

9:00 – 9:10 Opening Remarks

9:10 – 10:00 **Keynote - *Evaluation of the energy behavior of multicores of different generations***
Thomas Rauber and Gudula Runger

10:00 – 10:30 **Best Paper - *Adaptive Sketching Based Construction of H2 Matrices on GPUs***
Wajih Halim Boukaram, Yang Liu, Pieter Ghysels and Xiaoye Sherry Li

10:30 – 11:00 Coffee Break

11:00 – 11:20 ***A Header-Based C++ Library for Computing Hessian on GPU using Automatic Differentiation***
Desh Ranjan and Mohammad Zubair

11:20 – 11:40 ***Block Epsilon-Circulant Preconditioning with GPU-Accelerated Spatial Solvers for Linear Time-Dependent PDEs***
Ryo Yoda and Matthias Bolten

12:00 – 12:20 ***v-LPA: Fast GPU-based Label Propagation Algorithm (LPA) for Community Detection***
Subhajit Sahu, Mahen N and Kishore Kothapalli

12:30 – 14:00 Lunch Break

14:00 – 14:20 ***Thalassa: Transforming Symbolic PDEs into Tensor-Based Solvers Running on ML Accelerators***
Michail Boulasikis, Flavius Gruian and Robert-Zoltán Szász

14:20 – 14:40 ***A Parallel and Highly-Portable HPC Poisson Solver: Preconditioned Bi-CGSTAB with alpaca***
Luca Pennati, Måns I. Andersson, Stefano Markidis, Klaus Steiniger, René Widera, Tapish Narwal and Michael Bussmann

14:40 – 15:00 ***Scalable Higher Resolution Polar Sea Ice Classification and Freeboard Calculation from ICESat-2 ATL03 Data***
Jurdana Masuma Iqrah, Younghyun Koo, Wei Wang, Hongjie Xie and Sushil K. Prasad

15:00 – 15:05 Short Break

15:05 – 15:25 ***SkePU-DNN: Algorithmic Skeleton Programming for Deep Learning on Heterogeneous Systems***
Sehrish Qummar, August Ernstsson, Christoph Kessler and Oleg Sysoev

15:25 – 15:45 ***In-Situ Auto-Regressive Surrogate Modeling for Feature Extraction Using Ascent***

Kewei Yan and Yonghong Yan

15:45 – 16:05 ***Using Checkpoint Alteration to Gauge Fault Sensitivity of HPC Scientific Applications***

Elvis Rojas, Luis Carlos N. Todd and Esteban Meneses

16:05 – 16:30 Coffee Break

16:30 – 16:50 ***A Simple Tiled Approach to Teaching Parallel Computing***

Peter E. Strazdins

16:50 – 17:10 ***Embracing Load Imbalance for Energy Optimizations: a Case-Study***

Jelle van Dijk, Gabor Zavodszky and Ana-Lucia Varbanescu

17:10 – 17:30 ***Assembly of FETI Dual Operator Using CUDA***

Jakub Homola, Radim Vavřík, Ondřej Meca, Tomáš Brzobohatý and Lubomír Říha

17:30 – 17:40 Closing Remarks