



Dear EATCS members,

As usual, the June issue of the Bulletin will be available just before ICALP, the flagship conference of the EATCS and an important meeting of the theoretical computer science community world-wide. The 50th **EATCS International Colloquium on Automata, Languages, and Programming (ICALP 2023)**, will be held in Paderborn, July 10-14, 2023 (<https://icalp2023.cs.upb.de/>). I am looking forward to the conference run again in a fully in-person mode. The conference chair Sevag Gharibian, supported by his colleagues in Paderborn, promises us an exciting scientific event. I look forward to the conference and to celebrating the 50th ICALP with you and I hope to see many of you joining us in these celebrations during the ICALP 2023 conference in Paderborn!

In the scientific part of the ICALP program, the Programme Committee chairs Uriel Feige (track A) and Kousha Etessami (track B) and their PCs have done fantastic job selecting an impressive collection of papers, 103 accepted papers in track A and 29 in track B out of almost 450 submissions (~350 for track A and 97 for track B). The acceptance rate was about 29.5 percent. The programme of ICALP 2023 will highlight research across many areas within theoretical computer science. I invite you to attend and/or watch the talks even outside your own research field.

The **best paper awards at ICALP 2023** will go to the following three papers:

- Track A: Tsun-Ming Cheung, Hamed Hatami, Pooya Hatami, and Kaave



Hosseini, “Online learning and disambiguations of partial concept classes;”

- Track A: Miguel Bosch Calvo, Fabrizio Grandoni, and Afrouz Jabal Ameli, “A  $4/3$  approximation for 2-vertex-connectivity;”
- Track B: Marvin Künnemann, Filip Mazowiecki, Lia Schütze, Henry Sinclair-Banks, and Karol Węgrzycki, “Coverability in VASS revisited: Improving Rackoff’s bound to obtain conditional optimality.”

The **best student paper award** (for a paper that is solely authored by a student) will go to the following two papers:

- Track A: Manuel Cáceres. “Minimum chain cover in almost linear time;”
- Track B: Ruiwen Dong. “The Identity Problem in  $\mathbb{Z} \wr \mathbb{Z}$  is decidable.”

Congratulations to the authors of the award-receiving papers!

In addition to regular research talks, ICALP 2023 will feature five invited talks delivered by

- Anna Karlin (University of Washington, USA),
- Rasmus Kyng (ETH Zurich, Switzerland),
- Rupak Majumdar (Max Planck Institute for Software Systems, Germany)
- Thomas Vidick (California Institute of Technology, USA, and Weizmann Institute of Science, Israel), and



- James Worrell (University of Oxford, UK).

Further two special keynote presentations will be given to celebrate and commemorate the 50th ICALP:

- Thomas Henzinger (Institute of Science and Technology Austria, Austria) and
- Kurt Mehlhorn (Max-Planck-Institut für Informatik, Germany).

These activities will be complemented by a Colloquium in honor of Friedhelm Meyer auf der Heide taking place at the end of ICALP.

Apart from the invited and contributed talks, ICALP 2023 will feature special presentations of the receipts of the EATCS Award 2023, the EATCS Presburger Award, and of the Alonzo Church Award:

- The EATCS annually honors a respected scientist from our community with the **EATCS Distinguished Achievements Award**, to acknowledge extensive and widely recognized contributions to theoretical computer science over a life long scientific career (<http://eatcs.org/index.php/eatcs-award>). The recipient of the **EATCS Award 2023** is **Amos Fiat** (Tel Aviv University), for fundamental work within many areas of theoretical computer science and in particular for work in cryptography, on-line algorithms, and algorithmic game theory.
- The **EATCS Presburger Award** is awarded by the EATCS to a young scientist for outstanding contributions in theoretical computer science,



documented by a published paper or a series of published papers (<https://eatcs.org/index.php/presburger>). The recipients of the **Presburger Award 2023** are jointly **Aaron Bernstein** and **Thatchaphol Saranurak**.

