

Monday Morning

	Rottneest	Garden	Carnac
7:45–8:30	Registration at the ANZIAM desk		
7:45–8:30	Morning coffee		
8:30–8:45	Conference Opening		
8:45–9:35	<i>Chair: Hocking</i>		
	Invited talk: BADDELEY Sampling theory for vegetables		p19
	<i>Chair: Clarke B</i>	<i>Chair: Farrow</i>	<i>Chair: Plank</i>
9:40–10:05	ENTING p36 Adjoint sensitivity analysis in the attribution of responsibility for climate change	MCKIBBIN p46 Models for large-scale transport of particulates by the atmosphere: a search for analytic solutions	GRAYBILL * p62 Mathematically modelling a nephron
10:05–10:30	SMITH N p53 Saving water with statistics	HARPER * p62 A continuum approach to modelling droplet interception by a shelterbelt	FULFORD p37 Mathematical modelling of tear fluid transport and deposition on the eye
10:30–11:10	Morning tea in Abrothos		
	<i>Chair: McKinnon E.</i>	<i>Chair: Taylor</i>	<i>Chair: Fulford</i>
11:10–11:35	TAPLIN p55 A unified approach to the measurement of international accounting harmony	KEELER * p64 Investigating the GeRaF routing scheme in sensor networks	BARNES p27 Can pandemic influenza be contained?
11:35–12:00	BROWN p30 Developing gold standards for the mining industry	MOTYER * p65 Truncation of the two-node Jackson network	PLANK p50 Superspreading: sneezing taxi drivers or crowded workplaces?
12:00–12:25	NA-UDOM * p65 Modelling of response from computer simulated experiments	O'HELY p48 Markov models for genome evolution	ROBERTS MICK p51 How to model a virus that doesn't (yet) exist
12:25–1:50	Lunch at the Esplanade Hotel (included in registration)		

Monday Afternoon

	Rottneest	Garden	Carnac
1:50-2:40	<p><i>Chair: Taylor</i></p> <p>Invited talk: BEAN Markovian binary trees: a model of the macroevolutionary process</p> <p><i>Chair: McKinnon P.</i></p>		
2:45-3:10	<p>CLARKE B p32 On the convergence of Newton's method when estimating higher dimensional parameters</p>	<p>SURI * p68 Optimization in fisheries under uncertainty</p>	<p>TUCK p56 Slender viscous drops and filaments</p>
3:10-3:35	<p>YATAWARA p58 An information control chart for stationary autocorrelated processes</p>	<p>MOORE * p64 Optimal monitoring for invasive species management</p>	<p>CARNIE p31 Microfluidics in nanofilms</p>
3:35-4:05	<p>Afternoon Tea in Abrolhos</p>		
	<p><i>Chair: Taplin</i></p>		
4:05-4:30	<p>MILLS p47 Appointment systems in outpatients clinics</p>	<p>TAYLOR p56 Algorithms for evaluating return probabilities of stochastic fluid flows</p>	<p>BLOCKLEY * p60 Wave-trains in spherical Couette flow</p>
4:30-4:55	<p>CHAMPION p31 Emergency maths</p>	<p>NARIAI * p66 On the design of multi-type networks via the cross-entropy method</p>	<p>BARRY p28 Cylindrical swelling problems with two moving boundaries</p>
5:00-5:45	<p><i>Chair: Baddeley</i></p> <p>Invited talk: JAMES I. Estimation of natural HIV disease progression with unknown or uncertain dates of infection</p>		
5:45-6:45	<p>Drinks in Resort Pool area</p>		

