21st Computability in Europe Conference

14–18 July 2025

by **Gilda Ferreira*** and **Isabel Oitavem****

The Faculty of Sciences of the University of Lisbon (FCUL) hosted the 21st edition of the international conference *Computability in Europe* (CiE), held from July 14 to 18, 2025.

This conference is part of the annual series promoted by the Association CiE, which aims to advance and disseminate both fundamental and applied research in areas related to computability — including mathematics, computer science, logic, computational biology, as well as the history and philosophy of computing.
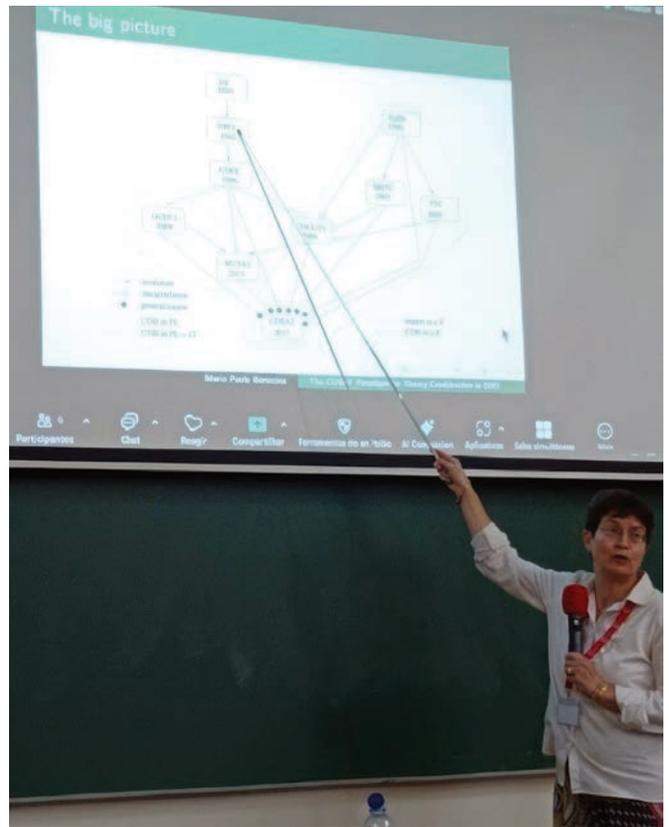
This year's edition brought together 138 researchers from 29 countries and fostered a stimulating environment for the exchange and discussion of advanced scientific ideas.

The conference featured 6 plenary talks, 2 plenary tutorials, 6 special sessions (each with 4 talks), and 55 contributed talks.

There were 49 papers submitted for publication in the conference proceedings, of which 27 were accepted. The proceedings were published by Springer in a

*   Universidade Aberta / Center for Mathematical Studies (CEMS.UL)
** Center for Mathematics and Applications (NOVA Math) and Department of Mathematics, NOVA School of Science and Technology (NOVA FCT)

Lecture Notes in Computer Science volume: https://doi.org/10.1007/978-3-031-95908-0. In addition to the accepted contributed papers, the volume also includes 8 invited papers.

Springer generously funded a Best Paper Award. The winner of this award was the paper *On the Computational Power of C-Random Strings* by Alexey Milovanov.

Since 2016, the conference has included a special interest group named *Women in Computability* (WiC). The WiC program features a workshop, the annual WiC dinner, a mentorship program, and a grant program for young women researchers. The *Women in Computability* workshop continued in 2025, under the coordination of Johanna Franklin, with invited speakers Ana Sokolova (Universitaet Salzburg) and Maria Paola Bonacina (Università degli Studi di Verona).

The social program of the event included a welcome drink in the garden of the Old Canteen, a guided visit to the City Museum at the Pimenta Palace, and a conference dinner at the D'Bacalhau restaurant in Parque das Nações.

