

MATHEMATICS AND STATISTICS

NEWSLETTER

October 2009 - January 2010

WELCOME

- We would like to give a very warm welcome to Jacquie Kirrane who has taken up the position of a Teaching Fellow in Statistics. Jacquie started in the department on the 5th January leaving her previous position as a lecturer at University College Cork.
- We welcome Yann Peresse as a Teaching Fellow for the next six months. Yann is well-known in the School, having taken both his undergraduate degree and PhD at St Andrews.

CONGRATULATIONS

- Congratulations to Janine Illian who was awarded a Royal Society/ Scottish Crucible grant to run a multidisciplinary workshop entitled “Pushing the boundaries of innovation”.
- Congratulations to Bernd Stratmann on his appointment as professor at the University of Bremen. We bid him farewell and wish him the best for the future.
- Congratulations to David Dritschel who obtained a two-year EC Marie-Curie fellowship for Dr Xavier Perrot, who will start in September. Dr Perrot will be studying the behaviour of near-surface flows in the ocean.
- Congratulations to Alan Hood who has been awarded a 3 year STFC grant of £1,039,956 for Parallel Computing Resources for the UK MHD Community. Alan is the PI of the UKMHD Consortium (the consortium is a group of UK researchers in MHD who use parallel computers to undertake 3D simulations of MHD phenomena) and this grant is part of a larger award of 2.6 million that will provide parallel computing facilities at St Andrews,

Leeds and Warwick. The grant will provide a replacement for the present MHD cluster on the ground floor of the institute. In the current economic climate getting any money out of STFC is a major achievement!

- Congratulations to Vanessa Cave who successfully defended her PhD in Statistics on December 4th and has taken up a job as a Statistical consultant at AgResearch based in New Zealand.
- Congratulations to Yann Peresse and Tony Samuel who have both been awarded EPSRC PhD Plus Fellowships for a period of one year to enable them to develop their research after completing their PhDs. Yann also successfully passed his PhD viva on 23 October. (Thesis title “Generating uncountable transformation semigroups”.)
- Congratulations to Bernie Roberts and Ineke De Moortel who have both received prestigious awards from the Royal Astronomical Society. Bernie was awarded the RAS Chapman Medal, whereas Ineke got the RAS Fowler ‘G’ award. Last October, Ineke De Moortel was also awarded a Philip Leverhulme Prize.
- Congratulations to a busy Len Thomas who has been collaborating on several research proposals that have been funded: a 3-year project joint with Profs Ian Boyd and John Harwood, funded by the US Office of Naval Research (ONR) to model movement behaviour of whales that will enable Tiago Marques to stay on as a postdoc at CREEM; another 3-year project again funded by ONR and with similar PIs plus Steve Buckland to model population-level consequences of acoustic disturbance on whales that will bring a visiting postdoc from Duke University; a 5-year EU project with many partners to estimate the number of harbour porpoise in the Baltic Sea using acoustic methods; a one-year project to model the spatial distribution of whales in EU waters funded by UK JNCC and being undertaken with various CREEM staff; and a one-year project funded by the US Navy to determine how good their lookouts are at spotting whales before they come within a safety buffer. The total value of these grants is around 4 million pounds, with St Andrews getting about 1 million of this.

MISCELLANEOUS

- Ruth King was recently elected to the International Biometrics Society Council. She started her term on the council on January 2010 which will continue until the 31st December 2013.

- The book "Bayesian Analysis for Population Ecology" by King, Morgan, Gimenez and Brooks was (finally) published by CRC Press at the end of October (but didn't quite make it to number 1 in the Christmas bestsellers list).
- Colleagues may be interested to know that Alex Craik and Alonso Roberts (a St Andrews student from the late 1960s) have just had an article published in the journal 'History of Universities' (OUP) entitled "Mathematics teaching, teachers and students at St Andrews University, 1765-1858".

