Proceedings of the
21st International Symposium
on
Principles and Practice
of Declarative Programming
(PPDP 2019)

Porto, Portugal
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Local Chair: José Nuno Oliveira   **Program Chair:** Ekaterina Komendantskaya

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Foreword

Welcome to the *21st Symposium on Principles and Practice of Declarative Programming - PPDP 2019*! This year's symposium continues the long tradition of bringing together researchers from the various declarative programming communities, including those working in the functional, logic, answer-set and constraint-solving programming paradigms. PPDP's mission is to stimulate research in the use of logical formalisms and methods for specifying, performing, and analysing computations, including mechanisms for mobility, modularity, concurrency, object orientation, security, verification and static analysis.

This year PPDP is collocated with *FM'19*, the *World Congress on Formal Methods*, which itself is composed of 9 conferences, 16 workshops, and 7 tutorials. It is a big honour and pleasure to be part of this international festival of formal tools, techniques and applications thereof.

We are fortunate to be joined by four invited speakers:

- **Amal Ahmed**, from Northeastern University, USA, with a talk on *Semantic Foundations for Gradual Typing*,

- **Mariangiola Dezani**, from the University of Torino, Italy, with a talk on this year's PPDP Most Influential Paper 10-Year Award, for PPDP'09 paper on *Foundations of Session Types*,

- **Naoki Kobayashi**, from the University of Tokyo, Japan, with a talk *10 Years of the Higher-Order Model Checking Project*, and

- **German Vidal**, from the Polytechnic University of Valencia, Spain, with a talk on *Reversibilization in Functional and Concurrent Programming*.

The latter two speakers are joint with LOPSTR'19, the *29th International Symposium on Logic-based Program Synthesis and Transformation*, in line with a long-standing tradition of PPDP and LOPSTR collaboration.

This year's **PPDP Most Influential Paper 10-Year Award** is given to *Foundations of Session Types*, by Giuseppe Castagna, Mariangiola Dezani-Ciancaglini, Elena Giachino, Luca Padovani.

PPDP'19 received 45 regular research paper submissions, of which 19 were accepted to be published in the ACM proceedings of the conference, and to be presented at the event. The accepted papers cover a range of topics in Lambda Calculus and Type Theory, Term Rewriting, Programming Language Semantics, Programming Language Compilers, Functional and Logic Programming, and applications thereof. The papers were peer-reviewed by the Programme Committee whose members were drawn from 16 different countries, industry and academia. All papers were subject to blind peer review, and each paper received at least 3 reviews. External reviewers contributed 30 of these reviews. As in previous year, the PC accommodated a 48-hour author response period, and approximately half of the accepted papers underwent an additional shepherding process before being accepted. We thank all authors and reviewers for their hard work!

Finally, we thank FM'19 local organisers, and in particular the local chair José Nuno Oliveira, from INESC TEC & University of Minho, for the excellent organisation of the event!

I hope that you find PPDP'19 programme interesting, stimulating and inspiring and that the symposium will provide you with the opportunity to meet with other researchers, forge new collaborations, and exchange ideas.

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Ekaterina Komendantskaya
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Heriot-Watt University
Scotland, UK

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2019 International Symposium on Principles and Practice of Declarative Programming

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