School of Mathematics and Statistics Newsletter

October 2022

Congratulations to …

- Giorgos Minas and his partner on the birth of a daughter, Nayia Myrto, on 7th October after a painful 13 hours labour with a very happy ending. She is tiny, weighing only 5.2 pounds on birth.

- Ffinlo Wright who was runner-up in the British Society for the History of Mathematics undergraduate essay prize for his essay 'A turning point for game theory: situating John F. Nash in the history of economic thought'. The paper developed from his MT4501 History of Mathematics project and will be recognised at the BSHM Gresham Lecture meeting on 19th October.

Welcome to ...

- Professor Ursula Martin who joins us as an Honorary Professor from 1st October. Ursula will be known to many from her occasional visits to the School and, for those with long memories, from her time in St Andrews as Professor of Computer Science in the 1990s. She will be working largely with the History of Mathematics group.

- Aleksi Pyörälä from the University of Oulu (Finland) who is visiting the Analysis group this semester.

Farewell

- At the end of October we say goodbye to Carl Donovan, who is leaving to work full-time within his consultancy business. Carl has been with us for over 20 years, and among many contributions was instrumental in expanding the MSc programmes in statistics to the sustained success they are now. We wish him all the best in his new role.

Conferences, Talks and Visits

- Len Thomas, plus several staff from the School of Biology, attended the first in-person meeting of an international working group to develop and demonstrate methods for estimating the cumulative effect of multiple human-caused stressors on marine mammal populations. The project has been underway for over two years, but this is the first time the working group has met in person. They spent a week at a residential centre set in coastal woodlands in Essex, Massachusetts – somewhat different from the Essex that Len grew up in. The meeting was far more productive than its remote equivalent would have been.

- Valentin Popov attended the *Royal Statistical Society* (*RSS*) *Conference* in Aberdeen on 13-15th September and gave talks on the application of financial methodology in the field of conservation studies as well as on including history of statistics in the syllabus for statistical modules.

- From 19th-23rd September Konstantinos Alexiou, Dimitrios Katsaounis, Kairui Li and Fiona Macfarlane from the Mathematical Biology group attended the *European Conference on Mathematical and Theoretical Biology* (*ECMTB*) at the University of Heidelberg, Germany. Konstantinos, Dimitrios and Fiona all gave talks on their research and Kairui presented a poster.

- On 10th October Alison Johnston gave a keynote talk on 'Big data in ornithology: challenges and opportunities from the rise of citizen science' at an online conference *Citizen Science and Birds: People Powering Ornithology*.

- Mike Todd spent a week at the conference *Probabilistic Techniques for Random and Time-varying Dynamical Systems* at CIRM (Centre International de Rencontres Mathématiques), near Marseille. There were some interesting talks, mathematical discussions and great hikes.

- Amlan Banaji, Alex Rutar and Boyuan Zhao attended the event *Ergodic Theory and Fractal Geometry* from 14-15th September at the University of Birmingham.

- Peter Cameron visited the University of York on 30th September, where he gave an Algebra seminar on 'Groups on graphs'. He was delighted to find that the seminar room, overlooking the campus lake, contained a high-quality blackboard and chalk.

- Saul Freedman gave an online talk 'Non-commuting, non-generating graphs and intersection graphs of groups' on 10th October, as part of the *Southern University of Science and Technology Group Theory* seminar series.

- On 16th September the LMS, IMA and BSHM held a joint meeting *Women in Astronomy* at De Morgan House, the LMS headquarters. Several members of the school attended online and Isobel Falconer was an invited speaker (in person) who spoke on 'Maria Cunitz and Urania Propitia – was marriage to an astronomer a "career" for women mathematicians in the 1600s and 1700s?'.

- On 5th October Colva Roney-Dougal gave an *Oxford Mathematics Public Lecture* entitled 'The million-dollar shuffle: symmetry and complexity'.

- Laura Johnson and Deborah Kent collaborated with the Royal and Ancient World Golf Museum for a *Maths Week Scotland* event, 'Why do golf balls have dimples?'. Workshop participants handled historical golf balls from the R&A collection and saw footage from a smooth ball experiment to appreciate the role of dimples in flight. They also explored symmetries of dimple patterns on old and new golf balls.

- Fiona Macfarlane gave an outreach talk to the Year 12 students at St Leonards School titled 'What is Mathematical Biology?' on 29th September. The talk focused on how the maths we learn at school can be used to help us understand biological processes such as pattern formation and the growth of cancer.

- On 21st September, the School hosted a congenial gathering of *Women in Science at St Andrews* (WISSA). Anyone who would like to be added to the mailing list for future events should write to wissa@st-andrews.ac.uk

Future Events

- The first *Annual JJ Valletta Memorial Lecture* will be at 2pm on Wednesday 26th October in the Mathematical Institute Lecture Theatre D (also broadcast online via the Statistics seminar Team). Dr TJ McKinley, University of Exeter, will speak on 'Emulation-driven inference for complex spatial meta-population models'. The lecture is in memory of our colleague JJ Valetta who died suddenly while hillwalking on 25th October 2020. The talk will be followed by an informal reception.

- Advance notice that Len Thomas will be delivering his Professorial Inaugural Lecture at 5:15pm on Wednesday 23rd November 2022 in School 3, St Salvator's Quad. All are very welcome!

Other News

- Jon Fraser has been appointed Editor-in-Chief of the *Proceedings of the Royal Society of Edinburgh* (*Section A: Mathematics*).
- Rachel Sippy was awarded a STAIRS (St Andrews Interdisciplinary Research Support) grant to develop a model of antibiotic resistance in East Africa, with co-investigators Andy Lynch and others from Biology, Geography and Medicine.

Next Issue

- The next edition of the School Newsletter will be circulated in November. Items may be sent to maths-news@st-andrews.ac.uk at any time but a reminder will be sent out a week before the deadline.