

THIS ISSUE

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CONGRATULATIONS

Douglas Bridges has been appointed to the Marsden Fund Mathematical and Information Sciences Panel for 2008.

Ronald Begg was awarded his PhD degree in December (see photo.) The title of his thesis is: *Cell-population growth modelling and nonlocal differential equations*. Ron will be teaching in MATH371 this semester.

Jevon Carding has been awarded a Sir George Grey Scholarship, and **Parham Baghaie** the Gordon & Evalyn Bivins Memorial Scholarship in Economics.

Ross Kendall (a 2007 STAR student) and **Katy Bergstrom** have been awarded John McMillan Scholarships in Economics and Mathematics. These scholarships were established by the University of Canterbury in 2007 to recognize the academic achievement of students from secondary schools within New Zealand and are awarded in memory of John McMillan, one of the University's most distinguished economics graduates and a Professor of International Management and Economics at the Graduate School of Business at Stanford University. The first awards have been made for tenure in 2008 and cover full first year fees. Both Katy and Ross plan to major in mathematics, with a second major in economics.



Ron Begg being awarded his PhD degree – Dec 2007

"Don't worry about your difficulties in mathematics; I can assure you that mine are still greater!"

~Albert Einstein

WELCOME TO OUR DEPARTMENTAL VISITORS

Visitor	Organization	Host	From	To	Room	Extn
Dr Tim Robinson	University of Wyoming, USA	J Brown	13/12/07	11/7/08	605	8028
Tanja Gernhard	Munich Technical University	M Steel	24/1/08	14/3/08	616	8876
Dr Robin Havea	University of the Sth Pacific, Fiji	D Bridges	1/2/08	11/7/08	605	8028
Prof Angus MacIntyre (E.)	Queen Mary, University of London	D Bridges	2/2/08	16/4/08	607	8875
Dr Beatrice Pelloni	Reading University, UK	D Bridges	2/2/08	16/4/08	607	8875
Prof Helmut Schwichtenberg	University of Munich	D Bridges	19/2/08	2/3/08	605	8028
Dr M Bartholomew-Biggs (E)	University of Hertfordshire, UK	I Coope	22/2/08	11/4/08	605	8028
Linz, Simone	University of Dusseldorf	C Semple	25/2/08	22/3/08	620	7431
Dr Dominic Welsh	University of Oxford	C Semple	3/3/08	7/3/08	710	7694

(E) = Erskine Fellow

Erskine Fellows

Professor Angus MacIntyre is visiting for 2 months from Queen Mary, University of London, where he holds the position of Professor of Mathematics, his special fields of interest being algebra, logic and combinatorics. Professor MacIntyre was elected a Fellow of the Royal Society in 1993 and in 2003 he was awarded the Pólya Prize by the London Mathematical Society. Accompanying him to New Zealand is his wife, **Dr Beatrice Pelloni**, a Reader in Applied Mathematics from Reading University. Their host is Douglas Bridges and they are based in Room 607 (extn 8875).

Dr Michael Bartholomew-Biggs is a Reader in Computational Mathematics at the University of Hertfordshire who is also visiting us for 2 months. After a spell in the aircraft industry, Mike joined the Numerical Optimization Centre at Hatfield, where he worked on the development and application of algorithms for nonlinear optimization. He joined the University of Hertfordshire whilst retaining his position in the NOC. In recent years he has been involved in global optimization problems in aircraft routing, particle identification and portfolio selection. His publications range from poetry to textbooks on nonlinear optimization with financial and engineering applications. He is hosted by Ian Coope and is based in Room 710 (extn 7694).

A Happy Event

Neil Watson reports that **Jane McDougall**, a Canterbury graduate who visited this department last year, has just announced the birth of her first child, Holly, born on 21 February in Colorado Springs. Mother and baby both well.

CONFERENCES

Bradley B A, Dhakal R P, Cubrinovski M, MacRae G A, Lee D S: *Seismic loss estimation for efficient decision making* (Paper accepted for the NZSEE Annual Technical Conference 11-13 April 2008, Wairakei, NZ)

Dominic Lee & Marina Zahari: to give a talk (tba) at the 2008 Australian Statistical Conference, Melbourne, 30 June – 3 July 2008

PAPERS SUBMITTED

Mossel E, Roch S & Steel M: *Shrinkage effect in ancestral maximum likelihood* (IEEE/ACM Transactions in Computational Biology and Bioinformatics)

Wu T, Moulton V & Steel M: *Refining phylogenetic trees given additional data: Algorithms based on parsimony* (IEEE/ACM Transactions in Computational Biology and Bioinformatics)

Whitfield J, Cameron S, Huson D & Steel M: *Filtered supernetworks for extracting and visualizing recurrent signal from incongruent gene trees* (Systematic Biology)

Gruenheit N, Lockhart PJ, Steel M & Martin W: *Difficulties in testing for covarian-like properties of sequences under the confounding influence of changing proportions of invariable sites.* (Molecular Biology and Evolution)

PAPERS ACCEPTED

R Loewen, E Soy Turk & G F Steinke: *Blowing up points and embedding flat stable planes in the nonorientable compact surface of genus one.* (Topology and its Applications)

M A Baroni & D S Bridges: *Continuity properties of preference relation* (Math. Logic Quarterly)

Iris Loeb: *Indecomposability of \mathbb{R} and $\mathbb{R} \setminus \{0\}$ in Constructive Reverse Mathematics* (Logic Journal of the IGPL)

Fischer M & Steel M: *Expected anomalies in the fossil record* (Evolutionary Bioinformatics Online)

PAPERS PUBLISHED

Douglas Bridges & Robin Havea: *Powers of a Hermitean element* (NZ J. Math. 36, 1-10, 2007)

G F Steinke: *More on Kleinewillinghofer types of flat Laguerre planes* (Results in Mathematics 51, 111-126, 2007)

Douglas Bridges: *Uniform continuity properties of preference relations* (Notre Dame Journal of Formal Logic 49(1), 97-106, 2008-02-07)

Douglas Bridges: *Product α -frames and proximity* (Math. Logic Quarterly 54(1), 12-26)

Neil A Watson: *An extension theorem for supertemperatures* (Annales Academiae Scientiarum Fennicae Mathematica 33 (2008) 131-141)

WHITIANGA '08



Charles Semple and Beata Faller



Tanja Gernhard and Klaas Hartmann

The 12th annual phylogenetics conference, *Whitianga '08*, was held at a lodge in Whitianga on the Coromandel from 10-15 February 2008. Talks were presented by Mike Steel, Charles Semple, Raaz Sainudinn, and Postdoctoral Fellow Bhalchandra Thatte; our PhD students, Klaas Hartmann, Mareike Fischer, and Beata Faller; and visitors from Germany, Simone Linz and Tanja Gernhard. Excursions included sea kayaking and soaking in thermal pools at Hot Water Beach.

This annual conference brings together mathematicians and evolutionary biologists and is often booked out 6 months in advance. Next year's conference will be held in Kaikoura and will coincide with the 200th birthday of Charles Darwin on 12 February. Following on immediately from this will be an international conference in Christchurch organised by the Allan Wilson Centre. That conference, *BioEd*, will be aimed at secondary teachers.

'COAST TO COAST'

'Longest Day' veteran **David Wall** teamed up with **Alex James** this year for a little gentle exercise in the 2-day teams' event. They performed creditably with a 14th overall in their section, and an even more impressive top 10 finish for day two.

