



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

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

MIGSAA Recruitment Events

Two Recruitment Days are planned for the new 2017-2018 intake. A number of candidates visited us on 19th December 2016, and some offers have been made and accepted. The second Recruitment Day is scheduled for 10th February 2017; in addition, Skype interviews for long distance applicants are continuing.

MIGSAA Courses & MIGSAA Supported Events

Throughout the latter half of 2016 MIGSAA organised several courses, including Bilinear Restriction Estimates and Applications, run by Tim Candy (Bielefeld) over three days in October; an Entrepreneurship course, run by Entrepreneurship First's Jack Owen in December; and Presentation Skills over December 2016/January 2017, run by Iain Davidson of Seeing Stone. Moreover MIGSAA supported a summer school in Fluid Mechanics (Ben Goddard, Markus Schmuck and Dominic Breit) and a three day course in Multilinear L^2 convolution estimates of Schrödinger waves (Soonsik Kwon), maintaining a flow of diverse edifying opportunities for the maths community in Edinburgh and beyond.

MIGSAA's 2nd Student Colloquium

This year the MIGSAA Annual Student Colloquium warmly welcomed Dan Crisan from Imperial College, Philip Maini from the University of Oxford and Jonathan Bennett from the University of Birmingham.

Talks by Dan, Philip and Jonathan comprised "*Integration: Past, Present and Future*"; "*Modelling collective cell movement in biology*"; "*The Brascamp-Lieb inequality*" respectively. A first class variety of talks and student presentations rounded off by a networking event proved to be a winning interdisciplinary combination.



Figure 1 The audience ponders the latest research in Analysis

MIGSAA's 3rd Industrial Sandpit



The third MIGSAA Industrial Sandpit in October 2016 hosted, among our partners Selex ES (now Leonardo) and Moody's Analytics, new associates Schlumberger and NPL (National Physical Laboratory). We have responded to MIGSAA students' growing interests by expanding industrial opportunities in a diverse range of interdisciplinary areas to suit their needs.

A poster presentation followed the talks and potential projects and extended project collaborations were discussed.

Figure 2 Jakub Stoček MIGSAA 1st year student and Sam Engwell (BGS)

This is What We Do

The new cohort of students have arranged and managed a series of presentations each Friday in their 'This is What We Do' sessions. Guest academics from both Universities give presentations on their research topics, showcasing their projects to the new students and more importantly getting to know each other. This should help connect students to suitable research projects in year 2. We are delighted that MIGSAA students already have the confidence and initiative to run their own events.

Reading Group in Computational Modelling

Two of year 2 MIGSAA students initiated and organised a bi-monthly Computational Modelling Reading Group held alternately at University of Edinburgh and Heriot-Watt University on Thursday afternoons. These are open to interested students *and* academics.

Meanwhile year 3 students continue to attend courses, schools and conferences at home and abroad maturing into confident Mathematical Researchers.

What's New?

Upcoming events in 2017 can be found in the **News** section of the MIGSAA website and include:

MIGSAA's Random Graphs and their Applications, 10th – 13th April 2017 in ICMS. Sign up at:
<http://icms.org.uk/workshop.php?id=418>

A Joint CDT Colloquium hosted by MIGSAA, 18th – 21st April in ICMS.

We welcome Cambridge Centre for Analysis (CCA), Oxford Centre for Nonlinear Partial Differential Equations (OxPDE), Warwick Mathematics and Statistics Centre for Doctoral Training (MASDOC) and Maxwell Institute Graduate School for Analysis and its Applications (MIGSAA) for a colloquium consisting of two four-part mini courses. One to be presented by Gustav Holzegel (Imperial) on *Waves on black hole geometries*, and another by Ruslan Davidchack (Leicester) on *Methods for Molecular Simulation*. Furthermore, students from each CDT will present their research. **Register at:**
<http://icms.org.uk/workshop.php?id=447>

A Modelling Camp, 1st – 5th May at the International Centre for Mathematical Sciences.

The second **MIGSAA Residential Symposium 8th – 10th May.**

An **Energy Industrial Sandpit on 23 June.** Keep an eye on the Maxwell Institute **News** page for particulars and registrations. <http://www.maxwell.ac.uk/migsaa/news>

Thanks for reading,
Tony Carbery

MIGSAA Director