Introduction

3-Day-Course — Göttingen — 1st day

Message Passing Interface (part 1)
8:30 Registration
9:00 Introduction [1] (talk)
10:30 Coffee
10:45 MPI — Introduction to the Message Passing Interface [3] (talk)
10:55 Chap. 1 MPI Overview (talk)
11:35 Chap. 2 MPI Process model (talk+practical)
13:00 Lunch
14:00 Chap. 3 Messages and Point-to-Point Communication (talk+practical)
15:15 Coffee
15:30 Chap. 4 Non-Blocking Communication (talk+practical)
17:00 Coffee
17:15 Chap. 6-(1) Collective Communication (talk+practical)
18:00 Chap. 7 Error handling (talk)
18:15 End

3-Day-Course — Göttingen — 2nd day

Message Passing Interface (part 2) and OpenMP
8:30 Chap. 5 The new Fortran module mpi_f08 (optional talk – only for Fortran participants)
9:00 Chap. 9-(1) Virtual Topologies [3, continued] (talk+practical)
10:00 Chap. 9-(2) Virtual Topologies, Neighborhood-communication (talk)
10:15 Chap. 9-(3) Optimization through reordering (short talk)
10:30 Coffee
10:45 OpenMP — Overview and execution model [7] (talk+practical 15min)
12:00 OpenMP — Work sharing directives (talk+practical after lunch)[1]
12:45 Lunch
13:45 OpenMP — Work sharing directives (practical 30 min)
14:15 Coffee
14:30 OpenMP — Data environment (talk+practical 10min)
15:15 Short break
15:25 OpenMP — Summary and Pitfalls (talk)
16:45 Coffee
17:00 OpenMP — Heat example (talk+homework)
17:15 OpenMP- 4.0 and 4.5 Extensions [7A] (talk)
17:45 Verifying an OpenMP Parallelization with the Intel Inspector XE [−] (talk+pr.)
18:15 End
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Parallelization of Explicit and Implicit Solvers [38a] (talk)</td>
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<td>10:00</td>
<td>Coffee</td>
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<td>10:15</td>
<td>Chap. 8-(1) Groups &amp; Communicators, Environment Management (talk+pr.)</td>
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<td>11:00</td>
<td>Chap. 12-(1) Derived Datatypes (talk+practical)</td>
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<td>12:15</td>
<td>Lunch</td>
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<td>13:15</td>
<td>Chap. 10 One-sided Communication [3, continued] (talk+practical)</td>
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<td>14:30</td>
<td>Chap. 11-(1) Shared memory one-sided communication (talk / no practical)</td>
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<td>15:00</td>
<td>Coffee</td>
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<td>15:15</td>
<td>Parallel programming models on hybrid systems / MPI + OpenMP [23] (talk)</td>
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<td>16:30</td>
<td>Q&amp;A</td>
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<td>16:45</td>
<td>Chap. 13-16 Parallel file I/O, MPI and Threads, Probe, Cancel, Persistent Requests, Process Creation and Management (short tour)</td>
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<td>17:15</td>
<td>Chap. 17 Other MPI features / Summary (talk)</td>
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<td>17:25</td>
<td>Summary (talk)</td>
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<td>17:30</td>
<td>End</td>
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Access to the federal high-performance computing-centers [9] (handout only)