calculi

ICALP 2024 Programme Committee

Track A: Algorithms, Complexity, and Games

Nima Anari (Stanford University)

Karl Bringmann (co-chair, Saarland University)

Parinya Chalermsook (Aalto University)

Vincent Cohen-Addad (Google Research)

Jose Correa (Universidad de Chile)

Holger Dell (Goethe University Frankfurt)

Ilias Diakonikolas (University of Wisconsin-Madison)

Yuval Filmus (Technion)

Arnold Filtser (Bar Ilan University)

Naveen Garg (IIT Delhi)

Pawel Gawrychowski (University of Wrocław)

Anupam Gupta (Carnegie Mellon University)

Samuel Hopkins (MIT)

Sophie Huiberts (Columbia University)

Giuseppe Italiano (LUISS University)

Michael Kapralov (EPFL)

Eun Jung Kim (Université Paris-Dauphine)

Sándor Kisfaludi-Bak (Aalto University)

Tomasz Kociumaka (Max-Planck-Institute for Informatics)

Fabian Kuhn (University of Freiburg)

Amit Kumar (IIT Delhi)

William Kuszmaul (Harvard University)

Rasmus Kyng (ETH Zurich)

Kasper Green Larsen (Aarhus University)

François Le Gall (Nagoya University)

Pasin Manurangsi (Google Research)

Daniel Marx (CISPA Helmholtz Center for Information Security)

Yannic Maus (TU Graz)
Nicole Megow (University of Bremen)
Ruta Mehta (University of Illinois at Urbana-Champaign)
Jakob Nordström (University of Copenhagen)
Richard Peng (University of Waterloo)
Seth Pettie (University of Michigan)
Adam Polak (Bocconi University)
Lars Rohwedder (Maastricht University)
Eva Rotenberg (DTU Compute)
Sushant Sachdeva (University of Toronto)
Melanie Schmidt (University of Cologne)
Sebastian Siebertz (University of Bremen)
Shay Solomon (Tel Aviv University)
Nick Spooner (University of Warwick)
Clifford Stein (Columbia University)
Ola Svensson (co-chair, EPFL)
Luca Trevisan (Bocconi University)
Ali Vakilian (Toyota Technological Institute Chicago)
Jan van den Brand (Georgia Tech)
Erik Jan van Leeuwen (Utrecht University)
Oren Weimann (University of Haifa)
Nicole Wein (University of Michigan)
Andreas Wiese (TU Munich)
John Wright (UC Berkeley)

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

Arnold Beckmann (Swansea University)
Manuel Bodirsky (TU Dresden)
Patricia Bouyer (LMF Cachan)
Yijia Chen (Shanghai Jiao Tong University)
Victor Dalmau (Universitat Pompeu Fabra)
Laurent Doyen (CNRS, LMF)
Marcelo Fiore (Cambridge University)
Stefan Göller (University of Kassel)
Martin Grohe (RWTH Aachen University, chair)
Sandra Kiefer (Oxford University)
Aleks Kissinger (Oxford University)
Bartek Klin (Oxford University)

Antonin Kucera (Masaryk University Brno)
Carsten Lutz (University of Leipzig)
Jerzy Marcinkowski (University of Wrocław)
Annabelle McIver (Macquarie University Sydney)
Andrzej Murawski (Oxford University)
Pawel Parys (University of Warsaw)
Michał Pilipczuk (University of Warsaw)
Joel Ouaknine (Max Planck Institute for Software Systems)
Christian Riveros (Pontificia Universidad Católica de Chile)
Alexandra Silva (Cornell University)
Balder ten Cate (ILLC Amsterdam)
Szymon Toruńczyk (University of Warsaw)
Igor Walukiewicz (CNRS, University of Bordeaux)
Sarah Winter (IRIF, University Paris Cité)
Georg Zetsche (Max Planck Institute for Software Systems)
Martin Ziegler (KAIST)

ICALP 2024 Workshops

The call and the selection of workshops will be done jointly with LICS. The first call will be issued in October.

ICALP 2024 Proceedings Chairs

Gabriele Puppis (University of Udine, Italy)

ICALP-LICS-FSCD 2024 Organizing Committee

Pawel Sobocinski (Tallinn University of Technology) Conference Chair
Niccolò Veltri (Tallinn University of Technology)
Amar Hadzihanovic (Tallinn University of Technology)
Fosco Loregian (Tallinn University of Technology)
Matt Earnshaw (Tallinn University of Technology)
Diana Kessler (Tallinn University of Technology)
Kristi Ainen (Tallinn University of Technology)