

High Performance Computing Hessen (HiPerCH)

TU-Darmstadt

08 - 11 April 2013

	Monday 08 April 2013	Tuesday 09 April 2013	Wednesday 10 April 2013	Thursday 11 April 2013
9:00-10:30	X	Dr. Markus Geimer, JSC, FZ Jülich Challenges of the Exascale era - and how tools can help (45min)	Prof. Dr. Gabriel Wittum, Goethe University Frankfurt - Parallel Adaptive Simulation of Processes from Science and Engineering	Prof. Dr.-Ing. Andreas Koch, TU Darmstadt - Matching the Architecture to the Application: Reconfigurable Computing (45min)
		Tutorial MPI Programming for Beginners - Christian Iwainsky, TU Darmstadt (45min)	Dr. Michael Klemm, INTEL - Introduction into the Intel XEON Phi co-processor (45min)	Tutorial CUDA - GPU Programming I - Prof. Dr.-Ing. Michael Goesele, TU Darmstadt (45min)
10:30-11:00	Welcome - Prof. Dr. Christian Bischof Workshop Overview - Dr. Andreas Wolf	coffee break	coffee break	coffee break
11:00-12:30	Prof. Dr. Christian Bischof, TU Darmstadt - Software in High-Performance Computing (45min)	Tutorial MPI Programming Advanced - Dr. Sergey Boldyrev, TU Darmstadt (45min)	Tutorial OpenMP Programming - Christian Terboven, RWTH Aachen University (90min)	Tutorial CUDA - GPU Programming II - Prof. Dr.-Ing. Michael Goesele, TU Darmstadt (45min)
	Prof. Dr.-Ing. Johannes Janicka, TU Darmstadt - Predicting Complex Turbulent Combustion Systems Using Large Eddy Simulation and Flamelet-Based Tabulated Chemistry (45min)	Tutorial Parallelization Strategies - Dr. Andreas Wolf, TU Darmstadt (45min)		Tutorial OpenACC - GPU Programming - Sandra Wienke, RWTH Aachen University (45min)
12:30-14:00	lunch break	lunch break	lunch break	lunch break
14:00-15:30	Introduction System Hardware - TU Environment - Karsten Kutzer, IBM Deutschland (45min)	Lab MPI - Christian Iwainsky / Dr. Sergey Boldyrev / Dr. Andreas Wolf, TU Darmstadt (90min)	Lab OpenMP - Christian Terboven, RWTH Aachen University (90min)	Lab CUDA+OpenACC - André Schulz, TU Darmstadt / Sandra Wienke, RWTH Aachen University (90min)
	Christian Iwainsky, TU Darmstadt - An Intro to HPC Programming: Principles & Terminology (45min)			
15:30-16:00	coffee break	coffee break	coffee break	coffee break
16:00-17:30	Introduction System Software - TU Environment - Dr. Andreas Wolf, TU Darmstadt (90min)	Tool Totalview - Dr. Sergey Boldyrev, TU Darmstadt (45min)	Tool Intel Cluster Studio - Michael Burger, TU Darmstadt (45min)	Sandra Wienke, RWTH Aachen University - Case Study on Productivity and Performance of GPGPUs (45min)
		Tool Vampir - Christian Iwainsky, TU Darmstadt (45min)	Tutorial OpenMP and Performance - Christian Terboven, RWTH Aachen University (45min)	Closing remarks - Prof. Dr. Christian Bischof / Dr. Andreas Wolf
19:00 -		Social Event - Dinner		X

	Introduction (System, Tools)
	Talk (general)
	Tutorial
	Lab (practical course)
	Miscellaneous