

An Introduction to HPC at the University Oldenburg

March 27 – 29, 2022 from 10:15 to 17:00 as online workshop
given by Wilke Trei (Forwind) and Stefan Harfst (Scientific Computing)

Time	Monday	Tuesday	Wednesday
10:15 – 11:15	Introduction to HPC (SH) <ul style="list-style-type: none">• Motivation• Architectures• Overview CARL and EDDY	Introduction to Parallel Programming (WT) <ul style="list-style-type: none">• Overview over parallel models• Parallel Programming with OpenMP	Introduction to Matlab on the local HPC-System (SH) <ul style="list-style-type: none">• Setting up the Client• Job submission
11:15 – 11:30			
11:30 – 13:00	Basic Usage of the HPC Cluster (WT) <ul style="list-style-type: none">• Job Scheduler SLURM• Basic Use of SLURM• Exercise SLURM	Parallel Programming with OpenMP (WT) <ul style="list-style-type: none">• Examples and Exercises	Parallel Programming in Matlab (SH) <ul style="list-style-type: none">• Parfor• Examples
13:00 – 13:45			
13:45 – 15:15	HPC Environment (SH) <ul style="list-style-type: none">• File Systems• Software and Modules• Compiler and Toolchains• Examples and Exercises	Parallel Programming with OpenMP (SH) <ul style="list-style-type: none">• Examples and Exercises	Parallel Programming in Matlab (SH) <ul style="list-style-type: none">• SPMD• Examples
15:15 – 15:30			
15:30 – 17:00	Advanced SLURM (SH) <ul style="list-style-type: none">• Job Arrays• Examples and Exercises	Performance Optimization (SH) <ul style="list-style-type: none">• Examples and Exercises	