

Monday morning					
Registration					
Conference opening Maitai 2					
<b>Invited: Judith Berner (National Center for Atmospheric Research, Boulder, Colorado, USA), Maitai 2</b> On the dynamical mechanisms governing El Niño–Southern Oscillation irregularity (#14, p30) <i>Chair: Bernd Krauskopf</i>					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair: Edward Green</i>				
8:00–8:40					
8:40–9:00					
9:00–9:50					
10:00–10:20	<b>Barbara Johnston</b> A comparison of models for subendocardial and partial thickness ischaemia (#91, p70)	<b>Robert Moss</b> Real-time assessment and prediction of influenza severity (#134, p92)	<b>Liam Morrow*</b> Controlling viscous fingering patterns in a Hele-Shaw cell through geometry manipulation (#133, p91)	<b>Ian Lizarraga</b> Computational singular perturbation method for nonstandard slow-fast systems (#111, p80)	<b>Martin Sagradian*</b> Arbitrary rotationally symmetric doubly-connected conductors: potential theory problems (#169, p110)
10:20–10:40	<b>David Warne*</b> Bayesian inference and information criteria for selection of reaction-diffusion models of collective cell behaviour (#201, p126)	<b>Dennis Liu*</b> Modelling of reporting behaviour in the FluTracking surveillance system (#110, p79)	<b>Koya Sakakibara</b> Numerical scheme for solving Hele-Shaw problems based on the method of fundamental solutions (#170, p110)	<b>James Yang*</b> Singularly-perturbed linear-quadratic zero-sum stochastic differential games (#209, p130)	<b>Yuto Miyatake</b> Reducing the effect of discretization errors in estimating ODE models by iteratively reweighted least squares (#131, p90)
10:40–11:00	<b>Phillip Brown*</b> Modelling colon cancer: Early modelling work (#19, p33)	<b>Georges Ferdinand Randri-afanomezantsoa Radohery*</b> Modelling antimalarial treatment in drug-resistant malaria (#162, p106)	<b>Matthew Hopwood*</b> Transversely isotropic extensional flow (#81, p65)	<b>Akane Kawaharada</b> Relation between spatio-temporal patterns generated by cellular automata and a singular function (#96, p72)	<b>Nathan March*</b> A fast semi-analytical homogenization method for block heterogeneous media (#123, p86)
11:00–11:20	Morning tea				

Monday morning continued					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair:</i> Alys Clark	<i>Chair:</i> Mick Roberts	<i>Chair:</i> Shaun Hendy	<i>Chair:</i> Hinke Osinga	<i>Chair:</i> Amie Albrecht
11:20–11:40	<b>Tarumendu Mapder</b> Hecging for cellular persistence in stress response (#122, p85)	<b>Roslyn Hickson</b> Modelling hypothesised interactions during transmission dynamics of two malaria species (#79, p64)	<b>Andriy Olenko</b> Analysis of spherical data with applications to CMB studies (#147, p99)	<b>Gray Manicom*</b> Modelling task-switching with heteroclinic networks. (#121, p85)	<b>Alexander Fedotov</b> Justification of the approximate methods for solving operator equations (#54, p51)
11:40–12:00	<b>Rosemary Aogo*</b> Using a PDE to dissect the role of Plasmodium translocon of exported proteins during infection (#3, p25)	<b>James Walker*</b> Bayesian model selection in epidemiology (#200, p126)	<b>Barry Cox</b> Wrinkles in nanosurfaces (#39, p43)	<b>Cecilia Gonzalez Tokman</b> Lyapunov spectrum of Perron-Frobenius operator cocycles (#69, p59)	<b>Turker Topal*</b> Analysis of arbitrary polygonal waveguides: TM and TE modes (#191, p121)
12:00–12:20	<b>Nabil Fadai</b> An accurate and efficient discretization for stochastic models of cell migration and cell proliferation (#51, p49)	<b>Yuhuang Wu*</b> Estimation of reactivation frequency of latent HIV and the impact of fluctuating frequencies (#208, p130)	<b>Pierluigi Cesana</b> A probabilistic model for martensitic interfaces (#29, p38)	<b>Brent Giggins*</b> Ensemble forecasting with stochastically perturbed bred vectors (#67, p58)	<b>Ayham Zaitouny</b> Multivariate transitions detection method: Applications to geological boundaries analysis (#211, p131)
12:20–12:40	<b>Claire Miller*</b> Mechanistic control of epidermal tissue height (#130, p90)	<b>David Khoury</b> Measuring drug efficacy in malaria (#98, p73)	<b>Robert Otupiri*</b> Dynamics of an all-fibre laser with saturable absorber (#150, p100)	<b>Wenqi Yue*</b> Reduced dynamics for the Kuramoto-Sakaguchi Model Through Collective Coordinates (#210, p131)	<b>Daisuke Furihata</b> Structure-preserving methods based on discrete laws on Voronoi meshes (#61, p54)
12:40–1:00	<b>Brodie Lawson</b> Perlin noise for automatic generation of complex spatial patterns: an application to cardiac fibrosis (#107, p78)	<b>Amy Hurford</b> Parasite-induced shifts to a lethargic host state results in evolutionary bistability (#83, p66)	<b>Emma Greenbank*</b> Modelling Surtseyan Ejecta (#73, p61)	<b>Andrus Giraldo</b> Dynamic complexity in two coupled photonic crystal nanocavities (#68, p58)	<b>Eric Hester*</b> A straightforward geometric approach to fluid-solid interactions using the signed distance function (#78, p63)
1:00–2:00	Lunch				

