Statistical Mechanics of Soft Matter, $(SM)^2$

SWINBURNE UNIVERSITY OF TECHNOLOGY

Hawthorn Campus

Australian Graduate School of Entrepreneurship Building, Room AGSE 207

30th November – 1st December, 2015

Monday, 30th November 2015

		Session 1 – Chair: Billy Todd		
		Opening and welcome	8:50	9:00
Gary Bryant	RMIT University	Synchrotron SAXS and Neutron studies of Structure Factors in Hard Sphere Suspensions	9:00	9:20
Shibu Saw	University of Sydney	Rigidity of matter as a consequence of configurational constraint	9:20	9:40
Stephen R. Williams	ANU	Beyond Thermodynamics: Totally Nonequilibrium Relaxation towards Equilibrium	9:40	10:00
Pierluigi Cesana	IMI, Kyushu University - Australia Branch	Effective response of elastic-liquid crystal membranes	10:00	10:20
		Tea in AGSE 102 foyer	**10:20**	**11:00**
*David Huang	University of Adelaide	Surface effects in nanofluidic energy harvesting	11:00	11:40
Nathan Clisby	University of Melbourne	Monte Carlo sampling of dense polymers	11:40	12:00
Peter Daivis	RMIT University	Nonlocal constitutive equations for shear flow in fluids with strongly inhomogeneous density and velocity profiles	12:00	12:20
		Lunch	**12:20**	**2:00**
		Session 2 – Chair: Nathan Clisby		
*Denis J Evans	ANU	Dissipation and the Foundations of Classical Statistical Thermodynamics	2:00	2:40
Kirill Glavatskiy	University of Queensland	Is local equilibrium sufficient for irreversible systems with delayed response?	2:40	3:00
William van Megen	RMIT University	Exposing a dynamical signature of the freezing transition through the sound propagation gap	3:00	3:20
Sergio De Luca	UNSW	Studying anticancer drugs-dendrimers interactions: a molecular dynamics approach	3:20	3:40
		Tea in AGSE 102 foyer	**3:40**	**4:20**
Derek Chan	University of Melbourne	Modelling the collision between a rising bubble and a deformable flat interface	4:20	4:40
Gerald Pereira	CSIRO	Brazil nuts and more	4:40	5:00
		PhD Students' Session – Chair: Federico Frascoli		
Lang Liu	University of Queensland	Interfacial resistance and size-dependent transport coefficients in nanoporous materials	5:00	5:10
Stephen Hannam	RMIT University	MD calculations of intermediate scattering functions for a model colloidal fluid with explicit solvent	5:10	5:20
Ian Douglass	University of Sydney	The role of particle softness in amorphous atomic alloys	5:20	5:30
Maryna Vlasiuk	Swinburne University	Molecular simulation of the thermodynamic properties of liquid neon	5:30	5:40
Matthew King	Griffith University	Chaos and fluctuations in a modified Ehrenfest wind-tree model	5:40	5:50
Daniel Ladiges	University of Melbourne	Frequency-domain Monte Carlo method for linear oscillatory gas flows	5:50	6:00
Adrian Menzel	RMIT University	Planar Poiseuille flow of highly confined polymer solutions	6:00	6:10
		Drinks in EN 612	**6:15**	**7:15**
		Dinner at OMAH'S Malaysian Cuisine (338 Burwood Road, Hawthorn)	**7:30**	

Tuesday, 1st December 2015

		Session 3 – Chair: Richard Sadus		
Ravi Jagadeeshan	Monash University	Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations	9:00	9:20
Ahmad Jabbarzadeh	University of Sydney	Surface Induced Crystallization of Polymers	9:20	9:40
Naida M. Lacevic	University of Melbourne	Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations	9:40	10:00
David Williams	ANU	The physics of Threading Rotaxenes and Nanotubes	10:00	10:20
		Tea in AGSE 102 foyer	**10:20**	**11:00**
*Debra J. Bernhardt	University of Queensland	Nonequilibrium flow in nanopores	11:00	11:40
Mihail N. Popescu	Max Planck Institute	Effective interaction between active colloids and fluid interfaces	11:40	12:00
Guy Metcalfe	Swinburne and Monash U., CSIRO	Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue to Soft Matter: the Soft Billiard	12:00	12:20
		Lunch	**12:20**	**2:00**
		Session 4 – Chair: Federico Frascoli		
Prabhakar Ranganathan	Monash University	The mechanobiology of construction and operation of traffic networks in interstitial swarms of bacteria	2:00	2:20
Peter Harrowell	University of Sydney	The Statistical Mechanics of Liquid Structure	2:20	2:40
Andrey Pototsky	Swinburne University	Instability modes and regular density patterns in a colony of self-propelled surfactant particles covering a thin liquid layer	2:40	3:00
Brad Wells	CSIRO	Towards developing structure-property relationships for tactic methacrylic ester polymers	3:00	3:20
Qiang Sun	University of Melbourne	Boundary regularised integral equation formulation of the Debye-Hückel model	3:20	3:40
		Tea and Students' Poster Session in AGSE 102 foyer Marsel Gokovi (Griffith), Emma Hodges (Monash), Andrew Tarzia (University of Adelaide)	**3:40**	**4:40**
		Final "wrap-up" and goodbye in AGSE 102 foyer	**4:40**	

Note: * denotes a keynote presentation