Sunday 6th December			
5.00-7.00	Welcome Reception and Registration [Bradley Forum, Level 5 Hawke Building]		

Monday 7th December			
8.45-9.00	Welcome to Country; Welcome by Prof Tanya Monro, DVCR (introduced by Bronwyn Hajek, Conference Director) [HH5-08]		
9.00-10.00	**Prof Martyn Nash** (introduced by Mark Nelson) [HH5-08]		
	[HH5-08]	[HH3-08]	[HH3-09]
Chairperson	Dimetre Triadis	Andrew Metcalfe	Jim Hill
10.00-10.20	**Mark Nelson** Performance analysis of the activated sludge model (number 1)	**David Harman*** Applying generalised polynomial chaos to epidemic models with individualised parameter distributions	**Elliot Carr** Two-scale PDE-based numerical modelling of gradient-driven transport in heterogeneous materials
10.20-10.40	**Fahad Al Saadi*** Sludge disintegration	**Muhammad Shuaib Khan*** Transmuted exponentiated Chen distribution with application to survival data	**Hammad Alotaibi*** Periodic simulation patch for diffusion equation in 3D
10.40-11.00	**Ashfaq Khan** Numerical modelling of anaerobic digestion reactor dynamics with a time delay	**Noratiqah Mohd Ariff** Regionalization of IDF curves with L-moments for storm events	**Russell Edson*** Multi-scale modelling in particulate suspensions
11.00-11.30	Morning tea		
Chairperson	Adrian Pincombe	Martyn Nash	David Scullen
11.30-11.50	**Elizabeth Bradford*** A numerical algorithm for inversion of linear matrix pencils	**Peter Johnston** A model for breeding choice between Wolbachia infected flies	**Andrew Stacey** Transition to helical flow in the partially yielded annular flow of a Herschel-Bulkley fluid
11.50-12.10	**Soorena Ezzati*** A new approach to solve first order reliability analysis problems	**Bushra Hasan*** Numerical simulation of malaria epidemic model in the presence of diffusion	**Fahad Alharbi*** Transition to a partial helical flow through applying the axial flow for Robertson-Stiff fluid
12.10-12.30	**Garry Newsam** An extension of the Douglas-Rachford method to the case of three or more constraint sets	**Zlatko Jovanoski** Dynamics of a kicked non-autonomous Ricker model	**Yvonne Stokes** Drawing microstructured optical fibres: the inverse problem
12.30-12.50	[No talk]	**John Shepherd** Logistic growth with a slowly varying Holling harvesting term	**Bronwyn Hajek** Convective and diffusive effects on particle transport in periodic capillaries
12.50-2.00	Lunch [GK2-10]		
2.00-3.00	**Dr Christine Mangelsdorf** (introduced by Amie Albrecht) [HH5-08]		
Chairperson	Amie Albrecht	Annette Worthy	Peter Johnston
3.00-3.20	**Nadine Adams*** Can diagnostic testing assist in disclosing and bridging gaps in assumed mathematics knowledge?	**Manal Saleh*** Maximising product concentration in a diabatic reactor	**Fatima Ahmed*** Numerical solution for the fluid flow between active elastic walls
3.20-3.40	**Vida Weiss*** Use of Computer Algebra Systems calculators in examinations in Engineering Mathematics subjects	**Rashid Ahmad*** Non-similar solution of Buongiorno's model for the coupled fluid-surface interface	**Dilan Pathirana*** Predicting blood pressure in aortas treated for coarctation
3.40-4.00	**Clinton Hayes** Preparing non-traditional students for engineering degrees	[No talk]	**Md Hamidul Islam*** Mathematical model for atherosclerotic plaque formation and arterial walls remodelling
4.00-4.30	Afternoon tea		
4.30-4.45	AGM [BH4-30]		
6.00-8.00	Student pizza night [GK2-10]		

