Timetable

MONDAY

0930	Coffee and registration in University Hall													
1115	Welcome and opening by Vice-Chancellor Max Lu													
1130					Karen Willcox - Stewar	tson Memorial Lecture (in Lecture Thea	atre, Rik Medlik Building)							
					Data to decisions via add	aptive reduced models and multifidelity	uncertainty quantification							
1230		Lunch in University Hall												
	LECTURE THEATRE A	LECTURE THEATRE B	LECTURE THEATRE D	LECTURE THEATRE E	LECTURE THEATRE F	LECTURE THEATRE G	LECTURE THEATRE H	LECTURE THEATRE J	LECTURE THEATRE L	22AA04	24AA04			
	Misc fluids	Symmetries and conservation laws	Network science	Acoustic waves	The dynamics of evaporation	Asymptotic methods in the applied sciences	Inverse problems and imaging	Recent progress in the mathematical theory of fluid dynamics	Dynamical systems and applications	Population models	Elasticity			
1400	Douglas Addy Diffuse-interface modelling of flows in porous media	Peter Hydon A beginner's guide to symmetries and conservation laws	Caroline Colijn Trees and networks in understanding pathogen transmission	Georgia Lynott Scattering from a row of aligned cylinders of arbitrary cross-section; tail-end asymptotics for the periodic Green's function	Matthew Saxton The role of kinetic effects in droplet evaporation	John King Organisation of vascular pattern in plant roots	Mohammad Golbabaee Fast compressed quantitative MRI	Daniel Coutand Finite-time singularity formation for Euler interface problems	Marianna Cerasuolo Dynamics of human prostate cancer cells in response to low androgen levels	Rowena Ball The fundamental equation of life	Oleksandr Menshykov Numerical modelling of layered camposite pipes under bending and pressure			
1420	Koji Ohkitani A Cole-Hopf-Feynman-Kac formula and quasi-invariance for the Navier- Stokes equations		Samuel Johnson Trophic coherence: what it is and why it matters	Jonathan Stone Complex aeroacoustic catastrophes: fangs and the memory of singularities past	Alexander Wray Low-order modelling of evaporation in asymmetric drops				Damian Smug Predicting financial stock crashes using ghost singularities	Lydia Rickett Sense and Sensitivity: using mathematical modelling to understand how a plant remains responsive to bacteria	Daniel Peck Resolution of the threshold fracture energy paradox for solid particle erosion			
1440	Maxim Zyskin Moving boundary problem of shape dependent oxidation of nanosized metal particle	Daniel Ratliff Multiphase wavetrains, conservation laws and the emergence of nonlinear PDEs	Peter Ashwin Geometric dynamics of the endoplasmic reticulum	Eman Aljabali Effect of relaxation on sonic booms	Stephen Wilson The lifetime of evaporating droplets with related initial and receding contact angles	Chris Howls Invisible catastrophes: when to turn an asymptotic blind eye	Hanne Kekkonen Large noise in variational regularisation	Franck Sueur On the controllability of the Navier- Stokes equations	Edmund Barter Meta-food-chains as a many-layer epidemic process on networks	Jasmina Panovska-Griffiths Re-evaluating the vaccination against Haemophilus influenzae type b in England: insights from a mathematical model	Nikolai Gorbushin Steady-state fracture of a double chain under a moving load			
1500	Fatemah Al Mukahal Non-Newtonian effects and Taylor dispersion in rivulet flow	Elizabeth Mansfield Discrete conservation laws and moving frames	Andrew Mathematical problems in network data analysis for cyber defence	Nicholas Ovenden Ultrasound propagation through contrast agent suspensions	Dominic Vella Evaporation in elastocapillary aggregation				Farzad Fatehi Deterministic and stochastic modelling of pathogen-induced autoimmunity	Vasiliki Bitsouni Modelling and analysis of TGF-beta pathway on tumour progression and cell adhesion	Gennady Mishuris Energy release rate in hydraulic fracture: can we neglect an impact oj the hydraulically induced shear stress?			
