

AMSIConnect 2021 program

All times are in AEDT (Melbourne/Canberra/Sydney). Adjust accordingly for your time zone.

Conference Day 1 – Tuesday 9 February 2021

11:00 am	WELCOME – Tim Marchant, AMSI Director	
	<i>Zoom Room 1</i>	
11:15 am AEDT	Guest Speaker: Life as a Researcher Dr Jacinta Holloway Brown, Queensland University of Technology	
11:45 am AEDT	Ice Breaker Activity	
12:20 pm	BREAK	
	<i>Zoom Room 1</i>	<i>Zoom Room 2</i>
Chair	<i>Dr Tim Garoni, Monash University</i>	<i>Dr Bronwyn Hajek, University of South Australia</i>
	Pure/Theoretical	Applied
1:00 pm AEDT	Limit Theorems for the Curie-Weiss Model Aram Perez, Monash University	Mathematical Modelling of Harmful Algal Blooms Ngoc Phuong Van Nguyen, Swinburne University of Technology
1:20 pm AEDT	Glasner Property for (Semi-)Group Actions Andrew Rajchert, The University of Sydney	Improving Clustering Techniques for Identifying Lagrangian Coherent Structures Liam Blake, The University of Adelaide
1:40 pm AEDT	Distribution of Maximal and Minimal Deviation in Multivariate Chebyshev Approximation Problem Sona Reddy, UNSW	What Kind of Random Walk are These Biological Cells Doing? Rebecca Rasmussen, The University of Melbourne
2:00 pm AEDT	The Polynomial Method in Additive Combinatorics Dibyendu Roy, The University of Sydney	Nanoscale Sessile Droplets Shape Prediction Comparison Between Theory and Experiment Benjamin Babu, University of South Australia
2:20 pm AEDT	Naturally Reductive Metrics on Homogeneous Spaces Marcus Flook, The University of Queensland	Incorporating Spatio-Temporal Convection Effects in Classical Snowball Earth Models Elizabeth Rose, The University of Sydney
2:40 pm	BREAK	
	<i>Zoom Room 1</i>	
3:00 pm AEDT	AMSIConnect Trivia	
4:30 pm	Day 1 Wrap Up	

Zoom Room 1 –

https://unimelb.zoom.us/join/joinMeeting/register/tZEIcuuhqjlrHtCMVZPav7yyo_jHXArf0kby

Zoom Room 2 –

<https://unimelb.zoom.us/join/joinMeeting/register/tZEscOqtpj4rHNwUWG9fXVgTVqULgkTdrOzn>

Gather Town –

<https://gather.town/app/lej99K0Y6XV9teXp/AMSI%20Summer%20School>

Speaker bios & project summaries: www.vrs.amsi.org.au/current-projects

Conference Day 2 – Wednesday 10 February 2021

11:00 am	WELCOME – Angela Coughlin, AMSI RHED Program Manager	
	<i>Zoom Room 1</i>	
11:05 am AEDT	Guest Speaker: Life as a PhD Student Alex Browning, Queensland University of Technology	
	<i>Zoom Room 1</i>	<i>Zoom Room 2</i>
Chair	<i>Dr Jennifer Flegg, The University of Melbourne</i>	<i>Dr Vanessa Robins, ANU</i>
	Statistics	Applied
11:40 am AEDT	Statistical Modelling of Malaria Parasite Clearance Meg Tully, The University of Melbourne	Entangled Structures Nicholas Bermingham, Australian National University
12:00 pm AEDT	The Percolation on Cellular Automata Jiayu Li, Monash University	Hierarchical Classification of Protein Sequences Susanna Grigson, Flinders University
12:20 pm AEDT	Adaptive tolerance selection for SMC ABC Abhishek Varghese, Queensland University of Technology	Performance of Multiscale Finite Element Methods Jacob Vandenberg, Monash University
12:40 pm	BREAK	
	<i>Zoom Room 1</i>	<i>Zoom Room 2</i>
Chair	<i>Prof Murray Elder, UTS</i>	<i>Dr Nathan Clisby, Swinburne</i>
	Pure/Theoretical	Applied
1:40 pm AEDT	Inverse Scattering in the Recovery of a Single Concave and a Finite Union of Disjoint Convex Obstacles Joshua Crawford, The University of Western Australia	Accurate Multi-Gas Emissions Equivalence Modelling of Greenhouse Gases Joshua Rogers, Swinburne University of Technology
2:00 pm AEDT	Length of Embedded Circuits in Geodetic Graphs John Cu, University of Technology Sydney	Lot Sizing on a Cycle Bowen Parnell, The University of Newcastle
2:20 pm AEDT	Entanglement Harvesting in Flat Spacetime Angus Walsh, RMIT University	Finding the Body of Minimal Resistance Juan Avila Molina, UNSW
2:40 pm AEDT	Topological Phases in Quantum Systems with Quantum Group Symmetries Michael Law, The University of Melbourne	Accuracy and Limits of Nodal Surface Approximations of the Lonsdaleit Minimal Surface Monica Seeber, Murdoch University
3:00 pm	BREAK	
	<i>Zoom Room 1</i>	<i>Zoom Room 2</i>
Chair	<i>Prof Inge Koch, UWA</i>	<i>Dr Julien Ugon, Deakin University</i>
	Statistics	Applied
3:20 pm AEDT	The Robustness of Limited Dependent Variable Modles to Misspecification Luke Thomas, The University of Western Australia	Facts Are Relative Alex Paviour, University of Wollongong
3:40 pm AEDT	Robust Adjustments to Random Effects Models for Dispersed Counts Wilson Lorensyah, The University of Queensland	Stochastic Modelling of Deterministic Time Series Jack Mulqueeny, The University of Western Australia
4:00 pm AEDT	Exploring Exotic Probability Theory Ashley (Yannan) Lin, Macquarie University	Piecewise Rational Approximation Bob La, Deakin University
4:20 pm	Day 2 Wrap Up	

