



PRACE Advanced Training Centres (PATCs)

- BSC - Barcelona Supercomputing Center (Spain)
- CSC - IT Center for Science (Finland)
- CINECA - Consorzio Interuniversitario (Italy)
- EPCC - University of Edinburgh (UK)
- GCS - Gauss Supercomputing Center (Germany)
- MdS - Maison de la Simulation (France)

PRACE Training Centres (PTCs)

- ICHEC - Irish Centre for High-End Computing (Ireland)
- IT4I - National Supercomputing Center VSB-Technical University of Ostrava (Czech Republic)
- GRNET - Greek Research and Technology Network (Greece)
- SURFsara (The Netherlands)

Tentative PATC and PTC Training Programme: August 2017 to February 2018

August 2017

- Advanced OpenMP (EPCC)
- MD workshop (EPCC)

September 2017

- Fortran Programming for Scientific computing (CSC)
- Programming the Manycore Knights Landing Processor (EPCC)
- Hands-on Intro to HPC (EPCC)
- Advanced Fortran Topics (GCS)
- CFD simulations using OpenFOAM (IT4I)
- Data management with iRODS (SURFsara)

October 2017

- Parallel Programming Workshop (BSC)
- Introduction to Marconi SKL Cluster, for users and developers (CINECA)
- Introduction to PRACE-PCP energy-efficient prototypes (CINECA)
- Introduction to Parallel Programming (CSC)
- GPU programming with CUDA (EPCC)
- Advanced MPI (EPCC)
- Advanced Parallel Programming with MPI-3.1 (GCS)
- High performance computing using Python (ICHEC)

November 2017

- Earth Sciences Simulation Environments (BSC)
- HPC methods for Computational Fluid Dynamics and Astrophysics (CINECA)
- Debugging and Optimization of Scientific Applications (CINECA)
- Analysing large datasets with Apache Spark (CSC)
- HPC for Biologists (EPCC)
- Single-Node Performance Optimisation (EPCC)
- Mastering GPU-Acceleration on OpenPOWER Platform for Optimal Application Performance (MdS)

- Code optimization and debugging (MdS)
- Hybrid MPI/OpenMP programming (MdS)
- Introduction to parallel programming (GRNET)
- System administration tools (IT4I)

December 2017

- High Performance Bioinformatics (CINECA)
- GPU programming with OpenACC (CSC)
- Software Carpentry (EPCC)
- Node-level Performance Engineering (GCS)
- Parallel and GPU programming in Python (SURFsara)

January 2018

- Administration of Petaflop Machine (BSC)
- Python in High-Performance Computing (CSC)
- Data Analytics with HPC (EPCC)
- Introduction to hybrid programming in HPC (GCS)
- Efficient use of HPC systems (GRNET)

February 2018

- Programming Distributed Systems - COMPSs (BSC)
- HPC simulations for Science and Engineering (BSC)
- Big Data Analytics (BSC)
- 14th Advanced School on Parallel Computing (CINECA)
- Advanced Parallel Programming (CSC)
- Writing Scalable Parallel Applications with MPI (EPCC)
- Parallel file systems and parallel IO libraries (MdS)
- C-C++ multicore application programming (MdS)
- Spring school in parallel programming (ICHEC)
- Intel Xeon Phi programming (IT4I)
- Introduction to High-Performance Machine Learning (SURFsara)



Tentative PATC and PTC Training Programme: March 2018 to July 2018

March 2018

- Introduction to simulation environments for Life sciences (BSC)
- Python for computational science (CINECA)
- Programming paradigms for GPU devices (CINECA)
- Advanced Fortran Programming (CSC)
- Spring School in Computational Chemistry (CSC)
- HPC Tools Workshop (EPCC)
- Object-Oriented programming for HPC (EPCC)
- Parallel I/O and Portable Data Formats (GCS)
- OpenMP GPU Directives for Parallel Accelerated Supercomputers (GCS)
- Parallel Programming with HPX (GCS)
- Data Management Plan – Long term preservation (MdS)
- Runtime systems for heterogeneous platform programming (MdS)
- Parallel programming with MPI/OpenMP (SURFsara)
- Advanced Usage on CURIE: parallelism, optimization, IO, tools (MdS)
- Uncertainty quantification (MdS)
- Introduction to PETSc (MdS)
 - Accelerator programming (GPU programming using CUDA and OpenACC) (GRNET)
 - Many-core programming and performance profiling for molecular and atomic simulations (ICHEC)
 - PETSc tutorial (IT4I)

April 2018

- Programming of Petaflop Machine (BSC)
- High Performance Molecular Dynamics (CINECA)
- Advanced Threading and Optimisation (CSC)
- Data Carpentry (EPCC)
- VI-HPS Tuning Workshop (GCS)
- Advanced Topics in HPC (GCS)
- Advanced Fortran for Scientific Computing (GCS)
- GPU Programming with CUDA (GCS)
- Parallel linear algebra (MdS)
- Introduction to biomolecular modelling and molecular dynamics in HPC (GRNET)
- Advanced topics in HPC programming (SURFsara)
- Introduction to programming in CUDA (BSC)
- 4th School On Scientific Data Analytics and Visualization (CINECA)
- High-Throughput on High-Performance and Cloud Computing with AiiDA (CINECA)
- Efficient Parallel IO (EPCC)
- Introduction to Unified Parallel C (UPC) and Co-Array Fortran (CAF) (GCS)
- Efficient parallel Programming with GASPI (GCS)
- High-Performance Computing with Python (GCS)
- Intel MIC / Knights Landing Programming Workshop (GCS)
- Node-Level Performance Engineering (GCS)
- High-performance scientific computing in C++ (GCS)
 - Meteorological and climate modelling (GRNET)
 - Efficient data formats and Streaming data processing in the Apache Big Data ecosystem (SURFsara)

May 2018

- Performance Analysis and Tools (BSC)
- Heterogeneous Programming on GPU with MPI (OMPSs) (BSC)
- ARM-based Architectures (BSC)
- HPC Methods for Engineering Applications (CINECA)
- Porting and Optimisation workshop (EPCC)
- HPC code optimisation workshop (GCS)
- Performance portability for GPU applications using high-level programming approaches (MdS)

June 2018

July 2018

- PUMPS (BSC)
- Message-Passing Programming with MPI (EPCC)



Find out more about PRACE training activities at:
www.events.prace-ri.eu
Find previous training material at:
www.training.prace-ri.eu