

Welcome – Monday 10 February 2020

TIME	ACTIVITY	VENUE
2:00 PM	Student registration opens	Queen's College
3:30 PM	Group 1 - Bus Transport from Airport to Queen's College (Adelaide, Brisbane, Canberra, Sydney, Wollongong arrivals)	
4:30 PM	Group 2 - Bus Transport from Airport to Queen's College (Newcastle, Perth arrivals)	
5:00 PM	Student registration	Eakins Dining Hall
5:30 PM	WELCOME - Chloe Pearse, AMSI	Eakins Dining Hall
5:45 PM	Icebreaker Activity	Eakins Dining Hall
6:00 PM	AMSIConnect Dodgeball Tournament	Basketball Courts
6:30 PM	PIZZA DINNER	Courtyard/Eakins Dining Hall

Conference Day 1 – Tuesday 11 February 2020

TIME	ACTIVITY	VENUE	
9:00 AM	WELCOME – Tim Brown, AMSI Director	Junior Common Room	
9:05 AM	Guest Speaker: Life as a Researcher Dr Julien Ugon, Deakin University	Junior Common Room	
9:30 AM	Group Photo	Courtyard	
	<i>Junior Common Room (Pure)</i>	<i>Eakins Foyer (Statistics)</i>	
<i>Session chair</i>	<i>Dr Julie Clutterbuck</i>	<i>Professor Dirk Kroese</i>	
		<i>Stafford Room (Applied)</i>	
9:40 AM	Recent Progress in Planar Curves Jia Jia Qian Monash University	Design of Neural Networks Using Randomised Algorithms Jonathan Wilton The University of Queensland	Advanced Solution Techniques to Multi-Component Optimisation Problems Duong Thuy Dung Le Deakin University
10:00 AM	Fredholm Operators and Differential Equations Dion Nikolic University of Wollongong	A New Algorithm for Analysing Big Time Series Data Luke Yerbury The University of Newcastle	Computational Modelling Using Exponential Integrators Joshua Wilson Queensland University of Technology
10:20 AM	Continuous-Variable Wigner Representation of Gottesman-Kitaev-Preskill-Encoded Qudits Lucky Kanellos Antonopoulos RMIT University	Monte Carlo Simulation Comparing Maximum Likelihood and L2 Estimates for ACTH Levels in Equids (Horses) George Malone Murdoch University	A Computational Approach to the Conjugacy Problem Amelia Lee University of Wollongong
10:40 AM	MORNING TEA	Eakins Dining Hall	

	<i>Junior Common Room (Pure)</i>	<i>Eakins Foyer (Statistics)</i>	<i>Stafford Room (Applied)</i>
Session chair	<i>Dr Tomasz Kowalski</i>	<i>Professor Kate Smith-Miles</i>	<i>A/Professor Federico Frascoli</i>
11:10 AM	Conway's Tiling Groups Grace Klimek La Trobe University	Generating New Instance Spaces for Stress-Testing Classification Algorithms Kulunu Dharmakeerthi The University of Melbourne	Modelling of Tissue Formation on 3D-printed Scaffolds Reuben Hill Queensland University of Technology
11:30 AM	Model Categories James Morgan Australian National University	Optimising Probability Inequalities and its Theoretical Implications Matthew Hanna Macquarie University	3D printing for Biofabrication Jesse Tonkin The University of Adelaide
11:50 AM	Fourier Analysis on Graphs Aditya Joshi The University of Newcastle	Advanced Bayesian Statistical Inference Methods for Simulation-Based models in Cell Biology Michael Carr Queensland University of Technology	Understanding the Mechanisms of Fate Determination during T Cell Development: A Mathematical Model Holly Casey , Swinburne University of Technology
12:10 PM	Understanding and Exploring Skew Morphisms Aaron Jenkins The University of Western Australia	A Comparison of Bayesian Inference Techniques for Sparse Factor Models Yong See Foo The University of Melbourne	Numerical Simulation of Pressure Drops from Patient-Specific 4D MRIs Connor Mallon Monash University
12:30 PM	LUNCH		Eakins Dining Hall
1:30 PM	Guest Speaker: Life as a PhD Student Michelle Strumila, The University of Melbourne		Junior Common Room
	<i>Junior Common Room (Pure)</i>	<i>Eakins Foyer (Statistics)</i>	<i>Stafford Room (Applied)</i>
Session chair	<i>Michelle Strumila</i>	<i>Dr Ross Turner</i>	<i>Mahyar Madadi</i>
2:00 PM	Multi-Pulse Solutions in a Generalised Fitzhugh-Nagumo Model Stefano Giannini Queensland University of Technology	Appraisal of Machine Learning Evaluation Techniques in the Context of Glacier-Generated Seismic Events Alex Oakley University of Tasmania	Stability of Geodesics on Three-Dimensional Lie Groups An Ky Duy Nguyen La Trobe University
2:20 PM	Fixing Sore Knees: Mechanics of Artificial Cartilage Lin Jiang The University of Adelaide	Feature Extraction of Wheat Data from Genotypes and Peptide Sequences Timothy Chapman The University of Western Australia	Harmonic Analysis on Lie Groups and Applications to Optical Communications Alexander Hiller University of Technology Sydney
2:40 PM	Alternative Construction of Groups of Type E6 Rohan Hitchcock The University of Melbourne	Optimal Exit Times in a Declining Industry Kenneth Guo The University of Sydney	Compactly Supported Solutions Through Symmetries Dylan Green University of Wollongong
3:00 PM	Nonlinear Galerkin Methods Dean Noble University of Wollongong	Association Network of World War One Primary Sources Christina Tait The University of Adelaide	The Rarefied Gas Dynamics of Levitating Microdisks Matthew Walker The University of Melbourne

