

Monday morning					
*student talk ^J JSIAM/ANZIAMI collaboration					
8:00-8:30		Registration			
8:30-9:00		Conference Opening			
9:00-9:50		Invited talk: Abrahams, David A historical look at analytical approaches to wave diffraction and scattering (p19) <i>Chair: Yvonne Stokes</i>			
	Upper North <i>Chair: Adelle Coster</i>	Upper South <i>Chair: P. Pooladvand</i>	Lakeview <i>Chair: Rahil Valani</i>	Business Centre <i>Chair: Tony P. Roberts</i>	Summit Centre <i>Chair: Hinke Osinga</i>
10:00-10:20	Gray, Catheryn Right place, right time, right activation (p62)	Korsah, Maame* Mathematical assessment of the role of intervention programs for malaria control (p79)	Meylan, Mike Theory of piezoelectric and other hydroelastic wave energy converters (p91)	Rajapaksha, Thakshila* Linear convergence of tilt-correct DFO proximal bundle method (p107)	Wechselberger, Martin Shock selection rules in composite regularised reaction-nonlinear diffusion models (p123)
10:20-10:40	Levi, Noa* Mathematical models of therapeutic intervention in robust chemical reaction networks (p84)	Foo, Yong See* Interplay between model fitting and model construction for biological dynamical systems (p59)	Westcott, Amy-Rose* Broadband energy capture by an array of heaving buoys (p125)	Challis, Vivien Optimisation of a multi-functional piezoelectric component for a climbing robot (p52)	Marangell, Robert Stability of asymptotic waves in the Fisher-Stefan equation (p87)
10:40-11:00	Kuba, Shahak* Incorporating cell mechanics into a model of biological tissue growth within confined spaces (p80)	Harrison, Lucinda* Near optimal selection of sites for mosquito surveillance of Japanese encephalitis virus in Australia (p66)	McCue, Scott Three-dimensional linear gravity-capillary wave patterns (p89)	Bui, Thi Hoa Cutting plane algorithms are exact for Euclidean max-sum problems (p49)	Miller, Thomas* Shock positions for regularized reaction-diffusion equations with negative diffusivity (p92)
11:00-11:20	Morning tea on The Deck				

Monday morning (continued)					
*student talk [†] JSIAM/ANZIAM collaboration					
	Upper North <i>Chair: Zoltan Neufeld</i>	Upper South <i>Chair: Michael Plank</i>	Lakeview <i>Chair: Scott McCue</i>	Business Centre <i>Chair: M. Wechselberger</i>	Summit Centre <i>Chair: Peter Taylor</i>
11:20–11:40	Johnston, Stuart Efficient modelling of heterogeneous cell populations (p74)	Anwar, Md Nurul* Investigation of Plasmodium vivax elimination under mass drug administration (MDA) (p42)	Amarathunge Achchige, Tharindi* Pattern formation of precursor films: a new mathematical model (p42)	Smith, Lauren Model reduction for finite networks of coupled oscillators with higher order interactions (p114)	Huang, Boris* Compounded Sibuya random walks and the fractional graph Laplacian (p71)
11:40–12:00	Georgiou, Fillipe Including organism and environmental heterogeneity in collective behaviour: looking at locusts (p60)	Nitschke, Cody Modelling the impact of infectious disease introduced to Australia through European contact (p99)	Kedda, Steven* Self-similarity in non-Newtonian thin films (p76)	Subramanian, Priya Rogue bursts as an effect of broken symmetry (p116)	McArthur, Harry* Balancing the privacy and utility with margin-consistent noise (p89)
12:00–12:20	Oelz, Dietmar Emergence of asymmetry in Hydra spheroids (p101)	Lydeamore, Michael Generating synthetic contact matrices using open-source data (p86)	Yang, Xinyi* Escape motility of multicellular magnetotactic prokaryotes (p127)	Krauskopf, Bernd Emergence of a blender: weaving a carpet from one-dimensional global manifolds (p80)	Xing, Chenchen* Pricing for perishable goods in a queueing system (p127)
12:20–12:40	Dharma, Rodney* Resolving spatial heterogeneity in microbial symbiosis (p54)	Ryan, Matt BaD transmission modelling: Incorporating human behaviour into simple models of disease transmission (p108)	Dallaston, Michael Thin filament modelling of Hele-Shaw flow (p53)	Osinga, Hinke A dynamical systems approach to low-damage seismic design (p102)	Zhang, Xinyi* Pricing American down-and-out call options with transaction costs (p129)
12:40–1:00	Murphy, Ryan Quantifying biological heterogeneity in nanoparticle-cell interaction experiments (p95)	Hickson, Roslyn Buzz off! Suppressing the neglected mosquitoes transmitting neglected diseases (p67)	Pototsky, Andrey Electromagnetically driven flow in unsupported electrolyte layers: lubrication theory and linear stability of annular flow (p106)	Bailie, John* Resonance structure due to periodic forcing: case study of a climate model with seasonal variation (p45)	Roughan, Matthew1 Randomly surreal (numbers) (p107)
1:00–2:00	Lunch on The Deck				

