









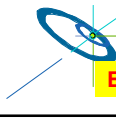


## 5-Day-PATC-Course — *Advanced* — 4th day (Thursday)

### Advanced MPI and OpenMP programming

- 8:30 **Parallel programming models on hybrid systems / MPI + OpenMP** [23] (talk) 
- 9:45 **Coffee** 
- 10:00 **Parallel programming models on hybrid systems / MPI + OpenMP** (continued) 
- 10:45 **Coffee**
- 11:00 **Parallel Performance Analysis and profiling** [16] (talk+practical) 
- 12:00 **MPI-2 parallel file I/O (basics)** [11+11a] (talk+practical) 
- 13:00 **Lunch**
- 14:00 **MPI-2 parallel file I/O (fileviews)** (talk+practical) 
- 15:00 **Coffee**
- 15:15 **MPI-2 parallel file I/O (access methods)** (talk) 
- 15:45 **Coffee**
- 16:00 **Memory Checking & Single-Processor Optimization using Valgrind** [05b] (talk) 
- 16:45 **MPI-3.0 Overview** [10a] (talk) 
- :--- **Services at HLRS** [18a] (handouts only) 
- 17:30 **End**











Introduction Rolf Rabenseifner  
[1] Slide 13 (5d) Höchstleistungsrechenzentrum Stuttgart

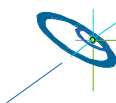
HLRS 

**Excursion to the world's 1st TV tower / States Gallery – Exhibition of Modern Art**

## 5-Day-PATC-Course — *Advanced* — 5th day (Friday)

### Parallelization in General

- 8:30 **Parallelization of Explicit and Implicit Solvers** [38a] (talk) 
- 9:45 **Coffee**
- 10:00 **PETSc Tutorial** [41] (talk) 
- 10:45 **Laplace-Example with PETSc** [42a+c] (talk+practical) 
- :--- **Laplace-Example with MPI** [42b] (handouts only)
- 11:30 **Coffee**
- 11:45 **Numerical and parallel libraries** [33] (talk) 
- 12:15 **Parallel numerics (part1)** [34] (talk) 
- 13:00 **Lunch**
- 14:00 **Parallel numerics (part2)** (talk) 
- 14:45 **Coffee**
- 15:00 **Particle based domain decomposition** [35] (talk) 
- 15:45 **Summary and Q&A** (talk+discussion) 
- 16:30 **End**



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1st day 4th day