

## UKBIM 11 Schedule

All talks take place in the Bowden Room

**Monday 10th July: Registration open from 8.30am**

Time	Speaker	Title	Session
9.00	Conference welcome: Professor Mary O'Neill, Dean of the School of Science and Technology		
9.10	J. Trevelyan	Acceleration of IGABEM for 3D elastostatics using Proper Generalised Decomposition inside a black-box Fast Multipole Method	Isogeometric BEM & Fast Multipole Methods
9.35	H. Khaki	Towards isogeometric boundary element methods based on adaptive hierarchical refinement of NURBS for 3D geometries	
10.00	Y. Sun	Evaluation of discontinuity in IGABEM modelling of 3D acoustic fields	
10.25	B. Carpentieri	Algebraic preconditioners for the Fast Multipole Method: trends and problems	Chair: Chappell
10.50 - 11.10: Coffee			
11.10	D. Lesnic	Solving the three-dimensional continuous model of electrical resistance tomography using the method of fundamental solutions and Markov chain Monte Carlo approach	Inverse Problems
11.35	R. Haunton	Nystrom-type discretisations of integral equations for inverse scattering in waveguides	
Chair: Trevelyan			
12.00 -13.00: Lunch in the Old Library			
13.00	S. Marburg	A pollution effect for BEM in acoustics	Wave Problems
13.25	B. Gilvey	Application of Filon-type methods to highly oscillatory integrals arising from the Partition of Unity BEM for 2D wave scattering simulations	
13.50	J. Bajars	On discretisation schemes for a boundary integral model of stochastic ray propagation	
14.15	P. Opsomer	Coupling modes in high-frequency multiple scattering problems: the case of two circles	
Chair: Harris			
14.40-15.10: Coffee			
15.10	D. Stark	Boundary elements and mesh refinements for the wave equation	Mathematical Aspects of BIM
15.35	M. Kelmanson	An exponentially convergent Volterra-Fredholm method for integro-differential equations	
16.00	S. Mikhailov	Integral potential operators for the nonsmooth-coefficient Brinkman PDE system in exterior domains	
16.25	C. Portillo	BDIE for the Compressible Stokes System with Variable Viscosity Mixed BVP in Bounded Domains	
Chair: Lesnic			
19.30: Conference dinner at Bistro Pierre, 13-17 Milton St, Nottingham NG1 3EN.			

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### Tuesday 11th July

Time	Speaker	Title	Session
9.00	T. Fokas	The Unified Transform for Elliptic PDEs and for Water Waves	Plenary Talk Chair: Chappell
9.50 - 10.20: Coffee			
10.20	R. Martin	Collocation methods for solving two-dimensional neural field models on complex triangulated domains	Biological & Convection Problems
10.45	P. Harris	A mathematical model of the formation of the chemical trails behind moving cells	
11.10	S. Al Bayati	DRBEM Formulations for Convection-Diffusion-Reaction Problems with Variable Velocity	
11.35	F. Oglakkaya	MHD combined convection flow in a lid-driven cavity with a sinusoidal wavy wall	Chair: Mikhailov
12.00 -13.00: Lunch in the Kilpin Room			
13.00	F. Fryklund	Function extension with radial basis function for solving non-homogeneous PDEs	Applications in Fluid and Solid Mechanics
13.25	J. Bagge	Accurate quadrature methods with application to Stokes flow with particles in confined geometries	
13.50	S. Palsson	Adaptive time-stepping for surfactant-laden drops	
14.15	O. Menshykov	Design of flexible composites for high-strain applications	
14.40	B. Ullah	The use of boundary element method in structural topology optimisation: Two and three-dimensional algorithms	
15.05: Close of conference and coffee			