## Monday afternoon

		Monday afternoon			
2:00–2:50	<b>Invited: Phil Howlett (University of South Australia)</b> , Maitai 2 Ngā hiahia kia titiro ki te tūmata, ā, ka kite ai tātou te mutunga (you must understand the beginning if you wish to see the end) (#82, p65) <i>Chair: Mark McGuinness</i>	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair: Alona Ben-Tal</i>	<i>Chair: Matthew Holden</i>	<i>Chair: Rowena Ball</i>	<i>Chair: Carlo Laing</i>	<i>Chair: Tammy Lynch</i>
3:00–3:20	<b>Peter Cudmore</b> BondGraphTools: Modelling network bioenergetics (#41, p44)	<b>Michael Plank</b> Mitigating fisheries-induced evolution (#157, p104)	<b>Brendan Florio</b> Measuring the fractal dimension of aggregate clusters using the perimeter-area method (#58, p53)	<b>Tomoharu Suda*</b> Application of Helmholtz-Hodge decomposition to the construction of Lyapunov functions (#179, p115)	<b>Garry Newsam</b> A random process model for laying out HF antenna arrays (#140, p95)
3:20–3:40	<b>Ielyaas Cloete*</b> How does hormone receptor phosphorylation tune the calcium signal in hepatocytes? (#36, p42)	<b>Rachelle Binny</b> Optimal control of irrupting pest populations in a climate-driven ecosystem (#15, p31)	<b>Elliot Carr</b> Calculating thermal diffusivity from laser flash experiments (#27, p37)	<b>Chris Lustrì</b> Localising nonlocal singular perturbations in the Benjamin-Ono wave equation (#115, p82)	<b>Oliver Maclaren</b> Accelerating the solution of geothermal inverse problems using the adjoint method (#119, p84)
3:40–4:00	Afternoon tea				

