

**Intermediate Course**  
**2025/04/10: Intermediate HPC**  
**and Data Management topics**  
**@KIT**

**Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Intermediate Bash Scripting + Exercises

*Thursday, April 10, 2025 10:35 AM (2 hours)*

- Bash and shell features and utilities: \* loops \* using the terminal efficiently \* basic unix tools and their composability \* defensive programming
- ssh tips and tricks
- Discussion about workflows
- Bash/Job Scripting and HPC workflows:
  - best practices for data/metadata organization and workflows
  - Job Arrays
  - Coalescing work together: parbatch

**Presenter:** MESITI, Michele (KIT)

Contribution ID: 2

Type: **not specified**

## Advanced Job Scripting + Exercises

Contribution ID: 3

Type: **not specified**

## **Adv. topics - Usage of bwHPC & HoreKa clusters**

Contribution ID: 4

Type: **not specified**

## Batch System: Best Practices and Running parallel jobs

*Thursday, April 10, 2025 3:20 PM (1h 30m)*

- Best practices for job setup and resource specification
- Job script templates
- Making use of the greatly parallel systems: specifying resources for parallel programs
- MPI programs (compute bound, memory bound, ...)
- OpenMP programs
- MPI + OpenMP hybrid programs

**Presenter:** BAER, Andreas (KIT)

Contribution ID: 5

Type: **not specified**

## File Systems

*Thursday, April 10, 2025 2:15 PM (45 minutes)*

- Learn more about the file systems available at our Clusters
- Understand the advantages and disadvantages of each file systems.
- How to use file systems like \$TMPDIR, BeeOND, LSDF, and PFS6
- Run simple benchmarks on different file systems.

**Presenter:** BYTYQI, Begatim (KIT)

Contribution ID: 6

Type: **not specified**

## Hints for successful submitting procedure to the HPC cluster (Horeka)

*Thursday, April 10, 2025 9:30 AM (45 minutes)*

**Presenter:** ARMBRECHT, Martje