The event was supported by several Portuguese research centers, including CEMS.UL, LASIGE, CMAT, NovaMath, CIDMA, and IT; by the *Association for Symbolic Logic*; the *Department of Mathematics of the Faculty of Sciences of the University of Lisbon*; the *Fundação para a Ciência e a Tecnologia*; the *Portuguese Republic*; CiM; *Turismo de Lisboa*; and by the *International Union of History and Philosophy of Science* – Division of Logic, Methodology and Philosophy of Science. The conference was also endorsed by the *Sociedade Portuguesa de Matemática*, the *Sociedade Portuguesa de Lógica*, and the *Kurt Gödel Society*.

Plenary speakers:

Ugo Dal Lago *University of Bologna, Italy*
Daniel Graça *University of Algarve, Portugal*
Ekaterina Komendantskaya *University of Southampton, UK*
Ng Keng Meng *Nanyang Technological University, Singapore*
Paulo Oliva *Queen Mary University of London, UK*
Ana Sokolova *University of Salzburg, Austria*

Tutorial speakers:

Maria Paola Bonacina *University of Verona, Italy*
Igor Carboni Oliveira *University of Warwick, UK*

Special sessions:

Computable Analysis and Topology

Organizers: Takayuki Kihara (Nagoya University, Japan) and Elvira Mayordomo (University of Zaragoza, Spain)

Speakers: Djamel Amir (Paris-Saclay University, France), Emmanuel Rauzy (University of the Bundeswehr Munich, Germany), Holger Thies (Kyoto University, Japan) and Cécilia Pradic (Swansea University, UK).

Computability Aspects of Descriptive Set Theory

Organizers: Luca San Mauro (University of Bari, Italy) and Dino Rossegger (Vienna University of Technology, Austria)

Speakers: Antonio Montalban (University of California, Berkeley, USA), Noah Schweber (Proof School, San Francisco, USA), Dan Turetsky (Victoria University of Wellington, New Zealand) and Benjamin Siskind (Vienna University of Technology, Austria).

Human-Centered AI: Foundational, Historical, and Computational Perspectives

Organizers: Melissa Antonelli (University of Helsinki, Finland), Jean-Baptiste Joinet (Jean Moulin Lyon 3 University, France) and Mattia Petrolo (University of Lisbon, Portugal)

Speakers: Juan Manuel Duran (Delft University of Technology, The Netherlands), Paolo Pistone (Claude Bernard University Lyon 1, France), Carina Prunkl (Utrecht University, The Netherlands) and João Marques-Silva (ICREA, Spain).

Proof Complexity and SAT

Organizers: Maria Luisa Bonet (Polytechnic University of Catalonia, Spain) and Pavel Pudlák (Czech Academy of Sciences, Czech Republic)

Speakers: Albert Atserias (Technical University of Catalonia, Spain), Paul Beame (University of Washington, USA), Sam Buss (University of California, San Diego, USA) and Robert Robere (McGill University, Canada).

Proof Theory: Pure and Applied

Organizers: Anton Freund (University of Würzburg, Germany) and Pedro Pinto (Technical University of Darmstadt, Germany)

Speakers: Horatiu Cheval (University of Bucharest, Romania), Azza Gaysin (University of Passau, Germany), Morenikeji Neri (University of Bath, UK) and Shuwei Wang (University of Leeds, UK).

Quantum Computing

Organizers: Georg Moser (University of Innsbruck) and Romain Péchoux (University of Lorraine, France)

Speakers: Alejandro Diaz-Caro (Inria, France & National University of Quilmes, Argentine), Robin Kaarsgaard (University of Southern Denmark, Denmark), Subhasree Patro (Eindhoven University of Technology, The Netherlands) and Simon Perdrix (Inria, France).

Program Committee Chairs:

Arnold Beckmann (University of Swansea)
Isabel Oitavem (Universidade Nova de Lisboa)

Organizing Committee Chair:

Gilda Ferreira (Universidade Aberta/CEMS.UL)

For more details about the meeting, including the list of the 55 contributed speakers not included in this report, please visit the conference webpage at https://bit.ly/CIE2025