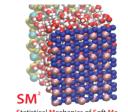


## Statistical Mechanics of Soft Matter, (SM)<sup>2</sup>

## SWINBURNE UNIVERSITY OF TECHNOLOGY

## **Hawthorn Campus**

## Australian Graduate School of Entrepreneurship Building, Room AGSE 207 30<sup>th</sup> November – 1<sup>st</sup> December, 2015



Monday, 30<sup>th</sup> November 2015

		Monday, 30 November 2015		
Shibu Saw Stephen R. Williar Pierluigi Cesana	University of Sydney ns ANU IMI, Kyushu University - Australia Branch	Session 1 – Chair: Billy Todd Opening and welcome Rigidity of matter as a consequence of configurational constraint Beyond Thermodynamics: Totally Nonequilibrium Relaxation towards Equilibrium Effective response of elastic-liquid crystal membranes	9:00 9:10 9:30 9:50	9:10 9:30 9:50 10:10
		Tea in AGSE 102 foyer	10:10	11:00
* <u>David Huang</u> Nathan Clisby Peter Daivis	University of Adelaide University of Melbourne RMIT University	Surface effects in nanofluidic energy harvesting Monte Carlo simulation of polymers attached to a surface Nonlocal constitutive equations for shear flow in fluids with strongly inhomogeneous density and velocity profiles	11:00 11:40 12:00	11:40 12:00 12:20
		Lunch	12:20	2:00
* <u>Denis J Evans</u> Kirill Glavatskiy William van Mege Sergio De Luca	ANU University of Queensland n RMIT University UNSW	Session 2 – Chair: Nathan Clisby Dissipation and the Foundations of Classical Statistical Thermodynamics Is local equilibrium sufficient for irreversible systems with delayed response? Exposing a dynamical signature of the freezing transition through the sound propagation gap Studying anticancer drugs-dendrimers interactions: a molecular dynamics approach	2:00 2:40 3:00 3:20	2:40 3:00 3:20 3:40
		Tea in AGSE 102 foyer	3:40	4:20
Derek Chan Gerald Pereira	University of Melbourne CSIRO	Modelling the collision between a rising bubble and a deformable flat interface Brazil nuts and more	4:20 4:40	4:40 5:00
Lang Liu Stephen Hannam Ian Douglass Maryna Vlasiuk Matthew King Daniel Ladiges Adrian Menzel	University of Queensland RMIT University University of Sydney Swinburne University Griffith University University of Melbourne RMIT University	PhD Students' Session – Chair: Federico Frascoli Interfacial resistance and size-dependent transport coefficients in nanoporous materials MD calculations of intermediate scattering functions for a model colloidal fluid with explicit solvent The role of particle softness in amorphous atomic alloys Molecular simulation of the thermodynamic properties of liquid neon Chaos and fluctuations in a modified Ehrenfest wind-tree model Frequency-domain Monte Carlo method for linear oscillatory gas flows Planar Poiseuille flow of highly confined polymer solutions	5:00 5:10 5:20 5:30 5:40 5:50 6:00	5:10 5:20 5:30 5:40 5:50 6:00 6:10
		Drinks in EN 612	6:15	7:15
		Drinks in EN 612  Dinner at OMAH'S Malaysian Cuisine (338 Burwood Road, Hawthorn)	6:15 7:30	7:15
				7:15
Ravi Jagadeeshan Ahmad Jabbarzad Naida M. Lacevic David Williams	Monash University eh University of Sydney University of Melbourne ANU	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes	9:00 9:20 9:40 10:00	9:20 9:40 10:00 10:20
Ahmad Jabbarzad Naida M. Lacevic	eh University of Sydney University of Melbourne	Dinner at OMAH'S Malaysian Cuisine (338 Burwood Road, Hawthorn)  Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus  Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers  Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations	9:00 9:20 9:40	9:20 9:40 10:00
Ahmad Jabbarzad Naida M. Lacevic	eh University of Sydney University of Melbourne ANU  dt University of Queensland	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes	9:00 9:20 9:40 10:00	9:20 9:40 10:00 10:20
Ahmad Jabbarzad Naida M. Lacevic David Williams *Debra J. Bernhar Mihail N. Popescu	th University of Sydney University of Melbourne ANU  University of Queensland Max Planck Institute Swinburne and Monash U.,	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes  Tea in AGSE 102 foyer  Nonequilibrium flow in nanopores Effective interaction between active colloids and fluid interfaces Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue	9:00 9:20 9:40 10:00 11:00 11:40	9:20 9:40 10:00 10:20 <b>11:00</b> 11:40 12:00
