P^3MA
First International Workshop on Performance Portable Programming Models for Accelerators (P^3MA)

http://www.csm.ornl.gov/workshops/p3ma2016/
June 23, 2016 co-located with ISC 2016

Summary of the Workshop’s CFP Process

First International Workshop on Performance Portable Programming Models for Accelerators (P^3MA) co-located with ISC 2016 was held at Frankfurt, Germany on June 23. The workshop solicited papers on topics covering feature sets of programming models (including but not limited to directives-based programming models), their implementations, and experiences with their deployment in HPC applications on multiple architectures, performance modeling and evaluation tools, asynchronous task and event-driven execution/scheduling. We received 13 submissions in total. All submitted manuscripts were peer reviewed. The review process was not double blind, i.e., authors were known to reviewers. Submissions were judged on correctness, originality, technical strength, and significance, quality of presentation, and interest and relevance to the conference scope. We chose 8 papers to be published in the workshop proceedings, Springer-Verlag Lecture Notes in Computer Science (LNCS) volumes.

Workshop Summary

The workshop was held on June 23 at ISC and brought together researchers, vendors, users and developers to brainstorm aspects of heterogeneous computing and its various tools and techniques. Around 50 attendees were present to see Dr. Si Hammond from Sandia National Laboratories, USA, give a keynote on Balancing Productivity, Portability and Performance - The Challenge for Programming Models at Exascale. All of the 8 accepted papers were presented at the workshop with topics ranging from using low-level to high-level programming models for heterogeneous systems, experiences porting legacy code to accelerators, addressing memory requirements, and creating translations from one standard to the other.

Prof. Haohuan Fu, Deputy Head of the National Supercomputing Center in Wuxi and Associate Professor at the Center for Earth System Science, Tsinghua University, China, gave an invited talk on preparing the Community Atmospheric Model climate application to run and scale on Sunway TaihuLight, announced at ISC’16 as the new number one HPC system on the Top500 list. His talk included their experiences with custom loop transformation tools for code refactoring, using OpenACC to program the heterogeneous architecture of TaihuLight, and extensions to the OpenACC standard that were implemented to enable various optimizations in the application.
NVIDIA generously offered to sponsor the ‘Best Paper Award’ with NVIDIA’s newest PASCAL compute capable card. This award was presented to “Task-Based Cholesky Decomposition on Knights Corner using OpenMP” from UTK. The award was determined by the Technical Program Committee and the Program Chairs from viewpoints of the technical and scientific merits, impact on the science and engineering of the research work and the clarity of presentation of the research contents in the paper.

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