



# HIGH PERFORMANCE COMPUTING

## MESSAGE PASSING INTERFACE (MPI)

### MPI EXERCISES

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- 1) Write the hello world program
- 2) Write the ping program for 2 tasks
- 3) Write a program sending a hello message between pairs of tasks
- 4) Program executing nob-blocking sendrec
- 5) MPI. Pi calculation example
- 6) Sum reduce example in MPI
- 7) Array decomposition using MPI
- 8) Compute prime numbers
- 9) Random number generation
- 10) Ring message passing

- 1) Broadcast
- 2) Barrier
- 3) Scatter
- 4) Gather
- 5) Hybrid source code: MPI + OpenMP