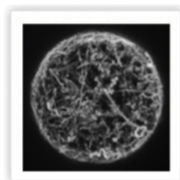


4th Spanish Soft Matter 1 1/2 Day

(Benasque Science Center, Oct 28 - Oct 31, 2026)

**Organizers:**

J. Aragonés (UAM), L. Arriaga (UAM), A. Fernandez-Nieves (UB - ICREA), M. Ruiz-Garcia (UCM)

Schedule	Wednesday, October 28
15:00	Bus from Barcelona, Universitat de Barcelona, Diagonal 686, Metro: L3 Palau Reial (Note that the bus stops opposite University of Barcelona, Facultat de Física I Química)
15:30	Bus from Barcelona airport 'El Prat', Terminal T2A (On leaving exit, turn left and you will find a police building called 'Mossos d'Esquadra'. Cross the road using the zebra crossing and turn left. The bus will stop there.)

Schedule	Thursday, October 29
9:00 – 9:05	Opening by Alberto Fernandez-Nieves
9:05 – 9:45	Plenary Talk by <u>Jaume Casademunt</u> HYDRODYNAMICS OF TISSUES. COLLECTIVE CELL MIGRATION AS ACTIVE SOFT MATTER
	Session 1 – Active nematics, defects and topological transport
9:45 – 10:05	TOPOLOGICAL DEFECTS AND NONEQUILIBRIUM DYNAMICS IN ACTIVE FLUIDS. Ignacio Pagonabarraga
10:05 – 10:25	CORRELATIONS IN ACTIVE NEMATIC DEFECTS. Anna Monclús-Rojo
10:25 – 10:45	NEW EXPERIMENTAL PLAYGROUND: PHENOMENA OBSERVED IN ACTIVE/PASSIVE LIQUID CRYSTAL INTERFACES. Olga Bantysh
10:45 – 11:05	IN SITU POLYMERIZATION OF RAFT-LIKE OBJECTS EMBEDDED IN ACTIVE NEMATICS. Marc Vergés Vilarrubia
11:05 – 11:25	TOPOLOGY OF NONEQUILIBRIUM CURRENTS CONTROLS ACTIVE TRANSPORT. Arin Escobar
11:25 – 11:55	COFFEE BREAK
	Session 2 – Collective behaviour in active and adaptive systems
11:55 – 12:15	A KINETIC THEORY FOR CLUSTERING OF ACTIVE PARTICLES IN NARROW CHANNELS. Juan Pablo Carrillo-Mora
12:15 – 12:35	PARTIAL VISION LEADS TO AN UNEXPECTED EMERGENT COLLECTIVE BEHAVIOR IN ACTIVE ALIGNING PARTICLES. Raúl Molina-Prados Lallena
12:35 – 12:55	NOISE-INDUCED DEMIXING IN BINARY VICSEK FLOCKS. Pradeep Kumar Yadav
12:55 – 13:15	LEARNING TASK ALLOCATION IN ANT COLONIES. Giulia Janzen
13:15 – 13:35	EVACUATION DRILLS WITH ROBOTS: STRONGER IS SLOWER. A. Garcimartín
13:35 – 15:00	Break – Free Time
15:00 – 15:30	COFFEE BREAK

	Session 3 – APS Sponsored Session on rheology, interfaces and mechanics of soft materials
15:30 – 15:50	BIREFRINGENCE OF ALGINATE GELS. Mara Maza-Cuello
15:50 – 16:10	RHEOLOGICAL AND MECHANICAL PROPERTIES OF MODEL PULMONARY SURFACTANT FILMS AT THE AIR-LIQUID INTERFACE. Ainhoa Collada
16:10 – 16:30	RHEOLOGY OF SOFT INTERFACES UNDER COUPLED SHAPE- AND AREA-CHANGING DEFORMATIONS: A CASE STUDY OF PULMONARY SURFACTANT-INSPIRED INTERFACES. Mariana Rodríguez-Hakim
16:30 – 16:50	TRACER PARTICLE DIFFUSION IN A GROWING BACTERIAL COLONY USING CELL SIMULATION TOOLS. Alejandro Cuetos
16:50 – 17:10	VIBRATION-INDUCED SPEED-UP OF BUBBLE RISE IN SHEAR-THINNING FLUIDS. Mario Riccio
17:10-19:00	Poster Session
19:00	WELCOME RECEPTION AND POSTERS

Schedule	Friday, October 30
9:00 – 9:40	Plenary Talk by <u>Luis G. MacDowell</u> THE KEY PHYSICS OF ICE PREMELTING
	Session 4 – Emergent structures, phase behaviour and complex networks
9:40 – 10:00	FLUCTUATION-CORRECTED PHASE DIAGRAMS OF DIBLOCK COPOLYMERS: TESTING THE PARTIAL SADDLE-POINT APPROXIMATION. Jorge Ramírez
10:00 – 10:20	THE METASTABILITY OF SELF-ASSEMBLED ONE-COMPONENT COLLOIDAL QUASICRYSTALS. Cosmin A. Dicu-Gohoreanu
10:20 – 10:40	TIME DELAY EFFECT ON TIME CRYSTALS FROM RARE EVENTS. Berta Gómez
10:40 – 11:30	COFFEE BREAK
11:30 – 11:50	COLLOIDAL-STRUCTURE INTERACTIONS: COLLOIDAL FLOW THROUGH A FLEXIBLE VESSEL. Zhen Lyu
11:50 – 12:10	THE FORMATION OF LOOPS IN BLOOD VESSEL NETWORKS – RESILIENCE, FLOW AND THERAPY. Rui Travasso
12:10 – 12:50	Plenary Talk by <u>Carlos Sánchez-Somolinos</u> ADDITIVE MANUFACTURING OF LIQUID CRYSTAL ELASTOMERS: FROM 4D PRINTING TO MOTILE, AUTONOMOUS SOFT ROBOTIC SYSTEMS
12:50	Adjourn

Schedule	Saturday, October 31
9:00	Bus from Benasque to Barcelona