

School of Mathematics and Statistics Newsletter

December 2022

Congratulations to ...



- David and Filipa Rees Jones on the recent birth of baby Isabel. She was born weighing just under 4kg with a good head of hair. Her older sisters are very happy to meet Isabel too.
- Tom Coleman on his engagement to his partner of five years, Hollian Richardson, who is a postdoctoral researcher in the School of Medicine at the University of Dundee where she works on chronic lung disease.
- Daphné Lemasquerier who gave the *Andreas Acrivos Dissertation Award in Fluid Dynamics Lecture* on ‘Insights into Jupiter’s dynamics from laboratory experiments’ on 22nd November at the *Annual Meeting of the American Physical Society’s Division of Fluid Dynamics (APS DFD)* in Indianapolis. Earlier in the year she received the *Donald L. Turcotte Award* in the Nonlinear Geophysics Section of the *American Geophysical Union*.

Welcome to ...

- two new postdoctoral research fellows who have recently joined the Mathematical Biology group to work with Alex Stewart on modelling the cultural evolution of online behaviour. Qi Su joins us from the University of Pennsylvania where he was a Simons Postdoctoral Fellow in the Center for Mathematical Biology, and Theodor Cimpeanu comes to us from Teeside University where he recently completed his PhD in the School of Computing, Engineering and Digital Technologies.

- David Waszek who joins us as a Visiting Scholar in the History of Mathematics. David will be around for the next year, moving back and forth between St Andrews and his regular position in Paris.

Visitors

- Mark Holland (Exeter) visited the Analysis Group from 5-9th December, giving a Pure Colloquium ‘On record events and extremes for dynamical systems’ and working with Mike Todd on some recurrence problems in dynamical systems.

Conferences, Talks and Visits

- A very successful School *Reserch Day* took place on 1st December, with some 19 short talks given by staff and postgraduate students from right across the School as well as a communal lunch and drinks and nibbles afterwards. Many thanks to Mike Todd, Fiona MacFarlane and Rhona Rodger for organising the event.
- On 17th November, Ben Swallow gave an invited talk at the *International Environmetrics Society* virtual annual meeting on ‘Bayesian causal inference for environmental exposures using potential outcomes: challenges and opportunities’. On 23rd November, he gave a virtual seminar to the *National Centre for Statistical Ecology* seminar on ‘Bayesian causal inference for zero-inflated GLMs using a potential outcomes framework’. From 4th-7th December, he visited *VetAgro Sup* in Lyon to teach a two-day workshop on ‘Complex Systems, Inference and Uncertainty’ as part of their international master’s programme in Managing Population Health.
- On 18th November, Rosemary Bailey and Peter Cameron attended the *40th Fisher Memorial Lecture*, at the Mathematical Institute in Oxford. The lecture was given by Kanti Mardia, on ‘Fisher’s legacy in multivariate analysis, statistics on manifolds, and beyond’, and included references to Mardia’s joint book with Peter Jupp.
- Alan Logan gave an invited talk on ‘The conjugacy problem for ascending HNN-extensions of free groups’ at the *Geometric Group Theory in the South East* meeting in Southampton on 2nd December.
- On 17th November Yoav Len gave a talk at the *Algebra and Number Theory Seminar* at Queen Mary University of London. His title was ‘Prym varieties and Brill-Noether theory’.
- Laura Johnson visited the University of Glasgow Computer Science department from 6-7th December where she gave a talk at the department’s FATA (Formal Analysis, Theory and Algorithms) seminar entitled ‘Applications of Difference Families and their generalisations’.
- Istvan Kolossvary visited Han Yu (a former PhD student of the School) at the University of Warwick from 5-7th December. During his stay he gave two seminars, one titled ‘A variational principle for box-counting quantities’ and the other ‘Distance between natural numbers based on their prime signature’.
- Kenneth Falconer visited Université Sorbonne Paris Nord (Villetaneuse) from 6-9th December, where he was a member of a PhD jury. He also gave a seminar and attended a one day meeting on *Analysis and Number Theory*.
- Amlan Banaji is attending the workshop *Statistical and Computational Aspects of Dynamics* at the Centro De Giorgi in Pisa, Italy, from 13-16th December.
- At the BSHM (British Society for the History of Mathematics) online AGM on 3rd December, Deborah Kent was elected as a new member of Council; Isobel Falconer demitted her role as meetings organiser and was elected Editor of the British Journal for the History of Mathematics. The BSHM Christmas meeting took place online on the same day organised by Isobel Falconer.

- Isobel Falconer spent from 5-8th December in Bonn for a team meeting of her collaborative project with the history and philosophy of physics group there on the gravitational constant. She followed this with two days in Cambridge, advising on the move of the Cavendish Museum to the new Cavendish Laboratory next autumn.
- At the LMS AGM on 18th November at Goodenough College in London, Deborah Kent was appointed Librarian of the LMS. On 19th November, she gave a talk titled ‘Molluscs and mathematics – the collaboration of Ronald Winckworth and D’Arcy Wentworth Thompson’ at the Conchological Society’s annual indoor meeting in Liverpool at the World Museum, which has Winckworth’s shell collection, some of which illustrate Thompson’s *On Growth and Form*. On 21st November Deborah gave a pure mathematics colloquium in Durham, and on 26-27th November spoke to Mathematics Heads of Department from schools across the country at the PTI’s (Prince’s Teaching Institute) Mathematics Enrichment Residential at Crewe Hall, a stunning Jacobean mansion in Cheshire. From 4-11th December, she participated in an Oberwolfach workshop *History of Mathematics through Collaboration*.

Outreach

- On 5th December the *Scotland and Wales Applied Mathematics for Biomedical Advances (SWAMBA)* group held an online event for undergraduate students titled ‘Mathematical Biology: What is it all about?’. Fiona Macfarlane represented St Andrews and gave a talk on her research on modelling patterns of bacterial cell movement. Lecturers from Swansea and Cardiff also contributed.

Grants

- Isobel Falconer and the History of Maths group have been awarded a £25k *Isaac Newton Institute Network Grant* to build a network around history of mathematics in tackling diversity issues in the mathematics curriculum. Other core partners are the Open University and Oxford.
- Laura Johnson has been awarded an *LMS Early Careers Research Travel Grant* for a visit to Richmond in Virginia in March.

Next Issue

- The next edition of the School Newsletter will be circulated in January. 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.