Monday afternoon continued					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair:</i> Barbara Johnston	<i>Chair:</i> Roslyn Hickson	<i>Chair:</i> Barry Cox	<i>Chair:</i> Zoltan Neufeld	<i>Chair:</i> Troy Farrell
4:00–4:20	<b>Sean Vittadello*</b> Mathematical models of cell proliferation in experiments with synchronised cells (#198, p125)	<b>Andrew Black</b> A household model for vector-borne diseases (#16, p31)	<b>Josef Giddings</b> Wet chemical etching of silicon dioxide microfibres (#65, p57)	<b>Elle Musoke*</b> A surface of heteroclinic connections in a 4D slow-fast system (#137, p93)	<b>Melanie Roberts</b> Towards a process based model of gully erosion for improved Great Barrier Reef water quality (#165, p108)
4:20–4:40	<b>Peter Johnston</b> Assessing catheter contact during cryo-ablation (#93, p71)	<b>Sarah Belet*</b> An agent-based model for the spread of Wolbachia in mosquito populations (#11, p29)	<b>Gagani Ranathunga*</b> Mathematical modelling to aid fabrication of components for medical devices (#161, p106)	<b>David Simpson</b> Stability in piecewise-smooth maps: Fixed points, fractals, and friction. (#173, p112)	<b>Pascal Cheon*</b> Domain truncation in pipeline monitoring (#31, p39)
4:40–5:00	<b>Adelle Coster</b> Stochastic queueing models: intracellular dynamics, regulation and optimisation with data (#38, p43)	<b>Rebecca Chisholm</b> Population-level effects of immunological memory contingent on multiple infection episodes (#32, p40)	<b>Benjamin Maldon*</b> Modelling dye-sensitized solar cells by nonlinear diffusion (#120, p84)	<b>Alexander Browning*</b> Travelling waves in a mathematical description of a biologically inspired smart material (#20, p33)	<b>Duncan Farrow</b> How much money should be spent on managers vs workers? (#53, p50)
5:00–5:20	<b>Ryan Murphy*</b> An individual-based mechanical model of cell movement in heterogeneous tissues (#136, p93)	<b>Mick Roberts</b> Red and grey squirrels, SQPV and the dilution effect (#164, p107)	<b>Lyndon Koens</b> Static and dynamic self-assembly of a pair of microscopic magno-capillary disks (#101, p75)	<b>Madeleine Cartwright*</b> A collective coordinate framework to study the dynamics of travelling waves in stochastic PDEs (#28, p38)	<b>John Hearne</b> Designing an optimal schedule for breaking the hazardous fuel continuum while maintaining habitat quality (#76, p62)
5:20–5:40	<b>Hayden Tronnolone</b> Growing yeast off the grid (#193, p122)	<b>Jason Archer*</b> An agent-based approach for modelling the dilution effect in plants (#5, p26)	<b>Shaun Hendy</b> Instabilities in the melting of metal nanowires (#77, p63)	<b>Kenta Kobayashi</b> The circumradius condition and its application (#100, p74)	<b>Steven Psaltis</b> Mathematical modelling of property variation in the southern pines (#160, p105)
6:30	ANZIAM student evening				

Tuesday morning						
8:30–9:20	<b>Invited: Raúl Rojas (Freie Universität Berlin)</b> , Maitai 2 Artificial intelligence for autonomous driving (#166, p108) <i>Chair: Cecilia Gonzalez Tokman</i>					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy	
	<i>Chair: Jennifer Flegg</i>		<i>Chair: Jim Denier</i>	<i>Chair: Joshua Ross</i>	<i>Chair: Elliot Carr</i>	
9:30–9:50	<b>Anudeep Surendran*</b> Spatial structure arises from chase-escape interactions with crowding effects (#180, p115)	<b>Claudio Arancibia-Ibarra*</b> Complex dynamics of a diffusive modified Holling-Tanner predator-prey model (#4, p25)	<b>Sophie Calabretto</b> Global instabilities in the flow around a rotating sphere (#25, p36)	<b>Adrian Ortiz-Cervantes*</b> A network approach for finding the right amount of topics in topic modelling (#148, p99)	<b>Winston Sweatman</b> Periodic orbits with four masses (#182, p116)	
9:50–10:10	<b>Mark Flegg</b> Diffusion-limited enzyme kinetics (#57, p52)	<b>Emily Gentles*</b> State space models for long range animal movement (#63, p56)	<b>Peter Duck</b> Compressible three-dimensional boundary layers with short spanwise scales (#49, p48)	<b>Jody Fisher*</b> Modelling turbulence and the Anthropocene: synergetic effects reduce ocean biomass (#55, p51)	<b>Joseph O’Leary*</b> Satellite orbits: Newtonian, post-Newtonian and Einsteinian (#144, p97)	
10:10–10:30	<b>Jesse Sharp*</b> Optimal control of acute myeloid leukaemia (#172, p111)	<b>Giorgia Vattiato*</b> Effect of individual heterogeneity on emergent population characteristics (#197, p124)	<b>Brendan Harding</b> The effect of inertial lift force on a spherical particle suspended in flow through microfluidic ducts (#74, p61)	<b>Michael Small</b> Propagation dynamics on multiplex (i.e. duplex) networks (#176, p113)	<b>Nur Atiqah Dinon*</b> The dynamics of Kuiper belt objects (#46, p47)	
10:30–10:50	Morning tea					

