

	The new RWTH HPC-Cluster, Introduction, Serial Programming, Tuning, Processor Architectures	Message Passing with MPI	Shared Memory Programming with OpenMP	GPGPU Programming	Labs, Tuning
	Mo, March 19	Tu, March 20	We, March 21	Th, March 22	Fr, March 23
9:00 - 10:30		MPI Basics: Part I <ul style="list-style-type: none"> • General Concepts • Point-to-Point communication • Tools: Vampir <i>H. Iliev (RWTH)</i>	Introduction to Parallel Computing with OpenMP (Part I) <i>C. Terboven (RWTH)</i> Lab: OpenMP Basics I (30 min)	GPU Architecture, CUDA Basics (+OpenCL) <i>S. Wienke (RWTH)</i>	Lab + Code Tuning
10:30 - 11:00		coffee break	coffee break	coffee break	coffee break
11:00 - 12:30	Introduction to Visual Studio <i>C. Terboven (RWTH)</i> Lab: Visual Studio	Vampir (15 min) <i>H. Iliev (RWTH)</i> TotalView (30 min) <i>T. Cramer (RWTH)</i> Lab: MPI and Tools	Introduction to Parallel Computing with OpenMP (Part II) <i>C. Terboven (RWTH)</i> Lab: OpenMP Basics II (30 min)	Lab: CUDA (+OpenCL) Basics	Lab + Code Tuning
12:30 - 14:00	lunch break	lunch break	lunch break	lunch break	
14:00 - 15:30	Welcome and Introduction (10 min) <i>D. a. Mey (RWTH)</i> Parallel Computing Architectures (60 min) <i>C. Terboven (RWTH)</i> The New Compute Cluster of the RWTH Aachen University (20 min) <i>T. Warschko (Bull)</i>	MPI Basics: Part II <i>H. Iliev (RWTH)</i> MPI Parallelization Strategies <i>D. an Mey (RWTH)</i>	OpenMP and Tools <i>D. Schmidl (RWTH), C. Terboven (RWTH)</i> Lab: OpenMP Tools (45 min)	CUDA Tuning Concepts <i>S. Wienke (RWTH)</i> Case Study: OpenCL - Portability and Performance (30 min) <i>B. Dammann (DTU Informatics, Denmark)</i>	
15:30 - 16:00	coffee break		coffee break	coffee break	
16:00 - 17:30	RZ-Environment (15 min) <i>T. Cramer (RWTH)</i> Lab: Performance Tuning for Cache-based Systems	Case Study: Review of Parallelizing a Finite Element Code <i>O. Fortmeier (Bull)</i> Intel Tools <i>C. Terboven (RWTH)</i> Lab: MPI and Tools	OpenMP and Performance (45 min) <i>C. Terboven (RWTH), D. Schmidl (RWTH)</i> Lab: Advanced OpenMP (45 min)	Introduction to directive-based GPU Programming (30 min) <i>S. Wienke (RWTH)</i> Lab: CUDA Advanced & PGI Accelerator Basics	
19:00 –			<u>Social event in Kazan</u> <i>Annastraße 26</i>		