

Newsletter

Mathematics & Statistics

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"Examinations are formidable even to the best prepared, for the greatest fool may ask more than the wisest man can answer!" (Charles Colton 1780-1832)

THIS ISSUE

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| 1. Swedish Scenes (David Wall) | 5. From Ski to Sea |
| 2. Visits | 6. Research Initiatives |
| 3. Auckland University Invitation | 7. Papers Submitted/Accepted/Published |
| 4. Congratulations | 8. Departmental Visitors |



SWEDISH SCENES – CONTRASTS IN ARCHITECTURE



David Wall on sabbatical at Chalmers University of Technology, Gothenborg, Sweden earlier this year. This university of approximately 8,500 students graduates around 250 PhDs, 800 MScs in Engineering, and 400 BEs per year.

Twisted Torso Apartments, Malmö

VISITS

- **Qui Bui** will make a 3-week research visit to Macquarie University from 6-25 November 2006. This visit is primarily supported by a Visiting Fellowship from that university.
- **David Wall, Rick Beatson** and **Alex James** will be attending the NZ Math Colloquium at Waikato University from 4-6 December 2006.
- **Jennifer Brown** will be attending a short course in Correspondence Analysis in Australia from 18-19 December 2006.

Douglas Bridges has been asked to act as the external member of the panel carrying out the Graduating Year Review of the undergraduate programme in Logic and Computation at Auckland University.

Douglas's Post-Doctoral Fellow, **Josef Berger**, left at the end of September to take up a fellowship from the Japan Society for the Promotion of Science. He will continue working in the field of constructive mathematics, at the Japan Advanced Institute of Science and Technology. He asks that his thanks be passed on to everybody for the good time he had whilst here.

CONGRATULATIONS!

- **Tim Candy** has been awarded an ANU Summer Research Scholarship.
- **Matthew Hendtlass** and **Qian Hou** have been awarded University Summer Scholarships. Matthew will do a research project under **Douglas Bridges** on “constructive analysis”. Qian will do a project under **Dominic Lee** on “Analysing physiological measurements from preterm babies to assess their state of health.”
- The following students have been offered Departmental Summer Scholarships to do a research project under the supervision of a member of staff: **Philippa Williams, Tim Candy, Hee Sook Lee, Hamish Silverwood, Gloria Teng, Stephen McConnachie, Glenn Thomson, Guan Yu Zheng, Lee Wen-Jhe, Lisa Henly, Ash Lightfoot, Jing Luo, and Chang Li.**
- **Kathryn Baldwin, Blair Robertson** and **James Roscoe** gave excellent Honours project presentations in early October.

**FROM SKI TO SEA!**

Mike Plank proves that it is possible to ski and surf in Canterbury on the same day, even if it can lead to some confusion in the wardrobe department! These photos were taken on a recent day at Mt Hutt & Sumner beach.

**RESEARCH INITIATIVES**

Mike Steel reports that Research Committee met on 11 August and awarded departmental research funds for the following ‘research initiatives’ to be undertaken by the end of 2006:

- Three-day postgraduate mathematics and statistics conference, proposed by **John Hannah, Ben Martin, Alex James, and Michael Plank.**
- Support for **Charles Semple** to participate in an enumerative combinatorics and random structures programme in Barcelona, Spain.
- Support for the visit of German PhD student **Simone Linz.**
- Support for a research visit by Dr Wolfgang zu Castell, proposed by **Rick Beatson.**
- Funding for the project “Change points identification for non-stationary and heteroscedastic processes”, proposed by **Marco Reale.**
- Funding for a two-month visit by Hungarian mathematics student **Beata Faller**, proposed by **Mike Steel.**
- Research visit to Alabama A & M University by **Jennifer Brown.**

PAPER SUBMITTED

V Moulton, C Semple & M Steel: *Optimizing phylogenetic diversity under constraints* (to Journal of Theoretical Biology)

PAPERS ACCEPTED

T Gernhard, D Ford, R Vos & M Steel: *Estimating the relative order of speciation or coalescence events on a given phylogeny.* (Evolutionary Bioinformatics Online)

H-Q Bui & R S Laugesen: *Approximation and spanning in the Hardy space, by affine systems* (Constructive Approximation)

PAPERS PUBLISHED

Douglas Bridges & Josef Berger: *A bizarre property equivalent to the \aleph_1^o -- fan theorem* (Logic Journal of the IGPL, published online 30 September 2006)

Douglas Bridges & Hannes Diener: *A constructive treatment of Urysohn's Lemma in an apartness space* (Math. Logic Quarterly 52(5), 464-469)

M Bordewich, C Semple & M Steel: *Identifying X-trees with few characters* (Electronic Journal of Combinatorics 13 #R83, 2006)

BOOK PUBLISHED

Douglas Bridges & Luminita Simona Vita: *Techniques of Constructive Analysis* (Universitext, Springer New York)

DEPARTMENTAL VISITORS (E = Erskine Fellows)

Welcome to **Simone Linz** (Heinrich-Heine Universität, Dusseldorf) who has returned for a longer stay, to work with Charles Semple. Her main interests are in Bioinformatics and she is based in MSCS 724.

Welcome also to **Beata Faller** from Eotvos University in Budapest. Beata is a biomathematics graduate who is here for 2 months on a Summer scholarship to work with Mike Steel. Beata is in MSCS 616.

Visitors	Name of Organization	From	To	Room	Extn
Dr Balchandra Thatte	Massey University	1 Apr 2006	15 Nov 2006	720	8337
Ms Simone Linz	University of Dusseldorf, Germany	29 Sep 2006	31 Aug 2007	724	7691
Ms Beata Faller	Eotvos University, Hungary	14 Oct 2006	20 Dec 2006	616	8876
Dr Michael Bate	University of Oxford, England	30 Nov 2006	16 Dec 2006	605	8028
Prof Rainer Loewen	University of Braunschweig	30 Nov 2006	6 Jan 2006	607	8875
Dr Magnus Bordewich	Durham University, England	8 Jan 2007	30 March 2007	724	7691
Dr Balchandra Thatte	Massey University	8 Jan 2007	1 Apr 2007	720	8337
Prof S L Lee	National University of Singapore	10 Jan 2007	10 Jun 2007	710	7694
Prof G Kristensson (E)	Lund University, Sweden	7 Feb 2007	14 Apr 2007	607	8875
Prof Richard Law (E)	York University, England	10 Feb 2007	21 Apr 2007	607	8875
Prof Jasbir Chahal	Brigham Young University, USA	15 Feb 2007	15 Apr 2007	605	8028
Prof H van Maldeghem (E)	Ghent University, Belgium	20 Feb 2007	14 Apr 2007	605	8028
Prof Lyman McDonald (E)	University of Wyoming, USA	14 Apr 2007	10 Jun 2007	605	8028
Prof Angus MacIntyre (E)	Queen Mary University of London	mid-Jul 2007	Mid-Oct 2007		