ICALP 2022

49th EATCS International Colloquium on Automata, Languages and Programming
4-8 July 2022, in Paris, France, and online
https://icalp2022.irif.fr/

Call for Papers

The 49th International Colloquium on Automata, Languages, and Programming (ICALP) will take place

** in Paris, France, and online on 4-8 July 2022. **

The 2022 edition has the following special features:

- Submissions are anonymous, and there is a rebuttal phase.

- The conference is hybrid.

- This will be the 50th birthday of the conference and some special events are planned.

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 4. The 2022 edition will be the occasion to celebrate the 50th anniversary of both EATCS and the first ICALP, which was first held in 1972 in Rocquencourt, in the Paris area.

Important dates

Submissions: February 10, 2022 AoE
Rebuttal: March 21-23
Notification: April 11
Camera-ready version: April 25
Early registration: TBA
Conference: 4-8 July, 2022

Deadlines are firm; late submissions will not be considered.

Conference website: https://icalp2022.irif.fr/

Submission: https://easychair.org/my/conference?conf=icalp2022#

Invited Speakers

Albert Atserias, Universitat Politècnica de Catalunya
Constantinos Daskalakis, MIT
Leslie Ann Goldberg, Oxford University
Madhu Sudan, Harvard
Stéphan Thomassé, ENS Lyon
Santosh Vempala, Georgia Tech

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 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 fully verified.

3) Submissions are anonymous. The conference will employ a fairly lightweight double-blind reviewing process. Submissions should not reveal the identity of the authors in any way. In particular, authors' names, affiliations, and email addresses should not appear at the beginning or in the body of the submission. Authors should not include obvious references that reveal their own identity, and 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 or anonymized. 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) The submissions are done via Easychair to the appropriate track of the conference (see topics below). The use of pdflatex and the LIPIcs style are mandatory:

papers that deviate significantly from the required format risk rejection without consideration of merit.

5) During the rebuttal phase, authors will have three days, March 21-23, to view and respond to initial reviews. Further instructions will be sent to authors of submitted papers before that time.

6) One author per accepted paper is expected to present the work in Paris, unless there are strong reasons not to do so, including high environmental cost of travel or impossibility to travel. We will be monitoring the current situation and are aware of possible travel restrictions, but we aim to organize the conference as a hybrid event with a strong in-person attendance. If no speaker can attend, a remote presentation and participation to the discussion session are mandatory.

7) 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 given:
- the EATCS award (https://eatcs.org/index.php/eatcs-award),
- the Gödel prize (https://eatcs.org/index.php/goedel-prize),
- the Presburger award (https://eatcs.org/index.php/presburger),
- the EATCS distinguished dissertation award (https://eatcs.org/index.php/dissertation-award),
- the best papers for Track A and track B,
- the best student papers for Track A and track B (see submission guidelines).

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.

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 2022 Programme Committee

Track A: Algorithms, complexity, and games

Petra Berenbrink - University of Hamburg
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Cameron Musco - University of Massachusetts Amherst
Anand Natarajan - MIT
Jelani Nelson - University of California Berkeley
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Debmalya Panigrahi - Duke University
Richard Peng - Georgia Tech
Vijaya Ramachandran - University of Texas at Austin
Saket Saurabh - Institute of Mathematical Sciences, Chennai
Christian Sohler - University of Cologne
Thomas Steinke - Google Research
Vasilis Syrgkanis - Microsoft Research
Emanuele Viola - Northeastern University
Adrian Vladu - CNRS
Jan Vondrak - Stanford
Hoeteck Wee - NTT Research / ENS
David Woodruff - CMU (chair)
Christian Wulf-Nilsen - University of Copenhagen

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

Luca Aceto - Reykjavik University
Isolde Adler - University of Leeds
Antoine Amarilli - Télécom Paris
Pablo Barcelo - Catholic University of Chile
Libor Barto - Charles University
Mikołaj Bojańczyk - University of Warsaw (chair)
Laura Ciobanu - Heriot-Watt University
Erich Grädel - RWTH Aachen University
Christoph Haase - University of Oxfordv
Marcin Jurdziński - University of Warwick
Benjamin Kaminski - University College London
Joost-Pieter Katoen - RWTH Aachen University

Bartek Klin - University of Oxford
Naoki Kobayashi - University of Tokyo
Dexter Kozen - Cornell University
Orna Kupferman - Hebrew University
Jérôme Leroux - CNRS / University of Bordeaux
Nathan Lhote - Aix-Marseille University
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Joël Ouaknine - Max Planck Institute
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Sven Schewe - University of Liverpool
Jeffrey Shallit - University of Waterloo
Mahsa Shirmohammadi - CNRS / University of Paris
Sebastian Siebertz - University of Bremen
Alex Simpson - University of Ljubljana
Lidia Tendera - University of Opole

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Track B: Mahsa Shirmohammadi
ICALP 2022 Proceedings Chairs
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