

**2<sup>nd</sup> IMA Conference on Nonlinearity and Coherent Structures  
Monday 19 – Wednesday 21 June 2017, UEA, Norwich, UK**

PROGRAMME

<b>Monday, June 19</b>	
08:30	Registration (TEC Foyer)
09:15 - 09:25	Introduction and Welcome
	Session chair: Paul Milewski (University of Bath)
09:25 - 09:50	Dane Grundy (University of East Anglia) Decay of solitary waves, an asymptotic and numerical comparison
09:50 - 10:15	Handan Borluk (Istanbul Kemerburgaz University, Turkey) Stability of solitary waves of a generalized modified Korteweg-de Vries equation
10:15 - 10:45	Coffee Break (TEC Foyer)
	Session chair: Paul Milewski (University of Bath)
10:45 - 11:45	<b>Magda Carr (University of St Andrews)</b> <b>Experimental and numerical modelling of internal solitary-like waves</b> <b>PLENARY LECTURE</b>
11:45 - 12:10	Yeunwoo Cho (Korea Advanced Institute of Science and Technology) Experimental observation of gravity–capillary solitary waves generated by a moving air-suction
12:10 - 13:25	Lunch (TEC Foyer)
	Session chair: Mark Blyth (University of East Anglia)
13:25 - 13:50	Hadi Susanto (University of Essex) Homoclinic snaking in discrete systems
13:50 - 14:15	Rudy Kusdiantara (University of Essex) Homoclinic snaking in Cavity Solitons with saturable nonlinearity
14:15 - 14:40	Natanael Karjanto (Sungkyunkwan University, South Korea)

	Solitons in a chain of dimers with complex couplings as $\{PT\}$ -symmetric systems
14:40 - 15:05	Agissilaos Athanassoulis (University of Dundee) Penrose modes for the Nonlinear Schrödinger Equation and highly localized instabilities of irregular wavefields
15:05 - 15:30	Hideshi Yamane (Kwansei Gakuin University, Japan) Asymptotics for the focusing integrable discrete nonlinear Schrodinger equation
15:30 - 16:00	Coffee Break (TEC Foyer)
	Session chair: Peter Clarkson (University of Kent)
16:00 - 17:00	<b>Beatrice Pelloni (Heriot-Watt University)</b> <b>The effect of boundary conditions on the integrability of PDEs</b> <b>PLENARY LECTURE</b>
17:00 - 17:25	Vincent Caudrelier (University of Leeds) Towards a Hamiltonian approach to the Unified Method
17:25 - 17:50	Konstantinos Kalimeris(RICAM - Austrian Academy of Sciences) A non-local formulation of water waves with moving boundaries
17:50 - 18:15	Anastasiia Vasylchenkova (Aston University) Nonlinear Fourier Transformation: discrete spectrum methods analysis
18:20 - 20:00	Poster Session & Reception (TEC Foyer)

<b>Tuesday, June 20</b>	
	Session chair: Demetrios Papageorgiou (Imperial College London)
09:00 - 09:25	James Christian (University of Salford) Ultrannarrow Helmholtz solitons from nonlinear Maxwell's equations: the role of rotational covariance in oblique propagation problems
09:25 - 09:50	Alfred Osborne (Nonlinear Waves Research Corporation) Integrable Turbulence for Soliton and Breather Gases Using Finite Gap Theory: Applications to Ocean Surface and Internal Waves
09:50 - 10:15	Lucy Campbell (Carleton University, Canada) Nonlinear dynamics of vortex Rossby waves in a cyclonic vortex
10:15 - 10:45	Coffee Break (TEC Foyer)
	Session chair: Demetrios Papageorgiou (Imperial College London)
10:45 - 11:45	<b>Jean-Luc Thiffeault (University of Wisconsin, USA)</b> <b>Transport and mixing by viscous vortex rings</b> <b>PLENARY LECTURE</b>
11:45 - 12:10	Philip Hall (Monash University, Australia) Vortex-wave interactions in shear flows
12:10 - 13:25	Lunch (TEC Foyer)
	Session chair: Konstantinos Kalimeris (Austrian Academy of Sciences)
13:25 - 13:50	Anna Kalogirou (University of East Anglia) Interfacial instabilities in surfactant-laden two-fluid shear flows in the presence of inertia
13:50 - 14:15	Mark Blyth (University of East Anglia) Solitary waves on a ferrofluid column
14:15 - 14:40	Michael Cornish (Imperial College London) Nonlinear Instabilities on an Axisymmetric Ferrofluid Jet
14:40 - 15:05	Dmitri Tseluiko (Loughborough University) Interfacial turbulence and regularisation in electrified falling films
15:05 - 15:30	Radu Cimpeanu (Imperial College London) Nonlinear dynamics of inertia dominated multi-layer flows
15:30 - 16:00	Coffee Break (TEC Foyer)

