

# 32nd EACSL Annual Conference on Computer Science Logic

CSL 2024, February 19–23, 2024, Naples, Italy

Edited by

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## ■ Preface

This volume contains the papers presented at CSL 2024, the 32nd meeting in the conference series Computer Science Logic (CSL), the annual conference of the European Association for Computer Science Logic (EACSL). CSL 2024 was held from 19th to 23th February 2024 in Naples, Italy.

CSL started as a series of international workshops, and became an international conference in 1992. Previous instalments of CSL were held in Warsaw (2023), Göttingen (2022, on-line), Ljubljana (2021, on-line), Barcelona (2020), Birmingham (2018), Stockholm (2017), Marseille (2016), Berlin (2015), Vienna (2014), Torino (2013), Fontainebleau (2012), Bergen (2011), Brno (2010), Coimbra (2009), Bologna (2008), Lausanne (2007), Szeged (2006), Oxford (2005), Karpacz (2004), Vienna (2003), Edinburgh (2002), Paris (2001), Munich (2000), Madrid (1999), Brno (1998), Aarhus (1997), Utrecht (1996), Paderborn (1995), Kazimierz (1994), Swansea (1993) and San Miniato (1992).

CSL is an interdisciplinary conference, spanning both basic and application-oriented research in mathematical logic and computer science. It is a forum for the presentation of research on all aspects of logic and its applications, including automated deduction and interactive theorem proving, constructive mathematics and type theory, equational logic and term rewriting, automata and games, game semantics, modal and temporal logic, logical aspects of computational complexity, finite model theory, computational proof theory, logic programming and constraints, lambda calculus and combinatory logic, domain theory, categorical logic and topological semantics, database theory, specification, extraction and transformation of programs, logical aspects of quantum computing, logical foundations of programming paradigms, verification and program analysis, linear logic, higher-order logic, and non-monotonic reasoning.

The conference received 106 abstracts of which 86 were followed up by full-paper submissions. The programme committee selected 42 papers for presentation at the conference. Each paper was reviewed by at least three members of the programme committee, with the help of external reviewers. The submission and reviewing process, programme committee discussion, and author notifications were all handled by the EasyChair conference management system. In addition to the contributed papers, there were five invited talks, by: Balder ten Cate (University of Amsterdam, The Netherlands), Georg Gottlob (University of Calabria, Italy), Barbara König (University of Duisburg-Essen, Germany), Marta Kwiatkowska (Oxford University, United Kingdom), and Moshe Vardi (Rice University, United States). Barbara König was a joint invited speaker with the co-located workshop FICS (Fixpoints in Computer Science). We thank the invited speakers for their stimulating talks and papers, which greatly contributed to the success of the conference.

One of the major regular events at CSL conferences is the presentation of the Ackermann Award: the annual EACSL award for an outstanding dissertation in the area of logic in computer science. The recipients of the award are selected by jury from a field of international nominees, and the recipients receive their award at a ceremony at which they give a prize lecture on their dissertation. This year, the jury elected to give the Ackermann Award 2023 to Gabriele Vanoni for his thesis “On Reasonable Space and Time Cost Models for the  $\lambda$ -Calculus”, defended at the University of Bologna (Italy) under the supervision of Ugo Dal Lago. The award was presented during the conference. The citation for the award is included in the proceedings. Another significant event at CSL 2024 was the presentation of the Helena Rasiowa Award, named after the eminent Polish mathematician and logician

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Helena Rasiowa (1917 – 1994) whose work had an essential impact on the emerging field of logic in computer science. The Helena Rasiowa Award, presented for the first time at CSL 2022, is given to the best paper, as decided by the programme committee, that is written solely by students or to which students were the main contributors. There was a strong field of candidates for this award edition, with 13 of the accepted papers eligible. From these, the programme committee selected Quentin Aristote as the recipient of the 2024 Helena Rasiowa Award, for his paper “Active Learning of Deterministic Transducers with Outputs in Arbitrary Monoids”. Quentin Aristote is a PhD student at IRIF under the supervision of Daniela Petrisan.

CSL 2023 also had two affiliated workshops: Fixpoints in Computer Science (FICS) and the Logic Mentoring Workshop (LMW).

We are very grateful to all the members of the CSL 2024 programme committee and external reviewers for their careful and efficient evaluation of the papers submitted. We would like to thank also the members of the organisation committee – Marco Aruta, Davide Catta, Francesco Chiarello, Angelo Ferrando, Michał Tomasz Godziszewski, Alfredo Laino, Giulia Longo, Vadim Malvone, Munyque Mittelman, Francesco Noviello – for taking care to ensure a smooth-running and enjoyable conference. It was as always a pleasure to work with Maribel Fernandez who, as the EACSL president, provided excellent guidance. The proceedings of CSL 2024 are published as a volume in the LIPIcs series. We thank Michael Wagner, Michael Didas and all the Dagstuhl/LIPIcs team for their ongoing support and for the high quality preparation of these proceedings. Last, but not least, we are very grateful to the Dipartimento di Ingegneria Elettrica e delle Tecnologie dell’Informazione, the Università degli Studi di Napoli Federico II, and the Consorzio di Ricerca per l’Energia, l’Automazione e le Tecnologie dell’Elettromagnetismo (CREATE) for supporting the organisation of this conference.

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