# School of Mathematics and Statistics Newsletter

**May 2019**

## *Congratulations…*

• to Ineke de Moortel on being awarded a Royal Society Wolfson Research Fellowship for five years to work on Solar heating.

• to Han Yu who passed his PhD viva for his thesis 'Assouad dimensions and dimension spectra' on 8th May. Fortunately for the examiners, his thesis included just 3 of the 20 papers that he wrote during his PhD period. In September Han will take up a 3 year Research Fellow position in Cambridge working with Peter Varju.

• to Gui Bortolotto, PhD student in the School of Biology co-supervised through CREEM, for successfully defending his thesis 'Humpback whales in Brazil: distribution, abundance and human impacts' on April 17th.

## *Visits and Conferences*

• Mike Todd visited Vienna for a week to work with Henk Bruin. He also met up with former St Andrews students Sascha Troscheit for some work and with Julius Jonusas who has a postdoc grant at the Technical University. At the end of the week he gave a talk on 'Escape rates for multimodal maps with holes' in Budapest in the joint *Budapest-Vienna Dynamics Seminar (BudWiSer)*, where he also met up with another former student Ábel Farkas.

• Kenneth Falconer visited the University of Warwick on 14th May where he gave a seminar 'Hausdorff, box and intermediate dimensions'.

• Colin Campbell and James Mitchell attended *Groups in Galway 2019* which was held at the National University of Ireland, Galway, from 10-11th May. James spoke on 'Uniqueness and non-uniqueness of Polish semigroup topologies'.

• Sophie Huczynska was in London 6-10th May, to work with Maura Paterson, Birkbeck, University of London.

• Peter Cameron, Sophie Huczynska and Nik Ruskuc attended the *2019 Colloquia in Combinatorics* on 8-9th May at Queen Mary University of London and the London School of Economics. Whilst there, Peter chaired a meeting of the British Combinatorial Committee.

• Jonathan Hickman spent two weeks in the middle of May at the University of Chicago and the University of Wisconsin, Madison on research visits and to attend the conference *Madison Lectures in Fourier Analysis*. As part of the conference he gave a talk entitled 'The Circular Maximal Function for Heisenberg Radial Functions'.

• Danielle Harris and Len Thomas attended the US Office of Naval Research (ONR) program review in Alexandria, Virginia on 23rd-25th April, giving 6 presentations on current or recently-completed ONR-funded projects.

• Janine Illian was an external examiner for a PhD thesis by Janne Mannseth, Department of Mathematics, University of Bergen, Norway, entitled 'Bayesian and frequentist computation with application to data from the Medical Birth Registry of Norway'.

• Len Thomas visited the University of Sheffield on 8th May as external examiner for the PhD of Hajar Alkhezi on 'Bayesian Inference for Animal Movement in Continuous Time'.

- Andy Lynch attended the *2019 Senescence Symposium* in Edinburgh on the 10th May, where he presented a poster 'Telomerecat: estimating telomere lengths from whole-genome sequencing data' and made a number of interesting contacts.

- Andy Seaton and Janine Illian were invited speakers at the meeting *Point Processes in Space, Time, and Beyond* in Skagen, Denmark, from May 13-16th.

## *Visitors*

- Welcome (back) to our former PhD student Oliver Allanson who is visiting the Solar Group from 13-17th May. Oliver is currently a Postdoc in the Space and Atmospheric Electricity Group in the Department of Meteorology at the University of Reading where he works on the physics of the Earth's radiation belts. Oliver's visit is part of an ongoing collaboration with his former supervisor, Thomas Neukirch, and whilst in St Andrews he also gave a seminar on his current work.

- CREEM hosted Joe Watson on 30th April-1st May. Joe is a PhD student at the University of British Colombia working on various projects in statistical ecology; he gave a seminar on the use of citizen science data to infer spatial distribution of Southern Resident killer whales in British Colombia.

- David Horowitz, Golden West College, California, is visiting Isobel Falconer from 29th April-12th June. They are working together on an early essay by Colin Maclaurin in which he uses a Newtonian gravitational model to explore theological questions! David will be giving a seminar on 5th June.

- Daniel Mitchell, RTWH Aachen, visited Isobel Falconer 22nd-26th April. They planned a project on 'The potential of the Exact Sciences', which will explore what is to be gained by writing about the 19th century from a perspective of integrated mathematics and quantitative science. It will centre around case studies of the development and implementation of ideas of potential.

## *Grants*

- Ruth Bowness and Cicely Macnamara have been awarded a grant from the Institute of Mathematics and its Applications to fund a one day meeting they are organising in December. The *Scottish Mathematical Biology Forum* will be held at the International Centre for Mathematical Sciences in Edinburgh on 5th December and seeks to foster collaboration in Mathematical Biology across Scottish centres.

## *Other News*

- A team from Maths consisting of Daniel Chambers, Jon Fraser, Tom Howson, Craig Johnston, Hope Thompson, James Threlfall, Hendrik Van Damme and Steph Yardley entered a charity 6-a-side football tournament in support of Scott Stinson's sarcoma treatment programme. (You can still donate to this worthy cause at https://uk.gofundme.com/scott039s-sarcoma-solution )The tournament involved 10 teams, mostly from the School of Chemistry. The maths team ended victorious, following a great team performance led by captain, talisman, and top-scorer Craig Johnston. They were briefly in trouble during a tricky group stage encounter, to be saved by a 'wonder goal' from James Threlfall, and went on to win a gritty final 1-0.

## Public Engagement

- On 24th April CREEM participated in a *University First Chances* event whereby about 100 S1 and S2 pupils from local schools visited the Schools of Maths and Statistics and Computer Science. CREEM ran one of the four workshops on offer, which focused on using mark-recapture methods for estimating population size, with Louise Burt, Fanny Empacher, Claudia Faustino, Richard Glennie, Catriona Harris, Charles Paxton, Valentin Popov, Lindesay Scott-Hayward, Katherine Whyte and Hannah Worthington helping out across the day.

- The School, together with the School of Computer Science, hosted a visit from De Leidsche Flesch, a study association of undergraduates based around the University of Leiden. About 30 mid-course undergraduate students visited St Andrews as part of a tour of Scotland and Ireland, and were entertained by talks from Tom Elsden, Jonathan Hickman and Valentin Popov.

- Now on the web is the *History of Maths and Science Walking Tour of St Andrews*, which was developed a few years ago by Isobel Falconer for the Biographies conference. It has since been used for Maths Week Scotland. Entertain your visitors by taking them on this walk or a part thereof: https://risweb.st-andrews.ac.uk/portal/files/258912501/StAMaths_SciWalk.pdf

## Caption Competition

- Captions are invited for this photograph taken in the Maths Institute and sent in by Valerie. Send your suggestions to schoolnews@mcs.st-andrews.ac.uk The best captions may be included in the next issue of the Newsletter.



## Next Issue

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