

School of Mathematics and Statistics

Newsletter

May 2018

Congratulations...

- to Antonia Wilmot-Smith on being awarded the Students' Association Teaching Award for the most 'Excellent Module' in the Science and Medicine Faculties for her teaching of MT2501 Linear Mathematics. The Students' Association awards are based on nominations by the students.
- to Ben Williams, who successfully defended his thesis with the title 'The Dynamic Topology of the Solar Corona: Mapping the Sun's Three Dimensional Magnetic Skeleton' on 10th May.
- to Craig Johnston, who successfully defended his thesis with the title 'Modelling chromospheric evaporation in response to coronal heating' on 15th May.

Farewell ...

- to Magda Carr who took up a Senior Lecturer position at the University of Newcastle as of 1st May. Magda has been a member of the School for nearly twelve years and has served the School in various roles, for example as Examinations Officer. We wish her all the best for the future.

Visits and Conferences

- On 26th April, Collin Bleak attended the House of Lords launch, hosted by Lord Julian Hunt, of Philip Bond's review report: 'The Era of Mathematics. Review of Knowledge Exchange in the Mathematical Sciences' <https://epsrc.ukri.org/newsevents/pubs/era-of-maths/> The report gives recommendations in support of many changes to UK governmental policy towards supporting mathematics, in an attempt to help stimulate UK innovation through better practice in engagement between practitioners of the various fields of Mathematics and with industry and government. The suggested changes include much-enhanced research funding, 100+ more PhDs in Mathematics each year, and various other recommendations.
- Rosemary Bailey attended the conference *Design of Experiments: New Challenges* at the Centre International de Rencontres Mathématiques (CIRM) at Luminy, near Marseille, France, from 30th April to 4th May. She gave a talk on 'Designs which allow each medical centre to treat only a limited number of cancer types with only a limited number of drugs'. The organizers showed an old photograph as evidence that 16 of those present had attended a similar meeting at CIRM in June 1998. Note that the 1998 meeting was not called 'Old Challenges', but someone remarked that Rosemary didn't seem to have changed her shirt in twenty years!
 - Colva Roney-Dougal, Peter Cameron, and MSc students Carl-Fredrik Nyberg Brodda and Jake Haycocks, attended the *Fourth Scottish Combinatorics Meeting* in Edinburgh on 26-27th April. Colva gave an invited talk on 'The generating graph of a finite group'. Peter contributed a talk on 'Equitable partitions of Latin square graphs' and Carl-Fredrik one on 'Topics in graph pebbling'.
 - Peter Cameron, Sophie Huczynska and Nik Ruskuc attended the *London Combinatorics Colloquia* at Queen Mary University of London and the London School of Economics. Peter chaired a meeting of the *British Combinatorial Committee*.
 - Sophie Huczynska spent the week 7-11th May in London, where she collaborated with Maura Paterson at Birkbeck, University of London as well as attending the *London Combinatorics Colloquia*.

- Martyn Quick delivered seminars entitled ‘Presentations for Thompson’s infinite group V and some of its generalisations’, first at the Algebra Seminar at the University of Lincoln on 18th April, and then second at the Algebra Seminar at the University of Glasgow on 2nd May.
- Colin Campbell attended *Groups in Galway 2018* which was held at the National University of Ireland, Galway from 18-19th May. Unlike the Groups St Andrews conferences which are held every four years, the Groups in Galway conferences have been running on an annual basis since 1978.
- Mike Todd visited Porto in the first week of May to work with his collaborators Ana Cristina Freitas and Jorge Freitas, as well as an addition to the team: Ian Melbourne from Warwick. He spent a week working on problems in extreme value theory, as well as eating nice food (sometimes with former St Andrews PhD student Vuksan Mijovic - currently a Porto postdoc) and revisiting some old haunts.
- Kenneth Falconer gave a plenary lecture at the *Young Mathematicians Colloquium* at the University of Birmingham on 18th April. It seems that he was invited to show the ‘young mathematicians’ what they might turn into in 40 years’ time!
- David Borchers was an invited speaker at the International Symposium on Conservation and Management of Gibbons in China, held in Guangzhou, China from the 22nd-24th April.
- Janine Illian gave a short course entitled ‘Fitting geostatistical and spatial point process models to spatial survey data’ at the Center of Statistics and Applications, University of Lisbon, Portugal, from 7-11th May.
- Thibault Jouglu attended the *European Geosciences Union* in April in Vienna, where he presented a poster.

