Combining particle-based and continuum modelling in soft matter physics with ESPResSo, PyStencils, and LbmPy

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Lecture: Introduction to particle-based simulations</td>
<td>Lecture: WaLBerla: Overview and examples</td>
<td>Hands-on session: SymPy</td>
<td>Lecture: Reaction methods</td>
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<td>10:00</td>
<td>Lecture: ESPResSo features</td>
<td>Lecture: Automated code gen. with PyStencils</td>
<td>Coffee break</td>
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<td>11:00</td>
<td>Coffee break</td>
<td>Coffee break</td>
<td>Coffee break</td>
<td>Hands-on session: The constant-pH method</td>
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<td>12:00</td>
<td>Lunch break</td>
<td>Lunch break</td>
<td>Lunch break</td>
<td>Hands-on session: The constant-pH method</td>
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<td>13:00</td>
<td>Lunch break</td>
<td>Lunch break</td>
<td>Lunch break</td>
<td>Concluding remarks</td>
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<td>14:00</td>
<td>Hands-on session: Lennard-Jones fluid</td>
<td>Talk: Jens Harting (Erlangen–Nuremberg)</td>
<td>Lecture: Automated code generation with LbmPy</td>
<td>Optional: Installing ESPResSo 4.2-dev (online participants)</td>
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<td>15:00</td>
<td>Coffee break</td>
<td>Talk: Electrokinetics and reactions</td>
<td>Hands-on session: Two-component fluid simulations with Shan-Chen</td>
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<td>16:00</td>
<td>Coffee break</td>
<td>Hands-on session: Active matter</td>
<td>Hands-on session: Active matter</td>
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<tr>
<td>17:00</td>
<td>Talk: Friederike Schmid (University of Mainz)</td>
<td>Talk: Marjolein Dijkstra (Utrecht University)</td>
<td>City walk and speaker’s dinner (onsite participants)</td>
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Schedule for the CECAM Flagship School ESPResSo, October 11–15, 2021, Central European Summer Time (UTC+02).