

PROPER 2011: Fourth Workshop on Productivity and Performance Tools for HPC Application Development

Michael Gerndt

Technische Universität München
Fakultät für Informatik I10, Boltzmannstr. 3, 85748 Garching, Germany

Foreword

The PROPER workshop addresses the need for productivity and performance in high performance computing. Productivity is an important objective during the development phase of HPC applications and their later production phase. Paying attention to the performance is important to achieve efficient usage of HPC machines. At the same time it is needed for scalability, which is crucial in two ways: Firstly, to use higher degrees of parallelism to reduce the wall clock time. And secondly, to cope with the next bigger problem, which requires more CPUs, memory, etc. to be able to compute it at all.

Tool support for the user is essential for productivity and performance. Therefore, the workshop covers tools and approaches for parallel program development and analysis, debugging and correctness checking, and for performance measurement and evaluation. Furthermore, it provides an opportunity to report successful optimization strategies with respect to scalability and performance.

This year's contributions reflect this spectrum nicely. The invited presentation by Mitsuhiro Sato about Challenges of programming environment and tools for peta-scale computers (programming environment researches for the K computer) takes place during the first session "Programming Interfaces", chaired by Felix Wolf. The second session is about "Performance Analysis Tools" and guided by Michael Gerndt. The topic of the last session is "Performance Tuning" and the chair is Allen Malony.

We would like to thank all the authors for their very interesting contributions and their presentations during the workshop. In Addition we thanks all the reviewers for the reading and the evaluation of all the submitted papers. And furthermore, we would like to thank the EuroPar 2011 organizers for their support and for the chance to offer the PROPER workshop in conjunction with this attractive conference. We are most grateful for all the administrative work of Petra Piochacz. Without her help the workshop would not have been possible.

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Michael Gerndt, Workshop Chair