	Session chair: Anna Kalogirou (University of East Anglia)
16:00 - 17:00	<b>Jean-Marc Vanden-Broeck (University College London)</b> <b>Nonlinear water waves</b> <b>PLENARY LECTURE</b>
17:00 - 17:25	Zhan Wang (Chinese Academy of Sciences) Stability and dynamics of capillary-gravity solitary waves
17:25 - 17:50	Prasun Ray (Imperial College London) Stability and nonlinear dynamics of gravity-driven viscoelastic film flows
17:50 - 18:15	Ruben Tomlin (Imperial College London) Control of three-dimensional waves on thin liquid films with blowing and suction
18:45 - 22.30	Conference Dinner (Sainsbury Centre for Visual Arts)

<b>Wednesday, June 21</b>	
	Session chair: Zhan Wang (Chinese Academy of Sciences)
09:00 - 09:25	Tadas Telksnys (Kaunas University of Technology, Lithuania) Application of the generalized differential operator technique for the construction of analytical solutions to nonlinear ODEs and PDEs
09:25 - 09:50	Raluca Eftimie (University of Dundee) Pattern formation in nonlocal models in cell biology
09:50 - 10:15	Heather Nelson (University of Oxford) On the Effect of Variability and Chain Length on Fermi, Pasta and Ulam Matrices
10:15 - 10:45	Coffee Break (TEC Foyer)
	Session chair: Zhan Wang (Chinese Academy of Sciences)
10:45 - 11:45	<b>Arno Kuijlaars (KU Leuven, Belgium)</b> <b>Critical phenomena in non-intersecting Brownian motions</b> <b>PLENARY LECTURE</b>
11:45 - 12:10	Federico Cornalba (University of Bath) A nonlocal stochastic Cahn-Hilliard equation
12:10 - 13:25	Lunch (TEC Foyer)
	Session chair: Radu Cimpanu (Imperial College London)
13:25 - 14:25	<b>Mariana Haragus (Université de Franche-Comté, France)</b> <b>Transverse instability of capillary-gravity water waves</b> <b>PLENARY LECTURE</b>
14:25 - 14:50	Anna Geyer (Delft University of Technology, Netherlands) Spectral stability of periodic waves in the generalized reduced Ostrovsky equation
14:50 - 15:15	Jack Keeler (University of East Anglia/University of Adelaide) Forced solitary waves with algebraic decay at critical Froude number
15:15 - 15:40	Yair Zarmi (Ben-Gurion University of the Negev, Israel) Zooming in on spatially extended wave solutions of nonlinear evolution equations
15:40 - 16:00	Coffee Break (TEC Foyer)

	Session chair: Emilian Parau (University of East Anglia)
16:00 - 16:25	Zhaosheng Feng (University of Texas Rio Grande Valley, USA) Wave solutions to Kuramoto-Sivashinsky Equation
16:25 - 16:50	Colette Calmelet (California State University, USA) Invariant Surfactant Driven Flows
16:50 - 17:15	Jonah Reeger Three Dimensional Traveling Waves in Vortex Sheets
17:15 - 17:40	Roger Khayat (University of Western Ontario, Canada) Influence of slip on hydraulic jump formation

All the talks will take place in The Enterprise Centre Lecture Theatre (TEC-LT)

**Posters:**

1. James Christian (University of Salford) Dissipative solitons of space-time-symmetrized complex Ginzburg-Landau equations: generalized nonlinearity and pulse propagation
2. Yair Zarmi (Ben-Gurion University of the Negev, Israel) A classical limit-cycle system that mimics the quantum-mechanical harmonic oscillator
3. Wedad Albalawi (Swansea University) Asymptotic behaviour of the ground state of quasilinear elliptic equation with a vanishing parameter
4. Robin Flohr (Karlsruhe Institute of Technology, Germany) A splitting approach for freezing waves
5. Berry Bakker (VU Amsterdam, Netherlands) Conservation laws in nonlocal equations
6. Aneet Narendranath (Michigan Technological University, USA) Nonlinear dynamics of liquid films: visualization through recurrence plots and stabilization strategy
7. Adam Yorkston (University of East Anglia) Steady solutions of an elastic cell in a fluid flow

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