

# School of Mathematics and Statistics Newsletter

April 2022

## ***Congratulations ...***

- to our Director of Teaching, Antonia Wilmot-Smith, on being awarded a University Teaching Excellence Award. These awards recognise academic staff for making a significant contribution to teaching across the University.
- to Fanny Empacher whose second daughter Elinor was born on 1st April, a sister for Thea.
- to Lauren Gatherum on the birth of a daughter, Amaya, on 5th April.



*Elinor with her proud sister Thea*



*Amaya*

## ***Welcome ...***

- to Shahieda Erkamp who joined the Teaching Admin Team on 1st April to cover Lauren's maternity leave. Shahieda previously worked at the Scottish Oceans Institute.

## ***Farewell ...***

- to Vasilis Archontis who leaves to become Professor in Astrophysics at the University of Ioannina, Greece. Whilst we congratulate Vasilis on his appointment it is with sadness that we say goodbye. Vasilis came to St Andrews as a postdoctoral research assistant in January 2006 and, after obtaining a Royal Society University Research Fellowship from 2011-2019, he was appointed a lecturer in Applied Mathematics in 2015. He has been awarded other research grants and is presently a key member of the 'Whole Sun' European Research Council Synergy grant. Interestingly, Vasilis started his undergraduate studies at Ioannina (some years ago!) but moved and graduated from Thessaloniki.

## Former Staff

- George Philips, Honorary Reader in the School, passed away on 1st April following a period of ill health. George grew up in Aberdeen and took his MA and MSc degrees at the University there. He moved to St Andrews for his PhD before becoming a lecturer at the University of Southampton. In 1967 he returned to St Andrews as a lecturer, then becoming a reader, retiring in 1998. He played a full part in teaching, administration and research, including at various times as Advisor of Studies, Pro Dean and a Faculty Admissions Officer. He wrote around 90 papers mainly on numerical analysis and approximation theory as well as four books. These include a highly acclaimed student text *Theory and Applications of Numerical Analysis*, and two books written in retirement: *Two Millennia of Mathematics: From Archimedes to Gauss*, which presents five central topics in mathematics with a historical perspective, and *Mathematics Is Not a Spectator Sport*, which aims to encourage youngsters to become mathematicians. Those who knew George will remember his wit and kindness along with his lyrical Aberdonian accent.



## Visits and Talks

- Supported by an LMS ‘Celebrating New Appointments’ grant, Yoav Len organised a *Day of Tropical Geometry* in St Andrews on 11th April. The speakers were Diane Maclagan (Warwick), Dhruv Ranganathan (Cambridge) and Yoav himself. It was a delight to be back in Room 1A for wine and cheese after the talks.
- Several of the Analysis Group attended the *Junior Ergodic Theory Meeting* at the International Centre of Mathematical Sciences (ICMS) in Edinburgh from 28th-31st March. Liam Stuart gave a talk entitled ‘Refined horoball counting for Kleinian group actions’, Amlan Banaji spoke on ‘Intermediate dimensions’, and Istvan Kolossvary talked about ‘Intermediate dimensions of Bedford-McMullen carpets’. Raquel Couto, Alex Rutar and Boyuan Zhao also attended, and Kenneth Falconer and Mike Todd were each allowed to attend for one day on sufferance. The meeting was organised by Natalia Jurga along with former School members Tom Kempton (now a lecturer in Manchester) and Rhiannon Dougall (now a lecturer in Durham), together with Solly Coles from Warwick.
- Nik Ruskuc gave a keynote lecture on ‘Direct and subdirect products in combinatorial semigroup theory’ at the early careers researchers’ *Northern British Semigroups and Applications Network* (NBSAN) meeting in Manchester on 25th March. In addition, Ashley Clayton spoke on ‘Counting subdirect powers of finite commutative semigroups’ and Bill de Witt on ‘The number of subdirect powers of unary algebras’.
- Nik Ruskuc is visiting his long-standing collaborator Peter Mayr at the University of Colorado in Boulder from 3rd-30th April. This marks a resumption of their joint work on direct and subdirect products in general algebra following the pandemic. Peter will make a return visit to St Andrews in September. Both visits are supported by a small grant from the EPSRC and Heilbronn Institute.
- Peter Cameron spoke at the online *Sixth Workshop on Algebraic Graph Theory*, organised from Novosibirsk, Russia, on 24th March. His topic was ‘Super graphs on groups’.
- Saul Freedman gave an online talk on ‘The non-commuting, non-generating graph and intersection graph of a group’ on 7th April, as part of the *Australian Postgraduate Algebra Colloquium*.
- Jérôme Rousseau from UFBA in Salvador visited the Analysis Group for a week in March. He gave a talk on the ‘Shortest distance between random orbits and correlation dimension’ in the *Analysis Seminar* and collaborated with Mike Todd on a related, less random, project.

- Lindsay Scott-Hayward and Saana Isojunno attended (virtually) the *Conference on Wind Energy and Wildlife Impacts (CWW)* at Egmond aan Zee, Netherlands on 4-6th April. Participants were an excellent mix of scientists, industry and government organisations from all over the world, discussing issues, solutions and emerging markets of onshore and offshore wind.
- Lilli Nadol, Thomas Neukirch, and Jack Reid participated in the of the Matter and Cosmos Section of the *Spring Meeting of the German Physical Society* (Deutsche Physikalische Gesellschaft, DPG) from 21st-25th March. Nominally hosted by Heidelberg, it was held online, in light of ongoing restrictions. Lilli and Jack both gave talks in the ‘Sun and Heliosphere’ session, with the titles ‘Coronal Magnetic Field Extrapolation Using a Specific Family of Analytical 3D Magnetohydrostatic Equilibria - Practical Aspects’ and ‘MHD avalanches in truly curved coronal arcades: proliferation and heating’, respectively.
- On 21st March, Isobel Falconer gave an invited talk, also at the *Spring Meeting of the German Physical Society*, on ‘J.H. Poynting and the Gravitational Constant in the 19th Century’. Unfortunately, the meeting was moved online, she missed the trip to Heidelberg that she had been looking forward to.
- On 9th April, the *British Society for the History of Mathematics* held a meeting in memory of Peter Neumann in Oxford. Peter Cameron, who was Peter Neumann’s sixth DPhil student, spoke on ‘A bridge between algebra and combinatorics’, relating to an unpublished manuscript from 1969 by Peter Neumann. The meeting was broadcast on Teams and YouTube, and several in St Andrews attended virtually, including Marina Anagnostopoulou-Merkouri, Rosemary Bailey, Deborah Kent and Ursula Martin. Marina has been awarded an Undergraduate Research Bursary by the London Mathematical Society to work on this paper.

## ***Other News***

- Raquel Couto, an Analysis PhD student, plays in the University 2nd Women’s volleyball team which recently won the BUCS (British Universities and Colleges Sport) Conference Cup. Congratulations to Raquel and her team! They also won their league (Scottish Tier 2A) getting promotion to the main league of Scottish Student Sport (Scottish Tier 1A) for next year, the first time in the history of the volleyball club that a women’s 2nd team has been promoted to the main category. Raquel played all the matches in her favourite position, outside hitter.

## ***Next Issue***

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



*Class of 2022 - Staff and Honours students*