Gregynog 2022 Timetable

Monday 23rd May – Seminar Room 1

Time	Title	Speaker
16:00 – 16:30	Tea: Blayney Room	
16:30 – 16:40	Welcome	
16:40 – 17:40	An introduction to Thompson's groups and their generalisations	Brita Nucinkis
17:45 – 18:45	Industrial Mathematics: What is it good for?	Chris Breward
19:00 - 20:00	Dinner: Dining Room	
20:15 – 21:15	Welsh Three Minute Thesis (3MT) competition	

Tuesday 24th May

Time	Seminar Room 1	Speaker	Seminar Room 2	Speaker
8:00 – 9:00	Breakfast: Dining Room			
9:00 – 10:00	A survey of mutually unbiased bases (part I)	Stefan Weigert		
10:00 – 11:00	Non-stationarity in extreme value models	Philip Jonathan		
11:00 – 11:30	Tea: Blayney Room			
11:30 – 12:30	On automorphism groups of Cantor Algebras	Brita Nucinkis		
12:30 – 12:50	Quaternary Lattices and Elliptic Curves	Dan Fretwell		
13:00 – 14:00	Lunch: Dining Room			

Time	Seminar Room 1	Speaker	Seminar Room 2	Speaker
14:00 – 14:20	On trusses	Tomasz Brzezinski	A droplet in an oscillating flow field using Stokes flow	Philip Trevelyan
14:20 – 14:40	Cohomology of semi-cosimplicial objects arising from set theoretic solutions to the Yang-Baxter equation	Chance Harris	Granular flows in three-dimensions	Tom Barker
14:40 – 15:00	Markovianity and the Thompson group F	Claus Köstler	A Conservative Level-Set Method for Viscoelastic Rising Bubbles	Will Doherty
15:00 – 15:20	Bundles of Algebras - Dixmier-Douady theory and its Generalisations	Ulrich Pennig	A 3-player game theoretic model of a choice between two queueing systems with strategic managerial decision making	Michalis Panayides
15:20 – 15:40	The Weyl, The SSMCs and The Chern Character	Sam Richardson	Where do bats sleep? Locating bat roosts using a mixture of diffusion modelling and Bayesian statistics	Lucy Henley
15:40 – 16:00	Stochastic and Semiclassical Mechanics	Andrew Neate	Automated Condition Monitoring using Artificial Intelligence	Ieuan Griffiths
16:00 – 16:30	Tea: Blayney Room		Tea: Blayney Room	

Tuesday 24th May - continued

Time	Seminar Room 1	Speaker	Seminar Room 2	Speaker
16:30 – 16:50	Semiheaps in Quantum Mechanics	Andrew James Bruce	Curvature Energies: From Steiner to Willmore and beyond	Julian Scheuer
16:50 – 17:10	Aspects of measurement incompatibility in quantum information theory	Jukka Kiukas	Limit profile for perturbed Choquard equation	Damiano Greco
17:10 – 17:30	Measures of non-classicality in optomechanical systems	Alexander Pitchford	Mammary maintance: polarity driven pattern formation in bilayer tissues	Joshua Moore
17:30 – 17:50	The Asymmetry Function of Regular Schrödinger Operators	Karl Michael Schmidt	Hybrid model for rainfall data	Eferhonore Efe-Eyefia
17:50 – 18:10	An existence result to a nonlinear Schrödinger-Poisson system involving a non-constant charge density	Tomas Dutko	Big Data Analytics for Predictive Maintenance at Tata Steel	Becky Peters
18:10 – 18:30	Integer Matrix Factorisation and the Quadratic Form Obstruction	Matthew C Lettington	Envelope-based Support Vector Machine	Alya Alzahrani
18:30 – 18:50	The Maximal Caratheodory Rank problem	Mark Hogan	PCA-based decompositions of dependence in extremes	Michela Corradini

Sesiwn Cyfrwng Cymraeg - Welsh Medium Session (in Welsh) - Weaver Room

Time	Title	Speaker
16:30 – 17:30	Gwrthdroi tebygoliaethol: synhwyro o bell i nodweddu ffynonnellau nwyon atmosfferig	Philip Jonathan
17:30 – 17:50	Profion ystadegol drwy amcangyfrif entropi Rényi	Dafydd Evans

19:00 - 20:00	Dinner: Dining Room

Wednesday 25th May

Time		
8:00 – 9:00	Breakfast: Dining Room	

Time	Seminar Room 1	Speaker	Seminar Room 2	Speaker
9:00 – 9:20	An Energy-Based, always Index ≤ 1 and Structurally Amenable Electrical Circuit Model	John Pryce	Using Predictive and Prescriptive Analytics Within Hospital Services for Elderly and Frail Patients	Elizabeth Williams
9:20 – 9:40	Weighted domination models on graphs	Lukas Dijkstra	What's cool about In Vitro fertilisation?	Timothy Ostler
9:40 – 10:00	Embedding $K5$ and $K3,3$ on orientable surfaces	Andrei Gagarin	Modelling iron acquisition by fungi	Graeme Boswell
10:00 – 10:20	Generalised Stirling operators, with Applications	Chadaphorn Punkumkerd	Using SEIR Models to Simulate the Spread of SARS-CoV-2	Nicholas Andrews
10:20 – 10:50	Tea: Blayney Room		Tea: Blayney Room	
10:50 – 11:50	Removing SO_2 from gas: the mathematics of reactive filtration	Chris Breward		
11:50 – 12:50	A survey of mutually unbiased bases (part II)	Stefan Weigert		
13:00 – 14:00	Lunch: Dining Room		Lunch: Dining Room	