

Statistical Mechanics of Soft Matter (SM)^2 Conference draft program							
Date: Wednesday Dec 3 - Friday Dec 5, 2025							
Location: RMIT City Campus, Building 80, Level 1, Room 2 (Rm 80.01.002)							
Wednesday							
Start time	Duration/min	Event	Presenter	Title			
10:00	10	Opening remarks	Peter Daivis				
10:10	75	Talk 1 & Discussion	Saffron Bryant	Cryopreservation: How different soft matter states can influence biological survival at very low temperatures			
11:25	30	Morning tea					
11:55	75	Talk 2 & Discussion	Benjamin Dalton	Reaction coordinates and memory kernels: the basis of coarse-grained dynamic protein folding models			
13:10	60	Lunch					
14:10	75	Talk 3 & Discussion	Brendan Dyett	The preparation and characterisation of lipid nanoparticles for drug delivery applications			
15:25	30	Afternoon tea					
15:55	75	Talk 4 & Discussion	Tu Le	Machine learning for functional materials			
Thursday							
Start time	Duration/min	Event	Presenter	Title			
9:00	10	Opening remarks					
9:10	20	Talk 1	Karl Travis	High pressure closure of melting and freezing behaviour			
9:30	20	Talk 2	Sunil Kumar	Transitions in a confined system of soft self-propelled particles			
9:50	20	Talk 3	Kirill Glavatskiy	Thermodynamics of ultra-fast processes			
10:10	20	Talk 4	Carmelo Riccardo Civello	Bridging Experiment and Simulation: Direct Comparison of Boundary Slip at Matched Shear Rates Using TCF-Enhanced NEMD			
10:30	30	Morning tea					
11:00	20	Talk 5	Billy Todd	Flow symmetry and slip dependence on the approach to steady-state for boundary driven flows			
11:20	20	Talk 6	Kannan Ridings	Self-assembly and transition mechanisms of trimer- triblock Janus particles interacting in a Lennard-Jones fluid			
11:40	20	Talk 7	Benjamin Dalton	Solvent-Solute Interplay and the Dynamics of Complex Liquids			
12:00	20	Talk 8	Mung Suan Pau Duhlian	Phase Field Simulation of Stick-Slip Flow Incorporating Shear Melting and Wall Slip			
12:20	90	Lunch & digital posters					
13:50	20	Talk 9	Rishabh More	To roll or not to roll - the yield stress in dilute soft particulate gels			
14:10	20	Talk 10	Holly Baldock	Revisiting the access conductance of a nanopore in a charged membrane			
14:30	20	Talk 11	Jordan Hill	Quantitative phase field modelling of planar ice growth in saccharide solutions			
14:50	20	Talk 12	Pratyasha Bhardwaj	Multiscale Modeling to Study Morphology Evolution in Polymer nanocomposites			
15:10	30	Afternoon tea					
15:40	20	Talk 13	Gerd Schroeder-Turk	Like the Gyroid, but nowhere near as favourable: Amorphous minimal surface sponges			
16:00	20	Talk 14	Matteo Baggioli	Topological and geometrical nature of plastic rearrangements in amorphous solids			
16:20	20	Talk 15	Caius Robertson	Field Independent Transient Time Correlation Function: Increasing Efficiency In Predicting Properties of Fluid Flow Systems In The Linear Regime			
16:40	20	Talk 16	Bill van Megen	PHONONS, DEGENERACY AND STRETCHING OF TIME CORRELATION FUNCTIONS OF SUSPENSIONS			
17:00	30	Digital posters					
17:30	80	Free time					
18:50		Dinner					
Friday							
Start time	Duration/min	Event	Presenter	Title			
9:00	10	Opening remarks					
9:10	20	Talk 17	Ravi Jagadeeshan	Linear Viscoelasticity of Dilute Solutions of Semiflexible Polymers			
9:30	20	Talk 18	Christopher Bolton	Non-equilibrium interfacial diffusion of anisotropic colloids			
9:50	20	Talk 19	Asaph Widmer-Cooper	How Ligand Structure affects the Colloidal Stability of Apolar Nanoparticles			
10:10	20	Talk 20	Huyen Pham	Local Atomic Re-arrangements in Shear-Bands of Deformed Metallic Glasses via Nano-Diffraction			

10:30	30	Morning tea	
11:00	20	Talk 21	Chris Brady Lattice polymers subject to a force
11:20	20	Talk 22	Prabhakar Ranganathan From Formal Closure to Scaling-Based Microstructural Models for the Rheology of Unentangled Polymer Solutions
11:40	20	Talk 23	Ellie Hajizadeh Defeating Superbugs: Molecular Dynamics Insight into Mode of Action of SNAPPs
12:00	20	Talk 24	Nick Dashti From Flow to Rigidity: Percolation in Sheared Granular Media
12:20	90	Lunch & digital posters	
13:50	20	Talk 25	Peter Harrowell Macroscopic Boundary Conditions from Microscopic Coupling: Flow in the Confined Rough Sphere Fluid
14:10	20	Talk 26	Gary Bryant Characterisation of non-spherical particles in suspension using scattering techniques
14:30	20	Talk 27	Andrew Martin The pair-angle distribution function: a sensitive measure of amorphous or disordered structures
14:50	20	Talk 28	Michael Hassett Molecular Dynamics simulations of discotic liquid crystal HOOT for pair-angle distribution function (PADF) comparison
15:10	30	Afternoon tea	
15:40	20	Talk 29	Stephen Sanderson Sllod: a can of worms
16:00	20	Talk 30	Ehsan Kamali Ahangar Shear-dependent structure and rheology of multi-chain block copolymer systems
16:20	10	Concluding remarks	
16:30		Finish	
Digital posters			
		Digital Poster 1	Sreehari Batni Ravindranath Non-coordinating co-solvents enhances performance of salt-concentrated Ionic Liquid Electrolytes
		Digital Poster 2	Amelia Liu Characterising plastic defects in a glass with a Burgers vector measurement from scanning small-beam diffraction
		Digital Poster 3	Mathushan Sathiayamoorthy Molecular Dynamics Study of Glass Formation in Au-based Metallic Nanoparticles
		Digital Poster 4	Jake Willett A Molecular Dynamics Study on the Curing Behaviour of Dental Resin Mixtures
		Digital Poster 5	Nicolas de Souza QENS at ANSTO : Opportunities for probing equilibrium fluctuations at the nanoscale
		Digital Poster 6	Ibrahim Al Azki Investigating the role of network topology in the dynamics and performance of reservoir computing systems