

Start	Finish		Total time
<b>Monday 27th November 2017</b>			
8:30:00	9:00:00	Registration	0:30:00
9:00:00	9:05:00	Acknowledgement to country	0:05:00
9:05:00	9:15:00	Welcome address from UTS Dean of Science	0:10:00
9:15:00	10:00:00	Session 0 - Last year's Bob Robertson Prize winner	0:45:00
10:00:00	10:30:00	Morning tea	0:30:00
10:30:00	12:35:00	Session 1 - Macromolecular Structure and Function	2:05:00
12:35:00	13:30:00	Lunch	0:55:00
13:30:00	15:15:00	Session 2 - Bioenergetics	1:45:00
15:15:00	15:45:00	Afternoon tea	0:30:00
15:45:00	17:05:00	Session 3 - Membrane Biophysics	1:20:00
17:05:00	17:35:00	Poster Slam	0:30:00
<b>17:35:00</b>	<b>19:35:00</b>	<b>The GE Poster Session and Mixer</b>	<b>2:00:00</b>
<b>Tuesday 28th November 2017</b>			
8:30:00	10:20:00	Session 4 - Joint Japan - Australia Biophysics Symposium on Mechanobiology	1:50:00
10:20:00	10:50:00	Morning tea	0:30:00
10:50:00	12:40:00	Session 5 - Joint Japan - Australia Biophysics Symposium on Mechanobiology	1:50:00
12:40:00	13:40:00	Lunch	1:00:00
13:40:00	15:05:00	Session 6 - Channels and Pumps 1	1:25:00
15:05:00	15:35:00	Afternoon tea	0:30:00
15:35:00	16:15:00	Session 7 - Channels and Pumps 2	0:40:00
16:15:00	17:00:00	Session 8 - This year's Bob Robertson Prize winner	0:45:00
17:00:00	18:00:00	Australian Society for Biophysics Annual General Meeting	1:00:00
<b>18:30:00</b>	<b>23:30 PM</b>	<b>Conference Dinner</b>	
<b>Wednesday 29th November 2017</b>			
9:00:00	10:25:00	Session 8 - cryo-EM	1:25:00
10:25:00	10:55:00	Morning tea	0:30:00
10:55:00	12:35:00	Session 9 - Single Molecule and Super Resolution Imaging	1:40:00
12:35:00	13:30:00	Lunch	0:55:00
13:30:00	14:50:00	Session 10 - Bio-nanotechnology and Bioengineering	1:20:00
14:50:00	15:20:00	Afternoon tea	0:30:00
15:20:00	16:40:00	Session 11 - Computational Biophysics	1:20:00
16:40:00	17:00:00	Closing remarks and poster prize awards.	0:20:00



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## Monday 27th November 2017

Start	Finish	Event	Affiliation	Abstract Title	Total time
8:30	9:00	Registration			0:30:00
9:00	9:05	Acknowledgement to country			0:05:00
9:05	9:15	Welcome address from UTS Interim Dean of Science Prof Bill Gladstone			0:10:00
9:15	10:00	Session 0 - 2016 Bob Robertson Prize winner			0:45:00
9:15	10:00	Prof. Michael Parker	St. Vincent's Institute of Medical Research	Cholesterol-Dependent Cytolysins: from Water-Soluble State to Membrane Pore	0:45:00
10:00	10:30	Morning Tea			0:30:00
10:30	12:35	Session 1 - Macromolecular Structure and Function			2:05:00
10:30	11:15	Invited Speaker 1 (Prof. Alison Rodger)	Macquarie University	How to use spectroscopy for biomolecules: linear and circular dichroism spectroscopy to study biological	0:45:00
11:15	11:35	Neil Robertson	University of Sydney	Unusual protein-binding kinetics of intrinsically disordered regions regulate complex formation of the LIM domain transcription factors	0:20:00
11:35	11:55	Po-Chia Chen	EMBL Heidelberg	A general SAXS-based screening workflow validated for RNA-protein interactions	0:20:00
11:55	12:15	Paul Curmi	University of New South Wales	Light funnels, evolution and quantum coherence: mixing and harvesting photosystems	0:20:00
12:15	12:35	Josep Sadurni	University of Sydney	Structural characterisation reveals insights into substrate recognition by the Glutamine Transporter ASCT2 (SLC1A5)	0:20:00
12:35	13:30	Lunch			0:55:00
13:30	15:15	Session 2 - General Biophysics			1:45:00
13:30	14:15	Invited Speaker 2 (Dr Nick Cox)	Australian National University	High-Field Pulse EPR: A New Biophysical Toolbox for the Study of Metalloenzymes	0:45:00
14:15	14:35	Ivan Kassal	University of Sydney	Purple bacteria use coherence to harvest light more efficiently	0:20:00
14:35	14:55	Nicola Smith	Victor Chang Cardiac Research Institute	Orphan G protein-coupled receptor GPR37L1: finding function without a ligand	0:20:00
14:55	15:15	Qian Su	University of Technology Sydney	Single-Molecule and Super-Resolution Microscopy for Intracellular Membrane Dynamics	0:20:00
15:15	15:45	Afternoon tea			0:30:00
15:45	17:05	Session 3 - Membrane Biophysics			1:20:00
15:45	16:05	Pierre Moens	University of New England	Profilin 1 dynamics in live cell membrane	0:20:00
16:05	16:25	Hadeel Al oheedallah	University of Sydney	The Effect of Xenon on Tethered Lipid Bilayers	0:20:00
16:25	16:45	Sara Pandidan	La Trobe University	The mechanism of melittin membrane disruption revisited: effect of membrane morphology	0:20:00
16:45	17:05	Ingo Köper	Flinders University	Mimicking Microbial Membranes	0:20:00
17:05	17:35	Poster slam			0:30:00
17:35	19:30	The GE Poster session and Mixer			1:55:00

