

October 24th and 25th, 2022, in Sendai, Miyagi, Japan

The 34th Workshop on Sustained Simulation Performance Toward Future HPC Technologies

Session Program

Mon., October 24th, 2022

10:00-	Registration
10:30-11:00	Opening Session
11:00-12:30	Session 1: HPC Trends
12:30-13:30	Lunch
13:30-15:00	Session 2: HPC Applications
15:00-15:20	Break
15:20-17:20	Session 3: Quantum Computing

Tue., October 25th, 2022

9:30-	Registration
10:00-12:00	Session 4: HPC Trends II
12:00-13:00	Lunch
13:00-14:30	Session 5: HPC Applications II
14:30-14:40	Break
14:40-15:40	Session 6: Data Science
15:40-15:50	Break
15:50-17:20	Session 7: HPC Technology
17:20-17:30	Concluding Remarks

Workshop Day 1 (Mon., October 24th, 2022)

Time	Presentation
10:00-	Registration
10:30-11:00	Opening Session <i>Opening Address: Welcome to The 34th Workshop on Sustained Simulation Performance</i> Hiroaki Kobayashi (Tohoku Univ.) <i>Greetings</i> Takafumi Aoki (Tohoku Univ.) <i>Greetings</i> Takuo Sukanuma (Tohoku Univ.) <i>Japan's S&T Policy on HPC</i> Taku Kawahara (MEXT)
11:00-12:30	Session 1: HPC Trends Chair: Kazuhiko Komatsu (Tohoku Univ.)
11:00-11:30	<i>German HPC and beyond</i> Michael Resch (HLRS)
11:30-12:00	<i>AOBA: The most powerful vector supercomputer in the world</i> Hiroyuki Takizawa (Tohoku Univ.)
12:00-12:30	<i>Software methods in aircraft development</i> Sabine Roller (DLR)
12:30-13:30	Lunch
13:30-15:00	Session 2: HPC Applications Chair: Ralf Schneider (HLRS)
13:30-14:00	<i>Unsteady aerodynamics simulation of ski jumping from takeoff to landing motion</i> Makoto Tsubokura (Kobe Univ./Riken)
14:00-14:30	<i>HPC Based Analyses of Turbomachinery Flow Problems</i> Matthias Meinke (RWTH Aachen Univ.)
14:30-15:00	<i>Cross reference simulation of space plasma</i> Keiichiro Fukazawa (Kyoto Univ.)
15:00-15:20	Break
15:20-17:20	Session 3: Quantum Computing Chair: Masayuki Sato (Tohoku Univ.)
15:20-15:50	<i>A feasibility study of quantum computing for the next-generation computing infrastructure</i> Kazuhiko Komatsu (Tohoku Univ.)
15:50-16:20	<i>Solving PDEs with Quantum Deep Neural Network</i> Li Zhong (HLRS)
16:20-16:50	<i>NEC Quantum Computing Technologies to Solve Social Issues</i> Shintaro Momose (NEC)
16:50-17:20	<i>Gaia-X and HPC</i> Dennis Hoppe (HLRS)

Workshop Day 2 (Tue., October 25th, 2022)

Time	Presentation
9:30-	Registration
10:00-12:00	Session 4: HPC Trends II Chair: Ryusuke Egawa (Tokyo Denki Univ.)
10:00-10:30	<i>Engineering Applications of Large-scale Fluid-flow Computations</i> Chisachi Kato (The Univ. of Tokyo)
10:30-11:00	<i>NFDI4Cat and the German National Research Data Infrastructure</i> Thomas Bönisch (HLRS)
11:00-11:30	<i>Osaka University's Data Aggregation Infrastructure for Supporting Data-intensive Science</i> Susumu Date (Osaka Univ.)
11:30-12:00	<i>Levante - The Next Generation System at DKRZ</i> Thomas Ludwig (DKRZ)
12:00-13:00	Lunch
13:00-14:30	Session 5: HPC Applications II Chair: Dennis Hoppe (HLRS)
13:00-13:30	<i>Large-scale simulation studies toward fusion energy</i> Masanori Nunami (NIFS)
13:30-14:00	<i>Compress to Impress: Redesigning Matrix Computations for Computational Astronomy and Seismic Imaging Applications</i> Hatem Ltaief (KAUST)
14:00-14:30	<i>On the performance of a DNS code for compressible turbulent flows</i> Mitsuo Yokokawa (Kobe Univ.)
14:30-14:40	Break
14:40-15:40	Session 6: Data Science Chair: Li Zhong (HLRS)
14:40-15:10	<i>Efficient and Performant Implementation of Agent-Based Models</i> Ralf Schneider (HLRS)
15:10-15:40	<i>Strategies for Software Agnostic Power Adjustments with Machine Learning</i> Johannes Gebert (HLRS)
15:40-15:50	Break
15:50-17:20	Session 7: HPC Technology Chair: Shintaro Momose (NEC)
15:50-16:20	<i>Challenges in Scaling Empirical Dynamic Modeling</i> Keichi Takahashi (Tohoku Univ.)
16:20-16:50	<i>Fostering Industrial Uptake of HPC and Associated Technologies in Europe</i> Bastian Koller (HLRS)
16:50-17:20	<i>Introduction of next generation of SX-Aurora TSUBASA, vector engine 3.0</i> Kato Toshihiro (NEC)
17:20-17:30	Concluding Remarks Chair: Yasuo Mogaki (NEC)