Courses, Training and Events for HPC

For the efficient usage of HPC computing architectures, knowledge in the area of parallel programming and code optimization is indispensable. LRZ offers regular training courses on various subjects in HPC. In this area LRZ collaborates with the HPC group of the Erlangen Computing Centre and the Competence Network for Scientific High Performance Computing in Bavaria, and the partners within the Gauss Centre for Supercomputing (GCS). Since 2012 LRZ as part of GCS is one of the PRACE Training Centres which offer HPC training for researchers from academia and industry from all around Europe.

Offerings:

- Courses and Events organized by LRZ (mostly in Garching)
- Courses and events organized by the Gauss Centre for Supercomputing in Germany
- Courses and Events organized by PRACE (Partnership for Advance Computing in Europe)

Additional information and Resources:

- Content Level Specification
  - C/C++
  - Deep Learning / Machine Learning
  - Fortran
  - GPU Programming using OpenACC and CUDA
  - Iterative Solvers and Parallelization
  - MPI
  - OpenMP
  - Python

- Lecture Notes and Materials
  - Compact Course: Iterative Linear Solvers and Parallelisation
  - Deep Learning and GPU programming using OpenACC
  - FPGA Programming Models
  - Introduction to ANSYS CFD (CFX, Fluent)
  - Introduction to Semantic Patching of C programs with Coccinelle
  - Introduction to the HPC Systems at LRZ
  - Introduction to the LRZ Linux Cluster and Compute Cloud
  - Parallel Programming Courses
  - PRACE Course: Advanced Fortran Topics
  - PRACE Course: Deep Learning and GPU Programming Workshop
  - PRACE Course: Deep Learning and GPU Programming Workshop @ CSC
  - PRACE Course: Intel MIC Programming Workshop
  - PRACE Course: Introduction to hybrid programming in HPC
  - PRACE Course: Node-Level Performance Engineering
  - PRACE Course: OpenMP Programming Workshop
  - PRACE Course: VI-HPS Tuning Workshop
  - PRACE Public Lectures
  - PRACE Workshop: HPC code optimisation workshop
  - Programming with Fortran
  - Python for Beginners
  - Python Refresher
  - Recent Advances in Parallel Programming Languages
  - Training on data analytics, big data and machine learning workflows at LRZ
  - Using Python at LRZ
  - Using R at LRZ