

Preface of the 27th Italian Conference on Theoretical Computer Science

The Italian Conference on Theoretical Computer Science (ICTCS) is the conference of the Italian Chapter of the European Association for Theoretical Computer Science. The purpose of ICTCS is to foster the cross-fertilization of ideas stemming from different areas of theoretical computer science. In particular, ICTCS provides an attractive venue where junior researchers and PhD students can meet senior researchers. Contributions in any area of theoretical computer science are warmly invited from researchers of all nationalities. The topics of interest include, but are not limited to, the following: agents, algorithms, argumentation, automata theory, complexity theory, computational logic, computational social choice, concurrency theory, cryptography, discrete mathematics, distributed computing, dynamical systems, formal methods, game theory, graph theory, knowledge representation, languages, model checking, process algebras, quantum computing, rewriting systems, security and trust, semantics, specification and verification, systems biology, theorem proving, and type theory.

As a new feature of this edition, ICTCS 2026 introduced three special tracks devoted to application domains of theoretical computer science. The Cyber-Physical Systems track, chaired by Alessandro Cimatti, focused on formal modelling, verification, synthesis, and analysis techniques for systems integrating computational and physical processes. The Quantum Computing track, chaired by Ugo Dal Lago, addressed the theoretical foundations of quantum computation, including quantum algorithms, complexity theory, formal models, verification techniques, and quantum programming languages. Finally, the Bioinformatics track, chaired by Paola Bonizzoni, was devoted to algorithmic, logical, and mathematical methods for computational biology. These tracks were intended to attract contributions that, although motivated by applied research problems, address substantial theoretical questions.

The 27th Italian Conference on Theoretical Computer Science (ICTCS 2026) was held at Sala Tomadini in Udine, Italy, from 7 to 9 September 2026. The paper submission deadline was 28 June 2026, and acceptance notifications were sent on 26 July 2026.

Each submission entering the peer-review process was assigned to at least three reviewers. The review process resulted in a total of 209 reviews, of which 51 were provided by sub-reviewers.

A total of 71 papers were submitted to the conference for peer review. Of these, 14 were desk-rejected, 3 were withdrawn during the review process, and 10 were rejected following peer review. The desk-rejected submissions exhibited clear signs of having been generated using AI tools and addressed topics entirely unrelated to theoretical computer science. Overall, 44 papers were accepted, including 27 regular papers and 17 short papers.

Most of the authors were affiliated with Italian universities. Authors affiliated with institutions outside Italy represented Austria, Belgium, Brazil, Canada, France, Germany, India, Israel, Japan, Kuwait, Poland, Portugal, Tunisia, the United Kingdom, and the United States of America.

The invited speakers were Parosh Aziz Abdulla from Uppsala University, Sweden, who gave the talk “Quantum Circuit Verification: Challenges and Opportunities”, and Nadia Pisanti from the University of Pisa, Italy, who gave the talk “Alignments to and among Degenerate Strings”.

The conference also hosted the annual meeting of the Italian Chapter of the European Association for Theoretical Computer Science (IC-EATCS), together with the ceremonies honouring Giuseppe Perelli as the recipient of the IC-EATCS Best Young Researcher Award; Matteo Russo as the recipient of the IC-EATCS Best PhD Dissertation Award; and Beniamino Todone as the recipient of the IC-EATCS Best MSc Thesis Award.

We wish to thank the Program Committee members, all the sub-reviewers, the invited speakers, the authors of the papers, and all the participants. We also gratefully acknowledge the generous support of our sponsors: Danieli Automation, beanTech, and the Department of Mathematics, Computer Science and Physics (DMIF) of the University of Udine.

Udine, September 2026

Luca Geatti and Carla Piazza, Chairs of ICTCS 2026

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