

Simulating the dynamics of soft matter with ESPResSo, PyStencils and LbmPy

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Lecture: Introduction to particle-based simulations, R. Weeber	Lecture: Error analysis, J.-N. Grad	Lecture: WaLBerla overview, introduction to SymPy, automated code gen. for stencil methods with PyStencils, M. Holzer	Lecture: Active matter, C. Lohrmann	Scientific talk: Andreas Härtel
10:00	Lecture: ESPResSo applications, C. Lohrmann	Lecture: Polymers, A. Schlaich			Lecture: Lees-Edwards + shear flow, S. Bindgen
	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
11:00	Lecture: Electrostatics solvers, C. Holm	Lecture: Lattice-Boltzmann, Timm Krüger	Hands-on session: Diffusion advection equation using PyStencils	Lecture: Electrokinetics, C. Lohrmann	Lecture: Capillary suspensions, S. Bindgen
12:00	Lecture: Charged matter, A. Schlaich			Lecture: Data management with git, pandas, MDSuite	Scientific talk: Sabine Klapp
					Concluding remarks
13:00	Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
14:00	Hands-on session: Lennard-Jones fluid	Hands-on session: Polymers	Lecture: Automated code gen. for LB using LbmPy, M. Holzer	Hands-on session: Active matter	
15:00			Coffee break		Coffee break
16:00	Hands-on session: Charged matter	Hands-on session: Lattice-Boltzmann	Hands-on session: Two-component fluid simulations with Shan-Chen	Community meeting	
17:00	Poster session and social event (onsite participants)	Scientific talk: David Beyer	Scientific talk: Christoph Lohrmann	City walk and speaker's dinner (onsite participants)	

Schedule for the CECAM Flagship School ESPResSo, October 10–14, 2022, Central European Summer Time (UTC+02).