7:30-8:30 – Breakfast Available
8:30 – Welcome: The Organizers
8:30-9:30 – Keynote 1 - Greg Stoner, Sr. Director in Radeon Open Compute, Chairman of the Board of the HSA Foundation
  • “ROCM: crafting an open platform for GPU computing exploration and problem solving,”
9:30-10:00 - Embedded GPUs
  • “Efficient Convex Optimization on GPUs for Embedded Model Predictive Control,” Leiming Yu, Abraham Goldsmith and Stefano DiCairano, Mitsubishi Electric Research Labs (MERL) and Northeastern University
10:00-10:30 – Coffee Break
10:30-12:00 – GPU Benchmarking and Optimization
  • “High-Performance Cholesky Factorization for GPU-only Execution,” Azzam Haidar, Ahmad Abdelfattah, Stanimire Tomov and Jack Dongarra, University of Tennessee
  • “Parallel CCD++ on GPUs for Matrix Factorization,” Israt Nisa, Aravind Sukumaran-Rajam, Rakshith Kunchum and P. Sadayappan, Ohio St. University
  • “DNNMark: A Deep Neural Network Benchmark Suite for GPUs,” Shi Dong and David Kaeli, Northeastern University
12:00-13:30 – Lunch (on your own)
13:30-14:30 – Keynote II - Hars Vardhan, Staff Research Engineer, Computer Science Innovation Center, Samsung Research America
  • “Effectively Scaling out Deep Learning Frameworks with GPUs,”
14:30-15:00 – GPU Security
  • “Understanding the Security of Discrete GPUs,” Zhiting Zhu, Sangman Kim, Yuri Rozhanski, Yige Hu, Emmett Witchel and Mark Silberstein, University of Texas at Austin and the Technion
15:00-15:30 – Coffee Break
15:30-17:00 – Compiler Optimizations
  • “Directive-based Tile Abstraction to Distribute Loops on Accelerators,” Tristan Vanderbruggen, John Cavazos, Chunhua Liao and Daniel Quinlan, University of Delaware and Lawrence Livermore National Labs
  • “Launch-Time Optimization of OpenCL GPU Kernels,” Andrew Lee and Tarek Abdelrahman, University of Toronto
  • “Multi-job Scheduling for OpenCL Kernels on CPU/GPU Platforms,” Yuan Wen and Michael O’Boyle, University of Edinburgh