- The **Alonzo Church Award** for Outstanding Contributions to Logic and Computation is a major prize in cooperation of the EATCS with ACM Special Interest Group on Logic and Computation and the European Association for Computer Science Logic (<https://eatcs.org/index.php/church-award>). The recipients of the **2023 Alonzo Church Award** are jointly **Lars Birkedal**, **Aleš Bizjak**, **Derek Dreyer**, **Jacques-Henri Jourdan**, **Ralf Jung**, **Robbert Krebbers**, **Filip Sieczkowski**, **Kasper Svendsen**, **David Swasey**, and **Aaron Turon**, for the design and implementation of **Iris**, a higher-order concurrent separation logic framework.

Moreover, during the conference, we will honor the recipients of the 2022 EATCS Distinguished Dissertation Award and the new group of EATCS Fellows.

The EATCS established the **EATCS Distinguished Dissertation Award** to promote and recognize outstanding dissertations in the field of Theoretical Computer Science (<https://eatcs.org/index.php/dissertation-award>). The three recipients of the **2022 EATCS Distinguished Dissertation Award** for the PhD dissertation in the field of Theoretical Computer Science that have been successfully defended in 2022 are

- **Kuikui Liu**, University of Washington (advisor: **Shayan Oveis Gharan**),



- Alex Lombardi, MIT (advisor: Vinod Vaikuntanathan), and
- Lijie Chen, MIT (advisor: Ryan Williams).

The **EATCS Fellows** Program is established by the EATCS to recognize outstanding EATCS Members for their scientific achievements in the field of Theoretical Computer Science. The new group of **EATCS Fellows (class 2023)** consists of

- Michael A. Bender (Stony Brook University, USA),
- Leslie Ann Goldberg (University of Oxford, UK), and
- Claire Mathieu (CNRS, France).

In addition to the standard conference program, ICALP 2023 will also have ten satellite workshops co-located with the main conference, taking place on Monday before the main event:

- Combinatorial Reconfiguration
- Graph Width Parameters: from Structure to Algorithms (GWP 2023)
- Algorithmic Aspects of Temporal Graphs VI
- Adjoint Homomorphism Counting Workshop (ad hoc)
- Congestion Games
- Workshop On Reachability, Recurrences, and Loops '23 (WORReLL'23)
- Workshop on Recent Trends in Online Algorithms



- Quantum Computing with Qiskit, and why Classical Algorithms still matter!
- Algebraic Complexity Theory
- Computer Science for CONTINUOUS Data

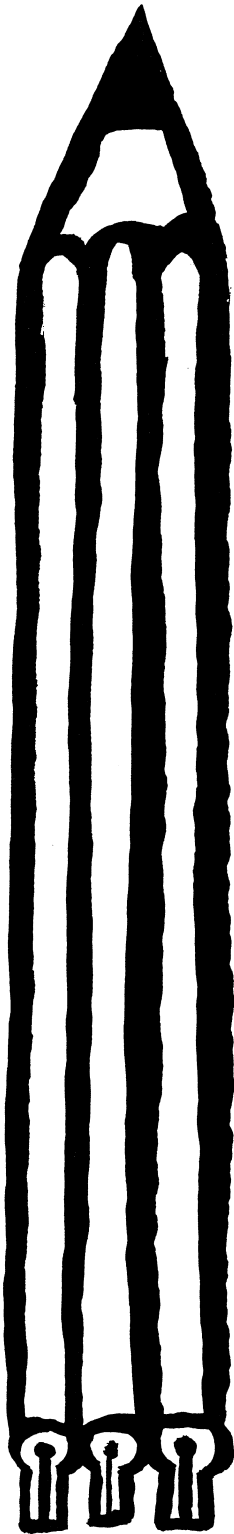
As usual, a more detailed report on the ICALP 2023 conference will be published in the October 2023 issue of the Bulletin.

In the recent months we have seen announcements of numerous further awards given to the members of theoretical computer science. While more details about many of these awards can be found on the pages of this Bulletin and elsewhere, let me list some highlights here.

