HiPerCH 5

All presentations will be in English.

This workshop is targeted at Hessian students and scientists with interest in programming modern HPC hardware.

You can book each course by itself.

Registration: Please register on our webpage.
URL: http://www.hpc-hessen.de

Attendance fee: There is an attendance fee that depends on the different courses. This fee includes lunch and coffee breaks as well as the evening event.

Bachelor and Master students receive a 50% discount. After your registration you will receive a bill for this workshop. Please pay by February 20, 2016:

Sparkasse Darmstadt
(BLZ: 508 501 50; Kto.-Nr. 704 300)
IBAN: DE 36 5085 0150 0000 7043 00,
BIC: HELADEF1DAS
Reason for payment: SC 582 00346,
HiPerCH 5, “your name”, “your university”

For further information, please visit our webpage. URL: http://www.hpc-hessen.de

Contact:
Hessisches Kompetenzzentrum für Hochleistungsrechnen
Mornewegstraße 30
64293 Darmstadt
Email: veranstaltungen@hpc-hessen.de

Hessisches Kompetenzzentrum
für Hochleistungsrechnen

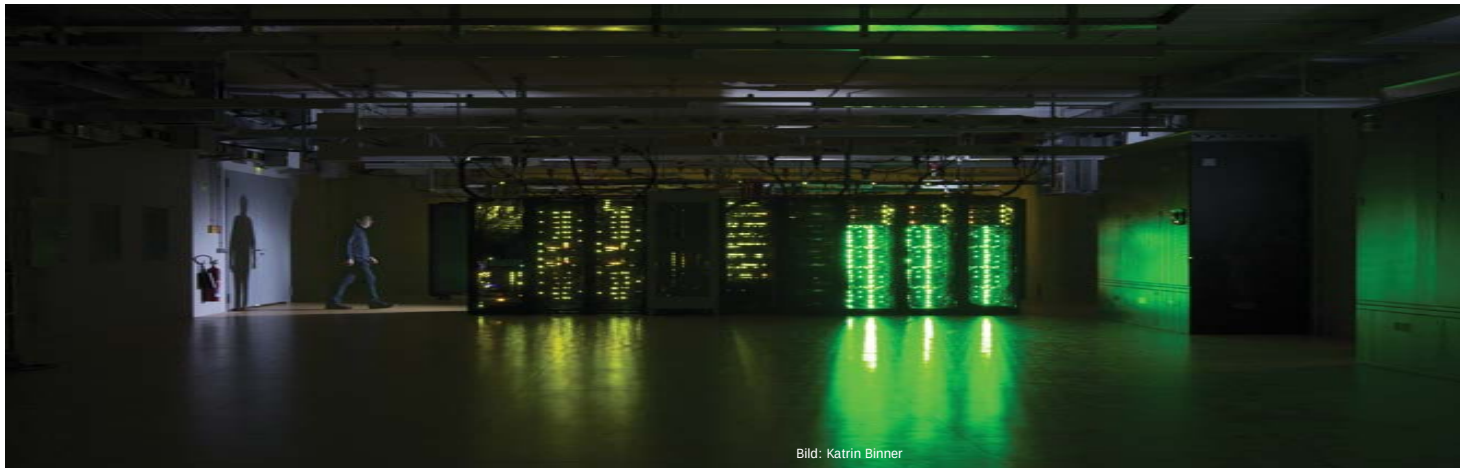

Bild: Katrin Binner

Location:
University of Kassel
Campus Center
Room 1111
Moritzstr. 18
34127 Kassel

HiPerCH 5

High Performance Computing Hessen

Introduction to High Performance Computing

February 29 - March 02, 2016
Kassel

Agenda

Monday, Feb. 29
Room 1111

REGISTRATION
10:00 A.M. - 10:15 A.M.
COURSE
10:15 A.M. - 12:00 P.M.

PREREQUISITES:
There are no prerequisites for participation on this day.

1) Introduction to Linux

STAFF MEMBERS HPC HESSEN

CONTENT
- Command-line and scripting

COURSE
01:00 P.M. - 03:00 P.M.

2) The Hessian Infrastruture for HPC

STAFF MEMBERS HPC HESSEN

CONTENT
Overview of available Hardware:
- Hessian and German HPC-facilities
- HPC Hessen – Brainware for Science
- Introduction to the batch system

NO ATTENDANCE FEE

Tuesday, March 01
Room 1111

REGISTRATION
10:00 A.M. - 10:15 A.M.
COURSE
10:15 A.M. - 5:00 P.M.
EVENING EVENT
7:00 P.M.

Wednesday, March 02
Room 1111

COURSE
9:00 A.M. - 4:00 P.M.

PREREQUISITES:
Participants must have basic knowledge of UNIX/Linux (login with secure shell, shell commands, basic programming, vi or emacs editors) and in programming with Fortran or C. For the tutorials all participants are kindly asked to use their own laptop (WLAN).

This course consists of lectures supplemented with practical exercises.

3) Parallel Programming with OpenMP

CHRISTIAN TERBOVEN (RWTH AACHEN)

CONTENT
- Short motivation for parallel programming
- Introduction to OpenMP
- Fundamentals of system architecture
- Task-parallel programming with OpenMP

LAB: OPENMP BASICS
Performance Tuning with OpenMP

- Measuring OpenMP performance with tools
- Load balancing
- Memory placement and thread Binding
- False sharing
- Implementing I/O pipelining, private vs. shared data
- Avoiding synchronization over head
- Vectorization with OpenMP

ATTENDANCE FEE: 40 EURO
INCL. EVENING EVENT

Directions to HiPerCH 5

University of Kassel
Campus Center
Room 1111
Moritzstr. 18
34127 Kassel

TRAVEL BY PUBLIC TRANSPORT:
- From train station Kassel Wilhelmshöhe, take tram 1 in direction to Vellmar up to Holländischer Platz/University. This takes about 17 minutes.

January 15, 2016