

# Computer Science Logic 2017

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LIPICS

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26th EACSL Annual Conference on Computer Science Logic.

Editors: Valentin Goranko and Mads Dam



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## ■ Preface

Computer Science Logic (CSL) is the annual conference of the European Association for Computer Science Logic (EACSL). It is an interdisciplinary conference, spanning across both basic and application oriented research in mathematical logic and computer science. CSL started as a series of international workshops on Computer Science Logic, and became at its sixth meeting the Annual Conference of the EACSL.

The 26th annual EACSL conference Computer Science Logic (CSL 2017) was held in Stockholm from August 20 to August 24, 2017. CSL 2017 was organised jointly by members of the Departments of Philosophy and of Mathematics and Stockholm University, and of the Department of Theoretical Computer Science at KTH Royal Institute of Technology.

CSL 2017 was colocated with the annual European summer meeting of the Association of Symbolic Logic, Logic Colloquium 2017, and the Nordic Logic Summer School of the Scandinavian Logic Society. It also had three affiliated workshops:

- Workshop on Logic and Algorithms in Computational Linguistics, LACompLing 2017,
- Workshop on Logical Aspects of Multi-Agent Systems, LAMAS 2017,
- Workshop on Logic and Automata Theory in memory of Zoltan Esik.

A total of 98 abstracts were registered and 76 of these were followed by full paper submissions to CSL 2017. Each paper was assigned for reviewing to at least three program committee members. The programme committee was assisted by over 100 external reviewers providing additional expertise. The list of external reviewers is included in the proceedings. The program committee worked for two months in total and, after a 4 week long discussion via Easychair, eventually selected 35 papers for presentation at the conference and publication in the proceedings. The overall quality of the submissions was quite good. The number of papers to be accepted was limited by the set overall duration of the conference, though it was also close to the number of submissions considered by the programme committee sufficiently good to be accepted. Still, we had to reject a few good papers. As a new feature for CSL we introduced the option of additional submission of short oral presentations, without publication in the proceedings and subject to lighter refereeing. Eventually, we accepted 8 such short presentations, of which 3 were based on regular submissions which could not be included in the programme as full papers.

As another novel feature, the CSL 2017 conference included a joint special session with Logic Colloquium, featuring two invited highlight speakers from each of the two conferences, in addition to the four plenary invited speakers giving presentations during the regular conference days. The speakers invited by CSL for the joint CSL/LC session were Phokion Kolaitis (University of California Santa Cruz and IBM Research - Almaden) and Wolfgang Thomas (RWTH Aachen University). The invited speakers for the regular CSL program were Laura Kovacs (Technische Universität Wien), Stephan Kreuzer (Technische Universität Berlin), Meena Mahajan (Institute of Mathematical Sciences, Chennai), and Margus Veanes (Microsoft Research). The invited speakers have contributed abstracts that are included in the proceedings.

A special regular item in the CSL programme is the Ackermann Award presentation. This is the EACSL Outstanding Dissertation Award for Logic in Computer Science. This year, the jury decided to give the Ackermann Award for 2017 to Amaury Pouly. The award was officially presented at the conference on August 22, 2017. The citation of the award, an abstract of the thesis and a biographical sketch of the recipient written by Daniel Leivant and Anuj Dawar is included in the proceedings.



The CSL 2017 conference also saw the presentation of the second Alonzo Church award. This is a joint award of the EACSL, ACM SigLog, EATCS and the Kurt Goedel Society. It is given for an outstanding contribution in the field of Logic and Computation represented by a paper or small group of papers within the past 25 years. This year the award is given jointly to Samson Abramsky, Radha Jagadeesan, Pasquale Malacaria, Martin Hyland, Luke Ong, and Hanno Nickau for providing a fully-abstract semantics for higher-order computation through the introduction of game models, thereby fundamentally revolutionising the field of programming language semantics, and for the applied impact of these models. Their contributions appeared in three papers:

- S. Abramsky, R. Jagadeesan, and P. Malacaria. Full Abstraction for PCF. *Information and Computation*, Vol. 163, No. 2, pp. 409–470, 2000.
- J.M.E. Hyland and C.-H. Luke Ong. On Full Abstraction for PCF: I, II, and III. *Information and Computation*, Vol. 163, No. 2, pp. 285–408, 2000.
- H. Nickau. Hereditarily sequential functionals. *Proc. Symp. Logical Foundations of Computer Science: Logic at St. Petersburg* (eds. A. Nerode and Yu. V. Matiyasevich), *Lecture Notes in Computer Science*, Vol. 813, pp. 253–264. Springer-Verlag, 1994.

We wish to thank all members of the programme committee and all external reviewers for their hard and highly professional work on reviewing and discussing the papers. Our thanks also go to the members of the organising committee and to the workshops organisers for their valuable contribution to organising CSL 2017. We also wish to thank Anuj Dawar who, as the EACSL president, was always there to help us with opinion and advice, as well as Marc Herbstritt from the Dagstuhl/LIPIcs team for assisting us in the production of the proceedings.

We send our warm thanks to the conference sponsors Stockholm University, including the Departments of Mathematics and Philosophy, KTH Royal Institute of Technology, including the School of Computer Science and Communication and the Department of Theoretical Computer Science, the Swedish Research Council VR, and Prover Technology AB. We also extend our thanks to Stockholm City Council for hosting the conference reception at Stockholm City Hall.

The workshop on Logic and Automata Theory affiliated with CSL 2017 was a tribute to the memory of Zoltan Esik, whom we lost tragically during the last year. Zoltan was actively associated with CSL and the EACSL, organizing CSL 2006 in Szeged, Hungary. All the members of the CSL community wish to express their sadness and sympathy to his family, friends and colleagues.

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Sujata Ghosh	Markus Müller-Olm	Fan Yang
Stéphane	Martin Otto	Richard Zach
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