An Introduction to HPC at the University Oldenburg

September 18 – 20, 2017 from 9:00 to 17:00 in room W1 0-008

given by Wilke Trei and Stefan Harfst

Time	Monday	Tuesday	Wednesday
09:15 – 10:45	Introduction to HPC (SH) • Motivation • Architectures • Overview CARL and EDDY	Introduction to Parallel Programming (WT) • Overview over parallel models • Parallel Programming with OpenMP	Introduction to Matlab on the local HPC-System (SH) • Setting up the Client • Job submission
10:45 – 11:00	Coffee Break		
11:00 – 12:30	Basic Usage of the HPC Cluster (WT) • Job Scheduler SLURM • Basic Use of SLURM • Exercise SLURM	Parallel Programming with OpenMP (WT) • Examples and Exercises	Parallel Programming in Matlab (SH) • Parfor • Examples
12:30 – 13:30	Lunch Break		
13:30 – 15:00	HPC Environment (SH) • File Systems • Software and Modules • Compiler and Toolchains • Examples and Exercises	Introduction to GPU Computing (SH) • Basics of GPU Programming • OpenACC • Examples and Exercises	Parallel Programming in Matlab (SH) • SPMD • Examples
15:00 – 15:15	Coffee Break		
15:15 – 16:45	Advanced SLURM (SH) • Job Arrays • Examples and Exercises	Introduction to GPU Computing (SH) • more OpenACC • Examples and Exercises	