Tuesday continued					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair:</i> Saber Dimi	<i>Chair:</i> Amy Hurford	<i>Chair:</i> Graeme Hocking	<i>Chair:</i> Melanie Roberts	<i>Chair:</i> W. Sweatman
10:50–11:10	<b>Alona Ben-Tal</b> Mathematical modelling of nasal high flow (#12, p29)	<b>Julie Mugford*</b> Developing methods to improve the accuracy of classification based crowdsourcing (#135, p92)	<b>Hyeongki Park*</b> A hinged linkage mechanism that follows discrete integrable equations (#152, p101)	<b>Dion O’Neale</b> Bipartite networks for fun and profit (#145, p97)	<b>Jinesh Joseph*</b> Long-term evolution of Apollo Asteroids (#94, p71)
11:10–11:30	<b>Fillipe Georgiou*</b> Continuum modelling of phagocytosis based on cell-cell adhesion and prey-predator relationship (#64, p56)	<b>Matthew Nitschke*</b> Modelling the role of the environment in the initial stages of multicellular evolution (#143, p96)	<b>Malte Peter</b> Graded resonator arrays for spatial frequency separation and amplification of water waves (#153, p102)	<b>Demival Vasques Filho*</b> Structure and dynamics of social bipartite and projected networks (#196, p124)	<b>Robert Lodder</b> Nonparametric approach to weak signal detection in the search for extraterrestrial intelligence (SETI) (#112, p80)
11:30–11:50	<b>Catheryn Gray*</b> Hysteresis and the drift to depletion: Akt under repeated insulin stimulation (#70, p59)	<b>Daniel Wilson*</b> Topology-dependent density optima for efficient simultaneous network exploration (#206, p129)	<b>Hyuck Chung</b> Acoustic scattering by a circular cylinder and air flow around it (#33, p40)	<b>Hamish Jolleyman*</b> Teleconnection networks of extreme weather events in Antarctica (#87, p68)	<b>Craig Douglas</b> A data enabled model for coupling dual porosity flow with free flow (#48, p48)
11:55–12:25	<b>Invited: Claire Postlethwaite (University of Auckland)</b> , Maitai 2 Spiral waves and heteroclinic cycles in Rock-Paper Scissors (#158, p104) <i>Chair: Michael Small</i>				
12:25–12:55	<b>Invited: Yvonne Stokes (University of Adelaide)</b> , Maitai 2 Drawing of microstructured optical fibres: modelling and validation. (#178, p114) <i>Chair: Mary Myerscough</i>				
1:00–2:15			Lunch		
			Women in Mathematical Sciences Lunch – Oceano Restaurant		
			Free afternoon		
7:30 pm			ANZIAM AGM – Waimea room		

## Wednesday morning

Wednesday morning					
9:00–9:50	<b>Invited: Ruth Baker (University of Oxford)</b> , Maitai 2 Mathematical and computational challenges in interdisciplinary bioscience: efficient approaches for interrogating stochastic models of biological processes (#8, p27) <i>Chair: Matthew Simpson</i> Maitai 2				
	Waimea- McNabb session	Wairau	Riwaka	Heaphy	
	<i>Chair: Mark Flegg</i>	<i>Chair: Luke Fullard</i>	<i>Chair: Boris Baeumer</i>	<i>Chair: Chris Green</i>	
10:00–10:20	<b>Gayani Tennakoon*</b> Collective motion with excluded-volume effects (#188, p119)	<b>Graeme Wake</b> Why are our pine trees going red? The problem of Red Needle Cast (#199, p125)	<b>Suha Al-Ali*</b> Free surface shape due to a line sink in an unconfined, vertical duct containing a porous medium (#1, p24)	<b>Paul Keeler</b> Electromagnetic signal propagation with randomness (#97, p73)	<b>Eduardo Altmann</b> Generalized entropies and the distance between scientific fields (#2, p24)
10:20–10:40	<b>Shawn Means</b> Weaving a tangled web: neurons and networks (#128, p89)	<b>Graham Weir</b> Magnetic field from a block neodymium magnet (#204, p128)	<b>Conway Li*</b> Corner rounding and roughness in dip-coating applications (#109, p79)	<b>Lisa Reischmann*</b> Extensions of the Cahn–Hilliard equation: modelling and simulation of coupled phase-separation processes (#163, p107)	<b>Pamela Burrage</b> Integrated approaches for stochastic chemical kinetics (#23, p35)
10:40–11:00	<b>Adarsh Kumbhari*</b> The importance of mitochondrial fission and fusion in a beating heart cell (#103, p76)	<b>Philip Laird</b> Simulation of reduction of train transit times and energy use from track upgrades (#106, p77)	<b>Harinadha Gidituri*</b> Dynamics of a fully wetted Marangoni surfer at the liquid-gas interface (#66, p57)	<b>Steve Taylor</b> An initial-boundary value functional differential equation problem arising in a cell division model (#186, p118)	<b>Markus Neuhaeuser</b> Pseudo-precision and rank tests (#139, p94)
11:00–11:20	Morning tea				

