

# MATHEMATICS AND STATISTICS

# NEWSLETTER

Autumn 2008

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## CONGRATULATIONS

- Congratulations to Jun Miao on successfully defending his thesis “The geometry of self-affine fractals”.
  - During the SSAC 2008 conference in Linz, “The GAP Group” was awarded the biannual “Richard Dimick Jenks Memorial Prize” for Excellence in Software Engineering Applied to Computer Algebra. The prize was received by Steve Linton, Alexander Konovalov and Frank Luebeck on behalf of the whole GAP development and support community.
  - Congratulations to Kenneth on completing a SECOND round of the Munros in August, with Bla Bhein on Skye as his final summit! (For the uninitiated, a Munro is Scottish Hill over 3000ft in height, of which there are 284).
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## WELCOMES

- Welcome to Stuart King, who started a 3 year postdoctoral position with Magda Carr on the 1st of October 2008. He got off to a flying start by attending an invited workshop in Oslo from Oct 14th-15th on large amplitude internal waves.

Welcome to all our new PhD students!

- In the Solar Group, we welcome firstly Jorge Fuentes Fernandez and Aïmilia Smyrli, who are both funded by the Solaire European Network, are both in the second year of their PhDs and are joining us from Budapest and Catania, respectively. Secondly, we also welcome three new students who are just starting their PhDs this September, Karen Meyer, James Threlfall and Fiona Wilson. To all of the above, we will be keen to assess their baking skills at the monthly cake baking competition!

- Statistics welcome new students Calum Brown, Glenna Evans, Theoni Photopoulos and Marjoliane Caillet. Calum is jointly supervised by Janine Illian and colleagues from outside St Andrews, Glenna is supervised by Janine Illian and Ruth King, while Theoni and Marjoliane are supervised by Len Thomas together with colleagues in the Sea Mammal Research Unit.
  - The Algebra and Combinatorics Group welcomes seven new students. They are: Si Craik, Jill Ferguson, Arthur Geddes, Atika Mahdi, Nina Menezes, Markus Pfeiffer and Claire Pollard.
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## **SEMINARS, RESEARCH VISITS AND OTHER NEWS**

- Colin Campbell has been elected to the Council of the United Kingdom Mathematics Trust.
- Ruth King was invited to present a talk by the Home Office Surveys, Design and Statistics sub-committee at the Drugs Science Strategy and Statistics Workshop on 8th July at the Central Hall Westminster, London. Ruth attended the workshop and presented her work on Bayesian capture-recapture analyses in the estimation of hidden population sizes.
- From 9th-11th July, the University of St Andrews hosted the International Statistical Ecology Conference. Around 200 delegates attended, to discuss and develop mathematical and statistical methods for problems in biology and ecology.
- Steve Buckland, David Borchers, Ruth King, Sophie Smout, Toby Reynolds and Vanessa Cave attended the International Biometrics Conference 2008, in Dublin from 13th-18th July. David, Ruth and Sophie gave oral presentations of their recent work, with Steve, Toby and Vanessa presenting posters.
- Two workshops (introductory distance sampling and advanced distance sampling) were delivered at the Observatory from 19th-27th August to approximately 35 participants from 13 countries. In addition, a specialized training workshop was offered for researchers studying wild primate populations from 30th July- 1st August. The introductory distance sampling workshop then went on the road twice in the autumn: to California in September and Perth, Western Australia in October.

- In August Janine Illian spent two weeks in Denmark visiting Aalborg and Arhus; she gave seminar talks in both places. In September Janine gave a talk entitled “Measuring spatial biodiversity” at the annual conference of the British Ecological society in London.
- Graeme Boore, Jun Miao, Lining Liu, Tony Samuel and Kenneth Falconer attended the conference “Fractals and Stochastics IV” at the University of Greifswald in Germany in September. Jun, Tony and Ken gave talks at the meeting. (One of Greifswald’s claims to fame is that Felix Hausdorff was professor there from 1913 to 1921 and one of the streets is named Hausdorffstrasse.)
- Len Thomas hosted Maria Mateos of the University of Cadiz for a few days in early September.
- Len Thomas and Andrew Thomas attended the opening workshop of a research program on sequential Monte Carlo (SMC) methods at the Statistical and Applied Mathematical Sciences Institute, North Carolina.
- Cicely Macnamara, Bernard Roberts and Andy Wright all recently attended workshops held at the International Space Science Institute (ISSI) in Bern, Switzerland. The workshop attended by Cicely and Bernard was on Coronal Seismology: Bernard chaired a one day session and gave a talk on “Fast waves and the Epstein profile”, while Cicely gave a talk on “The influence of damping on the period ratio  $P1/2P2$ ”. At his workshop, Andy gave an invited talk entitled “Magnetosphere-Ionosphere Coupling in Regions of Downward Current”. Bern is a delightful city, and provided the best weather of the summer, along with attractions such as Einstein’s house (where he wrote his Special Relativity paper) and the Beach Volleyball Tour.
- Ineke De Moortel gave an invited review, titled “Coronal Seismology: theoretical modelling” at the 12th European Solar Physics Meeting, held in Freiburg (Germany) from 8th to 12th September.
- Sophie Huczynska and Colva Roney-Dougal attended the Annual Conference of the Heilbronn Institute in Bristol, 19th-20th September.
- John Bamberg, Jan De Beule and Michel Lavrauw (Ghent University, Belgium) and Phillipe Cara (Vrije University, Brussels) visited CIRCA from 22nd-26th September to work with Max Neunhoffer.

- Dr. Victor Bovdi (University of Debrecen, Hungary) was visiting CIRCA from 27th September - 11th October to work with Alexander Konovalov and Steve Linton in the joint research project focused on torsion units in integral group rings of sporadic simple groups. The visit was supported by The Royal Society of Edinburgh International Exchange Programme.
- Debbie Lockett visited the Algebra and Combinatorics group from 29th September - 10th October.
- Alan Hood and David MacTaggart attended the Flux Emergence Workshop in Kyoto in early October and both gave talks. Alan also gave the summary talk at the end.
- James McLaughlin and David Pascoe visited the Centre for Fusion, Space and Astrophysics at the University of Warwick in October. Both Research Fellows gave presentations and discussed research ideas.
- Stephane Regnier visited the Institut d'Astrophysique Spatiale (near Paris) for a workshop on Solar-Terrestrial relations from 1st to 3rd October. Stephane also attended the RAS discussion meeting in London on 10th October.
- Colva Roney-Dougal spoke at the London Algebra Colloquium on 2nd October. Colva will also speak on a Radio 3 programme on 4th November.
- James McLaughlin attended the one day RAS "Magnetic coupling in the solar system" in London. James also gave an Applied Mathematics seminar to the members of the Division of Mathematics at the University of Dundee.
- James Mitchell and Yann Peresse attended the 2nd Polish Combinatorics Conference in Bedlewo, Poland, from 17th-23rd October.
- The Academy of Finland has granted a 372,000 euro project to Dr. Mikko Sillanpaa of University of Helsinki with Dr. Madhu Bhattacharjee of University of St Andrews as principal collaborator. The project title is "Computationally practical statistical methods for genomewide association studies, genetic biomarker identification, and data integration".

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## NEXT ISSUE

Please send material for the next Newsletter to: [mcsupdate@mcs.st-andrews.ac.uk](mailto:mcsupdate@mcs.st-andrews.ac.uk)