Ahmad Jabbarzad Naida M. Lacevic David Williams  *Debra J. Bernhar Mihail N. Popescu Guy Metcalfe  Prabhakar Ranganathan	th University of Sydney University of Melbourne ANU  University of Queensland Max Planck Institute Swinburne and Monash U., CSIRO  Monash University	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes  Tea in AGSE 102 foyer  Nonequilibrium flow in nanopores Effective interaction between active colloids and fluid interfaces Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue to Soft Matter: the Soft Billiard  Lunch  Session 4 – Chair: Federico Frascoli The mechanobiology of construction and operation of traffic networks in interstitial swarms of bacteria	9:00 9:20 9:40 10:00 11:40 12:00 12:20	9:20 9:40 10:00 10:20 11:00 11:40 12:00 12:20
Ahmad Jabbarzad Naida M. Lacevic David Williams  *Debra J. Bernhar Mihail N. Popescu Guy Metcalfe  Prabhakar	eh University of Sydney University of Melbourne ANU  dt University of Queensland Max Planck Institute Swinburne and Monash U., CSIRO	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes  Tea in AGSE 102 foyer  Nonequilibrium flow in nanopores Effective interaction between active colloids and fluid interfaces Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue to Soft Matter: the Soft Billiard  Lunch  Session 4 – Chair: Federico Frascoli The mechanobiology of construction and operation of traffic networks in interstitial swarms of	9:00 9:20 9:40 10:00 10:20 11:40 12:00	9:20 9:40 10:00 10:20 11:00 11:40 12:00 12:20
Ahmad Jabbarzad Naida M. Lacevic David Williams  *Debra J. Bernhar Mihail N. Popescu Guy Metcalfe  Prabhakar Ranganathan Peter Harrowell	th University of Sydney University of Melbourne ANU  University of Queensland Max Planck Institute Swinburne and Monash U., CSIRO  Monash University University of Sydney	Tuesday, 1st December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes  Tea in AGSE 102 foyer  Nonequilibrium flow in nanopores Effective interaction between active colloids and fluid interfaces Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue to Soft Matter: the Soft Billiard  Lunch  Session 4 – Chair: Federico Frascoli The mechanobiology of construction and operation of traffic networks in interstitial swarms of bacteria The Statistical Mechanics of Liquid Structure	9:00 9:20 9:40 10:00 11:40 12:20 2:00	9:20 9:40 10:00 10:20 11:00 12:00 12:20 2:00
Ahmad Jabbarzad Naida M. Lacevic David Williams  *Debra J. Bernhar Mihail N. Popescu Guy Metcalfe  Prabhakar Ranganathan Peter Harrowell Andrey Pototsky	th University of Sydney University of Melbourne ANU  University of Queensland Max Planck Institute Swinburne and Monash U., CSIRO  Monash University University of Sydney Swinburne University	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes  Tea in AGSE 102 foyer  Nonequilibrium flow in nanopores Effective interaction between active colloids and fluid interfaces Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue to Soft Matter: the Soft Billiard  Lunch  Session 4 – Chair: Federico Frascoli The mechanobiology of construction and operation of traffic networks in interstitial swarms of bacteria The Statistical Mechanics of Liquid Structure Instability modes and regular density patterns in a colony of self-propelled surfactant particles covering a thin liquid layer	9:00 9:20 9:40 10:00 11:40 12:20 2:00 2:20 2:40	9:20 9:40 10:00 10:20 11:00 12:00 12:20 2:00 2:20 2:40 3:00
Ahmad Jabbarzad Naida M. Lacevic David Williams  *Debra J. Bernhar Mihail N. Popescu Guy Metcalfe  Prabhakar Ranganathan Peter Harrowell Andrey Pototsky Brad Wells	th University of Sydney University of Melbourne ANU  University of Queensland Max Planck Institute Swinburne and Monash U., CSIRO  Monash University University of Sydney Swinburne University CSIRO	Tuesday, 1 <sup>st</sup> December 2015  Session 3 – Chair: Richard Sadus Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations Surface Induced Crystallization of Polymers Viscoelasticity of glycerol at ultra-high frequencies investigated via MD simulations The physics of Threading Rotaxenes and Nanotubes  Tea in AGSE 102 foyer  Nonequilibrium flow in nanopores Effective interaction between active colloids and fluid interfaces Entropy Production, Fluctuations and the Slow Approach to Equilibrium in a Mechanical Analogue to Soft Matter: the Soft Billiard  Lunch  Session 4 – Chair: Federico Frascoli The mechanobiology of construction and operation of traffic networks in interstitial swarms of bacteria The Statistical Mechanics of Liquid Structure Instability modes and regular density patterns in a colony of self-propelled surfactant particles covering a thin liquid layer Towards developing structure-property relationships for tactic methacrylic ester polymers	9:00 9:20 9:40 10:00 11:40 12:20 2:00 2:20 2:40 3:00	9:20 9:40 10:00 10:20 11:00 12:00 12:20 2:00 2:20 2:40 3:00 3:20