

# School of Mathematics and Statistics Newsletter

May 2023

## *Farewell to ...*

- Qi Su who has left the Mathematical Biology group to take up a tenure track position at Shanghai Jiaotong University.

## *Visitors*

- Klaus Galsgaard visited Duncan Mackay from 2nd-5th May to continue a collaboration on the modelling of X-ray Bright Points on the Sun. Some staff may remember Klaus as a PDRA and PPARC Advanced Fellow in the Solar Group from 1995-2002.
- Alison Johnston and CREEM have hosted several visitors this month, including Vincent Lostanlen, Michael Schrimpf, Beth Gardner (as part of the Global Fellows programme) and Brandon Edwards (PhD student visiting for 3 months).

## *Conferences, Talks and Visits*

- On 20th-21st April Isobel Falconer organised an international workshop in connection with her St Andrews-Bonn project *The Gravitational Constant 1890-1915: from the local to the universal*. The workshop brought together about 25 historians, philosophers, mathematicians and physicists from across Europe and the US. Raneem Aizouk, Kate Hindle, Deborah Kent Ursula Martin, Rachel Sippy and Peiran Wu attended from the School, as did four members of the School of History.
- Konstantinos Alexiou attended the *British Applied Mathematics Colloquium* (BAMC) in April, and gave a talk entitled 'A Stochastic Model of Multilevel Selection', as well as presenting a poster 'A Stochastic Multiscale Modelling Framework for the Evolution of Phenotype-Structured Cell Populations'.



*Palac Będleow*

- Members of the Analysis Group are attending a conference *Thermodynamic Formalism: Non-additive Aspects and Related Topics*, organized by the Institute of Mathematics of the Polish Academy of Science at Pałac Będleow, near Poznań in Poland, with talks by Amlan Banaji, Kenneth Falconer, István Kolossváry, Alex Rutar, and Mike Todd, and with Natalia Jurga and Boyuan Zhao also participating. Amlan, Natalia, István and Alex also attended a School and Workshop on *Dynamics and Fractals* the previous week.

- On 16th April our postgraduate research students had a trip to the Botanic Gardens and got to meet the Grufallo!



- Nikos Sfakianakis is lecturing in a Spring School on *Structured Population Models* organised by the Interdisciplinary Centre for Mathematical and Computational Modelling at University of Warsaw, Poland, from 15-19th May.
- Mike Todd visited the University of Porto for a week to work on problems in ‘Extreme value theory and dynamical systems’.
- Kenneth Falconer gave a colloquium talk on at the University of Birmingham on 28th April. He was hosted by his former PhD student Tony Samuel and our former School President Andrew Mitchell.
- Jack Southgate attended the *Graph Rigidity and Applications* workshop at Lancaster University from 17th-21st April and gave a presentation ‘Bounds on Embeddings of Triangulations of Spheres’.
- Louis Theran spoke at the first of the two *London Colloquia*, at Queen Mary University of London, on 10th May on ‘Globally rigid graphs and maximum likelihood inference in Gaussian graphical models’. Rosemary Bailey and Peter Cameron also attended the two meetings.
- Alex Stewart gave invited talks at the *Workshop on Inequality Across Scales, Space, Time and Domains* at the International Centre for Theoretical Physics (ICTP) in Trieste, Italy, and at the *AI Lund Workshop on Frontiers of Science in Social Media Research: Computational and Experimental Methods to Study Digital Democracy* at Lund University, Sweden.
- Kate Mowbray, Thomas Neukirch, David Rees-Jones and Jack Reid participated in the European Geosciences Union *EGU23 General Assembly*, 23rd-28th April 2023 in Vienna, Austria, and online. Kate, David and Thomas attended in person, with Jack attending online. Kate and David gave talks, Thomas presented a poster, and Jack gave an online presentation.
- Ian Durbach made a short research visit to the Zoological Society of London on 20th April, where he gave a talk in the *Science for Conservation* seminar series entitled ‘Acoustic Monitoring of Animal Populations’ and met with collaborators in the Institute of Zoology on an ongoing project acoustically monitoring Hainan gibbons
- From 15th May-15th June Nik Ruskuc is visiting James East at the Western Sydney University. They will continue work on multiple projects involving congruences, partition monoids and regular  $*$ -monoids. They will be joined by Azeef Muhammed, James’s postdoc, and Robert Gray, a former graduate and PhD of St Andrews, who is also visiting.

- Deborah Kent went south at the end of April to join the Oxford History of Mathematics Forum and the Oriel College Thomas Harriot Lecture. On 9-10th May she attended a meeting at the University of Virginia to mark the retirement of her PhD supervisor Karen Parshall.
- Michael Papathomas gave a talk on ‘Bayesian nonparametrics and mixture modelling’ at Sylvia Richardson’s *Festschrift* in Cambridge on 12th May, as part of the ‘Next Generation Leaders’ session.

### ***Other News***

- The *Scotland and Wales Applied Mathematics for Biomedical Advances* (SWAMBA) collaboration held an online PhD student competition on the 27th April. The four participants each gave a 25 minute talk on their research within mathematical biology. Both Kairui Li and Dimitris Katsaounis represented St Andrews and gave talks on their research. Congratulations to Dimitris who was awarded 2nd place.
- Ben Swallow been awarded a grant (~ £4.5k) from the *eastBIO Doctoral Training Partnership* to support a summer student on a Research Experience Placement. The eight week project will work on statistical approaches to ‘Long-term monitoring of survival in Trinidad birds through a mark-recapture study’ with Co-I Steve Hubbard from the University of Dundee.
- Deborah Kent and Tom Elsdon have been awarded *STFC Knowledge Exchange Institutional Award* funding of £16k for a project ‘Sharing the history and science of total solar eclipses’. This will combine the School’s research in Solar Theory and History of Mathematics to create a digital resource about the history of eclipse expeditions together with frontiers in solar science. Deborah has also been awarded £2k from the University’s *EDI Project Fund*, to be match-funded through the History Group’s INI Network grant to create a literature review for historically informed EDI work in mathematics.
- Rick Thomas acted as the External Advisor for the University of West London with regards to their launch of a new BSc degree in Mathematics and Computing.
- Congratulations to Fiona Macfarlane on winning the *Eurovision SwEUpy*, having drawn the winning entry of Sweden, Tattoo by Loreen. Thanks to Ashley Clayton for organising the sweepstake.

### ***Next Issue***

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