1520	Adam Townsend Explaining shear-thickening with friction	Tristan Pryer Structure preserving numerical schemes and exact solutions for the mKdV system		Wade Parsons Acoustic-gravity waves generated by impulsive sources at the ocean	Rodrigo Ledesma-Aguilar Lattice-Boltzmann simulations of evaporation dynamics	Philippe Trinh Exponential asymptotics, self- similarity and thin-film rupture	Clarice Poon The parameter estimation problem under radial lines sampling	Alessandro Morando Approximate current-vortex sheets near the onset of instability	Kevin Minors Sexual conflict accelerates species invasion	Stephen Baigent Convexity of invariant manifolds in competitive population models	Mitchell Berger Averaging the strain in elastic equilibria			
1540	Eun-Jin Kim Modeling self-organised shear flows in 0D, 1D and 2D			Hilary Ockendon Two-dimensional Wave Propagation in a Layered Medium	Arandeep Uppal Drying of sessile thixotropic droplets]			Shreya Sehgal A numerical bifurcation analysis of spiral waves					
1600						Coffee in University Hall								
1630					Peter G	rindrod (in Lecture Theatre, Rik Medlik	Building)							
					Some cha	llenaes, threats and opportunities for M	athematics							
1730					Poster ses	sion and drinks reception in Ur	iversity Hall							
1900						Buffet in Hillside								

TUESDAY AM

	LECTURE THEATRE A	LECTURE THEATRE B	LECTURE THEATRE D	LECTURE THEATRE E	LECTURE THEATRE F	LECTURE THEATRE G	LECTURE THEATRE H	LECTURE THEATRE J	LECTURE THEATRE L	22AA04	24AA04	39AA04
	Electro-magnetic waves	Why I compute - in honour of	Instability and transition shear	Cells and biomechanics	Lighthill-Thwaites	Thin films	Quantum theory information	Recent progress in the	Spatial localisation in fluids	Quantitative evolutionary	Multi-scale systems: from	Inverse problems LMS II
		Robert Rosner's 70th birthday	flows					mathematical theory of fluid		biology	analysis to numerics to	
0900								dynamics			applications	
	Deepthee Ramapriya	Robert Rosner	Adam Butler	Oliver Jensen	Oliver Allanson	Eugene Benilov	Matteo Lostaglio	David Gerard-Varet	Isabel Mercader	Florence Débarre	Pietro Asinari	Franz Király
	Wigner Function approach to	Why do I compute?	The modulation and excitation	A vertex-based model relating	From one-dimensional fields to	Stability of thin liquid curtains	Quantum coherence, time-	Stability of boundary layer	Localised binary convection in	Fidelity of parent-offspring	Multi-scale modelling of	Model identification,
	analyse near-to-far field		of stationary crossflow	cell shape and mechanical	Vlasov equilibria: theory and		translation symmetry and	flows	a slightly inclined rectangular	transmission and the evolution	nanoparticle suspensions	prediction and validation in
	propagation		vortices by surface roughness	stress in an epithelium	application of Hermite polynomials		thermodynamics		cavity	of social behaviour in structured populations		inverse problems
0020		-					-					
0920	Valon Blakaj		Ming Dong	Linda Irons	Nabil Fadai	Michael Dallaston			Cédric Beaume			
	Propagation of		On generation of instability	Discrete and continuum	Asymptotic analysis of a	Destabilisation of self-similar			From convectors to complexity			
	electromagnetic waves in		modes in the wake if a trailing	modelling of cell-ECM	drying model motivated by	rupture solutions in a thin film			in doubly diffusive convection			
	large scale environments - an		edge	adhesion	coffee bean roasting	equation						
	operator approach											
0940												
	Matthew Nethercote	Michael Proctor	Xuesong Wu	Simon Pearce	Duncan Joyce	Radu Cimpeanu	Reevu Maity	Vincenzo Sciacca	Yasumasa Nishiura	Thomas Ezard	Roland Roth	Martin Benning
	Electromagnetic wave	Quasi-cyclic behaviour in non-	Nonlinear evolution and	Microtubule curling	An integral equation method	Long-wave analysis and	Extracting a quantum distance	Long time behaviour for a	Dynamics of spatially localised	Is the world full of species?	DFT study of a system with	Gradient descent in a
