

**Maxwell Institute Graduate School in Analysis and its Applications - MIGSAA**  
**An EPSRC/SFC Centre for Doctoral Training**

Issue 3: March 2016

Welcome to the third MIGSAA Newsletter, keeping you informed about our students, research and all the other things that happen at MIGSAA.

**MIGSAA Colloquium**

In the last quarter of 2015, new cohort MIGSAA students, year 2015, met current students and staff at the MIGSAA Colloquium on 25 September in ICMS, South College Street, Edinburgh. The event was organised by first year student Jamie Bennett and his colleagues, providing a stimulating start to the academic year. The guest speakers were distinguished academics, Professor Beatrice Pelloni from the University of Reading and Dr Christina Cobbold, University of Glasgow. Professor Pelloni spoke on “Beyond integrability” affording insight into 15 years of research in the complex Inverse Scattering Transform. Dr Cobbold’s talk, “Moving in a patchy world” explained Patch models and coupled systems of ODEs, which are used by ecologists to study population dynamics on heterogeneous landscapes. New students, staff and the wider Mathematics community relished this highly stimulating event.



*Dr Christina Cobbold explains complex theory to a student.*



*Professor Beatrice Pelloni introduces 'Beyond integrability'.*



*A captivated audience enjoys the afternoon's arrangements!*

**2014 student cohort Extended Projects**

Razvan Mosincat’s project was identified as one of several potential publishable pieces of work: Mosincat, Razvan; Oh, Tadahiro; A remark on global well-posedness of the derivative nonlinear Schrödinger equation on the circle. C. R. Math. Acad. Sci. Paris 353 (2015), no. 9, 837–841. The 2014 cohort spent a challenging and enjoyable year preparing for their research career ahead and are congratulated on their successful progression into year 2 of the programme.

**Industrial Sandpit 2015**

One of the highlights of the last quarter of 2015 was the Industrial Sandpit on 9 October. Presentations by Industrial leaders: Selex ES, MOODYS Analytics, Oldbaum Services, OpenGoSim and the British Geographical Survey fascinated the audience. Practical industrial problems were discussed, which require a sophisticated mathematical academic skills’ set to solve. A networking reception followed where visitors and students of the Maxwell Institute and beyond chatted and exchanged ideas, fuelling a dynamic connection between academia and industry. A Selex site visit will be arranged for students in 2016 to illustrate how their research endeavours can boost business and industry, and promises to be an exciting event.



*Emma Coutts from Oldbaum Services viewing students' poster presentations.*

## Taster Projects 2015

As the first Semester of SMSTC courses drew to an end, the 2015 student cohort prepared for their Taster



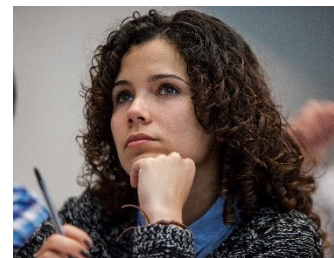
Project presentations. Presentations feedback was that the projects were “..very high standard and revealed how much (students) had put into learning the various topics”. A Christmas themed gathering ended the activities.

### New Year, New Semester!

The new year started with a busy Recruitment Day event on 8<sup>th</sup> January 2016, where potential candidates were able to discover the remarkable research themes and training arrangements this programme provides. Another will be held on 15 February, with places expected to be filled by the beginning of March. Potential applicants can read about the MIGSAA programme on the website <http://www.maxwell.ac.uk/migsaa> where there is a link to the online application form.

2015 student cohort plunged into their SMSTC courses and prepared for the extended project section of the programme. The choice of project was exceedingly varied, and suited everyone's interests.

Meanwhile, Year 2 students began the suite of Advanced Courses as well as some generic skills training, with a few opting for foreign languages to supplement their mathematics studies.



### Looking forward

In the coming months, MIGSAA year 1 students will be organising cross CDT events in either Edinburgh or central UK/London. Watch this space for more information!

Everyone is looking forward to a trip to The Burn in Edzell for a MIGSAA Mathematics Symposium in May. The Burn is a Georgian 18<sup>th</sup> century mansion situated at the foot of Glenesk, one of Scotland's most scenic glens, and is part of the Goodenough College. As well as presentations, tutorials and meetings, students will enjoy walks in some of the most beautiful scenery in the UK.



On the horizon:- ICMS Modelling Bootcamp, 21 – 24 March 2016, 15 South College Street, Edinburgh EH8 9AA.

Thanks for reading,  
Tony Carbery

**MIGSAA Director**