## Wednesday morning continued

	Maitai 2	Waimea- McNabb session	Wairau	Riwaka	Heaphy
	<i>Chair:</i> Oliver Maclaren	<i>Chair:</i> Graeme Wake	<i>Chair:</i> Stephen Joe	<i>Chair:</i> P. Broadbridge	<i>Chair:</i> Nalini Joshi
11:20–11:40	<b>Alys Clark</b> Early pregnancy maternal-fetal interactions: Insights from an agent based model (#34, p41)	<b>Troy Farrell</b> Towards accurate real-time control of lithium ion batteries (#52, p50)	<b>Matthew Tam</b> A new descent algorithm in nonlinear optimisation (#185, p118)	<b>Dilruk Gallage*</b> Solution for 4th-order nonlinear axisymmetric surface diffusion by inverse method (#62, p55)	<b>Naoyuki Ishimura</b> On a copula-based conditional value at risk (#84, p66)
11:40–12:00	<b>Cailan Jeynes-Smith*</b> Ultrasensitivity in a reversible covalent modification cycle with positive autoregulation (#89, p69)	<b>Bruce van Brunt</b> The Cauchy problem for functional differential equations (#214, p133)	<b>Andrew Phair*</b> Image reconstruction for MRI with a rotating RF coil (#155, p103)	<b>Luke Bennetts</b> Nonlinear waves on metamaterial chains (#13, p30)	<b>Sean Dawson*</b> Quantum monodromy and symplectic invariants of the spheroidal harmonics system (#43, p45)
12:00–12:20	<b>Jennifer Flegg</b> Infection in surgical wounds: bacteria versus immune cells (#56, p52)	<b>John Burnell</b> Geothermal reservoir modelling - challenges and achievements (#21, p34)	<b>Ursula Weiss*</b> Shape optimization by homogenization of an electromagnetic emission sensor plate (#205, p128)	<b>Andrew Cullen*</b> Exploring nonlinear wave equations through a novel fast ODE solver (#42, p45)	<b>Diana Nguyen*</b> Integrable systems arising from separation of variables on S3 (#141, p95)
12:20–12:40	<b>Ronél Scheepers*</b> A compartment model of cholesterol regulation in the retina (#171, p111)	<b>Mary Myerscough</b> A structured population model for lipid accumulation in macrophages (#138, p94)	<b>Andrew Eberhard</b> A fixed point operator in discrete optimisation (#50, p49)	<b>Fabien Montiel</b> Transport equation models for water waves in ice-covered oceans (#132, p91)	<b>Fareeda Begum*</b> Counterparts of the Schwarz Lemma for univalent holomorphic functions on an annulus (#10, p28)
12:40–1:00	<b>Murk Bottema</b> Quantifying irregular shape (#17, p32)	<b>Robert McKibbin</b> Estimating airflow turbulence scales from gas tracer data (#127, p88)	<b>Chayne Planiden</b> The Moreau envelope, proximal mapping and derivative-free VU-algorithm (#156, p103)	<b>Scott McCue</b> Hole-closing problem for the Porous-Fisher equation (#126, p88)	<b>Christopher Green</b> Harmonic measure distribution functions for slit domains on spherical and toroidal surfaces (#72, p60)
1:00–2:00	Lunch				



