

# School of Mathematics and Statistics

## Newsletter

November 2018

### *Welcome ...*

- to Edward Lavender who recently arrived to start a PhD in Statistics.

### *Congratulations...*

- to Michael Torpey on successfully defending his thesis ‘Semigroup congruences: Computational techniques and theoretical applications’.
- to Wilf Wilson on successfully defending his thesis ‘Computational techniques in finite semigroup theory’.
- to all involved in the successful renewal of the School’s Athena SWAN Bronze Award. In particular sincere thanks to Michael Papatomas and the Equality and Diversity Committee for all their efforts in putting together the application.
- to CREEM for gaining a University award for their support for public engagement. The award was presented at a glittering ceremony at the end of a one-day conference on public engagement on 26th October, and is now displayed in the Observatory coffee room. Congratulations in particular to Catriona Harris, who coordinates CREEM engagement activities, and who was herself short-listed for an Individual Achievement award. For more about CREEM’s outreach activities, see <https://www.creem.st-andrews.ac.uk/public-engagement/> and the School’s outreach and engagement page <https://www.st-andrews.ac.uk/math/outreach/>

### *Grants*

- Congratulations to Vasilis Archontis who has been awarded a major European Research Council Synergy Grant for *The Whole Sun Project* with a total funding of €11.2million of which about €2.2million will come to St Andrews. The grant, which is for 6 years from May 2019, is shared between the University of St Andrews, the University of Paris-Saclay CEA (France), the University of Oslo (Norway) and the Max Planck Institute MPS (Germany). The project is to study the inner most workings of the Sun, from its variability, magnetic cycle and eruptive nature to how it impacts the Sun-Earth connection. See <https://tinyurl.com/y6w8v95w>
- Nik Ruskuc has been awarded an EPSRC Overseas Travel Grant for a project *Diagram Monoids and Their Congruences*. The grant will support his ongoing collaboration with James East from the Western Sydney University.
- Jonathan Hickman has been awarded a London Mathematical Society Scheme 4 grant to facilitate a visit from a collaborator in Spain next year.

### *Visitors*

- Sanming Zhou of the University of Melbourne visited the School from 29th October-9th November, when he and Peter Cameron worked on perfect sets in Cayley graphs.

- Gregal Vissers from the Institute for Solar Physics at Stockholm University visited Patrick Antolin from 17th-23rd October to continue collaborative research of observations from the Swedish 1-m Solar Telescope (SST) of a magnificent prominence eruption from the Sun.

### ***Visits and Conferences***

- Mike Todd was an invited speaker at the conference *Probabilistic Limit Theorems for Dynamical Systems* at CIRM, near Marseille. His talk was on ‘Pressure and limit theorems: the infinite measure case’. Aside from having to brave the football fans of France’s greatest rivalry (Marseille v Paris St Germain), lots of rain and extensive building works at CIRM, it was a very productive and interesting conference. Mike also gave talks on ‘Phase transitions and limit laws’ at Imperial College London and Loughborough University during Independent Learning Week.
- Jonathan Hickman attended a one day *LMS Harmonic Analysis and PDE Network* meeting at the ICMS, Edinburgh.
- On 14th November Louis Theran gave a talk entitled ‘Unlabelled rigidity problems’ at the University of Bristol *Algebra and Geometry Seminar*.
- Rosemary Bailey and Peter Cameron attended the *Old Codger’s\* Combinatorics Conference* in Reading on 7th November, where Peter talked about ‘Equitable partitions in Latin square graphs’ [\* the apostrophe is in the right place: the organiser is an old codger but anyone is welcome to attend!]
- Giorgos Minas gave a talk ‘How does the noisy NF-kB signalling pathway distinguish between simultaneously received signals?’ to the *Mathematics Seminar* of the University of Dundee. He had interesting discussions with our neighbouring colleagues during and after the talk.
- Together with Sian Stott, a former physics undergraduate, Isobel Falconer attended the *International Conference on the History of Physics* in San Sebastian, from 18-20th October. She and Sian co-presented their work on ‘Recreating G.F. FitzGerald’s wheel and band model of the electromagnetic ether.’
- On 9th November Isobel Falconer gave a seminar on ‘Formulating a theory: Mathematics in Thomson and Rutherford’s collaboration on x-ray ionisation’ at the Mathematical Institute of the University of Oxford.

### ***Public Engagement***

- Rick Camp, Fanny Empacher and Charles Paxton ran a research stand at Dundee Science Centre on 10th November as part of their *Meet the Expert* programme. The focus of the event was on animals and so they ran activities showcasing a number of different methods for estimating animal abundance.
- Charles Paxton gave a talk on the ‘Science of Sea Monsters’ on 20th November to a group of St Andrews scouts taking part in a weekend event that included a series of STEM activities.
- Louis Theran gave a talk ‘The Magic world of nano self-assembly: why geometry matters’ at Pittenweem Community Library on 8th November to support the library

### ***Other News***

- At the recent AGM of the *British Society for the History of Mathematics*, Isobel Falconer was elected BSHM Meetings Coordinator.

- Ineke de Moortel has confessed to being the anonymous donor of the set of hard copies of the School Newsletter from 1987 onwards, see October 2018 Newsletter. However, she cannot remember who she obtained them from (not having been around in 1987!).

### ***Future Events***

- Andy Lynch will give his Inaugural Lecture entitled ‘Getting cancer’s number: an interface of statistics and molecular biology’ at 5.15pm on Wednesday 21st November in School III in St Salvator’s Quad.
- There will be a Workshop on *Mathematical Practices in Pre-Enlightenment Scotland and her European Networks* in the Gateway Boardroom on 23rd-24th November, all day, both days. We will be welcoming a number of Continental European historians to this workshop. Further details <http://www.mcs.st-andrews.ac.uk/MathsHistory/mathprac2018.shtml>

### ***Next Issue***

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



*Lacking other pictures, here is Johannes Kepler who died on 15th November 1630*