19th Workshop on Sustained Simulation Performance

Toward Future HPC Technologies

Program at a glance

Workshop Day 1 Thursday, March 27	Workshop Day 2 Friday, March 28
10:00am-10:30am **Opening Session**	10:00am-11:00am **Session 5** Keynote Talks II
10:30am-0:00pm **Session 1** Keynote Talks I	11:00am-0:00pm **Session 6** Clouds and Big Data
1:00pm-2:50pm **Session 2** HPC System for Memory-Intensive Applications I	1:00pm-2:30pm **Session 7** Software
3:20pm-3:50pm **Session 3** National Flagship Supercomputer	3:00pm-3:50pm **Session 8** Performance Evaluation
3:50pm-4:30pm **Session 2'** HPC System for Memory-Intensive Applications II	3:50pm-4:50pm **Session 9** Earthquake Simulation
4:30pm-5:20pm **Session 4** Memory-Intensive Applications	4:50pm **Closing Remarks**

Workshop Day 1 (Thursday, March 27, 2014)

10:00am-10:30am	Opening Session
10:00am- 10:05am	Opening Remarks **Hiroaki Kobayashi** (Tohoku University)
10:05am-10:15am	Greetings **Takafumi Aoki** (Vice President of Tohoku University)
10:15am-10:30am	Japan's Policy on High Performance Computing **Yoshio Kawaguchi** (Ministry of Education, Culture, Sports, Science and Technology)
10:30am-0:00pm	**Keynote Talks I**
10:30am-11:00am	Developments at HLRS in 2014/2015 **Michael Resch** (HLRS)
11:00am-11:30am	Application of HPC to Earthquake Hazard and Disaster Estimation **Muneo Hori** (University of Tokyo)
11:30am-0:00pm	SX-ACE, the Brand-New Vector Supercomputer for Higher Sustained Performance **Noritaka Hoshi** (NEC)
0:00pm-1:00pm	Lunch
1:00pm-2:50pm	**HPC System for Memory-Intensive Applications I**
1:00pm-1:30pm	Project Overview **Hiroaki Kobayashi** (Tohoku University)
1:30pm-1:50pm	System Architecture **Ryusuke Egawa** (Tohoku University)
1:50pm-2:10pm	Design Space Exploration of Network for Supercomputers **Kentaro Sano** (Tohoku University)
2:10pm-2:30pm	Conceptual Design of Storage System **Ken-ichi Itakura** (JAMSTEC)
2:30pm-2:50pm	System Software **Hiroyuki Takizawa** (Tohoku University)
2:50pm-3:20pm	Coffee Break
3:20pm-3:50pm	**National Flagship Supercomputer**
3:20pm-3:50pm	From K to Exa-scale Supercomputer (invited) **Yutaka Ishikawa** (RIKEN/University of Tokyo)
3:50pm-4:30pm	**HPC System for Memory-Intensive Applications II**
3:50pm-4:10pm	Device Technologies **Mitsumasa Koyanagi** (Tohoku University)
4:10pm-4:30pm	Design of High-Speed and Low Power Si Interposer for High-Performance 3D Stacked Systems **Kanji Ootsuka** (Meisei University)
4:30pm-5:20pm	**Memory-Intensive Applications**
4:30pm-5:00pm	Future Directions on Weather/Climate Simulations in HPC **Keiko Takahashi** (JAMSTEC)
5:00pm-5:20pm	Performance Analysis of Memory-Intensive Applications **Osamu Watanabe** (NEC)

Workshop Day 2 (Friday, March 28, 2014)

10:00am-11:00am	**Keynote Talks II**
10:00am-10:30am	Computer Science vs. Computational Engineering Sciences - Linking Users, Developers, and Centers **Sabine Roller** (University of Siegen)
10:30am-11:00am	Requirements for Modern Network Infrastructures **Jens Assmann** (University of Siegen)
11:00am-0:00pm	**Clouds and Big Data**
11:00am-11:30am	Benefits of the Complementarity of HPC and Clouds **Bastian Koller** (HLRS)
11:30am-0:00pm	Addressing the Big Data Challenges by Supercomputing Technologies **Alexey Cheptsov** (HLRS)
0:00pm-1:00pm	Lunch
1:00pm-2:30pm	**Software**
1:00pm-1:30pm	Simulation of Multi-Physics Problems on HPC Systems **Matthias Meinke** (RWTH Aachen University)
1:30pm-2:00pm	DASH – A Hierarchical Global Address Space Model **Jose Gracia** (HLRS)
2:00pm-2:30pm	Quality Assurance for Software with Portable Performance on HPC Systems **Daniel Harlacher** (University of Siegen)
2:30pm-3:00pm	Coffee Break
3:00pm-3:50pm	**Performance Evaluation**
3:00pm-3:30pm	Miniapps for Enabling Architecture-Application Co-design for Exascale Supercomputing (invited) **Naoya Maruyama** (RIKEN)
3:30pm-3:50pm	Performance Comparison of Auto-parallelized Codes and OpenMP Codes on Various Supercomputing Systems **Kazuhiko Komatsu** (Tohoku University)
3:50pm-4:50pm	**Earthquake Simulation**
3:50pm-4:20pm	Accurate and Efficient Modeling of Seismic Wave Propagation - Axisymmetric 2.5-D Approach and Its Applications - **Genchi Toyokuni** (Tohoku University)
4:20pm-4:50pm	Real-Time Mapping of Tsunami Inundation and its Impact towards Disaster-Resiliency **Shun-ichi Koshimura** (Tohoku University)