

December 11th and 12th, 2023, in Sendai, Miyagi, Japan

The 36th Workshop on Sustained Simulation Performance Toward Future HPC Technologies

Session Program

Mon., December 11th, 2023

10:15-10:45	Registration
10:45-11:30	Opening Session
11:30-12:30	Session 1: HPC Trends
12:30-13:30	Lunch
13:30-15:30	Session 2: System Software
15:30-15:50	Break
15:50-17:50	Session 3: HPC Applications I

Tue., December 12th, 2023

9:30-10:00	Registration
10:00-12:00	Session 4: HPC Applications II
12:00-13:00	Lunch
13:00-14:30	Session 5: HPC Trends II
14:30-14:50	Break
14:50-16:50	Session 6: Data Science
16:50-17:00	Concluding Remarks

Workshop Day 1 (Mon., December 11th, 2023)

Time	Presentation
10:15-10:45	Registration
10:45-11:30	Opening Session Chair: Kazuhiko Komatsu (Tohoku Univ.) <i>Opening Address: Welcome to The 36th Workshop on Sustained Simulation Performance</i> Hiroaki Kobayashi (Tohoku Univ.) <i>Greetings</i> Takafumi Aoki (Tohoku Univ.) <i>Greetings</i> Takuo Suganuma (Tohoku Univ.) <i>Japan's S&T Policy on HPC</i> Masahide Kokubun (MEXT)
11:30-12:30	Session 1: HPC Trends Chair: Sabine Roller (DLR)
11:30-12:00	<i>The discussion on AI and HPC in Germany</i> Michael Resch (HLRS)
12:00-12:30	<i>Strategy and outlook for expanding the AOBA world</i> Hiroyuki Takizawa (Tohoku Univ.)
12:30-13:30	Lunch
13:30-15:30	Session 2: System Software Chair: Susumu Date (Osaka Univ.)
13:30-14:00	<i>System Software Research – The FugakuNext Supercomputer and Synchrotron Radiation Facilities</i> Kento Sato (R-CCS)
14:00-14:30	<i>Virtual and Augmented Reality in Real Applications</i> Uwe Wössner (HLRS)
14:30-15:00	<i>Proposal of Peak Shift Method to Improve Data Durability for Large-scale Data Infrastructure</i> Takaki Nakamura (Tohoku Univ.)
15:00-15:30	<i>FFT Performance Improvement for SX-Aurora TSUBASA</i> Arihiro Yoshida (NEC)
15:30-15:50	Break
15:50-17:50	Session 3: HPC Applications I Chair: Johannes Gebert (HLRS)
15:50-16:20	<i>Dynamic Load Balanced Simulations based on Hierarchical Cartesian Meshes</i> Matthias Meinke (RWTH Aachen Univ.)
16:20-16:50	<i>Neighboring Particle Search Method for Molecular Dynamics on Long Vector Computers</i> Atsushi Ito (NIFS)
16:50-17:20	<i>Stimulating the competitiveness of SMEs with HPC</i> Bastian Koller (HLRS)
17:20-17:50	<i>Future Direction of Osaka University's Data Infrastructure towards Open Science</i> Hideyuki Tanushi (Osaka University)

Workshop Day 2 (Tue., December 12th, 2023)

Time	Presentation
9:30-10:00	Registration
10:00-12:00	Session 4: HPC Applications II Chair: Matthias Meinke (RWTH Aachen Univ.)
10:00-10:30	<i>High-resolution global weather simulations with the Model for Prediction Across Scales (MPAS)</i> Thomas Schwitalla (University of Hohenheim)
10:30-11:00	<i>Performance analysis and optimization of the external mode part of an ocean model</i> Masao Kurogi (JAMSTEC)
11:00-11:30	<i>Morphometry Driven Profiling - On the Patient Specific Use of HPC Resources</i> Johannes Gebert (HLRS)
11:30-12:00	<i>Parallelization of the structural mechanics solver b2000++: assessment, status and future strategy</i> Harald Klimach (DLR)
12:00-13:00	Lunch
13:00-14:30	Session 5: HPC Trends II Chair: Ryusuke Egawa (Tohoku Univ.)
13:00-13:30	<i>Economic Aspects in HPC</i> Thomas Ludwig (DKRZ Hamburg)
13:30-14:00	<i>Analysis of Memory Systems of Clustered Architecture</i> Masayuki Sato (Tohoku Univ.)
14:00-14:30	<i>NEC Quantum Computing Strategies and Vector Annealing to Solve Social Issues</i> Shintaro Momose (NEC)
14:30-14:50	Break
14:50-16:50	Session 6: Data Science Chair: Noritaka Hoshi (NEC Deutschland GmbH)
14:50-15:20	<i>Towards Digital Twins for Research Aircraft of the German Aerospace Center</i> Michael Baessler (DLR)
15:20-15:50	<i>AI Applications in High-Performance Computing</i> Dennis Hoppe (HLRS)
15:50-16:20	<i>Encoding Turbulent Flows into Quantum States</i> Pia Siegl (DLR)
16:20-16:50	<i>LLM inference on SX-Aurora Vector Engine</i> Erich Focht (NEC Deutschland GmbH)
16:50-17:00	Concluding Remarks Chair: TBD (NEC)