

**Fourth KAUST-NVIDIA workshop on
Accelerating Scientific Applications using GPUs
Sunday, February 5th, 2017**

Program

08:30 - Registration

08:40 - 08:50 Welcome!

Dr. Saber Feki, *Workshop Chair, KSL & Frederic Pariente, NVIDIA*

08:50 - 09:20 Keynote Talk: PGI Compilers for Heterogeneous Supercomputing - 2017 Update

Brent Leback, *PGI Customer Service Manager*

09:20 - 9:50 Unleashing GPU Computational Power to Tackle Multidisciplinary Research Projects @ECRC

Dr. Hatem Ltaief, *Senior Research Scientist, Extreme Computing Research Center, KAUST*

09:50 - 10:15 ExaGeoStat: A High Performance Unified Framework for Geostatistics on Manycore Architectures

Sameh Abdullah, *Post-Doc, Extreme Computing Research Center, KAUST*

10:15 - 10:30 Coffee Break

10:30 - 10:55 Scaling Computer Vision and Numerical Optimization with GPUs

Victor Escorcia, PhD Student, Visual Computing Center, KAUST

10:55 - 11:20 Introduction to KSL

Dr. Jysoo Lee, *Director, Supercomputing Core Laboratory, KAUST*

11:20 - 12:00 Keynote Talk: NVIDIA — The AI Computing Company

Dr. Timothy Lanfear, *Director, Solution Architecture and Engineering, EMEA, NVIDIA*

12:00 - 12:10 Group Photo

12:10 - 13:30 Lunch/Prayer Break

13:30 - 14:00 Keynote Talk: State-of-the-art Machine Learning Algorithms and How They Are Affected By Near-Term Technology Trends

Rob Farber, *CEO*, TechEnablement.com, USA

14:00 - 14:25 Asynchronous Task-Based Polar Decomposition on Manycore Architectures

Dalal Sukkhari, *PhD Student*, Extreme Computing Research Center, KAUST

14:25 - 14:50 Batched Triangular DLA for Very Small Matrices on GPU

Ali Charara, *PhD Student*, Extreme Computing Research Center, KAUST

14:50 - 15:05 Coffee Break

15:05 - 15:30 Manycore Implementations of a Real-Time Tomographic Reconstructor for the European Extremely Large Telescope

Nicolas Doucet, *PhD student* Observatoire de Paris, France, in collaboration with Extreme Computing Research Center, KAUST

15:30 - 15:55 Fast Batched SVD on GPU

Wajih Boukaram, *PhD Student*, Extreme Computing Research Center, KAUST

15:55 - 16:10 Introduction to GPU Resources on Campus

Antonio Arena, *Research Computing Lead*, IT Research Computing, KAUST

16:10 - 16:20 Closing Remarks -- Dr. Saber Feki, Workshop Chair