## Tuesday 28th November 2017

Start	Finish	Event	Affiliation	Abstract title	Total time
8:30	10:20	Session 4 - Joint Japan - Australia Biophysics Symposium on Mechanobiology			1:50:00
8:30	9:15	Invited talk 3 (Prof. Keiji Naruse)	Okayama University	Mechanomedicine	0:45:00
9:15	9:35	Yoshitaka Nakayama	Victor Chang Cardiac Research Institute	Gating mechanisms of the mechanosensitive channel MscCG in Corynebacterium glutamicum glutamate export	0:20:00
9:35	10:20	Invited talk 4 (Assoc. Prof. Shireen Lamande)	Murdoch Children's Research Institute	The TRPV4 skeletal disorders: Lessons from humans, cats and mice	0:45:00
10:20	10:50	Morning Tea			0:30:00
10:50	12:40	Session 5 - Joint Japan - Australia Biophysics Symposium on Mechanobiology			1:50:00
10:50	11:35	Invited talk 5 (Asst. Prof. Kumiko Hayashi)	Tohoko University	Non-invasive force measurement using fluctuation for organelle transport in neurons	0:45:00
11:35	11:55	Philip Kuchel	University of Sydney	NMR of Stretched Cells	0:20:00
11:55	12:40	Invited talk 6 (Professor Rob Parton)	University of Queensland	Mechanical protection and signaling by caveolae	0:45:00
12:40	13:40	Lunch			1:00:00
13:40	15:05	Session 6 - Channels and Pumps 1			1:25:00
		<b>The Victor Chang Cardiac Research Institute Invited Talk</b>			
13:40	14:25	(Prof. Eduardo Perozo)	University of Chicago	On symmetry and the Gating Mechanism of a Ligand-Gated Ion Channel	0:45:00
14:25	14:45	Qianyi Wu	University of Sydney	A Dual-functioning Human Excitatory Amino Acid Transporter: A Transporter and An Ion Channel	0:20:00
14:45	15:05	Angelo Keramidas	University of Queensland	Effects of glutamate and ivermectin on glutamate-gated chloride channels of the parasitic nematode H. contortus	0:20:00
15:05	15:35	Afternoon tea			0:30:00
15:35	16:15	Session 7 - Channels and Pumps 2			0:40:00
				Real-time Imaging of Lithium 'Hot-spots': An Analysis of Ion Conductance in Aquaporin-1 Using Novel Photo-switchable Sensor	
15:35	15:55	Jinxin Pei	University of Adelaide		0:20:00
15:55	16:15	Charles Cox	Victor Chang Cardiac Research	A TRiP through the mechanical world of TRPP channels	0:20:00
16:15	17:00	Session 8 - ASB Prizes			0:45:00
16:15	17:00	This year's Bob Robertson Prize winner			0:45:00
<b>17:00</b>	<b>18:00</b>	<b>Australian Society for Biophysics Annual General Meeting</b>			<b>1:00:00</b>
<b>18:30</b>	<b>23:00</b>	<b>Conference Dinner - Powerhouse Museum</b>			