	alification of perfect electric	linear simulations of the shear	secondary instability of Gortler		for the homogenization of	Control of the viscous Rayleigh-	from relative kenyl entropy	aissipative snallow water	patterns in binary fiulas		competing interactions	generalised Bregman aistance
	arbitrary linear polarization	aynamo	stream vortices		media: antiplane elasticity	fields	measures	moder				Jrumework
	arbitrary micar polarization		stream vortices		meand, antipiane clasticity	jielus						
1000	On: Schnitzor		Elona Maronsi	Arshad Kamal	Doiroann O'Kiely	Abdulwahod Alshaikhi			Aluaro Mocoguor			
	Wayes in slowly varying hand		Nonlinear evolution of	Aisilau Kalilai	Edge behaviour in the glass	Existence and stability of			Creation and anihilation			
	aan media		unsteady streaks in a		sheet redraw process	stationary solutions of a thin			hifurcation mechanisms of			
	gap meana		compressible boundary laver	viscoelastic environments	sheet rear an process	film equation with Derigauin			localised travelling pulses in			
			subject to free-stream vorticity			disjoining pressure			shear flows			
1020	Stewart Haslinger	David Hughes	Priya Subramanian	Alexander Erlich	Zachary Wilmott	David Sibley	Benjamin Yadin	Paola Trebeschi	Yohann Duguet	Laurel Fogarty	Alice Harpole	Oliver Dorn
	Active cloaking for flexural	Strong field dynamo action in	Nonlinear spatio-temporal	Growth dynamics of tubular	The effect of ions on the	Capturing fluid structure in	Quantum processes which do	Local existence of MHD	Oblique stripes of turbulence	The mathematics of cultural	Multiscale modelling of	Level set and sparsity
	waves in a pinned Kirchhoff	rotating convection with no	patterns in inclined layer	structures	motion of an oil slug in a	thin-film models for the	not use coherence	contact discontinuities	in plane Poiseuille flow	accumulation	burning on neutron stars	regularisation for an inverse
	plate	inertia	convection		charged capillary	motion of terraced drops						problem of the 2D time-
							-					dependent transport equation
1040			Ashley Willis	Carina Dunlop		Matthew Moore					Antonio Russo	in optical confography
			Stabilisation of finite-	Differential contractility as a		Ice formation within a thin film					Transport properties at fluids	
			amplitude solutions in shear	new mechanism for		flowing over a flat plate					interfaces: macroscopic	
			flow	mechanotransduction in							relations for microscopic	
			-	epithelial cells							phenomena	
1100						Coffee in U						
1130						Cottee in Ui	niverSity Hall					
						Maternal offects and	environmental change					
1230							niversity Hall					

TUESDAY PM

	LECTURE THEATRE A	LECTURE THEATRE B	LECTURE THEATRE D	LECTURE THEATRE E	LECTURE THEATRE F	LECTURE THEATRE G	LECTURE THEATRE H	LECTURE THEATRE J	LECTURE THEATRE L	22AA04	24AA04	39AA04
	Density function theory	Why I compute - in honour of Robert Rosner's 70th birthday	Instability and transition shear flows	Ice-fluid coupling	Applying maths to public health	Asymptotic methods in the applied sciences	Quantum theory information	Recent progress in the mathematical theory of fluid dynamics	Applied delay differential equations	Quantitative evolutionary biology	Elastodynamics	Structure in time and space
1400	Rory Mills Dynamical density functional theory with a short range hydrodynamic interaction	Joanne Mason The fun of simulating MHD turbulence	Andrea Cassinelli Streak instability in near-wall turbulence revisited	Alexander Korobkin Water entry problem in the presence of floating ice flows	Katherine Atkins Modelling influenza transmission and vaccination for public health decision- making	Adri Olde Daalhuis Computation of the coefficients appearing in the uniform asymptotic expansions of integrals	Marco Cianciaruso Generalised geometric quantum speed limits	Anna Mazzucato The vanishing viscosity limit in porous media	Konstantin Blyuss Time-delayed model of RNA interference	Mark Broom Modelling evolution in structured populations using multiplayer games	Giorgio Carta Unidirectional localisation and control of waves in chiral lattices: the DASER effect	Pier Luigi Dragotti FRESH - An algorithm for resolution enhancement of piecewise smooth signals and images
