

March 19 and 20, 2019 in Sendai, Miyagi, Japan

The 29th Workshop on Sustained Simulation Performance Toward Future HPC Technologies

Session Program

Workshop Day 1 (Tue., March 19th, 2019)

9:30-	Registration
10:00-10:30	Opening Session
10:30-12:00	Session 1 "HPC Trends I"
12:00-13:00	Lunch
13:00-14:00	Session 2 "HPC Projects"
14:00-14:15	Break
14:15-15:45	Session 3 "Vector Computer I"
15:45-16:00	Break
16:00-17:30	Session 4 "Applications I"

Workshop Day 2 (Wed., March 20th, 2019)

9:30-	Registration
9:50-10:50	Session 5 "Applications II"
10:50-11:00	Break
11:00-12:00	Session 6 "HPC Trends II"
12:00-13:00	Lunch
13:00-14:30	Session 7 "Vector Computer II"
14:30-14:45	Break
14:45-15:45	Session 8 "Vector Computer III"
15:45-16:00	Break
16:00-17:30	Session 9 "Applications III"
17:30-17:40	Concluding Remarks

Workshop Day 1 (Tue., March 19th, 2019)

Time	Presentation
9:30-	Registration
	Opening Session
10:00-10:05	<i>Greetings</i> Hiroaki Kobayashi (Tohoku Univ.)
10:05-10:20	<i>Greetings</i> Takafumi Aoki (Tohoku Univ.)
10:20-10:30	<i>Japan's Policy in Promotion of High Performance Computing</i> Suzuka Sakashita (MEXT)
	Session 1 "HPC Trends I" Chair: Mitsuo Yokokawa
10:30-11:00	<i>On Some Aspects of Artificial Intelligence and Simulation</i> Michael Resch (HLRS)
11:00-11:30	<i>QA-Assisted Next Generation HPC Infrastructure: Potentials of NEC's New Vector System SX-Aurora TSUBASA and Its Extension for the Future</i> Hiroaki Kobayashi (Tohoku Univ.)
11:30-12:00	<i>Quantitative real-time uncertainty estimation of the tsunami inundation using HPC technologies</i> Yusaku Ohta (Tohoku Univ.)
12:00-13:00	Lunch
	Session 2 "HPC Projects" Chair: Sabine Roller
13:00-13:30	<i>Current Status of Post-K Development</i> Yutaka Ishikawa (Riken)
13:30-14:00	<i>Mastering the exascale challenges for engineering applications</i> Bastian Koller (HLRS)
14:00-14:15	Break
	Session 3 "Vector Computer I" Chair: Kazuhiko Komatsu
14:15-14:45	<i>Various memory access features of SX-Aurora TSUBASA: VH/VEs shared memory and NUMA mode</i> Aoi Kawahara (NEC Corporation)
14:45-15:15	<i>Using the NEC Aurora System for High-Order DG in Ateles</i> Harald Klimach (Univ. of Siegen)
15:15-15:45	<i>I/O profiling, monitoring and benchmark for JAMSTEC supercomputer systems</i> Tsuyoshi Nakagawa (JAMSTEC)
15:45-16:00	Break
	Session 4 "Applications I" Chair: Matthias Meinke
16:00-16:30	<i>Enhancement of the GW space-time program code for accurate prediction of the electronic properties at surfaces and interfaces in organic electronics materials</i> Susumu Yanagisawa (Ryukyu Univ.)
16:30-17:00	<i>On the Detection and Interpretation of Performance Variations of HPC Applications</i> Li Zhong (HLRS)
17:00-17:30	<i>Evaluation of the Feasibility and Performance of Porting a Climate Model to GPUs</i> Shun Ishiguro (JAMSTEC)

Workshop Day 2 (Wed., March 20th, 2019)

Time	Presentation
9:30-	Registration
	Session 5 "Applications II" Chair: Akihiro Musa
9:50-10:20	<i>Estimation of flood damage in Japan with different resolution</i> So Kazama (Tohoku Univ.)
10:20-10:50	<i>Continuous and Discontinuous Galerkin methods in fluid dynamics with moving geometries</i> Sabine Roller (Univ. of Siegen)
10:50-11:00	Break
	Session 6 "HPC Trends II" Chair: Kenichi Itakura
11:00-11:30	<i>Acceleration with Machine Learning</i> Thomas Ludwig (DKRZ)
11:30-12:00	<i>Supercomputing Education: Towards [Reasonably] High Sustained Simulation Performance</i> Vladimir Voevodin (Moscow State Univ.)
12:00-13:00	Lunch
	Session 7 "Vector Computer II" Chair: Harald Klimach
13:00-13:30	<i>VE Hybrid Coding with py-veo and HAM</i> Erich Focht (NEC Deutch)
13:30-14:00	<i>Memory First! A performance tuning strategy focusing on memory access patterns</i> Hiroyuki Takizawa (Tohoku Univ.)
14:00-14:30	<i>Vectorizing LLVM IR for SX-Aurora</i> Simon Moll (Saarland Univ.)
14:30-14:45	Break
	Session 8 "Vector Computer III" Chair: Ryusuke Egawa
14:45-15:15	<i>Development of optimized COAWST for the vector supercomputers</i> Shivanshu Singh (NEC Technologies India)
15:15-15:45	<i>Performance of I/O in Fortran and C on the SX-Aurora TSUBASA</i> Mitsuo Yokokawa (Kobe Univ.)
15:45-16:00	Break
	Session 9 "Applications III" Chair: Bastian Koller
16:00-16:30	<i>HPC based Mitigation of Aeroacoustic Noise</i> Matthias Meinke (RWTH Aachen Univ.)
16:30-17:00	<i>From Proposal to Publication - The Lifecycle of an HPC Project at HLRS</i> Manuela Wossough / Thomas Beisel (HLRS)
17:00-17:30	<i>Multi-Physics and Multi-Scale - Coupled simulation of fluid flow and rigid body interaction induced aero-acoustics</i> Neda Ebrahimi Pour (Univ. of Siegen)
17:30-17:40	Concluding Remarks