

Newsletter

Mathematics & Statistics

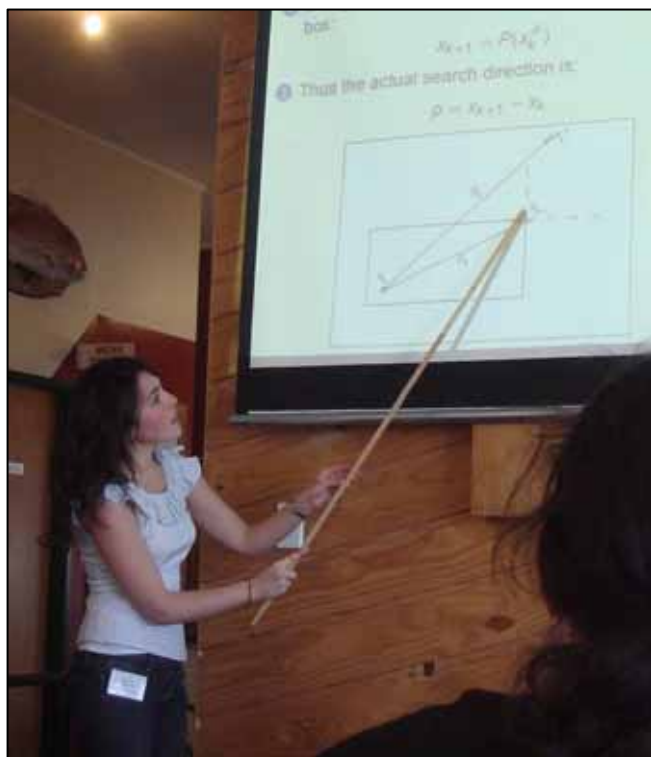
(Mt Cook ice formations – photographs suitable for future banners welcome.)

ISSUE 01/10

January 2010

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NEW ZEALAND MATHEMATICS & STATISTICS POSTGRADUATE CONFERENCE - 2009



Rachael delivering her winning presentation



Shannon being presented with his prize

Congratulations to PhD students Rachael Tappenden and Shannon Ezzat, who won awards for the Best Applied Mathematics Talk (Rachael) and Best Pure Mathematics Talk (Shannon) at the New Zealand Postgraduate Conference at Foxton Beach in November. Both went on to perform with distinction at the NZ Maths Colloquium. (See page 2 for Rachael's full report on the conference.)

RETIREMENT

Associate Professor Ian Coope, who has been a valued member of the department for 31 years, will be retiring on 7 May 2010. He will, however, maintain an association with the department after this date. A formal retirement function will take place in May or June, but I want to take this opportunity to thank Ian for his contribution over the years to the Department and the University.

- Jennifer Brown

NZ MATHEMATICS & STATISTICS POSTGRADUATE CONFERENCE (contin.)

From 23 – 26 November, nearly 60 postgraduate students from around New Zealand converged on the sleepy town of Foxton Beach for the annual New Zealand Mathematics and Statistics Postgraduate Conference (NZMASP).

NZMASP is a student-run and organised conference and this year Massey University (Palmerston North Campus) took up the challenge. They had a hard job maintaining the high standard of last year's Whitianga Conference but they certainly succeeded.

The University of Canterbury contingent included Shannon Ezzat, Anna MacDonald, Michael Snook and Rachael Tappenden.



Michael Snook making his presentation



Rachael, Anna MacDonald and Emma (UoA)

Every attending student is expected to give a 25-minute presentation on their research. This can be a daunting exercise for new postgraduate students but the NZMASP offers a supportive environment where new collegial relationships can be formed. As well as student talks, plenary talks were also given by Mike Hendy, Martin Hazelton and David Gauld.

A fantastic time was had by all, with the University of Canterbury keeping up its reputation for award-winning talks. Shannon Ezzat received an excellence award for the Best Pure Mathematics Talk while Rachael Tappenden received an excellence award for the Best Applied Mathematics Talk.

It was with a huge amount of determination, hard work and amazing support from University of Canterbury academics that enabled the first postgraduate conference in 2006 to eventuate. Next year, it will again fall on institutes from the South Island to host this now annual and much anticipated event. Watch this space!

- Rachael Tappenden

CONTINUING EDUCATION COURSE

Raazesh Sainudiin and Miguel Moyers-Gonzalez are running a course from 12 February to 26 March for the Continuing & Bridging Education programme. The course, *Using Numb3rs to Make Sense of Math*, is based on the popular TV series *Numb3rs* and explores the elementary mathematical concepts underpinning each episode.

CONGRATULATIONS!

- Congratulations to Rua Murray who has received a University Teaching Award, which will be presented at the April graduation ceremony.
- Charles Semple has been appointed President of the New Zealand Mathematical Society. He has also been promoted to Principal Investigator of the Allan Wilson Centre for Molecular Ecology and Evolution (CoRE)
- Alex James, Dominic Lee and Ben Martin have been promoted to Senior Lecturer over the bar. Alex is also the new Secretary of the New Zealand Mathematical Society.
- Miriam Hodge has been appointed Assistant Lecture in Statistics on a one-year contract.

Departmental Prizewinners for 2009

- | | |
|--|---|
| • Adam Kuang | Peter Bryant Memorial Prize – 100 level |
| • Ross Kendall | Peter Bryant Memorial Prize – 200 level |
| • Thomas Steinke | Cook Memorial Prize |
| • Thomas Heyang Li | Gordon Petersen Memorial Prize |
| • Brendan Bycroft & Robert Gibb (co-winners) | William Brent Wilson Memorial Prize |
| • Po-Chien Sung | Statistics New Zealand Prize |



Government Statistician Geoff Bascand presenting the Statistics NZ prize to Po-Chien Sung in the presence of the Dean of Science (left), the PVC of Science (right), HoD Jennifer Brown & family members.