1420	Miguel Duran-Olivencia Dynamic density functional theory for phase transitions: non-classical nucleation pathways in colloidal fluids		Christian Thomas Globally unstable behaviour in the rotating-disc boundary layer	Davide Bella Freezing droplets on solid surfaces with arbitrarily complex geometry					Thilo Gross Dynamic motifs in networks of delay-coupled delay equations		Peter Wootton Asymptotic Modelling of the Rayleigh Wave field caused by a regular array of surface resonators	Adrian Bowman Surfaces, shapes and anatomy
1440	Peter Yatsyshin Bifurcations of equilibrium metastable states of inhomogeneous classical fluids in contact with patterned substrates	Steven Tobias Why I computestatistics of astrophysical flows and dynamos	Jonathan Healey Global instability of mixing layers over sloping sea beds	David Hammond Impact ice growth and properties	Anotida Madzvamuse A novel approach for whole cell tracking based on geometric partial differential equations	Jon Chapman Analysis of Carrier's problem	Fabio Anza Information theory and observable thermalisation	Bin Cheng Error estimates and 2nd order corrections to approximate fluid models	Jan Haskovec Synchronization in multiagent systems with reaction delays and multiplicative noise	James Allen Social influence increases cooperation in the public goods game on networks	Domenico Tallarico On the coupling of shear and pressure waves in a triangular lattice elastic lattice containing tilted resonators	Carola-Bibiane Schönlieb Joint motion estimation and image reconstruction
1500	Matthew Russell Fluctuations in solute transport in a spatially disordered environment			Emilian Parau Numerical study of solitary wave propagation in a fragmented ice plate					Yulia Kyrychko Dynamics of neural systems with discrete and distributed delays		Michael Gomez Over-damped elastic `snap- through'	Giacomo Albi Mean-field control hierarchy
1520	Ben Goddard Dynamical density functional theory and hydrodynamic interactions in confined systems	Paul Bushby Simulating convectively-driven astrophysical dynamos		Harold Heorton The response of the sea ice edge to atmospheric and oceanic jet formation	Timothy Kinyanjui Vaccine induced herd immunity for control of RSV	C. John Chapman An asymptotic method for long waves in a curved layer	Davide Girolami Characterising the structure of multipartite correlations	Francesco Gargano Singular behaviour for regularised vortex sheet motion	Jan Sieber Normal forms in delay- differential equations with state-dependent delays	Belgin Seymenoglu Invariant manifolds of a model from population genetics	Robert Davey An efficient semi-analytical scheme for determining the reflection of Lamb waves in a semi-infinite waveguide	Huiling Le Smooth curve fitting to 3D shape data
1540				Richard Porter Wave interaction with floating ice sheets					Daniel Ward Mathematical modelling of lineage commitment of human hematopoietic progenitors in early erythroid culture		Vladyslav Danishevskyy Macroscopic dynamic models for periodically heterogeneous structures	Sofia Olhede Extracting rapidly-varying oscillations
1600					•	Coffee in Ur	niversity Hall	•				
1630				Challenges for cl	imate and weather prediction in	Beth Wingate (in Lecture T the post-Moore's-Law era of cor	heatre, Rik Medlik Building)	ne-parallelism and the role of lon	g-time dynamics			
1800		Gala dinner in Hillside										

WEDNESDAY AM

	LECTURE THEATRE A	LECTURE THEATRE B	LECTURE THEATRE D	LECTURE THEATRE E	LECTURE THEATRE F	LECTURE THEATRE H	LECTURE THEATRE J	LECTURE THEATRE L	22AA04	24AA04
	Free-surface and interfacial flows	Symmetries and conservation laws	Pipe and channel flows	Tissue engineering I	Biorhythms	Geophysical fluid dynamics	Recent progress in the mathematical theory of fluid dynamics	Mathematical modelling of crime	Modelling epidemics in human and plant populations	Inverse problems and heat transfer