Tuesday Morning

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8:20–8:30	Notices		
8:30–9:25	<p><i>Chair: Tuck</i></p> <p>Invited talk: WAKE Modelling of cancer treatment</p> <p style="text-align: right;">p23</p>		
9:30–9:55	<p><i>Chair: Boland</i></p> <p>ZANNINO * p69 Methods for analysing competing risks data</p>	<p><i>Chair: Forbes</i></p> <p>ROBERTS MELANIE p66 Modelling periodic free surface phenomena in coastal groundwater systems</p>	<p><i>Chair: Hearne</i></p> <p>HUGHES p40 Isotropic dispersal in stochastic spatial models</p>
9:55–10:20	<p>TREWENACK * p68 Travelling wave models of neural crest cells during development of the enteric nervous system</p>	<p>CLARKE S p33 Weakly nonlinear regimes for two-layer flow past topography</p>	<p>COX B * p61 Exact and approximate geometric parameters for carbon nanotubes</p>
10:20–10:45	<p>LANDMAN p43 Simulating invasion: connecting individual and macroscopic properties</p>	<p>CHEN * p61 Periodic waves in three-layer fluid flows with shear</p>	<p>KIM p42 Average formulas of Nevanlinna counting functions of holomorphic self-maps of the unit disk</p>
10:45–11:15	Morning tea in Abrothos		
11:15–11:40	<p><i>Chair: Landman</i></p> <p>SULLIVAN * p67 Using statistical moment analysis to distinguish between repulsion and inhibition</p>	<p><i>Chair: Macaskill</i></p> <p>PAGE p49 An implicit immersed-interface method</p>	<p><i>Chair: Hughes</i></p> <p>BARRY p28 Which high school system is best?</p>
11:40–12:05	<p>CAI * p60 T cell development: cell migration and differentiation in the thymus outer region</p>	<p>KISS p42 Dynamics of rotating fluid flow over bathymetry at low Rossby number</p>	<p>ROBERTS A p51 ARC grant applications: comments, questions and general answers</p>
12:10–1:00	<p><i>Chair: Landman</i></p> <p>Invited talk: HOWLETT Inversion of analytically perturbed linear operators that are singular at the origin</p> <p style="text-align: right;">p21</p>		
2:00	Rest afternoon		
8:00–9:30	ANZIAM AGM		
9:30–10:00	ANZIAM Executive		

Wednesday Morning

	Rottneest	Garden	Carnac	Admiralty Gulf
8:20–8:30	Notices			
8:30–9:20	<p><i>Chair: Laing</i></p> <p>Invited talk: OSINGA Global bifurcations of the Lorenz manifold p23</p>			
9:25–9:50	<p><i>Chair: Bean</i></p> <p>BOLAND Progress in open-pit mine scheduling p29</p>	<p><i>Chair: Broadbridge</i></p> <p>HAY * A Lax pair for a lattice modified KdV eq., reductions to q-Painlevé eqs. and associated Lax pairs p63</p>	<p><i>Chair: Fowkes</i></p> <p>TRIADIS * The JKR-DMT transition for power-law punches p68</p>	<p><i>Chair: Hocking</i></p> <p>HAQUE Expansion of high pressure gas into air—a more realistic blast wave model p38</p>
9:50–10:15	<p>LEVY * Ready, get set, switch! p64</p>	<p>JOSHI Integrable lattice equations p41</p>	<p>HILL Continuum modelling of gigahertz nano-oscillators p40</p>	<p>ZHANG Critical and supercritical withdrawal of a layered fluid through a line sink in a porous medium p59</p>
10:15–10:40	<p>SLATER * Stochastic modelling of vertebrate neural lineage trees p67</p>	<p>SUN Regular Sturm-Liouville operators with transmission conditions p54</p>	<p>MATTHEWS Nanoscale boundary layers p45</p>	<p>SWEATMAN Destruction of binary stars in low-energy gravitational encounters p55</p>
10:40–11:15	Morning tea in Abrolhos			

Wednesday Morning continued

	<i>Chair: Y. Stokes</i>	<i>Chair: Demskoi</i>	<i>Chair: Lukas</i>	<i>Chair: Page</i>
11:15–11:40	LAING p44 Coarse-grained dynamics of an activity bump in a neural field model	SCHREIDER p52 Application of OR models in natural resource management: from competition to cooperation	COX G p33 A macroeconomical model for shocks between a large and a small country	HARUN * p63 Long waves propagating over a circular hump
11:40–12:05	JAMES A p40 The laziest insect in the world?	BINDER p29 Using topological chaos to develop optimal batch mixer designs	KAZAKOV * p63 Optimal VWAP trading	STOKES T p54 Varying the flow rate of a line sink in a fluid of finite depth
12:05–12:30	BAKER p26 A mechanism for morphogen-controlled domain growth	MERCER p46 Exact and approximate continuous methods for finding the minimal risk route through a minefield	NAKAMAURA p47 Tests of the random walk hypothesis for Australian financial data	HENDY p39 The effect of heterogeneous slip and surface roughness on flows of simple fluids
12:30–12:55	KOERBER p43 Modelling the quorum sensing regulatory gene-networks involved with virulence in bacterial infections	GARANOVICH * p62 Active control of polychromatic light in nonlinear photonic structures	PIANTADOSI p50 WaterLog – a mathematical model to implement the recommendations of the Wentworth Group	CLARKE R p32 The decay of suddenly-stopped Dean flow
12:55–2:10	Lunch			

