

MATHEMATICS AND STATISTICS

NEWSLETTER

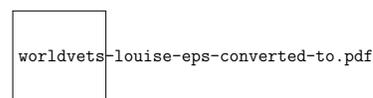
November 2001

WELCOME

- to Mrs Georgina Whitaker ('Gina') who joins us as a secretary for six months whilst Niki is on leave.
 - to Maja Waldhausen, a new research student in the Algebra Group and CIRCA; she will be supervised jointly by Edmund Robertson and Steve Linton.
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CONGRATULATIONS

- to Louise Burt from the RUWPA group who recently won a bronze medal at the World Veterans Mountain Running Championships, Ustron, Poland. Louise ran in the W35 8k up-hill only event completing the climb of 1800 ft in less than 45 minutes. This was the first time Louise had represented Scotland and she can be seen working hard in the final stages of the race in the photograph on the right!
- to the Solar Group on the renewal of their research grant. This years PPARC rolling grant which covers four postdocs, a computing officer and a secretary for the next four years is worth £817,000.
- to Keith Bennett, for the successful defence of his PhD thesis 'The Behaviour of MHD Waves in a Structured Coronal Environment'. The External Examiner was Prof Marcel Goossens (Leuven) and Alan Hood was the Convenor. Keith's supervisor was Bernard Roberts.



- to David Boddie, for the successful defence of his PhD thesis ‘Magnetohydrodynamic Waves and Instabilities in Solar Magnetic Structures’. The External Examiner was Dr Richard Rynbeek (Sussex) and Andrew Wright was the Convenor and David’s supervisor was Bernard Roberts.
 - to Istvan Ballai on gaining a two-year European Commission Marie-Curie fellowship to work on the topic of ‘Coronal Seismology and MHD Waves’. The Project Coordinator is Bernard Roberts.
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NEWS

- In September Bernard Roberts gave lectures on ‘MHD Waves and Coronal Heating’ at the PPARC Introductory Course in Solar-Terrestrial Physics, held in Aberystwyth. This one-week course aims to introduce new post-graduates students to the fields of solar physics, the solar corona and solar wind, magnetospheric physics, and the physics of the upper atmosphere of the Earth. Eighteen lecturers are involved. The course was attended by 25 students, including Robert Close, Robert Kevis and David Pontin from the Solar Group in St Andrews.
- Jerome Petri from the Observatoire de Strasbourg who recently visited the Solar Group as part of the PLATON network activities.

Other recent visitors to the Group have been Fernando Moreno-Insertis from Tenerife, Ame Winebarger and Cathy Reeves from the Smithsonian Center for Astrophysics, Harvard, Bart de Pontieu from LMSAL, Palo Alto and Gunnar Hornig from Ruhr-University, Bochum.

- Bernd Stratmann made a research visit in June to the Laboratoire de Topologie, Universit de Bourgogne (Dijon,France), where he gave an invited talk entitled ‘The geometry of geometrically infinite Kleinian groups; singly cusped parabolic fixed points’. He made a research visit in June to the University of Fribourg (Switzerland), where he gave an invited colloquium talk entitled ‘Fractal analysis of Kleinian limit sets’, as well as a seminar talk entitled ‘Upper bounds for the exponent of convergence’. He gave a lecture in July at the PRODYN Workshop on ‘Non-Hyperbolic Dynamical Systems’, which took place at the University of Goettingen (Germany); title of his lecture was ‘Fractal geometry and dynamics for parabolic Kleinian groups’. He gave an invited talk in September at the

conference ‘Ergodic Theory And Dynamical Systems’ (Universite Paris 13, France) entitled ‘Multifractal structures in Kleinian limit sets’. He gave an invited talk in October at the conference Aspects Of Hyperbolic Geometry (University of Fribourg, Switzerland) entitled ‘Geometry and dynamics of Kleinian groups; phenomena of multifractal and thermodynamic phase transitions’.

- Mike Lonergan and David Borchers met with Spanish and Portuguese collaborators on their EC-funded project ‘Using Environmental Variables with Improved DEPM Methods to Consolidate the Series of Sardine and Anchovy Estimates’ in Lisbon on the 19th-20th October. Mike ran the second in a series of workshops designed to bring the collaborators up to speed on the R software being developed for the project at St Andrews. Part of the challenge in designing the workshop was to make the difficult technical aspects of the methods accessible to non-statisticians. A mark of its success in this regard is how much the participants enjoyed it - one commenting that the exercises were ‘as much fun as a Nintendo game’.

Mike stayed on to take part in the International Council for the Exploration of the Sea’s Study Group on the Estimation of Spawning Biomass for Sardine and Anchovy. This ran from the 22nd to the 25th of October and brought together scientists from most of the European institutes working on this problem, along with experts from the USA and Australia. The study group had two main aims: to examine the various methods used in different areas (for everything from survey design to aging eggs and post-ovulatory follicles), and to plan the surveys to be carried out around Spain and Portugal in early 2002. As most of the people involved were very practical ‘hands-on’ scientists this provided a good opportunity for Mike to learn about the collection and meaning of the data provided by these studies, and ask awkward questions. The resulting (lively) discussions were interesting and informative.

- Oliver Buhler from the Waves and Vortices group followed an invitation and went to the USA for 10 days in October (after the University helpfully clarified that their insurance underwriter was still covering air travel there). He first visited the Centre for Atmosphere-Ocean Science at the Courant Institute of Mathematical Sciences, which is part of New York University. There he presented a seminar on wave scattering as well as leading a graduate student discussion on the quasi-biennial oscillation in the tropical stratosphere. He then travelled to Boston to visit the Math-

ematics Department at M.I.T., where he presented a seminar on wave breaking and longshore currents on beaches. Recent events permitting, a good time was had by all.

- Peter Jupp attended the Mini-Workshop on Quantum Stochastics held in the University of Aarhus at the beginning of October. The discussions continued informally in Skagen, at the northern tip of Jutland.

SEMINARS

- Solar Group Seminars (Math. Rm 3B - 1.30pm)
 - Wednesday 14 November: Bernard Roberts, “MHD Waves”
 - Wednesday 21 November: Clare Parnell, “Solar Magnetic Carpet”
 - Wednesday 28 November: Duncan Mackay.
 - Wednesday 5 December: Steve Brooks.
- Statistics Seminar (Math. L.T. D - 4pm)
 - Monday 12 November: Dr. Ernst Wit (University of Glasgow), “Statistical issues relating to microarray gene expression experiments”
 - Monday 19 November: Dr. Blanca Palacios (Universidad Publica de Navarra and University of Kent at Canterbury), “Robust trend parameters in multivariate spatial linear models”
More details, including abstracts, can be found on the website <http://www-maths.mcs.st-and.ac.uk/StatsSeminars/index.shtml>
- Pure Maths Colloquium (? - 2pm)
 - Monday 19 November: M. J. Evans (Washington and Lee University), “First-return notions in real analysis”.
 - Thursday 6th December: B. Rynne (Heriot-Watt University).
 - Thursday 13th December: T. Bedford (University of Glasgow), “Why I became a closet pure mathematician”.

NEXT ISSUE

- Please send any material for the next newsletter to mcsnews@mcs by 12pm Thursday 6th December.