0900	Ying Huang Coupled sloshing in a 2-vessel system	Colin Cotter Discretising the action: from variational integrators to singular solutions of nonlinear PDEs	Andrew Croudace Unsteady flow of thixotropic fluid in a slowly varying pipe	Andrew Krause Analysis of lattice and continuum models of bioactive porous media	Adam Bridgewater Mathematical investigation of diabetically impaired ultradian oscillations in the glucose insulin regulation	Jean Reinaud Tripolar vortices in a two-layer quasi-geostrophic flow	Michele Bartuccelli Explicit estimates on the torus for the sup-norm and the problem of the 'crest factor' of solutions of the two- dimensional Navier-Stokes	Craig Gilmour Self-exciting point processes and their applications to crime data	Istvan Kiss Generalization of pairwise models to non-Markovian epidemics on networks	Kai Cao Inverse coefficient problems in heat transfer
0920	Dane Grundy Decay of solitary waves, a comparison between asymptotic and numerical results		Graham Benham Shear layers in channel flow	Ahmed Ismaeel Mathematical modelling of photothermal therapy	Matthew Bailey The hidden rhythm in the sleep patterns of the common vole	Sean Cleator Reconstructing ice-age palaeoclimates using model inversion and data interpolation	equations	Naratip Santitissadeekorn Sequential data assimilation for urban crime models	Louise Dyson Household modelling of Yaws data indicates that case finding and contact tracing my be unsuccessful at disease eradication	Yujun Qiao Analysis of multiplicative regularisation for inverse problems
0940	Konstantin Ilin Free-surface waves on a vibrating fluid layer	John King H Stochastic blow up	Danyang Wang The energetics of flow in flexible channel	Niall McInerney A mathematical model of a thermoresponsive drug delivery device	James Preston Modelling the dynamics between pathogens and the immune system, with emphasis on EPEC	Yue-Kin Tsang Probabilistic parametrization of condensation in coarse- grained moisture transport models	Tao Wang Nonlinear stability of relativstic vortex sheets in two spatial dimensions	Sally Faulkner Geographic profiling in biology	Nakul Chitnis Mathematical modelling of the transmission dynamics of opisthorchis viverrini	Vladimir Turetsky On solvability of linear- quadratic differential game for a heat equation
1000	Mat Hunt Free surface flows in electrohydrodynamics with constant vorticity	Maxim Zyskin H Transformation groups and discrete structures in continuum description of defective crystals	Kevin Devine Oscillation mark formation in steel casting	Andrey Melnik Perspectives on constitutive models for soft tissues	Leo Turner Nonlinear dynamical system for prostate cancer cell transdifferentiation	William Booker Internal wave attractors in stratified fluids		Michael Tsardakas A data-driven approach to modelling serious and minor crime	Lara Gosce Modelling latent tuberculosis infection	Ferran Brosa Planella Instability in the self-similar motion of a planar solidification front
1020	Benjamin Aymard Multiphase flows in confinement with complex geometries	Francesco Giglio Integrable nematic liquid crystals	Edmund Chadwick Using drag Eulerlets	Xin Zhuan Coupled agent-based and FE modelling of left ventricle post myocardial infarction	Tim Hurst Approximating non-adiabatic transitions in two-dimensional quantum molecular dynamics	Usama Kadri Tsunami detection and mitigation	Marco Sammartino Vortex layers of small thickness	Rafael Prieto Curiel The concentration of victimisation and criminality	Michael Jeger Plant virus transmission pathways: the evolution of virulence and mutualism	Rudolf Kohulak Freeze-drying, Stefan problems and level set methods
1040	Matt Turner Time-dependent conformal mappings with applications to nonlinear sloshing problems		Thomas Ward Predicting the onset of high- frequency self-excited oscillations in a channel with an elastic wall		Philip Aston Feature extraction from a blood pressure signal based on attractor reconstruction	Stephen Griffiths The limiting form of symmetric instability in geophysical flows		Toby Davies Where next for the mathematical modelling of crime?	Ryan Sharp How a competing endemic pathogen strain affects the dynamics and control of an invading strain in a vegetatively propagated crop	Matthias Ehrhardt Faster PET reconstruction with a stochastic primal-dual hybrid gradient method