Conference Day 3 - Thursday 11 February 2021

	Pure/Theoretical	Applied	
	Zoom Room 1	Zoom Room 2	
Chair	<i>Prof Roozbeh Hazrat, WSU</i>	<i>Dr Arathi Arakala, RMIT University</i>	
11.00 am AEDT	Order Ideal Relations and Structural Properties of Leavitt Path Algebras Anthony Warwick, Western Sydney University	Studying the Human Mobility Patterns in Victoria Pre- and Post-COVID-19 Cameron McLaren, RMIT University	
11.20 am AEDT	Arithmetic Algebraic Geometry of Curves Pavel Stoilescu, Australian National University	The Effect of Population Heterogeneity on the Spread of Contagious Diseases Tianze Wei, University of Wollongong	
11:40 am AEDT	Super Box-Ball Systems Benjamin Solomon, The University of Queensland	Understanding How Influence Affects Information Flow In Online Social Networks Bridget Smart, The University of Adelaide	
12:00 pm AEDT	Computational Searches for Combinatorial Designs Tiana Tsang Ung, UNSW	Control Strategies for a Superspreading Virus at Very Low Prevalence Kristian Caracciolo, La Trobe University	
12:20 pm	BREAK		
	Zoom Room 1	Zoom Room 2	
Chair	<i>A/Prof Paul Corry, QUT</i>	<i>Dr Nan Zou, Macquarie University</i>	
	Applied	Applied	Statistics
1:00 pm AEDT	The Price of Anarchy, the Price of Stability, and the Price of Communication in Interacting Intensive Care Units Ashley Hanson, The University of Melbourne	When Does Machine Learning Work in Time Series Forecasting? Gaurangi Gupta, Macquarie University	
1:20 pm AEDT	Predicting Relapse in Colorectal Cancer Patients Using Feature Extraction Nauvoo Perez, La Trobe University	Quantum Boltzmann Machines: An Investigation Saleh Naghdi, The University of Melbourne	
1:40 pm AEDT	Optimisation of Surgical Waiting List Management Jack Powers, Queensland University of Technology	Efficient Estimation of Risk Measures Using Monte Carlo Methods Peter (Hoang Nhat Huy) Nguyen, Macquarie University	
2:00 pm AEDT	Pallet-Packing Vehicle Routing Problem Ponpot Jartnillaphand, Curtin University	Online Colouring Overlap Graphs Eamonn Kashyap, RMIT University	
2.20pm AEDT	Optimal Control of Translocation Strategies for Threatened Australian Mammals Montana Wickens, Queensland University of Technology	Variational Inference for Bayesian Nonnegative Matrix Factorisation Gyu Hwan Park, The University of Melbourne	
2:40 pm	BREAK		

Conference Day 3 - Thursday 11 February 2021

	Zoom Room 1
Chair	<i>Prof Florian Breuer, The University of Newcastle</i>
	Pure/Theoretical
3:00 pm AEDT	Experimental Number Theory with Sage Cameron Shaw-Carmody, The University of Newcastle
3:20 pm AEDT	Representation Varieties of Once-Punctured Torus Bundles Youheng Yao, The University of Sydney
Chair	<i>Angela Coughlin, AMSI</i>
3:40 pm AEDT	Guest Speaker: Careers Professor Tim Marchant, AMSI Director
4:20 pm	Conference Wrap Up