## Wednesday 29th November 2017

Start	Finish	Event	Affiliation	Abstract title	Total time
9:00	10:25	Session 9 - Cryo-EM			1:25:00
9:00	9:45	The University of Wollongong Molecular Horizons Invited Speaker (A/Prof. Sara Sandin)	Nanyang Technological University, Singapore	Phase plate cryo-EM analysis of chromatin	0:45:00
9:45	10:05	Alastair Stewart	Victor Chang Cardiac Research Institute	Cryo-EM structures of the autoinhibited E. coli ATP synthase in three rotational states	0:20:00
10:05	10:25	Mark Hunter	Victor Chang Cardiac Research Institute	Towards a structural understanding of hERG K+ channel function using CryoEM	0:20:00
10:25	10:55	Morning Tea			0:30:00
10:55	12:35	Session 10 - Single Molecule and Super Resolution Imaging			1:40:00
10:55	11:15	Donna Whelan	Monash University	Super Resolution Imaging of DNA replication, transcription and damage inside the nucleus	0:20:00
11:15	11:35	Ilina Bereja	University of New South Wales	Studying actin-tropomyosin interactions at the single filament level	0:20:00
11:35	11:55	Ashley Rozario	Monash University	Super-Resolution Imaging of Virally-Altered Cell Structure	0:20:00
11:55	12:15	Daniel Nieves	University of New South Wales	Quantitative Single Molecule Localisation Microscopy via Halo-PAINT	0:20:00
12:15	12:35	Artem Efremov	National University of Singapore	Involvement of myosin II and formins in mechanosensing behavior of cell filopodia.	0:20:00
12:35	13:30	Lunch			0:55:00
13:30	14:50	Session 11 - Bio-nanotechnology and Bioengineering			1:20:00
13:30	13:50	Matt Baker	University of New South Wales	Probing mechanisms for force-sensing and activation in mechanosensitive ion channels with artificial droplet bilayer systems	0:20:00
13:50	14:10	Shelley Wickham	University of Sydney	DNA origami barrels for single molecule biology	0:20:00
14:10	14:30	Andrew Tuckwell	University of New South Wales	DNA origami dimensions and structure measured by solution X-ray scattering	0:20:00
14:30	14:50	Sophie Hertel	University of New South Wales	Sequence dependent kinetics and thermodynamics of DNA-hybridization	0:20:00
14:50	15:20	Afternoon tea			0:30:00
15:20	16:40	Session 12 - Computational Biophysics			1:20:00
15:20	15:40	Amanda Buyan	Australian National University	Protonation state determines binding sites of sodium channel inhibitors	0:20:00
15:40	16:00	Md Harunur Rashid	RMIT University	A novel residue deletion in Kv7.4 affects the ion transfer function and consequence is hearing loss, revealed from free energy simulation	0:20:00
16:00	16:20	Catheryn Gray	University of New South Wales	Akt translocation as a controller of metabolic activity	0:20:00
16:20	16:40	Charles Cranfield (Evelyne Deplazes)	University of Technology Sydney	The effect of hydronium ions on the structure of phospholipid membranes	0:20:00
16:40	17:00	Prizes and Closing Remarks			0:20:00

## **Cryo-EM workshop**

**The Cryo-EM workshop sponsored by FEI/Thermo Fisher will be held on Thursday, November 30. The workshop is fully catered, including morning tea, lunch and afternoon tea. (Registration is required for this workshop)**

### **Program**

Thursday 30th November 2017

09:00 09:45 Introduction/Overview - Professor Eduardo Perero (University of Chicago, USA)

09:45 10:30 Instrumentation and State of the Art - Dr Ryan Shaw (FEI/ThermoFisher)

#### **10:30 11:00 Morning tea**

11:00 11:45 Sample Prep and evaluation – A/Prof. Sara Sandin (Nanyang Technological University, Singapore)

11:45 12:30 Data Collection Strategies - Dr James Bouwer (University of Wollongong)

#### **12:30 13:30 Lunch**

13:30 14:15 Data Processing – Dr Michael Landsberg (University of Queensland)

14:15 14:40 Tomography, instrumentation processing and FIB - Dr James Bouwer (University of Wollongong)

14:40 15:05 CLEM - Sara Sandin (Nanyang Technological University, Singapore)

#### **15:05 15:30 Afternoon tea**

15:30 16:30 Facilities in Australia - reps from national facilities including: UoW, UNSW, USyd, Monash, UQ, Uni Melb

16:30 17:00 General Questions and Discussion