1100					Coffee in Ur	niversity Hall				
1130					Ingrid Daubechies (in Lecture	Theatre, Rik Medlik Building)				
1230					Lunch in Un	iversity Hall				

WEDNESDAY PM

	LECTURE THEATRE A	LECTURE THEATRE B	LECTURE THEATRE D	LECTURE THEATRE E	LECTURE THEATRE F	LECTURE THEATRE L	22 AA04	24 AA04		
	Network science	Why I compute - in honour of Robert Rosner's 70th birthday	Flow stability, boundary layers and bubbles	Tissue engineering II	Asymptotics	Dynamical systems and applications	Application of string theory	Novel applications		
1330	Ginestra Bianconi Multilayer networks: a new framework for complex systems	Matthew Browning Magnetism and dissipation in global simulations of convective stars	Pietro Servini Roughing up wings: A promising technique in laminar flow control	Tuoi Vo Modelling drug elution from polymer-free drug-eluting stents with microporous surfaces and drug-filled stents	Michael Nieves Asymptotic analysis of solutions to transmission problems in solids with many inclusions	Hassan Alkhayuon Rate-induced tipping with periodic orbits	Christian Saemann How category theory simplified my life	Sam Tucker Harvey Experimental characterisation and modelling of an aeroelastic energy harvester		
1350	Thilo Gross Master stability functions reveal diffusion driven instabilities in multilayer networks		Hui Xu Destabilisation and modification of Tollmien- Schlichting disturbances by a three dimensional surface indentation	Sara Frecentese Bloch waves in blood vessels with stents	Paolo Musolino A functional analytic approach for singular perturbation problems in perforated domains	Cezary Olszowiec Heteroclinic phenomena in the coupled replicator equations, a computer-assisted approach		Gevorg Hunanyan The security market line and short sale constraints		
1410	Lucas Lacasa Identifying the hidden multiplex architecture of complex systems	Robert Kerr Trefoil knot reconnection and regularity	Rabeea Darghoth Investigating the possibility of using Oseen flow to model the boundary layer	Jessica Williams Mathematical modelling of ureteroscope irrigation	Ben Sloman Asymptotic analysis of a silicon furnace model	Thibaut Putelat Remote tactile surface texture sensing: from rats to robots		Francesca Grassetti Local and global dynamics in a discrete time growth model with VES production function		
1430	Ayalvadi Ganesh Connectivity and colouring in random geometric graphs		Robert Whittaker Stability of a twisted plateau border with line tension and bending stiffness	Matthew Coleman Using dynamic flux balance analysis to predict non-steady state behaviour in continuous metabolic models	Bwebum Dang Complexity Asymptotics	Vitaly Fain Energy growth and scattering maps for a billiard inside a time-dependent symmetric domain close to an ellipse	Mathew Bullimore Supersymmetry and representation theory	Richard Burke <i>Reduced-order approximation</i> <i>of consensus dynamics in</i> <i>networks with hybrid adaptive</i> <i>communication protocols</i>		
1450		Rainer Hollerbach A Taylor-Couette dynamo	Alex Doak Selection of axisymmetric bubbles in the limit of small surface tension	Anna Lambert Modelling cell heterogeneity using multi-dimensional population balance equations	Alan Champneys Demystifying the G-spot in contact mechanics	Denis Patterson Blow-up and asymptotic growth in Volterra equations		Srikanth Ravipati Computing contact angles from molecular dynamics simulations of nanodroplets		
1510			Oliver Kerr The onset of double-diffusive convection with evolving background temperature gradients	Hao Gao Mathematical study of active contraction in myocyte and left ventricle from health to non- ischemic dysfunction				Carl Whitfield Hydrodynamic instabilities and pattern formation in active cholesterics		
1530			Clos	ing session and prize-giving (in L	ecture Theatre, Rik Medlik Build	ding)				
1600	Conference closes									