























3-Day-Course — Mainz — 1st day

Message Passing Interface (part 1)

- 8:30 **Registration**
 - 9:00 **Introduction** [1] (talk)
 - 9:15 **Parallel Architectures and Programming Models** [2] (talk) 
 - 10:15 **Coffee**
 - 10:30 **MPI – Introduction to the Message Passing Interface** [3] (talk)
 - 10:40 **Chap. 1 MPI Overview** (talk)  1-4  5-9  10-14  15-18
 - 11:15 **Chap. 2 MPI Process model** (talk+practical)
 - 12:30 **Lunch**
 - 13:30 **Chap. 3 Messages and Point-to-Point Communication** (talk+practical)
 - 15:00 **Coffee**
 - 15:15 **Chap. 4 Non-Blocking Communication** (talk+practical)
 - 16:30 **Coffee**
 - 16:45 **Chap. 6 Collective Communication** (talk+practical)
 - 17:30 **Chap. 7 Error handling** (talk)
 - 17:40 **Chap. 15 Probe, Cancel, Persistent Requests** (talk)
 - 18:00 **Chap. 5 The new Fortran module mpi_f08** (talk – only for Fortran participants)
 - 18:30 **End**
- Introduction
[1] Slide 9 (3days) Höchstleistungsrechenzentrum Stuttgart
- 18:30 Guided City-Tour through Mainz**
- 20:00 Dinner at restaurant “Eisgrub” (self-paying)**
- H L R I S 

3-Day-Course — Mainz — 2nd day




Message Passing Interface (part 2) and OpenMP

- 8:30 **Chap. 8 Groups & Communicators, Environment Management** (short-talk+pr.)  1-4  5-9  10-14  15-18
 - 9:15 **Chap. 9 Virtual Topologies** [3, continued] (talk+practical)
 - 10:15 **Coffee**
 - 10:30 **Chap. 12(1) Derived Datatypes** (talk / no practical)
 - 11:15 **Short break**
 - 11:20 **OpenMP – Overview and execution model** [7] (talk+practical 15min) 
 - 12:15 **Lunch**
 - 13:15 **OpenMP – Work sharing directives** (talk+practical 25 min) 
 - 14:30 **Coffee**
 - 14:45 **OpenMP – Data environment** (talk+practical 10min) 
 - 15:30 **Short break**
 - 15:40 **OpenMP – Summary and Pitfalls** (talk) 
 - 17:00 **Coffee**
 - 17:15 **OpenMP – Heat example** (talk+homework) 
 - 17:30 **OpenMP- 4.0 Extensions** [7A] (talk)  7A  4.0
 - 18:00 **Verifying an OpenMP Parallelization with the Intel Inspector XE** [--] (talk+pr.)  49H  ZIH  D2  ppt
 - 18:30 **End**
- Rolf Rabenseifner
[1] Slide 10 (3d) Höchstleistungsrechenzentrum Stuttgart
- H L R I S 

3-Day-Course — Mainz — 3rd day

Message Passing Interface (part 3)



- 8:00 **Access to the federal high-performance computing-centers** [9] (talk) 
- 8:30 **Parallelization of Explicit and Implicit Solvers** [38a] (talk) 
- 10:15 **Coffee**
- 10:30 **Chap. 10 One-sided Communication** [3, continued] (talk+practical)
- 11:45 **Chap. 11-(1) Shared memory one-sided communication** (talk / no practical)
- 12:05 **Chap. 14 MPI and Threads** (talk)
- 12:15 **Chap. 16 Process Creation and Management** (talk)
- 12:20 **Chap. 17 Other MPI features / Summary** (talk)
- 12:30 **Lunch**
- 13:30 **Chap. 13, Block 1 Parallel file I/O (basics)** (talk+practical 10min)
- 14:30 **Coffee**
- 14:45 **Chap. 13, Block 2 Parallel file I/O (fileviews)** (talk+practical 30min)
- 15:45 **Chap. 13, Block 3 Parallel file I/O (access methods)** (talk)
- 16:15 **Summary / Q&A** (talk)
- 16:30 **End**
- : -- **Chap. 18 Best practice** (handout only)
- : -- **Parallel programming models on hybrid systems / MPI+OpenMP** [23] (handout only) 

Introduction Rolf Rabenseifner
[1] Slide 11 (3d) Höchstleistungsrechenzentrum Stuttgart

H L R I S

see also login-slides 