IMS Annual Scientific Meeting 2022
Technological University Dublin, Grangegorman
September 1st–2nd

The 35th Annual Meeting of the IMS was organised by the School of Mathematical Sciences, TU Dublin at the new Grangegorman campus. The meeting was very well attended by more than 70 participants, including many new members. The organising committee was led by Dana Mackey and consisted of: Nicole Beisiegel, John Butler, Alberto Caimo, Laura Cooke, Chris Hills and Milena Venkova. There were opening remarks from Chris Hills (Head of School) and Dana Mackey, and a welcome address from the Dean of the Faculty of Digital and Data, Prof Pramod Pathak.

The meeting consisted of 12 invited talks on a range of topics in Pure and Applied Mathematics and Statistics, as well as an Athena Swan information session. A key outcome of the AGM was the formal establishment of the Irish Committee for Equality, Diversity and Inclusion in Mathematics, a subcommittee of the IMS, chaired by Romina Gaburro.

The list of all invited talks is below:

- Nicole Beisiegel (TU Dublin) – *Numerical Testcases to Study Proudman Resonance Using Shallow Water Models*
- Leo Creedon (ATU Sligo) – *New algebraic structures which are almost semigroups and rings*
- Ray Ryan (NUI Galway) – *Analysis on vector lattices*
- Rachel Quinlan (NUI Galway) – *How to make up questions about matrices*
- Catalina García (Granada University) – *An overview of multicollinearity: contributions and alternatives to ridge regression*
- Roisin Hill (UL) – *Generating layer-adapted meshes using MPDEs*
- Peter Lynch (UCD) – *Parity and Partition of the Rational Numbers*
- David Malone (Maynooth University) – *Ranking and Rankability*
- Sarah Fink (Athena Swan Ireland) and Niall Madden (NUI Galway) – *Introducing Athena SWAN, and the Mathematical Sciences Athena SWAN Network*
- Eabhnat Ní Fhloinn (DCU)– *Is Maths Different? Experiences and opinions of mathematics lecturers teaching online during the COVID-19 pandemic.*
- Lennon Ó Náraigh (UCD) – *Mathematical and physical modelling of industrial drying*

There were also 11 posters displayed by undergraduate and postgraduate students and early-stage researchers - see list below. The prize for the best poster was awarded to Niall Donlon (UL).

- Priyanka Joshi (UCD) – *Powers of Karpelevič Arcs and their Sparsest Realising Matrices*
- Sowmiya Krishnaraj and Michael Vynnicky (UL) – *Analysing the Effects of Aerosol Particle Deposition on the Pulmonary Tree using Computational Fluid Dynamics (CFD)*
- Thomas Quinlan (UCC) – *Investigating the Effects of Delayed Feedback on the Shutdown of the Atlantic Meridional Overturning Circulation*
- Eva Leahy (UCC) – *Overview of Minimal Surfaces*
- Dylan McGrath (UCC) – *Bump-and-Revalue: Estimating the Greeks*
- Jack Lyons (TU Dublin) – *A Mathematical Model for Holographic Recording in Photopolymer Media with Zeolite Nanoparticles*
- Niall Donlon (UL) – *Stable Reconstruction of Anisotropic Conductivity*
- Edward Donlon (TU Dublin) – *Dynamics of Generalized Random Sequential Adsorption*

- Jason Curran (UL) – *Stability estimates in the inverse problem of diffuse optical tomography via singular solutions*
- Ole Cañadas (DCU) – *Affine Volterra Processes with jumps*
- Yen Thuan Trinh (UCC) – *Pricing multi-asset options using the MONTE CARLO-TREE (MC-TREE) method*
- Fearghus Downes (ATU Sligo) – *Mathematical model of bovine hormonal dynamics*

The webpage for the meeting, which includes abstracts for all talks and posters is archived at

`https://www.tudublin.ie/mathematics/ims-2022/`

The organisers would like to thank the speakers, students who presented posters, and all participants for contributing to a successful and enjoyable meeting.

Report by Dana Mackey, TU Dublin.
dana.mackey@tudublin.ie