The **Gödel Prize** for outstanding papers theoretical computer science is sponsored jointly by the EATCS and the ACM SIGACT (<https://eatcs.org/index.php/goedel-prize>). The **2023 Gödel Prize**, to be presented at STOC 2023, has been awarded to the following two papers:

- Samuel Fiorini, Serge Massar, Sebastian Pokutta, Hans Raj Tiwary, and Ronald de Wolf. “Exponential lower bounds for polytopes in combinatorial optimization,” *STOC 2012*: 95-106, and *Journal of the ACM*, 62(2), 17:1-17:23 (2015);
- Thomas Rothvoss. “The matching polytope has exponential extension complexity,” *STOC 2014*: 263-272, and *Journal of the ACM*, 64(6), 1-19 (2017).

The **Edsger W. Dijkstra Prize in Distributed Computing** is awarded for outstanding papers on the principles of distributed computing



(<https://eatcs.org/index.php/dijkstra-prize>), and is sponsored jointly by the EATCS Symposium on Distributed Computing (DISC) and the ACM Symposium on Principles of Distributed Computing (PODC).

The **2023 Dijkstra Prize** has been awarded for introducing Information-Theoretic Secure Multiparty Computations and showing how to achieve maximal resilience to malicious adversaries while providing unconditional security to the following papers:

- Michael Ben-Or, Shafi Goldwasser, and Avi Wigderson, “Completeness theorem for non-cryptographic fault-tolerant distributed computation,” *STOC 1988*: 1-10;
- David Chaum, Claude Crépeau, and Ivan Damgård, “Multiparty unconditionally secure protocols,” *STOC 1988*, 11-19;
- Tal Rabin and Michael Ben-Or, “Verifiable secret sharing and multiparty protocols with honest majority,” *STOC 1989*, 73-85.

EATCS also sponsors the **Best ETAPS Paper Award 2023** for the best theory paper at ETAPS, which this year was awarded to the following paper:

- Pascal Baumann, Flavio D’Alessandro, Moses Ganardi, Oscar Ibarra, Ian McQuillan, Lia Schütze, and Georg Zetsche, “Unboundedness problems for machines with reversal-bounded counters.”

Congratulations to the award winners and new EATCS Fellows!



On behalf of the EATCS, I also heartily thank the members of the awards, dissertation and fellow committees for their work in the selection of this stellar set of award recipients and fellows. It will be a great honor to celebrate the work of these colleagues during ICALP 2023. (More details about the EATCS Award 2023, the EATCS Presburger Award 2023, 2023 Alonzo Church Award, the 2022 EATCS Distinguished Dissertation Award, the EATCS Fellows, and the Gödel Prize 2023 are presented on the later pages of this issue of the Bulletin.)

Also, please allow me to remind you about three other EATCS affiliated conferences that will be taking place later this year.

- **MFCS 2023:** the 48th International Symposium on Mathematical Foundations of Computer Science, will be held in Bordeaux, France, August 28-September 1, 2023 (<https://mfcs2023.labri.fr/>).
- **ESA 2023:** the 31st Annual European Symposium on Algorithms, will be held in Amsterdam, The Netherlands, September 4-6, 2023 (<https://algo-conference.org/2023/esa/>).
- **DISC 2023:** the 36th International Symposium on Distributed Computing, will be held in L'Aquila, Italy, October 9-13, 2023 (<http://www.disc-conference.org/wp/disc2023/>).

As usual, let me close this letter by reminding you that you are always most welcome to send me your comments, criticisms and suggestions for improving the impact of the EATCS on the Theoretical





*Computer Science community at  
president@eatcs.org. We will consider all  
your suggestions and criticisms carefully.*

*I look forward to seeing many of you at  
ICALP 2023 and to discussing ways of  
improving the impact of the EATCS within  
the theoretical computer science community  
at the general assembly.*

*Artur Czumaj  
University of Warwick, UK  
President of EATCS  
president@eatcs.org*

*June 2023*