

Accelerated Data Analytics and Computing Workshop 8

Hosted by University of Tokyo and Tokyo Tech University
University of Tokyo Kashiwa Campus
Kashiwa, Japan

October 30-31, 2019

–AGENDA–

Wednesday, October 30, 9:00 am – 6:00 pm

TIME	DESCRIPTION	PRESENTER
9:00 AM	Welcome & Opening	Kengo Nakajima, University of Tokyo
9:20 AM	Plenary: Large-Scale Molecular Dynamics Simulation of Biomolecules in Cellular Environments	Yuji Sugita, RIKEN
	Applications	Session Chair:
10:00 AM	Towards Large Scale Quantum Chemistry Calculations on the K and Fugaku Supercomputer	William Dawson, RIKEN
10:30 AM	GPU-Accelerated Large-Scale Excited-State Simulation Based on Divide-and-Conquer Time-Dependent Density-Functional Tight-Binding	Takeshi Yoshikawa, Waseda University
11:00 AM	Break	
11:15 AM	Sony's deep learning development environment for massively large-scale training	Takuya Narihira & Hisahiro Suganuma, Sony
11:45 AM	Yet Another Accelerated SGD: ResNet-50 Training in 70.4 Seconds	Masafumi Yamazaki, Fujitsu
12:15 PM	Working Lunch	
	Resource Management for HPC and AI	Session Chair: Barney Maccabe, ORNL
1:00 PM	ABCI's scheduling design for accommodating various AI jobs	Shinichiro Takizawa, AIST
1:30 PM	Summit RM status update and challenges	Jim Rogers, ORNL
2:00 PM	Cray Shasta orchestration for HPC and cloud	Bill Sparks, Cray
2:30 PM	Updates on testbeds at ADAC partners (technology, access methods, and usage)	Jeff Vetter, ORNL Mark Klein, CSCS
3:00 PM	Break	
	Programming Environment Outlook for Multi-Accelerator Future	Session Chair: Sadaf Alam, CSCS
3:30 PM	Programming environment for HPC + AI	Naruhiko Tan, Nvidia
3:50 PM	ROCm: Leveraging Open Source Software for Accelerating Applications with GPUs	Derek Bouius, AMD
4:10 PM	The Programming Environment for Frontier	Luiz DeRose, Cray
4:30 PM	Resilience in Parallel Programming Environments	Christian Engelmann, ORNL
4:50 PM	Break	

5:00 PM	Debating the present and future of programming ecosystem with dense accelerator nodes (questions from application teams)	Naruhiko Tan, Nvidia Derek Bouius, AMD Luiz DeRose, Cray
5:45 PM	End of Day 1 at University of Tokyo Kashiwa Campus	
6:15 PM	Working Dinner – Matenro http://www.matenro.info/index.html Continue discussions in preparation for Working Groups on Day 2	Jeff Nichols, ORNL: The Future of the ADAC Institute
9:30 PM	Adjourn Day 1	

Thursday, October 31, 9:00 am – 5:00 pm

TIME	DESCRIPTION	PRESENTER
9:00 AM	Day 2 Welcome and Logistics	Rio Yokota, Tokyo Tech
9:05 AM	Working Group Goals and Expectations	Rio Yokota, Tokyo Tech Jeff Nichols, ORNL Thomas Schulthess, CSCS
9:15 AM	Working Groups <ul style="list-style-type: none"> • Applications <ul style="list-style-type: none"> ○ Felix Thaler ○ Soshana Jakobovits ○ Programming Models and Libraries discussion • Emerging Technologies and Resource Management • Governance 	
12:00 PM	Working Lunch	
12:30 PM	Working Groups <ul style="list-style-type: none"> • Applications <ul style="list-style-type: none"> ○ Programming Models and Libraries discussion ○ Collaboration on GPU-acceleration of specific applications • Emerging Technologies and Resource Management Governance 	
3:30 PM	Working Group Reports	
4:30 PM	Wrap-Up and Next Steps	
5:00 PM	Adjourn Day 2	