Reconfigurable Architectures Workshop (RAW)

This book presents the proceedings of the 25th Reconfigurable Architectures Workshop (RAW 2018) held in Vancouver, Canada in May 2018. RAW 2018 is associated with the 32nd Annual IEEE International Parallel & Distributed Processing Symposium (IEEE IPDPS 2018) and is sponsored by the IEEE Computer Society and the Technical Committee on Parallel Processing. The workshop is one of the major meetings for researchers to present ideas, results, and on-going research on both theoretical and practical advances in reconfigurable computing.

In the last few years, we have seen a steady growth in exciting developments and applications in the field of reconfigurable computing. Many of these new developments are reported in these proceedings, in topics that include algorithms, architectures, tools, systems and applications. The technical program committee, which includes experts from academia and industry around the world, has put together an excellent and stimulating program. The papers presented in these proceedings were selected from among 40 submissions. The technical program includes four regular sessions, two short paper introduction session, five invited talks and an interactive session following each set of technical presentations. The aim of the interactive session is to provide the opportunity to all the authors to present a demo and a poster of their work to facilitate discussion and brainstorming with the RAW participants.

We would like to express our sincere thanks to all those who have contributed to the success of the workshop. In particular, we would like to thank all the members of the program committee and reviewers for their valuable time and effort in the review process, and to provide constructive feedback to the authors. We also acknowledge the support of the IPDPS organizing committee and IEEE Computer Society in producing these proceedings. A special mention has to be done for the members of the EXTRA EU project ("Exploiting eXascale Technology with Reconfigurable Architectures" - http://extrahpc.eu/ - funded from the EU Horizon 2020 research and innovation programme under grant No 671653) and the TXTnext group for their support in organizing an event to celebrate the 25th RAW anniversary. Finally, we thank all authors who contributed to this workshop, for submitting their manuscript and sharing their latest research results with the RAW community. We hope that you will find in these proceedings and workshop a valuable platform as well as source of information for your work.

Marco D. Santambrogio, Diana Goehringer, Dirk Stroobandt, Ken Eguro

Organizing Committee

Workshop Chairs:
> Marco D. Santambrogio, Politecnico di Milano, Italy
> Diana Goehringer, TU Dresden, Germany

Program Chair:
> Dirk Stroobandt, Ghent University, Belgium
> Ken Eguro, Microsoft Research, USA

Steering Chair: Viktor K. Prasanna, University of Southern California, USA

Steering Committee:
> Jürgen Becker, Karlsruhe Institute of Technology, Germany
> Viktor K. Prasanna, University of Southern California, USA
> Ramachandran Vaidyanathan, Louisiana State University, USA

Publicity Co-Chairs:
> Brian Veale, IBM, USA
> Ivan Beretta, University of Westminster, UK
> Laura Nacci, Politecnico di Milano, Italy

IEEE computer society

Program Committee

Juergen Becker, Karlsruhe Institute of Technology
Ivan Beretta, Imperial College London
Catalin Ciobanu, University of Amsterdam
Bruce Cockburn, University of Alberta
Rene Cumplido, INAOE
Lorenzo Di Tucci, Politecnico di Milano
Ken Eguro, Microsoft Research
Diana Goehringer, TU Dresden
Guy Gogniat, Université de Bretagne Sud
Christian Hochberger, Technische Universitaet Darmstadt
Michael Huebner, Ruhr-University Bochum
Eddie Hung, Imperial College London
Andreas Koch, Technische Universitaet Darmstadt
Dirk Koch, University of Manchester
Martin Langhammer, Intel
Miriam Leeser, Northeastern University
Philip Leong, The Chinese University of Hong Kong
Gayatri Mehta, University of North Texas
Nele Mentens, KU Leuven
Antonio Miele, Politecnico di Milano
Seda Ogrenci-Memik, Northwestern University
Francesca Palumbo, UNISS
Dionisios Pnevmatikatos, FORTH-ICS & Technical University of Crete
Mario Porrmann, Bielefeld University
Viktor Prasanna, University of Southern California
Marco Rabozzi, Politecnico di Milano (webmaster)
Marco Domenico Santambrogio, Politecnico di Milano
Fynn Schwiegelshohn, Ruhr-University Bochum
Dimitrios Soudris, National Technical University of Athens
Dirk Stroobandt, Ghent University
Ramachandran Vaidyanathan, Louisiana State University
Ana Varbanescu, University of Amsterdam
Brian F. Veale, IBM
Sara Vinco, Politecnico di Torino