

Timetable

Monday

16:00 – 16:30	Tea
16:30 – 16:40	Welcome
16:40 – 17:30	Aston : Statistics, science and government: a statistician as a CSA
17:30 – 18:00	Jobbins : Molecular dynamics & enhanced sampling techniques for materials discovery
18:00 – 18:30	Mughal : We are all Scutoids: a brand-new shape, explained
19:00	Dinner

Tuesday

8:00	Breakfast
9:00 – 9:50	Aston : Functional data in constrained spaces
9:50 – 10:20	Pachon : On random graphs and complex networks
10:20 – 10:50	Torras Casas : Persistent homology distribution via spectral sequences
10:50 – 11:30	Coffee
11:30 – 12:20	Heath-Brown : Diophantine equations
12:20 – 12:50	Fretwell : Roots of sextic polynomials mod p : Serre's dream.
13:00	Lunch
14:10 – 15:00	Derks : Stationary and travelling waves in semi-linear wave equations

Afternoon parallel sessions I

Lecture room 1

15:00 – 15:20	Richardson : Lie groups and twisted K-theory
15:20 – 15:40	Punkumkerd : Introductorily basic knowledge for generalized Stirling operators, with applications
15:40 – 16:00	Papworth : Hochschild cohomology of trusses & affine Nijenhuis operators

Lecture room 2

15:00 – 15:20	Corradini : Kernel embeddings for sparse angular-measure approximation
15:20 – 15:40	Sadeghi Namaghi : Least squares PGD methods for solving elliptic PDEs
15:40 – 16:00	Hergibo: A quadtree-based adaptive moment-of-fluid method for interface reconstruction with filaments

16:00 – 16:30	Tea
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Welsh Mathematics Colloquium 2023

Afternoon parallel sessions II

Lecture room 1

16:30 – 16:50	Doherty : Axisymmetric viscoelastic multiphase flow and its application to rising gas bubbles
16:50 – 17:10	Alghamdi : Fractional differential models for viscoelastic fluids
17:10 – 17:30	Deadman : Rack n Roll: linearisations of quandles to R-matrices and how rack isomorphisms interplay with equivalence of solutions to the Yang-Baxter equation
17:30 – 17:50	Hutchings : Sequential sampling strategies for the Nyström approximation of large symmetric positive-semidefinite matrices
17:50 – 18:10	Ramzan : Applications of heat transport in vacuum pump oil in applied mathematics

Lecture room 2

16:30 – 16:50	Jameel : The eigenvalues of Dirac operators
16:50 – 17:10	Gwynne : Isoperimetric solutions of a single region in 1-D and 2-D spaces with density
17:10 – 17:30	Adukova : Is it possible to solve the factorisation problem of matrix functions exactly?
17:30 – 17:50	Hogan : New bounds for the integer Caratheodory rank
17:50 – 18:10	Sahjwani : Stability of Alexandrov-Fenchel inequalities in the hyperbolic space.

19:00 Dinner

Wednesday

8:00	Breakfast
9:00 – 9:50	Derks : Existence and stability of fronts in inhomogeneous wave equationsL
9:50 – 10:20	Liu : Optimal self-protection and insurance design under contagious cyber risks
10:20 – 10:50	Chargaziya : Differential equations in a scale of Hilbert spaces
10:50 – 11:20	Coffee
11:20 – 11:50	Gagarin : Weighted domination models and randomized heuristics
11:50 – 12:40	Heath-Brown : Counting solutions of Diophantine equations
13:00	Lunch