Wednesday afternoon					
2:00–2:50	<b>Invited: Martin Wechselberger (University of Sydney), Maitai 2</b> The geometry of excitability in multiple (time-)scale problems (#203, p127) <i>Chair: Adelle Coster</i>				
	Wairau	Waimea	Riwaka	Heaphy	
	<i>Chair:</i> Wang Jin	<i>Chair:</i> Phillip Brown	<i>Chair:</i> Richard Clarke	<i>Chair:</i> David Simpson	<i>Chair:</i> Peter Taylor
3:00–3:20	<b>Oleksii Matsiaka*</b> Mechanistic and experimental models of cell migration reveal the importance of cell-to-cell pushing (#124, p86)	<b>James McCaw</b> Metapopulation models for macroparasitic disease transmission (#125, p87)	<b>Alexander Tam*</b> A multi-phase extensional flow model for sliding motility in yeast biofilms (#184, p117)	<b>Sam Jelbart*</b> Canard explosion in two-stroke relaxation oscillators (#86, p67)	<b>Zhou Zhou</b> Transport plans with domain constraints (#212, p132)
3:20–3:40	<b>Jessica Crawshaw*</b> A computational model of vascular deformation (#40, p44)	<b>Robert Cope</b> Optimal early epidemic surveillance design for Bayesian model discrimination of novel pathogens (#37, p42)	<b>Jim Denier</b> Modelling blood flow through umbilical cord (#44, p46)	<b>Valerie Jeong*</b> Heteroclinic networks with noise and input (#88, p68)	<b>Edward Kim*</b> Backward stochastic equations and applications (#99, p74)
3:40–4:00	Afternoon tea				

Wednesday afternoon continued					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair:</i> H. Tronnolone	<i>Chair:</i> James McCaw	<i>Chair:</i> Tim Stokes	<i>Chair:</i> Dion O'Neale	<i>Chair:</i> Bruce van Brunt
4:00–4:20	<b>Nathan Pages*</b> Multiple time scales in a calcium dynamics model. (#151, p101)	<b>Michael Lydeamore</b> Estimating epidemiological quantities for skin sores in remote Australian communities using interval-censored data (#116, p82)	<b>Sergey Suslov</b> Peculiarities of magnetic control of heat transfer in ferrofluids (#181, p116)	<b>Caroline Wormell*</b> Particle approximation of forward-backward stochastic differential equations (#207, p129)	<b>Angus Lewis*</b> Modelling electricity prices with regime switching models (#108, p78)
4:20–4:40	<b>Rowena Ball</b> Uncool CATs: Differential scanning calorimetry can overestimate critical ambient temperatures (#9, p28)	<b>Saber Dini</b> Quantifying the impact of recurrent malaria infections on hospital readmissions and death (#45, p46)	<b>Luke Fullard</b> Head in the sand: Modelling the flow of discrete grains as a continuum (#60, p54)	<b>Bernd Krauskopf</b> Excitability and feedback: to pulse or not to pulse? (#102, p75)	<b>Guiyuan Ma</b> Optimal investment and consumption under a continuous-time cointegration model with exponential utility (#118, p83)
4:40–5:00	<b>Wang Jin</b> Modelling SDF-1/CXCR4 regulated in vivo homing of therapeutic mesenchymal stem/stromal cells in mice (#90, p69)	<b>Steffen Docken</b> Quantifying the variability in the viral growth of SIV during infection (#47, p47)	<b>Edward Green</b> Connections between transversely isotropic fluids and active suspensions (#71, p60)	<b>Alex James</b> Gender and Society (#85, p67)	<b>Xiaoping Lu</b> A PDE approach for weather derivative pricing (#114, p81)
5:00–5:20	<b>Peter Taylor</b> A model for cell proliferation in a developing organism (#187, p119)	<b>Joshua Ross</b> Optimized prophylactic vaccination in metapopulations (#168, p109)	<b>Ravindra Pethiyagoda</b> Time-frequency analysis for wakes of accelerating ships (#154, p102)	<b>Carlo Laing</b> Reduced models for networks of model neurons (#105, p77)	<b>Song-Ping Zhu</b> An alternative form used to calibrate the Heston model (#213, p132)
6:30	Conference dinner: pre-dinner drinks – Riwaka Foyer and Courtyard				
7:00	Conference dinner – Maitai 1				

