

GPUs and Accelerators in HPC

Tower Seminar Room, STFC Daresbury Laboratory
28-29 September 2010

The Programme

Day 1, 28 September (Tuesday)

9:00 – 9:30	Igor Kozin, STFC	Opening
9:30 – 10:00	Chris Butler, NVIDIA	TBA
10:00 – 10:30	John Brooke, Manchester	Dynamic Profiling and Load Balancing of an N-body Computational Kernel on Heterogeneous Architectures
10:30 – 11:00	Coffee Break	
11:00 – 11:45	Mike Giles, Oxford	Key Talk : OP2: an open-source library for unstructured grid applications
11:45 – 12:15	Chris Maynard, EPCC	Synthesis: Simulating sound on GPUs
12:15 – 13:15	Lunch	
13:15 – 14:00	Guillaume Collin de Verdere, CEA	Key Talk : GPU computing at CEA
14:00 – 14:30	Graham Markall, Imperial	Generating optimised finite element solvers for GPUs
14:30 – 15:00	Francois Bodin, CAPS	TBA
15:00 – 15:30	Coffee Break	
15:30 – 16:15	Christopher Bergström, PathScale	Tutorial : PathScale ENZO - A complete GPGPU solution from programming model to kernel driver
16:15 – 17:00	Nikolay Piskun, TotalView	Tutorial : TotalView for CUDA
18:00 –	Dinner	

Day 2, 29 September (Wednesday)

9:00 – 9:30	Ruari Nestor, ICHEC	Porting the DL POLY molecular dynamics package to GPGPUs
9:30 – 10:00	David Huw Jones, Imperial	Evolving a GPU kernel to perform complex low-level image-processing tasks
10:00 – 10:30	Alistair Hart, Cray	Accelerator directives - a user's perspective
10:30 – 11:00	Coffee Break	
11:00 – 11:45	Matt Harvey, Imperial	Key Talk: High-throughput molecular dynamics simulations using ACEMD on GPUs
11:45 – 12:15	John Pennycook, Warwick	Experiences with Porting and Modelling Wavefront Algorithms on Many-Core Architectures
12:15 – 13:15	Lunch	
13:15 – 13:45	Lennart Johnsson, Houston	TBA
13:45 – 14:15	Daniel Goodman, Manchester	Environmental Considerations When Measuring Relative Performance of Graphics Cards
14:15 – 15:00	Douglas Miles, PGI	Tutorial: PGI compiler
15:00 – 15:30	Coffee Break	
15:30 – 16:15	David Lecomber, Allinea	Tutorial: DDT debugger with CUDA support
16:15 – 16:30	Closing	

Workshop URL: http://www.cse.scitech.ac.uk/events/GPU_2010/index.shtml

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