

QANZIAM MEETING (Tuesday 4th June, 2019) Room 204 University of Queensland Building 45 (Mansergh Shaw)

8.30-9.00	Registration	
9.00-9.05	Welcome	
9.05-9.20	CLAUDIO ARANCIBIA- IBARRA*	Spatial patterns in a diffusive Holling–Tanner predator-prey model with weak Allee effect on the prey
9.20-9.35	CHANTELLE BLACHUT*	Detecting fundamental changes to coherent structures in non-autonomous dynamical systems
9.35-9.50	ALEXANDER BROWNING*	A Bayesian sequential learning framework to parametrise a model of melanoma invasion into human skin
9.50-10.05	NICHOLAS BUTTLE*	Computation and analysis of gravity-capillary waves
10.05-10.20	JOSHUA CALCUTT*	Convective transport of capillary loops in the viable skin
10.20-10.35	SOLENE HEGARTY- CREMER*	A cell-based particle method for modelling hyperbolic curvature flows in biological tissue growth
10.35-11.00	Morning tea	
11.00-12.00	Invited speaker BRONWYN HAJEK	Analytic solutions for reaction-diffusion equations with applications to calcium fertilisation waves
12.00-12.15	ABBISH KAMALAKKANNAN*	Utilising Generalised Polynomial Chaos to refine the design of an electrode array to measure cardiac conductivities
12.15-12.30	JUSTIN KENNEDY*	Detection of parametric roll resonance using Bayesian Discrete-Frequency model selection
12.30-12.45	MATTHEW KING*	Dissipation in a quartic potential
12.45-1.00	YIFEI LI*	Travelling wave solutions in a negative nonlinear diffusion-reaction model
1.00-2.00	Lunch	
2.00-2.15	NATHAN MARCH*	A fast semi-analytical homogenization method for block, locally-isotropic heterogeneous media
2.15-2.30	LIAM MORROW*	A flexible numerical scheme for investigating non-standard Hele-Shaw configurations
2.30-2.45	RYAN MURPHY*	An individual-based mechanical model of cell movement in heterogeneous tissues and its coarse-grained approximation
2.45-3.00	DILAN PATHIRANA*	Possible causes of pre- and post-treatment observations in Coarctation of the Aorta patients
3.00-3.15	NIZHUM RAHMAN*	Travelling wave solutions of a 1D model for collective cell migration in an epithelial layer
3.15-3.30	JESSE SHARP*	Optimal control of acute myeloid leukaemia
3.30-3.45	ANUDEEP SURENDRAN*	Spatial structure arising from chase-escape interactions with crowding
3.45-4.15	Afternoon tea	
4.15-4.30	SEAN VITTADELLO*	Mathematical models of cell proliferation in experiments exhibiting cell-cycle synchronisation
4.30-4.45	DAVID WARNE*	Accelerating Bayesian inference for stochastic models by preconditioning with approximate continuum limit descriptions
4.45-5.00	ANDREW WILKINS	Modelling mosquito gene drives in Africa
5.00-5.30	QANZIAM Meeting	