

School of Mathematics and Statistics

Newsletter

July 2020

Congratulations...

- to Alan Hood on a prestigious accolade for his work. Although many members of the School have already heard about this, it has not yet been publicly announced! There will be more details in next month's Newsletter.
- to Kenneth Falconer who was awarded the London Mathematical Society's 2020 Shephard Prize for 'his many original and profound results in fractal geometry, particularly the description, occurrence, geometrical properties and dimensional analysis of fractal sets and measures'. The full citation may be read at www.lms.ac.uk/sites/lms.ac.uk/files/files/Falconer_Shephard_citation.pdf
- to Craig Miller who successfully defended his PhD Thesis 'Finiteness conditions on semigroups relating to their actions and one-sided congruences'.
- to all staff and research students involved in teaching for achieving a 96% level of satisfaction in the recent National Student Survey, taking us to 8th in the UK for Mathematical Sciences (of course it would be 100% if it weren't for the other halves of our joint degrees!). As usual St Andrews was top overall amongst multi-discipline universities.

Virtual Activities

- Edmund Robertson gave two lectures to the CEEPUS (Central European Exchange Program for University Studies) Summer University on 6-7th July by Zoom. The Summer University delivered a two-week intensive course on *Central European Contributions to the History of Mathematics and Teaching of Mathematics*. The students came from Bulgaria, Romania and Serbia. Edmund's lectures were (i) The MacTutor History of Mathematics Archive and (ii) Writing MacTutor biographies.
- Isobel Falconer organised an online conference *Mathematics in Times of Crisis* on 6th July for the British Society for the History of Mathematics. Some 110 people registered in locations from Japan to California, including several from our School and all seemed to enjoy themselves. The meeting consisted of 10 pre-recorded talks which varied considerably in style and approach, with three one hour live question and answer discussion sessions featuring the speakers as panelists. The talks can still be viewed at <https://www.bshh.ac.uk/conference-talks-mathematics-times-crisis>
- Sadly, Peter Cameron was unable to go to the meetings *Group Theory in Florence* and *Laci Babai's Birthday Conference* in Budapest.

However, he was gratified to learn from Peter Sarnak's LMS Hardy lecture that one of his 1976 papers, with Jean-Marie Goethals, Jaap Seidel and Ernie Shult, was cited as part of the solution to a problem arising in the theory of waveguides. The paper, which used the theory of root systems to classify graphs with smallest eigenvalue -2 , thus gives another example of an unexpected application of pure mathematics.

- Rosemary Bailey had organised an invited Special Session on Design and Analysis of Experiments for the *LinStat 2020* conference in the beautiful High Tatras in Slovakia in the first week of July. The conference has now been postponed to a similar time in 2021.
- As a member of the Trust, Colin Campbell attended (virtually) the Annual General Meeting of the *United Kingdom Mathematics Trust* on 13th July.

- Many members of CREEM attended the virtual *International Statistical Ecology Conference*, hosted by University of Sydney, 22nd-26th June. David Borchers gave a plenary talk ‘It’s about time: modelling detection processes continuously in time’. There were also presentations from our Rick Camp, Ian Durbach, Fanny Empacher, Richard Glennie, Theo Michelot, Felix Petersma, Theoni Photopoulou, Andy Seaton, Paul van Dam-Bates, Len Thomas and Katherine Whyte; others attending included Hannah Worthington. Congratulations to Felix Petersma for getting a prize in the best student speedtalk category! Len served on the local organizing committee and during the conference as a virtual helper (an ‘elf’, see picture). Given the ease and inexpense of virtual attendance, numbers were greatly increased: there were over 850 participants compared with around 400 at ISEC 2018 in St Andrews. There was plenty of positive feedback, based around the software slack, with talks being live-streamed via Zoom to YouTube. Over 300 tons of carbon was saved by participants not travelling to the conference. Future ISECs will likely alternate between a mixed live-and-virtual and a virtual-only format.
- Mike Todd had planned to visit Chile for research and to speak at the conference *New Trends in Ergodic Theory* at UC, Santiago (the Pontifical Catholic University of Chile) from 6-10th July. He is continuing his Chilean collaborations, but it’s more difficult without pisco sours and face to face research discussions.
- Isobel Falconer attended several sessions of the British Society for History of Science *Global Digital History of Science Festival* which ran from 6-10th July
- Meredith Houlton is currently discussing her work on William Sanders *Elementa Geometriae* in the *North British History of Science Seminar*. This seminar is taking place in an asynchronous discussion forum.



Caption Competition

- Our June issue asked for caption suggestions for Andy Wright’s photograph. Captions include:
 ‘Tom shares his screen via the shortest Zoom meeting allowed by social distancing in Andy’s new office.’ ANW
 ‘Do you remember the days of summer long past?’ KJF



Next Issue

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