SEMINARS, LECTURES, RESEARCH VISITS

- Clare Parnell, Ineke De Moortel, Stephane Regnier and Alan Hood organised a Postgraduate School as part of the Solaire European Network in January on Solar MHD, Reconnection Theory, Flares & CMEs. Around 30 students attended from all over Europe. Alan Hood, Thomas Neukirch, Stephane Regnier and Clare Parnell all gave lectures at the School.
- Stephane Regnier gave an invited review talk at the 3rd Hinode meeting in Tokyo (1-4 Dec) entitled "Structure of the outer atmosphere: combining models and observations". He also attended the Fall AGU meeting in San Francisco (14-18 Dec) where he presented a poster.
- Andy Wright and Alex Russell attended a workshop entitled 'Multi-Scale Electrodynamics of Magnetosphere-Ionosphere Interactions at High Latitudes' sponsored by the International Space Science Institute in Bern, Switzerland from the 25th to the 30th of January. Andy gave a talk entitled 'Multiple scale features in downward field-aligned currents', while Alex gave a presentation on 'A single fluid model for magnetosphere-ionosphere interactions including electron inertia'. This was the final workshop in a series of three for this programme. The leader of the programme (Prof Streltsov from Dartmouth, NH) was enthusiastic about the results emerging from the workshops and plans to renew the sponsorship.
- Ineke De Moortel gave seminars in Oxford (19 January), at MSSL (3 February) and Dundee (9 February) on "3D Numerical Simulations of Coronal Loop Oscillations." She spend a week at MSSL working with Dr David Williams on the analysis of EIT observations.

- Thomas Neukirch, Ineke De Moortel and Karen Meyer organised both a lecture and quiz for 60 school children from all over Fife, taking part in SpaceCamp on Saturday 6 February.
- In October/November Peter Jupp spent 3 weeks at Osaka Prefecture University, where he gave a series of lectures on directional statistics. He also worked with Yoko Watamori (who visited St Andrews in 2001-2002) on chaos in directional time series. He then went to Montreal and attended a Workshop on ‘The Analysis of Directional Data with Applications to Biomechanics and Biomedical Imaging’, at which he spoke on ‘Embeddings, earthquakes and orthogonal axial frames’.
- Alex Craik and his wife Elizabeth were in India during 17 October - 4 December 2009. Alex’s visit was partly sponsored by the Cambridge Society of Bombay. In Mumbai, he gave six undergraduate lectures on the history of calculus at Mumbai University’s multi-disciplinary Centre for Excellence in Basic Sciences; and a public lecture at the Nehru Institute on the 19th century revival of Cambridge University. He and Elizabeth both gave brief pre-dinner talks about their respective research to the Cambridge Society of Bombay, held in the Royal Bombay Yacht Club (a remarkable survival from colonial days). Elizabeth’s talk about the mainly vegetarian diet of ancient Greece was of particular interest in mainly vegetarian South India. A whirlwind tour followed, with talks by Alex in Goa and Bangalore on the history of ocean waves; and a two-day workshop on the history of mathematics in Pune, where Alex’s talk on ‘Changing attitudes to rigour in the foundations of calculus’ was the only one on “Western” mathematics. Sightseeing became the main object of the latter part of the trip, with memorable visits to Mysore, Ajanta and Ellora caves, Delhi, Agra and Jaipur.
- Janine Illian lead a discussion session on Spatial and Time-space Point Processes at the SAMSI workshop on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change in North Carolina. In October she gave a (remote) presentation to the SAMSI working group North Carolina on spatial point process modelling. She visited Prof. Volker Schmid at LM University, Munich, gave a talk entitled “Modelling complex spatial point patterns - spatial point processes and applications” and also visited Prof. Martin Schlather in Goettingen. Janine spoke at the NESTA Crucible alumni meeting on London in November. In January she visited

Prof. Haavard Rue in Trondheim, Norway and gave a seminar entitled “modelling complex spatial point patterns”.

- Tom Blyth was in China for 12 days in November, giving talks at the invitation of his former research student Jie Fang who is now Professor at the Guangdong Polytechnic Normal University in Guangzhou. The invitation included business class flights, a four-star hotel suite, and a trip to Xi'an to see the terracotta warriors! Guangzhou has a population of twenty million and is served by twenty thousand taxis and a seemingly infinite number of buses. Another interesting fact is that at Fang's university the mathematics/computer science department has a staff of 100 of whom only 6 are Professors.
- Ruth King gave a seminar at the University of Lancaster on 4th December entitled "A Bayesian Study of Ornithological Surveys (and My "Mistakes" Along the Way)".
- Rachel McCrea from the University of Kent visited CREEM for a week in November to work with Ruth King on the efficient construction of likelihoods for multi-state capture-recapture-recovery models.
- Kenneth Falconer has been making the most of his research leave with research visits to several other universities. In October he visited the University of Warwick where he presented a Colloquium and a Seminar. He spent most of November and December in sweltering heat at the Australian National University in Canberra, where he worked with their very active fractals group and gave two talks. In January he visited a snowbound Paris to give a talk at Universit Paris-Nord and examine a PhD at Universit Paris-Sud.

NEXT ISSUE

Please send material for the next Newsletter to: mcsupdate@mcs.st-and.ac.uk