Tuesday 8th December			
9.00-10.00	**Dr Darryn Reid** (introduced by Brandon Pincombe) [HH5-08]		
	[HH5-08]	[HH3-08]	[HH3-09]
Chairperson	Soorena Ezzati	Christine Mangelsdorf	Neil Kelson
10.00-10.20	**Dion Grieger** Analysing closed-loop combat simulation data to support military operations research studies	**Stephen Woodcock** Development of enquiry-oriented learning in the Mathematical Sciences	**Neil Kelson** A heterogeneous computing approach to simulation of the Heston stochastic volatility model
10.20-10.40	**William Chau** Bayesian network model for analysing operational impact of Land Combat Vehicles	**Sergiy Klymchuk** Using puzzles, paradoxes, provocations and sophisms for enhancing teaching and learning of Engineering	**Bolujo Adegboyegun*** A comparative study of the direct and the inverse finite element approaches for pricing American options
10.40-11.00	**Thang Cao** Multi-Criteria Decision Analysis for Land Combat Vehicle ranking and selection process	**Nadine Adams** PBL: Project based learning or problems becoming learned	**Hamish Macintosh*** Optimised portable OpenCL design for PCR and SPIKE diagonally dominant sparse solvers for large matrices targeting FPGAs
11.00-11.30	Morning tea		
Chairperson	Brandon Pincombe	John Shepherd	Elliot Carr
11.30-11.50	**Kash Sirinanda** Time delayed discounted Steiner trees to locate two or more discounted Steiner points	**Zlatko Jovanoski** A simple ecosystem with a stochastic carrying capacity	**Muhammad Ilyas*** Adaptive mixed finite element method for elliptic problems with concentrated source terms
11.50-12.10	**Erika Belchamber*** Energy-efficient train control: a numerical algorithm for the two-train separation problem on level track	**Bojana Manojlovic*** Data assimilation for seagrass meadows	**Igor Boglaev** Monotone iterates for solving systems of integro-parabolic equations and applications
12.10-12.30	**Zeinab Hajiabolhasani*** Simulation-based optimization of supply chain for a batch process manufacturing plant	**Mahrita Harahap*** Pattern identification of the major drivers of carbon and water fluxes over Australian savannas	**Stuart Hawkins** A numerically stable computational framework for the T-matrix
12.30-12.50	**Ajini Galapitage*** Pickup and delivery using electric vehicles	**Mahayaudin Mansor*** Modelling directionality for paleoclimate time series	**Muhammad Ilyas*** Stabilized mixed finite element method for Poisson problem based on a three-field formulation
12.50-2.00	Lunch [GK2-10]		
2.00-3.00	**Prof Bill Blyth and Dr Asim Ghous** (introduced by Bronwyn Hajek) [HH5-08]		
Chairperson	Darryn Reid	Mark Nelson	Igor Boglaev
3.00-3.20	**Brandon Pincombe** Mass action models of Falklands war battles: a reality check	**Zhejun Huang*** No-adiabatic combustion waves in a two-step competitive exothermic-exothermic reaction model	**Daisuke Tagami** An iterative domain decomposition method for mixed variational problems and its application into eddy current problems
3.20-3.40	**Adrian Pincombe** Dispersed combat as many-on-many search: solving generalised Lanchester equations	**Rajeev Bhanot*** Dynamics of curved reaction fronts under a single-equation model	**Hidekazu Yoshioka** On analytical viscosity solution to a 1-D Hamilton-Jacobi-Bellman equation for upstream migration of individual fishes in rivers
3.40-4.00	**Hiroshi Yokohama** Comparison of blast effects modelling tools in urban environment	**Isaac Towers** Incorporating environmental uncertainty in fire spread modelling	**Adham Ali** Nonlinear stability in seismic waves
4.00-4.30	Afternoon tea		
6.30 onwards	Conference dinner [Adelaide Zoo]		

Wednesday 9th December			
9.00-10.00	**A/Prof Kylie Catchpole** (introduced by Jim Hill) [HH5-08]		
		[HH3-08]	[HH3-09]
Chairperson		Bronwyn Hajek	Amie Albrecht
10.00-10.20		**Annette Worthy** Laplace transforms and a multilayer diffusion problem	**Chi-Yao Chung** Mathematical modeling for lithium iron battery capacity variation with different charge cycles
10.20-10.40		**Marianito Rodrigo** Laplace and Z transforms of linear dynamical systems and conic sections	**Andrew Metcalfe** Duckworth Lewis, run out?
10.40-11.10	Morning tea		
Chairperson		Yvonne Stokes	Bill Blyth
11.10-11.30		**David Scullen** A simplified model for clogging of permeable pavements	**Timothy Hutchinson** Regulatory testing for safety: the mathematics of broad-based results
11.30-11.50		**Dimetre Triadis** Leveraging progress in analytical groundwater infiltration for new solutions in industrial metal solidification	**Jalal Sultan** Solving fuzzy multi-objective master production scheduling problems using hybrid particle swarm optimization: an industrial case study
11.50-12.50	**Dr Ben Rubinstein** (introduced by Andrew Metcalfe) [HH5-08]		
12.50-2.00	Lunch [GK2-10]		
2.00-4.00	Maple workshop [GK2-16]		