

Schedule for online MPI course

17 – 20 October 2022

Day 1	
9:00	Welcome, general intro
9:10	Lecture: concept of parallel and MPI - Joachim
9:30	Lecture: Running MPI – Birgitte
9:45	Lecture: Initialisation, Communicators - Joachim
10:30	<i>Break</i>
10:45	Demo: Hello world – by language (C: Joachim F: Pedro P: Xin)
11:00	Lecture: Point-to-point - Tor
11:45	Exercise: Parallel code, collecting partial results: Pi as a sum (C: Joachim F: Tor P: Xin)
12:20	Questions and Wrap-up
12:30	<i>Close</i>

Day 2	
9:00	Recap day 1
9:10	Lecture: Non-blocking and deadlock - Joachim
10:00	Demo: Message around a ring (C: Joachim F: Tor P: Xin)
10:45	<i>Break</i>
11:00	Lecture: Collectives - Pedro
11:45	Demo: 2-D integration (start from serial, do the MPI) (C: Tor F: Pedro P: Xin/Joachim) Exercise PI using collectives
12:20	Questions and Wrap-up
12:30	<i>Close</i>

Day 3	
9:00	Demo of DDT debugger (use message around a ring as demo code - recap) - Joachim
9:45	Hands on: Use DDT on your samples (C: Joachim F: Pedro P: Xin)
10:30	<i>Break</i>
10:45	Lecture: Splitting Communicators - Tor
11:15	Exercise: Collectives in sub-groups (C: Pedro F: Tor P: Xin)
12:20	Questions and Wrap-up
12:30	<i>Close</i>

Day 4	
9:00	Recap day 3
9:10	Lecture: Derived data and user defined reductions (C, C++, Fortran) –Joachim Lecture: Transferring NumPY objects in Python – Xin
9:45	Exercise: of derived data or user defined reductions (C: Joachim, F: Tor) Demo Transferring NumPY objects in Python – Xin
10:30	<i>Break</i>
10:45	Lecture: MPI performance – Pedro
11:30	Exercise: on performance (in slides) (C: Tor F: Pedro P: Xin)
12:15	Wrap up/Questions
12:30	<i>Close</i>