Session Program

29 June 2025 to 4 July 2025

Higgs School on Advances in Computational Active Matter

Morning Session

James Clerk Maxwell Building Mayfield Road Edinburgh EH9 3JZ UK

Monday 30 June

09:00	Morning Session: LAMMPS and Cellular Potts Session Location: James Clerk Maxwell Building, Mayfield Road Edinburgh EH9 3JZ UK Convener: Tyler Shendruk
	09:00-09:15 Introduction
	Speaker Joakim Stenhammar
	09:15-10:45 Active Brownian Particles
12:30	Speaker Chantal Valeriani
	10:45-11:00 Coffee
	11:00-12:30 Collective behavior of cells in animal development
	Speaker Erika Tsingos

Tuesday 1 July

09:00	Morning Session: Vertex and Phase Field Models Session Location: James Clerk Maxwell Building, Mayfield Road Edinburgh EH9 3JZ UK
	09:00-10:30 Vertex model for tissue mechanics
	Speaker Rastko Sknepnek
	10:30-11:00 Coffee
	11:00-12:30 Continuum theories for active particles
12:30	Speaker Benno Liebchen

Wednesday 2 July

09:00	Morning So Session Loca	ession: Stokesian Dynamics and Lattice Boltzmann Methods tion: James Clerk Maxwell Building, Mayfield Road Edinburgh EH9 3JZ UK
	09:00-10:30	Hydrodynamic interactions in Stokes flow
	Speaker Gwynn Elfring	
12:30	10:30-11:00	Coffee
	11:00-12:30	Lattice Boltzmann method: principles
	Speaker Timm Krueger	

Thursday 3 July

09:00	Morning Session: Immersed Boundary Methods and Multi-phase Cahn- Hilliard Dynamics Session Location: James Clerk Maxwell Building, Mayfield Road Edinburgh EH9 3JZ UK		
	09:00-10:30 Immersed boundary methods: theory and implementation		
	Speaker Enkeleida Lushi		
	10:30-11:00 Coffee		
	11:00-12:30 Theory of phase field models with and without hydrodynamics		
	Speaker Davide Marenduzzo		

Friday 4 July

09:00	Morning Session: Hydrodynamic Studies of Microswimmers and Multi- Particle Collision Dynamics Session Location: James Clerk Maxwell Building, Mayfield Road Edinburgh EH9 3JZ UK
	09:00-10:30 Hydrodynamic Studies of Microswimmers I: Multi-particle collision dynamics and squirmers
	Speaker Holger Stark
	10:30-11:00 Coffee
	11:00-12:30 Multi-particle collision dynamics for active fluids
	Speaker Tyler Shendruk