
MuCoCoS-2013 is the sixth workshop in the series: MuCoCoS-2008 (Barcelona, Spain), MuCoCoS-2009 (Fukuoka, Japan), MuCoCoS-2010 (Krakow, Poland), MuCoCoS-2011 (Seoul, Korea), and MuCoCoS-2012 (Salt Lake City, USA).

The pervasiveness of homogeneous and heterogeneous multi-core and many-core processors, in a large spectrum of systems from embedded and general-purpose to high-end computing systems, poses major challenges to software industry. In general, there is no guarantee that software developed for a particular architecture will be executable (that is, functional) on another architecture. Furthermore, ensuring that the software preserves some aspects of performance behavior (such as temporal or energy efficiency) across different such architectures is an open research issue.

Therefore, this workshop focuses on language level, system software and architectural solutions for performance portability across different architectures and for automated performance tuning. The topics of the MuCoCoS workshop include but are not limited to:

- performance measurement, modeling, analysis and tuning;
- portable programming models, languages and compilation techniques;
- run-time systems and hardware support mechanisms for auto-tuning;
- tunable algorithms and data structures; and
- case studies highlighting performance portability and tuning.

For this year’s workshop we received 18 full-paper submissions from Asia Pacific, Europe, and North America. In a peer-reviewing phase with approximately 3 reviews per paper, the submissions were judged by originality, relevance, technical quality, and presentation. All papers were carefully discussed in the program committee. Based on the reviews and the PC discussion, we decided to accept 8 high-quality papers for presentation in the technical program of MuCoCoS-2013 and inclusion in the post-workshop proceedings. We have also planned for two keynotes, on Dataflow Language Compilation by Benoit Dupont de Dinechin from Kalray, France, and on Multiscale Dataflow Computing by Oskar Mencer (presented by Oliver Pell) from Maxeler, UK.

The program for this workshop is the result of hard and excellent work of paper authors, reviewers and program committee members. We would like to express our sincere appreciation to all authors for their valuable contributions and to all program committee members and external reviewers for their cooperation in completing the workshop program under a very tight schedule. Last but not the least, we thank the PACT organization chair, Chris Fensch from the University of Edinburgh, for helping with the organization of the workshop in conjunction with the PACT-2013 conference; Allison Mohn from IEEE Conference Operations; and Lisa Tolles from Sheridan Communications.

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