

Preliminary schedule (as of 1 November)

## Ninth Statistical Mechanics of Soft Matter Conference + Research School

Murdoch University, Perth, 20-23 November 2023

**Conference venue:** "The Loft" on Murdoch University's South Street campus, on the first floor of the Sir Walter restaurant / staff club.

**Parking:** Best car parks to use are P3 or P4 near the Chancellery Building. These have pay parking machines accepting cash and cards.

**Public transport:** Check [www.transperth.wa.gov.au](http://www.transperth.wa.gov.au) for 20-minute bus connections to/from Fremantle (999/998) and 70-minute routes to/from airport. Bus stop at Murdoch is "Discovery Way - Amenities" then walk up hill to Bush Court, or 25 minute walk from "Murdoch Station". Taxi from airport takes about 25 minutes and costs around 80\$.

### Monday 20 Nov 2023 (SM<sup>2</sup> Conference)

12:00	<i>Welcome</i>		
12:05 - 12:35	Charlotte Petersen	Uni of Melbourne	Direct measurement of structural change with amorphous solidification from simulated static speckle scattering
12:35 - 13:05	Nicolas Francois	ANU	Hydrodynamic analogue of the Casimir effect in Turbulent flows
13:05 - 13:35	Blake Armstrong	Curtin University	Complete Thermodynamics of Calcite Kink Sites for Crystal Growth and Dissolution
<i>Coffee Break</i>			
14:15 - 14:45	tba	tba	tba
14:45 - 15:15	Richard Sadus	Swinburne Uni	Ab Initio Potential for Classical Hydrogen
15:15 - 15:35	Claudio Pedrick	Curtin Uni	The effect of cryoprotective agents on model cell membranes
<i>Break</i>			
16:00 - 16:30	Tim Duignan	Griffith Uni	Accel. accurate 1st principles simulation of electrolytes w equivariant neural networks
16:30 - 17:00	Matthieu Roche	ANU & CNRS, FR	Anomalous dissipation in confined capillary flows of dense suspensions
17:00 - 17:20	Lara Frcej	Curtin Uni	Mechanism of interaction of plant vitrification solutions with model cell membranes
17:20 - 17:40	Michael Hough	Murdoch University	Ultrasonic spray nozzle-mediated activation for hierarchically structured carbon bead

*Drinks at the Guild Tavern on Murdoch campus*

### Tuesday 21 Nov 2023 (SM<sup>2</sup> Conference)

09:15 - 09:45	Andreas Menzel	Magdeburg Uni DE	From polar to nematic and chiral actively driven motion
09:45 - 10:15	Prabhakar Ranganathan	Monash University	Hyperfluidity in sperm suspensions
10:15 - 10:35	Alvin Jenner Walisinghe	Curtin Uni	Crystal Shape & Topography: Prediction & Optimisation with CrystalGrower Model
<i>Coffee Break</i>			
11:15 - 11:45	Ravi Jagadeeshan	Monash University	Universal diffusion of dendrimers in semidilute solutions of linear polymers
11:45 - 12:15	Billy Todd	Swinburne Uni	Practical use of nonlinear response theory: a paradigm-shift for tribology and rheology
12:15 - 12:45	Debra Bernhardt	Uni of Queensland	Distribution functions: their existence and utility
<i>Lunch (generously provided by the College of Science, Technology, Engineering and Mathematics of Murdoch University)</i>			
14:15 - 14:45	David Huang	Uni of Adelaide	Non-equilibrium molecular dynamics of steady-state fluid transport through a 2D membrane driven by a concentration gradient
14:45 - 15:15	Nathan Clisby	Swinburne Uni	Enhanced Flory screening for Hamiltonian walks
15:15 - 15:45	Hor (Ebi) Dashti	Uni of Queensland	Pheromonal Random Walk
<i>Coffee Break</i>			
16:15 - 16:45	Zhaochuan Fan	SINANO, Suzhou, CN	Anisotropy in Near-Spherical Colloidal Nanoparticles
16:45 - 17:15	Henrich Frielinghaus	FZ Juelich, DE	Dynamic criticality of a 3d- and 2d-Ising system made of 3-picolin and D2O without/with antagonistic salt
17:15 - 17:45	Peter Harrowell	Uni of Sydney	The Structural Change Associated with Amorphous Solidification
<i>Casual conference dinner in Fremantle (from 7pm onwards; restaurant tba)</i>			

### Wednesday 22 Nov 2023 (SM<sup>2</sup> Conference)

09:00 - 09:30	Stephen Sanderson	Uni of Queensland	Measuring partial or local temperature in inhomogeneous systems with rigid constraints
09:30 - 10:00	Peter Davies	RMIT	Can a mesoscopic model explain stick-slip flow?
10:00 - 10:30	Gerd Schroeder-Turk	Murdoch University	Disordered bicontinuous structures in sea urchin stereoms
<i>Coffee break</i>			
11:15 - 11:45	Edoardo Savoia	Swinburne Uni	Computation of Isobaric Heat Capacity via Molecular Dynamics and Quantum Corrections for Polarizable Water Models
11:45 - 12:15	Shibu Saw	Roskilde Uni DK	Active-parameter polydispersity in the 2d Active Brownian Particle model
<i>Close of conference</i>			

### Thursday 23 Nov 2023 (Research School)

9am - 12pm	Andreas Menzel	Hydrodynamic interactions in viscous suspensions with links to elastic systems and statistical physics	
1:30 - 4:30pm	Tim Duignan	Equivariant Neural network potentials: CP2K and NequIP simulations of neural network potentials for water	

### Posters to be displayed for the duration of the conference

Riccardo Civello	Swinburne Uni	Transient Time Correl Function to compute slip length of a sheared water on graphene
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Attendees without presentation likely include: Paolo Raitera (Curtin), Julian Gale (Curtin), Jaime Brook (Curtin), Peter Spackman (Curtin), Annie Jessop (Murdoch)