- This year the Department awarded two additional prizes for outstanding performance at 400 level:
Rezza Baqae (400-level Mathematics)
James Dawber (400-level Statistics)
- Beata Faller won a prize for Best Student Talk at the ACCMCC in Newcastle, NSW last month. She was one of two winners amongst 22 entries.
- Shannon Ezzat was co-winner of the Aitken Prize for the best New Zealand postgraduate talk at the NZ Maths Colloquium in December and Rachael Tappenden was Aitken Prize Runner-up.

- At this year's NZMS AGM, outgoing president Robert McLachlan identified 22 papers published by New Zealanders in the Top 20 Pure and Applied Mathematics Journals since 2008. Five of those papers included authors from our department – Qui Bui (twice), Ben Martin, Charles Semple and Mike Steel.
- Irene Hudson reports from Australia that PhD student In Kang (supervisors : Irene Hudson, Marco Reale and Carl Scarrott) has recently gained two significant publications borne from preliminary work in her Honours year and the basis of her PhD work on biomedical modelling and brain image constructs for depression. See under Papers Accepted/ Published.



Congratulations to Ben, Rachel and young Daniel Martin who welcomed Elizabeth Claire Martin into the world on New Year's Eve. All are doing well.

WELCOME TO OUR DEPARTMENTAL VISITORS

<u>Visitor</u>	<u>Organization</u>	<u>Host</u>	<u>From</u>	<u>To</u>	<u>Room</u>	<u>Extn</u>
Tom Wilkinson	University of Otago	D Wall	4/11/09	29/1/10	444	7882
Tim Candy	Edinburgh University	Q Bui	15/12/09	15/1/10	605	8028
Prof.Richard Laugesen	University of Illinois	Q Bui	17/12/09	14/1/09	605	8028
Tomas Johnson	Uppsala University	D Bridges	4/1/10	31/1/10	704	7427
Bruce Craig	Purdue University	R Sainudiin	11/1/10	11/7/10	607	8875
Olivier Gascuel	LIRMM, France	C Semple	25/1/10	9/4/10	616	8876
Fabio Pardi	LIRMM, France	C Semple	25/1/10	1/3/10	620	7431

PAPERS ACCEPTED

Jennifer Brown & Irene David: *Teaching Critical Thinking to First Year University Students*, ICOTS-8 Conference, Ljubljana, July 2010.

Irene David & Jennifer Brown: *Implementing The Change: Teaching Statistical Thinking Not Just Methods*, ICOTS-8 Conference, Ljubljana, July 2010

Hudson I L, Keatley M R & Kang I (2010): *Wavelet Characterisation of Eucalypt Flowering and the Influence of Climate* (Environmental and Ecological Statistics)

PAPERS PUBLISHED

Jennifer Harlow, Bry Ashman & Raazesh Sainudiin: *Extending Galton's Binomial Quincunx to the Trinomial Septcunx* (Technology Innovations in Statistics Education 3 (2), 2009).

Irene L Hudson, In Kang & Marie R Keatley (2010): *Wavelet Analysis of Flowering and Climatic Niche Identification* (Phenological Research: Methods for Environmental and Climate Change Analysis – Hudson and Keatley eds)

CONFERENCES & VISITS

Brendan Bycroft: to give a talk entitled *Mutational Markov Chains on Ancestral Recombination Graphs*, at DOOM 2010, Mount Ruapehu, 9 – 14 February 2010.

James Degnan: to give a talk entitled *Distribution of tree balance for gene trees in species trees* at DOOM 2010, at Mount Ruapehu, 9 – 14 February 2010.

Alex James: to attend ANZIAM 2010 in Queenstown, 31 January – 4 February 2010. Talk tba.

Miguel Moyers-Gonzalez: to give a talk entitled *Stable multi-layer flows at all Re. Viscoplastic lubrication of shear-thinning and viscoelastic fluids* at ANZIAM 2010, Queenstown, 31 January – 4 February 2010.

Raazesh Sainudiin: gave a talk entitled *Statistical Regular Sub-pavings in Multi-variate Density Estimation* at Angström Laboratory, Department of Mathematics, Uppsala University, Sweden, 16 December 2009

Raazesh Sainudiin: presented a poster on *Controlled Lumped Coalescent Markov Chains for Population Genomic Inference* at the First Swedish Meeting on Theory and Mathematics in Biology and Medicine, Centre for Interdisciplinary Mathematics, Uppsala University, Sweden., 17 December 2009.

Raazesh Sainudiin: to give a talk entitled *Lumpings of Coalescents with Multiple Mergers* at DOOM 2010, Mt Ruapehu, 9-14 February 2010.

Charles Semple: to give a talk entitled *New Results on the Subtree Distance Between Phylogenies* at DOOM 2010, Mt Ruapehu, 9-14 February 2010.

David Wall: to give a talk entitled *Eigenvalue Problems from Population Modelling of Human Tumour Cell Lines* at ANZIAM 2010, Queenstown, 31 January – 4 February 2010.

SOUTHERN RIGHT DELTA CONFERENCE

John Hannah, Mike Plank, Irene David and Kathy Clark attended the Southern Right Delta conference on Teaching Undergraduate Mathematics & Statistics in Cape Town from 29 November – 4 December 2009. (See Irene's photo on right of Table Mountain) A large contingent of our Auckland colleagues were also in attendance. John, Mike and Irene are assisting on the organising committee for the next of these Southern Hemisphere conferences – the 2011 Volcanic Delta Conference, to be held in Rotorua in November 2011.