Wednesday afternoon

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2:10–3:00	<i>Chair: Wake</i> Invited talk: MCGUINNESS A salty tale—modelling the growth of sea ice in Antarctica		p22	
3:05–3:30	<i>Chair: McCue</i> FORBES Modelling acoustic noise in medical scans	<i>Chair: Schreider</i> MCARTHUR Cell-based model of the spread of an exotic alga, in south eastern Australian waters	<i>Chair: Anderssen</i> PACK * Parallel two-level Schwarz algorithm for solving singularly perturbed convection-diffusion problems	<i>Chair: Joshi</i> BAEUMER Fractional reproduction-dispersal equations and heavy tail dispersal kernels
3:30–3:55	JOHNSTON Determining cardiac tissue electrical parameters from potential measurements	HEARNE A method for reducing the complexity of large ecosystem models	DE HOOG Subset selection for matrices	BROADBRIDGE Entropy behaviour of evolution PDEs.
3:55–4:30	Afternoon tea in Abrolhos			
4:30–4:55	<i>Chair: Mick Roberts</i> STOKES Y Determining oxygen requirements of mammalian oocytes and embryos	<i>Chair: Keady</i> SMITH P Scalar wave diffraction from arbitrarily shaped shells of revolution: a rigorous approach	<i>Chair: Sweatman</i> BARTON A heat engine based on cold combustion?	<i>Chair: Mercer</i> GRAY An extra unfolding parameter for the ignition bifurcation
4:55–5:20	GIBSON Modelling neural-glia interactions in the brain and nervous system	VINOGRADOVA Wave scattering by an arbitrary profiled elongated cylinder	NELSON Reducing the emission of pollutants in food-processing wastewaters	LANGLANDS Anomalous diffusion with linear reaction dynamics
5:20–5:45	SIMPSON Coalescence of interacting cell populations	DYSKIN High amplitude resonances in bi-linear oscillators	ROBERTS A Normal form transforms separate slow stochastic modulation from stochastic oscillatory systems	WEBER Nonlocal flow effects in bushfire spread rates
7:00–7:30	Pre-dinner drinks			
7:30–11:00	Conference Dinner			

Thursday Morning

	Rottneest	Garden	Carnac
8:20–8:30		Notices	
8:30–9:20	<p><i>Chair: Bassom</i></p> <p>Invited talk: CLARKSON Rational solutions of the Painlevé equations and applications to soliton equations</p> <p style="text-align: right;">p20</p>		
	<i>Chair: de Hoog</i>	<i>Chair: D. Hill</i>	<i>Chair: Osinga</i>
9:25–9:50	<p>ANDERSEN p25 Modelling pattern formation in plants</p>	<p>DEMSKOI p34 On Liouville type equations and their applications to soliton theory</p>	<p>BALL p26 A brief tour of nonlinear dynamics, stability, and chaos</p>
9:50–10:15	<p>DEAKIN p33 Exploring Kleiber's law</p>	<p>PASTERNAK p49 Mechanics of fragmented bodies: Cosserat continuum approach</p>	<p>STEMLER p53 Stochastic modelling of experimental chaotic time series</p>
10:15–10:45	Morning tea in Abrolhos		
	<i>Chair: de Hoog</i>	<i>Chair: D. Hill</i>	<i>Chair: Mak</i>
10:45–11:10	<p>DRAGOMIR p35 Approximating the Stieltjes integral via the theory of inequalities</p>	<p>VAZQUEZ-ABAD p57 Assessing the accuracy of the simulation of Gaussian systems</p>	<p>BANERJEE p27 Effect of age-based vaccination policy on the dynamics of delay epidemic model</p>
11:10–11:35	<p>KEADY p41 Bounds for torsional rigidity and moments of inertia for plane convex domains</p>	<p>ADDIE (late) Flows in networks—understanding how to manage them when their definition is vague</p>	<p>FOWKES p37 The boundary tracing technique for solving boundary value problems: new solutions of the Laplace-Young equation</p>
11:40	Conference Ends		