

# Gregynog 2018 Timetable

## Monday 21st May – Seminar Room 1

| Time          | Title   | Speaker        |
|---------------|---|----------------|
| 16:00 – 16:30 | Tea: Blayney Room   |                |
| 16:30 – 16:40 | Welcome   |                |
| 16:40 – 17:40 | The Farey graph, continued fractions and $SL_2$ -tilings: Part I                | Ian Short      |
| 17:40 – 18:10 | A mathematical model of nutrient influence on fungal competition                | Graeme Boswell |
| 18:10 – 18:40 | Data, Lagrangian, action: simulating a mechanism direct from a text description | John Pryce     |
| 19:00         | Dinner: Dining Room   |                |

## Tuesday 22nd May – Welsh – Writing Room

| Time          | Title   | Speaker        |
|---------------|---|----------------|
| 15:00 – 15:50 | Dylunio Erodeinamig Awyrennau a Cheir Uwchsonig   | Ken Morgan     |
| 16:00 – 16:30 | Tea: Blayney Room   |                |
| 16:30 – 17:00 | Modelu ewynnau hylif gan ddefnyddio efelychiadau rhifiadol  | Tudur Davies   |
| 17:00 – 17:30 | O Led-Grwpiau Feller i Brosesau Adio - gan ddefnyddio Gweithredyddion Differol-Ffug   | Kristian Evans |
| 17:30 – 17:50 | Cynhyrchydd o grwp lled is-Markovian $L^2$ a Grwp Unedol  | Huw Fry        |
| 17:50 – 18:10 | Topics on Hamiltonian Dynamics Related to Symbols of Certain Schrödinger Operators Associated with Generators of Lévy Processes | Elian Rhind    |

## Wednesday 23rd May – Seminar Room 1

| Time          | Title   | Speaker            |
|---------------|---|--------------------|
| 8:00 – 9:00   | Breakfast: Dining Room  |                    |
| 9:00 – 10:00  | What makes a good drug for transdermal delivery or monitoring?<br>Insights from mathematical modelling. | Jane White         |
| 10:00 – 10:30 | $k$ -domination in graphs and placement of electric vehicle charging stations in road networks          | Andrei Gagarin     |
| 10:30 – 11:00 | On Sum-and-Distance Systems, Reversible Square Matrices and Divisor Functions                           | Matthew Lettington |
| 11:00 – 11:30 | Tea: Blayney Room   |                    |
| 11:30 – 12:00 | Sampling and spectral approximation   | Bertrand Gauthier  |
| 12:00 – 13:00 | How mathematicians “count” what they cannot see   | Ruth King          |
| 13:00 – 14:00 | Lunch: Dining Room  |                    |

Tuesday 22nd May – English – Seminar Rooms 1 and 2

| Time          | Seminar Room 1  | Speaker              | Seminar Room 2  | Speaker             |
|---------------|---|----------------------|---|---------------------|
| 8:00 – 9:00   | Breakfast: Dining Room  |                      |   |                     |
| 9:00 – 10:00  | Modelling infectious disease control: dealing with what you can't see and with populations that vary.         | Jane White           |   |                     |
| 10:00 – 10:30 | Mathematical Modelling of DNA Methylation   | Jason Roberts        |   |                     |
| 10:30 – 11:00 | The structure of additive Systems of Integers   | Karl Michael Schmidt |   |                     |
| 11:00 – 11:30 | Tea: Blayney Room   |                      |   |                     |
| 11:30 – 12:30 | Efficient parameter estimation – a semi-complete data likelihood approach                                     | Ruth King            |   |                     |
| 12:30 – 13:00 | Packing problems, phyllotaxis and Fibonacci numbers   | Adil Mughal          |   |                     |
| 13:00 – 14:00 | Lunch: Dining Room  |                      |   |                     |
| 14:00 – 15:00 | The Farey graph, continued fractions and $SL_2$ -tilings: Part II   | Ian Short            |   |                     |
| 15:00 – 15:20 | Training memory one strategies for the Prisoner's Dilemma   | Nikoleta Glynnatsi   | Distributing Cohomology Computations via Sheaf Cohomology   | Alvaro Torras Casas |
| 15:20 – 15:40 | Oscillatory Boundary Layers and Electrochemistry  | Scott Morgan         | Particle density of the CAR algebra and particle-hole duality in continuum                        | Alshehri Maryam     |
| 15:40 – 16:00 | Droplet Spreading, Chemically Treated Surfaces and Mathematics  | Danny Groves         | Alternating sign matrix lattice and its properties  | Hasan Izanloo       |
| 16:00 – 16:30 | Tea: Blayney Room   |                      | Tea: Blayney Room   |                     |
| 16:30 – 16:50 | On the predictive power of functional principal components analysis   | Ben Jones            | Eigenvalues of the Periodic $p$ -Laplacian  | Matthew Lewis       |
| 16:50 – 17:10 | Analysis of bending elastic plates  | Joe Bishop           | An introduction to horizontal mean curvature flow   | Raffaele Grande     |
| 17:10 – 17:30 | Transient behaviour of viscoelastic fluids in boundary layers   | Martina Cracco       | Spatio-temporal evolution of hypoxia and its role in HAP-Radiation effectiveness in solid tumours | Sara Hamis          |
| 17:30 – 17:50 | Ligand binding dynamics and the effects of cooperativity: linear and nonlinear models for dimerised receptors | Carla White          | Blow-ups and Spherical Twists   | Chris Seaman        |
| 17:55 – 18:15 | Least Squares Estimator for path-dependent mean-field SDEs via Discrete-time Observations                     | Paupan Ren           | Effective numerical model for hydraulic fracturing  | Gaspard Da Fies     |
| 18:15 – 18:35 | Surfactant transport in dry two-dimensional foams   | Francesca Zaccagnino | Modifying PCA: Sparse Dimension Reduction for Exponential Family Data                             | Luke Smallman       |
| 18:35 – 18:55 | Homogenous and heterogeneous populations of active rods confined within two dimensional channels              | Vladimir Khodygo     | The characters of a sharply 5-transitive subgroup of $A_{12}$                                     | Sam Hughes          |
| 19:00         | Dinner: Dining Room   |                      |   |                     |