Thursday morning						
9:00–9:50	<b>Invited: Anja Slim (Monash University), Maitai 2</b> Trapped underground: the fluid dynamics of sequestered carbon dioxide (#174, p112) <i>Chair: Vivien Kirk</i>					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy	
	<i>Chair: R. Chisholm</i>	<i>Chair: Hyuck Chung</i>	<i>Chair: Fabien Montiel</i>	<i>Chair: Xiaoping Lu</i>	<i>Chair: Peter Johnston</i>	
10:00–10:20	<b>Pengxing Cao</b> Quantifying the <i>in vivo</i> gametocyte kinetics of <i>P. falciparum</i> with controlled human malaria infection data (#26, p37)	<b>Sara Loo</b> Investigating selection pressure on single nucleotide polymorphisms in bacterial populations (#113, p81)	<b>Dimetre Triadis</b> An analytical solution for groundwater infiltration under ponded surface conditions (#192, p122)	<b>Justin Tzou</b> Anomalous scaling of Hopf bifurcation thresholds of localized spot patterns in 2-D (#195, p123)	<b>Philip Broadbridge</b> The partially integrable nonlinear diffusion equation with diffusivity $1/u$ (#18, p32)	
10:20–10:40	<b>Michael Watson</b> A multiphase model of fibrous cap formation to investigate the effect of growth factor competition (#202, p127)	<b>Thi Hoai Linh Nguyen</b> Animal swarming models using stochastic differential equations: a brief review (#142, p96)	<b>Kenji Tomoeda</b> Appearance and disappearance of the region occupied by the flow through a boundary (#189, p120)	<b>Hinke Osinga</b> Bursting in the presence of a locally separating manifold (#149, p100)	<b>Frances Kuo</b> Application of Quasi-Monte Carlo methods to neutron diffusion and wave propagation in random media (#104, p76)	
10:40–11:00	<b>Mike Chen</b> Chondrogenesis strategies in layered tissue engineering constructs (#30, p39)	<b>Stuart Johnston</b> The impact of short- and long-range perception on population movements (#92, p70)	<b>Kyoko Tomoeda</b> Toward a mathematical analysis for a model of suspension flowing down an inclined plane (#190, p120)	<b>Cris Hasan</b> Existence and stability of periodic traveling waves: who will prevail in a rock-paper-scissors game? (#75, p62)	<b>Thomasin Lynch</b> Advection problems with spatially varying velocity fields: Analytical and numerical solutions in 1D (#117, p83)	
11:00–11:20	Morning tea					

Thursday morning continued					
	Maitai 2	Waimea	Wairau	Riwaka	Heaphy
	<i>Chair:</i> Stuart Johnston	<i>Chair:</i> Alex James	<i>Chair:</i> Larry Forbes	<i>Chair:</i> Andrew Eberhard	<i>Chair:</i> Pamela Burrage
11:20–11:40	<b>Dietmar Oelz</b> Microtubule dynamics, kinesin-1 sliding, and dynein action drive growth of cell processes (#146, p98)	<b>Danya Rose</b> Who cares? Or, when does paternal care arise in primates? (#167, p109)	<b>Andrey Pototsky</b> Vertically vibrated floating drops (#159, p105)	<b>Daisuke Tagami</b> A incomplete balancing domain decomposition method for magnetostatic problems (#183, p117)	<b>Kenji Kajiwara</b> Space curve extensions of Log-aesthetic curves in industrial design by integrable geometry (#95, p72)
11:40–12:00	<b>Richard Clarke</b> Determining how the microstructure of the glycocalyx layer affects its bulk properties (#35, p41)	<b>Christopher Baker</b> Learning from optimisation to improve invasive species management (#7, p27)	<b>Larry Forbes</b> Light fluids rising through heavy ones (#59, p53)	<b>John Butcher</b> 45 years of B-series (#24, p36)	<b>Kevin Burrage</b> The Toeplitz part of a wave is the reflection-less part: an analysis based on Bessel functions (#22, p34)
12:00–12:20	<b>Shakti Menon</b> A unified mechanism for spatiotemporal patterns in somitogenesis (#129, p89)	<b>Matthew Holden</b> Can population dynamic models improve species occurrence predictions? (#80, p64)	<b>Tim Stokes</b> Unsteady free surface flows into a submerged ring sink. (#177, p114)	<b>Takuya Tsuchiya</b> Hadamard variational formulae and its applications for iterative numerical schemes (#194, p123)	<b>Boris Baeumer</b> Modelling deposition and erosion of clay in an aquifer (#6, p26)
12:20–1:10	<b>Invited: Ian Sloan (University of New South Wales), Maitai 2</b> Using maths to probe the maps - are the cosmic microwave background maps really random fields? (#175, p113) <i>Chair: Frances Kuo</i>				
1:10–1:20	Closing remarks – Maitai 2				
1:20–2:20	Lunch				