An Introduction to HPC at the University Oldenburg

March 30 – April 1, 2020 from 10:00 to 17:00 in room W1 0-008

given by Wilke Trei (Forwind) and Stefan Harfst (Scientific Computing)

Time	Monday	Tuesday	Wednesday
10:15 – 11:15	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
11:15 – 11:30			
11:30 – 13:00	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
13:00 – 13:45			
13:45 – 15:15	HPC Environment (SH) • File Systems • Software and Modules • Compiler and Toolchains • Examples and Exercises	Parallel Programming with OpenMP (SH) • Examples and Exercises	Parallel Programming in Matlab (SH) • SPMD • Examples
15:15 – 15:30			
15:30 – 17:00	Advanced SLURM (SH) • Job Arrays • Examples and Exercises	Performance Optimization (SH) • Examples and Exercises	