School of Mathematics and Statistics Newsletter

July 2021

Congratulations …

- to recently promoted colleagues: Jon Fraser and Monique MacKenzie who become professors and Tom Coleman who is promoted to lecturer.

- to Adán Mordcovich for successfully defending his PhD thesis entitled 'Probabilistic generation of almost simple groups and their maximal subgroups' on 23rd June.

- to Tom Conti-Leslie who graduated with MMath (Honours) Mathematics in June. Tom was awarded the Miller Prize for the most distinguished student in the Faculty of Science, the Principal's Medal for students who have displayed exceptional endeavour and achievement whilst at St Andrews and the John Honey Award from the Students' Association for outstanding and exceptional contribution to student wellbeing. Tom will take up a position with Nightline in Paris.

Welcome …

- to Christopher 'CJ' Davis who joined the School as a Computer Technician on 1st July.

- to Matthew Brookes who has joined the Algebra and Combinatorics Research Group as a postdoc on the EPSRC funded project *Right Noetherian and Coherent Monoids*. Matthew joins us from the University of York, where he completed his PhD earlier this year.

- to Magda Chudzinska, who started with us in May. Magda has a joint position with CREEM and SMRU Consulting working on wildlife assessment problems, for two years in the first instance.

Dorothy Foster

- Long-standing members of the School will be saddend to hear that former colleague Dorothy Foster passed away on 2nd July.

Virtual Activities

- The joint BSHM (British Society for the History of Mathematics) and CSHPM/SCHPM (Canadian Society for the History and Philosophy of Mathematics) conference *People, Places, Practices* was scheduled to take place in person in St Andrews in July 2020, but was postponed to July 2021 and then regretably moved to online from 12-15th July. The meeting attracted 300 registered participants and together with the plenary talks there were three parallel sessions, various live activities, presentations with a St Andrews emphasis, and social activities, see http://www.mcs.st-andrews.ac.uk/bshm-cshpm/. Isobel Falconer was the main organiser with assistance from Fiona MacFarlane and a team of nine of our undergraduates were recruited for tasks such as moderating online sessions and editing and captioning recorded contributions. Speakers from St Andrews included Rosemay Bailey, Adam Dunn, Ella Duréault, Kenneth Falconer, Isobel Falconer, Pilar Gill, David Horovitz, Meredith Houlton, Sophie Lenihan, Manuel Medrano, John O'Connor, Edmund Robertson and Philippe Schmid. Led by Deborah Kent and Gerry O'Reilly, there was a presentation *Mathematically Curious St Andrews* from a group of our summer students.

- *The British Combinatorial Conference* (*BCC*) took place in Durham on 5-9th July. Colva Roney-Dougal gave an invited plenary on 'Base sizes and relational complexity of finite permutation groups' and Peter Cameron spoke at a minisymposium on 'Diagonal semilattices and their graphs'. Others attending from St Andrews included Mun See Chang, Ian Gent, Ruth Hoffmann and András Salamon.

- On 16th-18th June, Saul Freedman attended a problem solving retreat hosted by the University of Western Australia's *Centre for the Mathematics of Symmetry and Computation*, held in person at the Moondyne Convention Centre in Avon Valley National Park, Australia. Several interesting open problems in group theory and other areas of algebra were discussed.

- Mike Todd gave a talk on 'Capturing clustering in extreme values' at the *Exeter Workshop on Deterministic Extremes and Recurrence* held on Zoom on 21st-23rd June. Raquel Couto and Boyuan Zhao also attended talks throughout the three day meeting, which consisted of both research presentations and introductory talks on various topics in the area.

- Andy Lynch attended *Burwalls 2021* (the Annual Meeting for Teachers of Statistics in Medicine and Allied Health Sciences) organised virtually from Cardiff on 5-7th July, a meeting that no longer takes place at Burwalls House in Bristol even when it isn't virtual. Its tagline used to be *Teaching Of Medical Statistics Conference* which, to Andy's mind, makes it close enough to being named after a Womble (Tomsk) that this should have been explored further.

- Most of the Statistical Ecology group attended the virtual *NCSE* (*National Centre for Statistical Ecology*) *Annual Meeting* from 14-18th June. Richard Glennie gave a plenary talk on 'Stochastic differential equations in statistical ecology: a discussion of three research goals'. Many others from St Andrews gave talks, include some 4 minute speed talks, which was a new challenge for many. Congratulations to Fanny Empacher for scooping the prize for best contributed student talk for her presentation on 'Sampling from the posterior distribution in complex state-space models using the Kalman filter with bias correction via importance sampling'.

- A number of people from the Statistical Ecology group attended the online *EURING 2021* conference 31st May-11th June hosted by Université Laval, in Québec City, Canada, which is one of the two main international conferences focussed on wildlife assessment methods. Paul van Dab-Bates gave a talk entitled 'A marked Poisson process for latent ID spatial capture-recapture models' and Hannah Worthington presented a poster 'A semi-Markov survival model for ring-recovery data'.

- At the end of June, Peter Jupp attended the virtual *Leeds Annual Statistics Research Workshop*. The first 10 minutes of his presentation were very embarrassing, because the recommended platform was uncooperative (and Peter was heard to request a blackboard). A swap with a later speaker solved the problem and Peter was able to talk on 'Statistics of crystallographic orientations'.

Grants

- Michael Papathomas was part of a team, with the Schools of Computer Science, Medicine and Geography, awarded a St Andrews Interdisciplinary Research Support (STAIRS) grant of £55k for a project 'Disease trajectories of multimorbidity in Scotland: a data science approach', to run from August 2021 to July 2022.

Summer Activities

- With restrictions on foreign travel, a number of School members have been heading to the Highlands this summer. The picture shows two mathematicians doing trig at the top of Ben Wyvis, a Munro near Garve

Next Issue

- The next edition of the School Newsletter will be circulated in August. Items for inclusion 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.