School of Mathematics and Statistics Newsletter

December 2020

Congratulations…

- (or perhaps commiserations) to Mark Chaplain and Jon Fraser on their appointment to the REF2021 Panel for Unit of Assessment 10 'Mathematical Sciences'. They will surely have a delightful time next year reading and assessing hundreds of mathematics papers published since 2014.

- to Raad Kohli who won a prize for his short talk 'Groups defined by language theoretic properties' at the London Mathematical Society virtual Graduate Student Meeting on 16th November.

- to Lawrence Lee who has been awarded a one year EPSRC Doctoral Prize Fellowship at the University of Manchester. The position will start (probably remotely) in April and Lawrence will be working with Tom Kempton, a former postdoc in the St Andrews Analysis Group.

- to Haipeng 'Clarence' Chen on passing his PhD viva on 4th December with a thesis entitled 'Lower Assouad type dimensions of fractal sets' at the South China University of Technology. Clarence spent last academic year, the final year of his PhD, as a very lively member of our Analysis Group, visiting under the China Scholarship Council scheme.

- to the autumn *Step Count Challenge Team*, made up of members from Maths (Niki), CREEM (Rhona and Louise) and two guests, who recorded their activity (walking, running and cycling) for eight weeks. This is a challenge for Scottish workplaces to encourage staff to walk more to feel happier and healthier. The team finished 28th out of 524 teams, and were the first of 7 University of St Andrews teams. The spring challenge starts 3 May 2021, see www.stepcount.org.uk

Welcome …

- to Matthias Frey who joined the Vortex Dynamics Research Group from ETH (Zurich) on 1st December. He is working with David Dritschel together with colleagues at Leeds and Edinburgh on a four year EPSRC funded project studying cloud formation and evolution in the atmosphere.

Virtual Activities

- Michael Papathomas gave an invited talk on 9th December at the Department of Economics, Mathematics and Statistics, at Birkbeck, University of London, on 'Prior specifications for Dirichlet process mixture models with Gaussian kernels'. This is work done with Wei Jing from our School and Silvia Liverani at Queen Mary University of London.

- Andy Lynch attended the virtual *European Bioconductor Conference 2020*, nominally held in Padua, from 14-18th December. The conference is aimed at those interested in the Bioconductor project which promotes open source software for the analysis and comprehension of high-throughput genomic data.

- Colva Roney-Dougal has given four online seminars over the past few weeks. One, part of the *Ischia Online Group Theory Conference* series, will hopefully result in an actual trip to Ischia when that becomes possible again (Ischia is an island about 12 miles from Naples). She also gave a seminar at the University of South Wales, another at Bielefeld University, and another as part of an online conference *Mathematics without Boundaries* organised by the National Institute of Technology Srinagar, in India.

- On 8th December, Peter gave the opening talk in a new seminar series entitled *Ural Seminar on Group Theory and Combinatorics* at the Ural Federal University in Yekaterinburg on 'Graphs defined on groups: old and new connections'. Peter also spoke at two international conferences in India: an *International Conference on Algebraic Graph Theory and Applications* at Presidency University, Kolkata, where he spoke on 'Graphs defined on groups', and at an *International Conference on Number Theory and Discrete Mathematics* at Rajagiri School of Engineering and Technology, Kochi, on 12th December, to commemorate the centenary of the death of Srinivasa Ramanujan, where he took the audience on a journey 'From automata to permutation groups'.

Peter speaking at Rajagiri

- On 2nd December, Rosemary Bailey and Peter Cameron gave a mini-series of two talks in the *Combinatorics Seminar* at Shanghai Jiao Tong University. Rosemary spoke on 'Latin cubes' and Peter on 'Diagonal graphs and the Hall-Paige conjecture'.

- Mike Todd gave a talk on 'Pressure on non-compact spaces?' on 11th December at the *Dynamical Systems Semina*r of the Jagiellonian University in Krakow.

- Meredith Houlton gave a talk on 'Axiomatics in *Elementa Geometriae* by William Sanders' at the *31st Novembertagung on the History and Philosophy of Mathematics*, held on 26-28th November. The meeting had the theme 'Axiomatics: Ancient and Contemporary Perspectives' and was originally planned to be at Humboldt-Universität zu Berlin but was held on Zoom.

- Isobel Falconer organised and chaired the morning session of the British Society for the History of Science (BSHM) *Christmas Meeting* on 5th December. The virtual meeting looked forward to the BSHM's 50th birthday next year, with a line-up of past Presidents as speakers and 130 participants. The keynote address was by Craig Fraser, the current President of the Canadian Society for the History and Philosophy of Mathematics, who spoke on John Charles Fields and Canadian Mathematics.

Other News

- During Revision Week, four members of maths staff each led two 'history of maths' walks around St Andrews for small groups of undergraduates as part of the 'CanDo' scheme. The students were generally enthusiastic and appreciative as they visited sites such as D'Arcy Thompson's house, Gregory's meridian, Admiral Fitzroy's barometer, and the stone sight for the Bell Rock Lighthouse, with the lighthouse, some 17 miles distant, being visible on half of the walks. One student got very excited when she discovered that one of her friends lived in the house where Margaret Murray, our first female maths graduate, grew up.

Next Issue

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

A Happy Christmas to all our readers!