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

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Lecture: Introduction to particle-based simulations	Lecture: Lattice-Boltzmann and particle coupling	Lecture: WaLBerla: Overview and examples	Lecture: Active matter	Lecture: Reaction methods
			Hands-on session: SymPy		
10:00	Lecture: ESPResSo features		Lecture: Automated code gen. with PyStencils		
	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
11:00	Lecture: Charged soft matter and electrostatic interaction	Hands-on session: Lattice-Boltzmann simulation	Hands-on session: Diffusion advection equation using PyStencils	Lecture: Blood cell modelling	Hands-on session: The constant-pH method
12:00				Hands-on session: pyOIF demo / Lecture: pyOIF demo	
	Lunch break	Lunch break	Lunch break	Lunch break	Concluding remarks
13:00					Lunch break
14:00	Hands-on session: Lennard-Jones fluid	Talk: Jens Harting (Erlangen–Nuremberg)	Lecture: Automated code generation with LbmPy	Lecture: Lattice methods in ESPResSo	Optional: Installing ESPResSo 4.2-dev (online participants)
		Coffee break	Coffee break	Coffee break	
15:00		Lecture: Electrokinetics and reactions	Hands-on session: Two-component fluid simulations with Shan-Chen	Hands-on session: Active matter	
	Coffee break				
16:00	Talk: Friederike Schmid (University of Mainz)				
17:00	Social event (onsite participants)	Talk: Marjolein Dijkstra (Utrecht University)		City walk and speaker's dinner (onsite participants)	

Schedule for the CECAM Flagship School ESPResSo, October 11–15, 2021, Central European Summer Time (UTC+02).