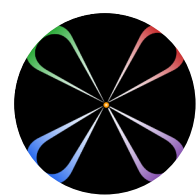


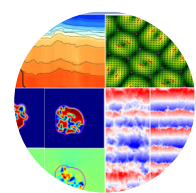
# Programmes & Workshops 2024



## New equivariant methods in algebraic and differential geometry

3 January 2024 to 28 June 2024

- W** Equivariant methods in geometry  
8 January 2024 to 12 January 2024
- W** Applied and computational algebraic geometry  
22 January 2024 to 26 January 2024
- W** Singularity theory and hyperbolicity  
18 March 2024 to 22 March 2024
- W** K-stability and moment maps  
13 May 2024 to 17 May 2024
- W** Moduli stacks and enumerative geometry  
17 June 2024 to 21 June 2024



## Anti-diffusive dynamics: from sub-cellular to astrophysical scales

8 January 2024 to 28 June 2024

- W** Layering — A structure formation mechanism in oceans, atmospheres, active fluids and plasmas  
5 January 2024 to 19 January 2024
- S** Layering in Magnetized Plasmas  
19 February 2024 to 23 February 2024  
National STEM Learning Centre, University of York, York
- W** Mathematical and Computational Modelling of Anti-Diffusive Phenomena  
25 March 2024 to 28 March 2024
- W** Climate Applications of Layering  
20 May 2024 to 24 May 2024
- W** Anti-Diffusion in Multiphase and Active Flows  
10 June 2024 to 14 June 2024



## Discretization and recovery in high-dimensional spaces

1 July 2024 to 26 July 2024

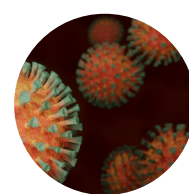
- W** Multivariate approximation, discretization, and sampling recovery  
15 July 2024 to 19 July 2024



## Stochastic systems for anomalous diffusion

1 July 2024 to 18 December 2024

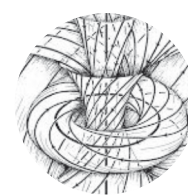
- W** Self-interacting processes  
8 July 2024 to 12 July 2024
- W** Stochastic reflection  
5 August 2024 to 9 August 2024
- W** Geometry, occupation fields, and scaling limits  
28 October 2024 to 1 November 2024
- W** Monte Carlo sampling: beyond the diffusive regime  
25 November 2024 to 29 November 2024



## Modelling and inference for pandemic preparedness

5 August 2024 to 30 August 2024

- W** Modelling and inference for pandemic preparedness - a focussed workshop  
5 August 2024 to 9 August 2024



## Twistor theory

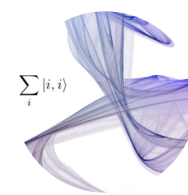
2 September 2024 to 27 September 2024

- W** Twistors in Geometry & Physics  
9 September 2024 to 13 September 2024



## Big Specification

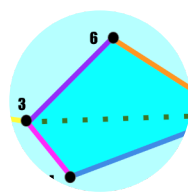
30 September 2024 to 25 October 2024



## Quantum information, quantum groups and operator algebras

4 November 2024 to 6 December 2024

- W** School on selected topics in quantum groups, quantum information and operator algebras  
4 November 2024 to 8 November 2024
- W** New trends at the intersection of quantum information theory, quantum groups and operator algebras  
2 December 2024 to 6 December 2024



## Solidarity for mathematicians

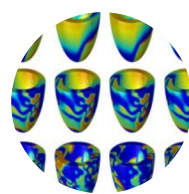
10 March 2022 -

## FOLLOW-ON WORKSHOPS



## Structure and Randomness - a celebration of the mathematics of Timothy Gowers

8 April 2024 to 12 April 2024



## Fickle Heart: The intersection of UQ, AI and Digital Twins

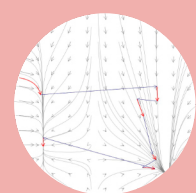
3 June 2024 to 4 June 2024



## WHT Follow on: the applications, generalisation and implementation of the Wiener-Hopf Method

1 July 2024 to 5 July 2024

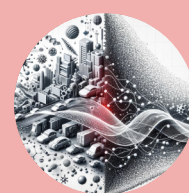
## SATELLITE PROGRAMMES



## Heavy tails in machine learning

2 April 2024 to 26 April 2024  
The Alan Turing Institute, London

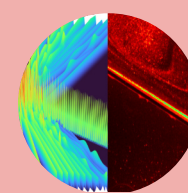
- W** SGD, stability and simulation in the presence of heavy tails  
2 April 2024 to 5 April 2024
- W** SGD: stability, momentum acceleration and heavy tails  
22 April 2024 to 26 April 2024



## Diffusions in machine learning: Foundations, generative models and non-convex optimisation

24 June 2024 to 19 July 2024  
The Alan Turing Institute, London

- W** International Workshop on Diffusions in Machine Learning: Foundations, Generative Models, and Optimisation  
15- 19th July 2024



## Emergent phenomena in nonlinear dispersive waves

22 July 2024 to 16 August 2024  
Northumbria University, Newcastle



## Hypergraphs: Theory and Applications

22 July 2024 to 16 August 2024  
The Alan Turing Institute, London



## Topology, representation theory and higher structures

27 May 2024 to 23 June 2024  
Gaelic College, Sabhal Mor Ostaín, Isle of Skye

- W** Workshop on topology, representation theory and higher structures  
10 June 2024 to 14 June 2024
- W** International Conference  
17 June 2024 to 21 June 2024



## The mathematics of multiphase flows with applications

1 July 2024 to 31 July 2024  
University of East Anglia (UEA) in Norwich

- W** ECR Summer School  
2 July 2024 to 5 July 2024
- W** New directions in multiphase flows  
8 July 2024 to 12 July 2024