

MATHEMATICS AND STATISTICS

NEWSLETTER

Spring 2009

WELCOME

- We would like to welcome Brett McClintock to the department, who started a post-doc with Ruth King, Len Thomas and Jason Matthiopoulos (SMRU) on the 1st June. Brett will be based at CREEM.
- Welcome to all the 2009 Maths Summer Students: Alison Shaw, Izabela Petrykiewicz, Alejandra Garrido, Sam Baynes, Jenni Awang, Alex McLeman, James Hyde, Lorna Mitchell, Julie McCormick, Axel Obermeier, Shreena Patel, Ruairi Campbell and Hannah Worthington
- We would like to welcome Lorenzo Milazzo to CREEM. Lorenzo is a software developer working with Carl Donovan, David Borchers and Catriona Harris on further developments to the Environmental Risk Mitigation Capability system, which assesses the risk of anthropogenic sound production to marine mammals. He received a PhD in Physics at King's College London and since 1998 has specialised in Computational Science and has been involved in several R&D projects in both industry and academia. His main research interests are computer simulations, algorithms and computational methods, scientific software development.

CONGRATULATIONS

- Congratulations to Mike Harrison on successfully defending his thesis Equilibrium and Dynamics of Collisionless Current Sheets.
- Congratulations to our recent PhD student Jun Miao on his appointment to a lectureship at the East China Normal University in Shanghai.
- Congratulations to Sophie Huczynska and her husband Tom, on the birth of their daughter Freya on 27th May. We hope Magnus enjoys being a big brother!

SEMINARS, LECTURES, RESEARCH VISITS

- Clare Parnell attended the AAS Solar Physics Division Meeting in Boulder, USA in the middle of June where she gave a talk entitled, “A power-law distribution of solar magnetic fields over more than five orders of magnitude”. The following week she attended the 6th Magnetic Tracking Workshop at SWRI, Boulder where she also gave a seminar on “The importance of 3D Magnetic Nulls”.
- Several members (Ineke de Moortel, Jorge Fuentes-Fernandez, Keith Grady, Andrew Haynes, Alan Hood, Duncan Mackay, James McLaughlin, Karen Meyer, Thomas Neukirch, Eric Priest, Alex Russell) of the Solar and Magnetospheric Theory Group attended the European Week of Astronomy and Space Science at the University of Hertfordshire, Hatfield from 20 to 23 April 2009. This meeting incorporated the Royal Astronomical Society’s National Astronomy Meeting (NAM) 2009, the European Astronomical Society’s JENAM 2009, the UK Solar Physics Meeting (UKSP) 2009 and the Magnetospheric-Ionospheric-Solar-Terrestrial Meeting (MIST) 2009. Thomas Neukirch gave an invited talk on Particle Acceleration in Solar Flares - An Overview of Theoretical Ideas.
- Andrew Haynes attended the RAS Discussion Meeting on 13th March 2009, where he presented a poster on “The Effects of Magnetic Resistivity on a Magnetic Fly-by Model”. He also attended the 2009 UKSP meeting in Hertfordshire where he presented the same poster, as well as a talk on “The Nature of Separator Reconnection”.
- Ineke De Moortel attend the BUKS meeting in Leuven (April), the 2009 UKSP meeting in Hertfordshire (April) and the 4th Loops Workshop (June) in Florence, giving a talk on “Coronal Seismology of 3D Numerical Simulations of Transverse Loop Oscillations” at these three meetings. She also attended the third Solar Orbiter Workshop where she gave and invited review on “Coronal Seismology with Solar Orbiter”.
- Stephane Regnier attended the annual one-day meeting of the GMI working group (understanding CMEs from their source to the ionosphere) in Paris on May 6, and visited the Institute d’Astrophysique Spatiale (4-8 May). He also lectured on “Magnetic field measurements and extrapolations” during the SOLAIRE school held in Glasgow (1-5 June).

- Stephane Regnier organised a workshop in the Maths building on nonlinear force-free field extrapolations (23-25 June). 20 world experts in the observation and modelling of the solar magnetic fields met to prepare for the soon-to-be-launched Solar Dynamics Observatory (SDO) satellite. The local organisation has been done with Alan Hood, Fiona MacFarlane and Peter Lindsay.
- Thomas Neukirch and Alan Cairns attended the IOP Plasma Physics Conference 2009 which took place at the University of Warwick from 30 March to 2 April 2009. Thomas presented a talk on A one-dimensional Vlasov-Maxwell equilibrium for the force-free Harris Sheet.
- Thomas Neukirch attended the EGU General Assembly in Vienna on 23 and 24 April 2009, where he presented a talk and three posters. He also attended the 2009 Joint Assembly of the American Geophysical Union and the Canadian Geophysical Union in Toronto from 24 May to 27 May, where he presented a talk and a poster.
- Janine Illian attended the three "Scottish Crucible 2009" events in Edinburgh, St Andrews and Aberdeen. In April she was a guest at the inaugural lecture of Prof. Richard Law, University of York. She visited Prof. Haarvard Rue in Trondheim, Norway in May and Prof. Jorge Mateu in Castellon, Spain in June. In the same month she gave an invited lecture at a workshop on stochastic population dynamics and applications in spatial ecology at the ICMS in Edinburgh and presented a joint paper with Ruth King on Gibbs point process models with fixed and random effects - a Bayesian approach, at the 10th European Congress of Stereology and Image Analysis at the University of Milan, Italy.
- In March Peter Jupp attended a Workshop on 'Data Analysis using Computational Topology and Geometric Statistics' at the Banff International Research Station (in Banff, Alberta). He was delighted by (i) the plentiful blackboards, (ii) the contrast in temperature between the air (-27 C) and the hot springs (38 C), (iii) the knowledge that Hodge theory can be extended to metric spaces and that it is useful in the analysis of high-dimensional data sets.
- On March 26, Alex Craik gave a historical talk in the Mathematics Dept. at the University of Virginia, Charlottesville, on the work of St Andrews graduate James Glenie (1750-1817).

- Jean Reinaud and Alex Craik both gave talks at the Scottish Fluid Dynamics Meeting at Dunstaffnage, Oban on 27 May

NEXT ISSUE

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