Visitors

- Alex LeGal, from Université de Bretagne Occidentale, France, is visiting the vortex group to work with Jean Reinaud for 5 weeks from 23rd April. Alex and Jean are working on the interaction between a street of alternate-sign surface vortices and a deep coastal current, a situation relevant to the flow in the Persian gulf near the coast of Oman.
- Bob Gray from the University of East Anglia (and a former student and PhD student from St Andrews) visited Nik Ruskuc from 23rd-27th April. They are working on a joint paper, also involving Igor Dolinka from Novi Sad in Serbia, on one relator inverse semigroups.
- Antti Käenmäki from the University of Helsinki visited Jon Fraser for the week 14-18th May.
- Amain Astarloa from AZTI, Spain, is visiting Richard Glennie from May to July.
- Ian Durbach from the University of Cape Town is visiting David Borchers from May through to August.
- Gisela Cheoo from the University of Lisbon is visiting Len Thomas until June.

Public Engagement

- Alan Hood gave two general talks. Firstly, a talk to the *British Astronomical Association* at Newcastle on 5th May and secondly the Braithwaite Lecture to the *Clydesdale Astronomical Society* at Forth on 14th May. John Braithwaite was the last telescope maker in Scotland and he contributed to the ideas behind adaptive optics. Both lectures were, somewhat surprisingly, called ‘Our Sun’s Magnetic Personality’ and both seemed to feature very similar slides! Hopefully no-one attended both lectures!

Grants

- David Borchers and his PhD student Filippo Franchini have been awarded a grant of £30,000 from the National Geographic Society to develop and test methods for drone-borne passive acoustic surveys of gibbons in South East Asia. This grant will fund hardware development and fieldwork costs for Filippo to conduct trials at study sites in Sumatra and Laos.

Other News

- Kenneth Falconer has been appointed Chair of the London Mathematical Society *Nominations Committee*, for three years from November 2018. This committee is charged with ensuring that sufficiently many and diverse candidates are nominated for the LMS Council elections, and also that suitable candidates are identified and nominated for the main officer positions of the Society.

Forthcoming Events

- The *British Mathematical Colloquium BMC2018* will be held in St Andrews from 11-14th June. This is the major annual UK Mathematics Conference which has been held every year in universities across Britain since 1949. There is a stunning list of plenary and invited speakers, and workshops on Algebra, Analysis and Probability, Combinatorics, Dynamics, and History of Mathematics, as well as speed talks and a display of rare mathematics books, see <http://www.mcs.st-and.ac.uk/~bmc2018/> Staff and PhD students from the School are welcome to attend any of the talks; if you want to attend more than one or two talks let Mike Todd know so that you can be given a badge and conference pack.
- As part of BMC2018 Julia Wolf from the University of Bristol will give a *Public Lecture* on Monday 11th June at 5.30pm in Physics Lecture Theatre A, entitled 'Using randomness to find structure'. Julia works in combinatorics and number theory is well-known for her public engagement activities. The talk will be suitable for senior school pupils as well as interested public, and all are welcome to attend. The lecture is sponsored by the Edinburgh Mathematical Society and will be followed by a wine reception.

Caption Competition

- Readers are invited to suggest captions for this picture of past Heads of School. A selection of those that are not too impolite may be included in the next Newsletter. Send your suggestions to schoolnews@mcs.st-andrews.ac.uk Also, any suggestions for a collective noun for a set of Heads of School?



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. Remember *if it's not in the Newsletter then it didn't happen!*