	<p>Monday afternoon</p> <p>[*]student talk ^JJSIAM/ANZIAMI collaboration</p>				
2:00–2:50	<p>Invited talk: Fulton, Beth Our complex world creates holes in predictive capacity, is that really a bad thing? (p21) <i>Chair: Melanie Roberts</i></p>				
	<p>Upper North <i>Chair: Stuart Johnston</i></p>	<p>Upper South <i>Chair: Matt Ryan</i></p>	<p>Lakeview <i>Chair: Steve Taylor</i></p>	<p>Business Centre <i>Chair: Ryan Murphy</i></p>	<p>Summit Centre <i>Chair: Boris Baeumer</i></p>
3:00–3:20	<p>Ivory, Elizabeth* Agent-based modelling of <i>Plasmodium vivax</i> under treatment with radical cure (p73)</p>	<p>Flegg, Jennifer A spatiotemporal model of multi-marker antimalarial resistance (p58)</p>	<p>O’Kane, Terence2 Bayesian structure learning for climate model evaluation (p100)</p>	<p>Roughan, Matthew2 The polylogarithm function in Julia (p108)</p>	<p>Joshi, Nalini Dynamics through the lens of cryptography (p74)</p>
3:20–3:40	<p>Stadler, Eva Translation of the resistance risk for the antimalarial drug cabamiquine across infection models (p115)</p>	<p>Baker, Christopher Developing real-time modelling capabilities for emergency animal disease outbreaks. (p45)</p>	<p>Grant, Patrick* Simple wood, complex challenges: modelling moisture migration and swelling in timber boards (p62)</p>	<p>Wegert, Zachary2* An extendable <i>Julia</i>-based set of scalable computational tools for level set-based topology optimisation (p124)</p>	<p>Morrison, Peter* Hyperbolic special functions and the projection-slice theorem (p94)</p>
3:40–4:00	<p>Afternoon tea on The Deck</p>				

Monday afternoon (continued)					
	*student talk		^J JSIAM/ANZIAM collaboration		
	Upper North <i>Chair: Adrienne Jenner</i>	Upper South <i>Chair: Maud El-Hachem</i>	Lakeview <i>Chair: Edward Hinton</i>	Business Centre <i>Chair: Bernd Krauskopf</i>	Summit Centre <i>Chair: Mark McGuinness</i>
4:00–4:20	Williams, Thomas* Incorporating the structure of the lung into models of respiratory viral infections (p126)	Holden, Matthew The value of information paradox (p68)	Oliver, Dylan* Dual-grid mapping method for the advection-diffusion-reaction equation in a heterogeneous medium (p101)	Dipierro, Serena Analysis of an ecological niche: competition versus cooperation (p55)	Kapsis, Maria* Managing peak power demand for a fleet of trains (p75)
4:20–4:40	Jayathilake, Chathraanee* Tractability of biochemical signalling models (p73)	Pascal, Luz* When to stop investing in technology development for ecosystem management? (p103)	Mansoor, Wafaa Faisal Modelling of dispersal of hydrogen in the retina: Axisymmetric solution (p87)	Burney, Stuart-James* Properties of novel exact solutions to advection equations and diffusion equations with time-delay (p50)	Bala, Indu Optimizing neural network training: the impact of Levy-Flight and Chaos in Artificial Electric Field Algorithm (p46)
4:40–5:00	Lee, Lloyd* The effect of calcium influx on calcium signalling (p83)	Stewart, Owen* Applying modern portfolio theory to marine spatial management (p102)	Watt, Simon Critical initial conditions in competitive exothermic-endothermic reaction systems (p122)	Suda, Tomoharu^J Effective reaction rates in chemical reaction networks (p117)	Kolyaei, Mary* A reinforcement learning method for optimizing the omnichannel retail problems (p79)
5:00–5:20	Sharma, Akshay Uncovering the secrets of cancer: discover how microRNA-17-92 utilises transcriptional and translational time delays to control the gene expression network (p111)	Mills, Elise* A generalised sigmoid population growth model with energy dependence: application to quantify the tipping point for Antarctic shallow seabed algae (p92)	Myerscough, Mary Mathematical tools for science students—a context-driven applied mathematics service unit (p95)	Mancini, Renzo* Bifurcation analysis of a two-delay model for the Atlantic Meridional Overturning Circulation (p86)	Sadegh Zadeh, Hajar* Comprehensive forecasting of emergency cases arrivals for surgical departments: a comparative analysis of existing approaches (p109)
6:30	Student social event at the Hahndorf Inn				