3:20 PM	AFTERNOON TEA		Eakins Dining Hall
	<i>Junior Common Room (Pure)</i>	<i>Eakins Foyer (Applied)</i>	<i>Stafford Room (Applied)</i>
<i>Session chair</i>	<i>Dr Jonathan Spreer</i>	<i>Dr Joel Miller</i>	<i>Professor Brenda Vo</i>
3:50 PM	Graph-Encoded Manifolds Steven Condell The University of Sydney	Bouncing Balls on Tables Vibrating with Two Frequencies Julian Ceddia La Trobe University	Can Machines Learn Like Fish? An Application of Simulated Multi-Timescale Nexting David Adams , The University of Western Australia
4:10 PM	Curve Shortening Flow and Grayson's Theorem Nicholas Garrett , The University of New England	Mixing, Twisty Puzzles, and the Fractal Geometry of Piecewise Isometries Martin Gossow The University of Sydney	PDE Discovery Using Machine Learning Sean McGowan The University of Adelaide
4:30 PM	Inner Product Spaces on Subsets of the Powerset of Riemannian Manifolds David Perrella The University of Western Australia	Interface Stability and Interplay of Surface Tension and Inertial Stabilisation Mechanisms Luke Robinson , The University of Western Australia	Study and Application of Concept-Extraction Algorithms in Statistical and Programming Sciences Ana Vintila The University of New England
4:50 PM	DAY 1 WRAP UP - Chloe Pearse, AMSI		Junior Common Room
5:00 PM	Free Time		
6:00-7:30 PM	BBQ DINNER		Eakins Dining Hall

Conference Day 2 - Wednesday 12 February 2020

TIME	ACTIVITY	VENUE	
9:20 AM	WELCOME - Chloe Pearse, AMSI	Junior Common Room	
	<i>Junior Common Room (Pure)</i>	<i>Eakins Foyer (Statistics)</i>	
	<i>Stafford Room (Applied)</i>	<i>Stafford Room (Applied)</i>	
	<i>Dr Stephan Tornier</i>	<i>Professor Matthew Roughan</i>	
9:30 AM	Groups Acting on Trees Without Involutive Inversions Jack Berry The University of Newcastle	Effect Size Measures, Sampling Behaviour and Use Across Fields of Study Mikayla Goodwin The University of Newcastle	Analysis of Information Entropy in Constructed Languages Megan Crossing The University of Adelaide
9:50 AM	C*-Algebras of Self-Similar Groupoid Actions on Higher Rank Graphs Tony Wang The University of Sydney	Rank Embeddings for Detecting Ranking Outliers Daniel Stratti Western Sydney University	The Perverse Incentives of Strong Enforcement Caren Rattray Queensland University of Technology
10:10 AM	Determining the Metric Dimension of Random Regular Graphs Will Veenman Monash University	The Geometry of Nash Equilibria Baihe Zhang Monash University	Study of Causal Inference Techniques for Data-Driven Personalised Decision-Making Zhou Dai University of South Australia

10:30 AM	Compact Quantum Groups Yee Chin The University of Sydney		Bragg Edge Neutron Strain Tomography Thomas Vandenberg The University of Newcastle
10:50 AM	MORNING TEA		Eakins Dining Hall
	<i>Junior Common Room (Pure/Applied)</i>	<i>Eakins Foyer (Statistics/Applied)</i>	<i>Stafford Room (Applied)</i>
<i>Session chair</i>	<i>A/Professor Stephan Tillmann</i>	<i>Professor Tim Brown</i>	<i>A/Professor Stephen Davis</i>
11:20 AM	Finite Transition Times for Coupled Linear Diffusion Problems Jonah Klows Queensland University of Technology	The Effect of Confining Geometries on MFPT for a 2D Random Walk Nicholas Maurer The University of Queensland	Global sensitivity analysis of a model for Cyprinid Herpes Virus 3 as a biocontrol agent of common carp Stephanie Fuser RMIT University
11:40 AM	Exploring Toposes Yuchen Jiang The University of Adelaide	Methods Towards Precision Medicine Samantha Chew The University of Sydney	Ethical Considerations in Vaccine Hesitancy Daniel Roberts La Trobe University
12:00 PM	Convex Projective Surfaces Cameron Eiggins The University of Sydney	Getting the Most Out of Electropherograms Louise Branch-Smith Murdoch University	Mathematical Modelling of Post-Transcriptional Regulation of Gene Expression Eunice Blessica Yuwono The University of Adelaide
12:20 PM	Lie Symmetries of Stochastic Differential Equations Rory Jacques University of Technology Sydney	Comparison of Pre-Processing Normalisation Techniques Used in the Bioinformatic Analyses of RNA-Seq Data Bayan Khalili RMIT University	
12:40 PM	LUNCH		Eakins Dining Hall
12:40 PM	Bag Collection for Perth and Coffs Harbour flights		
1:40 PM	Best Presentation Voting		Junior Common Room
1:50 PM	Guest Speaker: Careers Professor Tim Brown, AMSI Director		Junior Common Room
2:20 PM	DAY 2 WRAP UP - Chloe Pearse, AMSI		Junior Common Room
2:45 PM	Group 1 - Bus transport from Queen's College to airport (Perth, Coffs Harbour departures) *arrive approx. 3.15pm		
2:45 PM	Bag Collection		
3:30 PM	Group 2 - All other interstate students depart from Queen's College to Melbourne Airport *arrive approx. 4.15pm		