Schedule for online MPI course

3, 4, 10, 11 December 2024

	Day 1
9:00	Welcome, general intro
9:10	**Lecture**: concept of parallel and MPI - Joachim
9:30	**Lecture**: Running MPI – Joachim
9:45	**Exercise:** Running code – Joachim, Pedro, Juan & LUNARC
10:15	*Break*
10:30	**Lecture**: Initialisation, Communicators – Juan
11:15	**Exercise**: Hello world – by language (C: Joachim F: Pedro P: Juan)
11:50	Questions and Wrap-up
12:00	*Close*

	Day 2
9:00	Recap day1
9:10	**Lecture**: Point-to-point - Pedro
9:50	**Exercise**: Parallel code, collecting partial results: Pi as a sum (C: Joachim F: Pedro P: Juan)
10:15	*Break*
10:30	**Lecture**: Non-blocking and deadlock - Joachim
11:10	**Exercise**: Message around a ring (C: Joachim F: Pedro P: Juan)
11:50	Questions and Wrap-up
12:00	*Close*

	Day 3
9:00	Recap day 2
9:10	**Lecture**: Collectives - Pedro
9:45	**Exercise**: 2-D integration (start from serial, do the MPI) (C: Joachim or F: Pedro P: Juan) **Extra Exercise:** Exercise PI using collectives
10:30	*Break*
10:45	**Lecture**: Splitting Communicators - Joachim
11:15	**Exercise**: Collectives in sub-groups (C: Pedro F: Tor P: Juan)
11:50	Questions and Wrap-up
12:00	*Close*

	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 – Juan
9:45	Exercise of derived data or user defined reductions (C,F) – Joachim, Pedro **Demo** Transferring NumPY objects in Python – Juan
10:15	Break
10:30	Lecture: MPI performance – Pedro
11:15	Exercise on performance (in slides) (C: Joachim F: Pedro P: Juan)
11:50	Wrap up/Questions
12:00	*Close*