

Newsletter

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FULBRIGHT SCIENCE & TECHNOLOGY AWARD WINNERS 2009



Congratulations to Gunter Steinke's Masters student, Ash Lightfoot (front left), who has been awarded a Fulbright Graduate Student Award to study in the USA. Ash, who graduated BSc (Hons) this year and has just completed his MSc, departed for the USA on 25 July to attend a 3-day gateway programme with other "Fulbrighters" from around the world at Vanderbilt University in Nashville Tennessee. From there, he travels to Bloomington Indiana to commence a PhD in mathematics, specialising in algebraic and topological mathematics, at Indiana University.

For further Fulbright information, please see the Fulbright NZ website or contact
Andy Mitchell, Communications Advisor (andy@fulbright.org.nz)

HoD NEWS

This is my first newsletter, after less than two weeks in the role of Head of Department.

When I lie awake at night asking myself "What have I done?", one thought is always very clear - it is a privilege to work in this department. The team of people who make up the department is truly amazing. We are such a diverse group, each with our own skills and special abilities, and yet we all work together as a team. Thank you for the opportunity you have given me. I will always consider this position to be a privilege.

On Thursday, we met to discuss what I termed "investment strategies", and many sensible, well-thought-out ideas came from that meeting. Thank you for contributing. Pauline recorded all the ideas and I will now tie them into common themes and start thinking about how to implement them.

The first working group has been formed to look at workload allocation. Rick Beatson, Carl Scarrott, Phil Wilson and Chris Price will discuss how to allocate workload fairly and effectively. They will be talking with you, but feel free to catch any one in this group and let them know your views. Once the working group has developed recommendations, we will present these to the department for final discussion and approval. After that, we can draft teaching allocations for 2010 and 2011. In reality, any teaching decided upon now may change, but, hopefully, an early allocation will help you to plan for your new 15-point courses.

Welcome to our current department visitors. I am trying to get round to greet you all, but if I haven't made it to your office yet please feel free to come and visit me on the 4th floor.

And, finally, congratulations to Gunter Steinke's student Ash Lightfoot for his Fulbright Graduate Award. What a success and well done to Ash and his supervision team!

- Jennifer Brown



Meanwhile, former HoD David Wall is getting up close and personal with the locals in Trondheim, Norway!
(Photo courtesy of Jennifer Brown, who met up with him during her recent visit to that country.)

NEW STAFF MEMBER

Welcome to Penelope Goode, the newly appointed Departmental Administrator. Penny is a familiar face in the Department, and indeed throughout the university, having worked in several departments in conjunction with her studies that have seen her graduate with a BA (Sociology) and an MA (Maori). Most recently she has been temping in the Maths & Stats office, assisting Julie Daly on the accounting and administrative side. She will continue with those duties in addition to taking up the role of PA to the HoD.



REPORT FROM MEGHAN WILLIAMS

Spare a thought for PhD student Meghan Williams, who is currently “enduring” 3 months of Summer in the South of France! She is working in the Pyrennes Mountains (above) and writes as follows:

“I have a grant (complete with a letter in French addressed to ‘Mademoiselle Meghan Williams’) from the University of Pau and Pays de l’Adour, and support from the Department, to assist in the development of a monitoring plan for Pyrenean desmans (*Galemys pyrenaicus*). *G. pyrenaicus* is a small, semi-aquatic mammal currently listed as threatened in the IUCN Red List. The funding will be used to support 3 months of field research and pilot survey design development with Dr Frank d’Amico in the Ossau Valley and at the University of Pau.

Dr d’Amico was a visitor to this Department in December 2008, hosted by my supervisor Jennifer Brown. During his visit, I worked with Jennifer and Frank to produce simulated GRTS (generalized random tessellation stratified) survey designs, which were then approved by the scientific committee responsible for the conservation of the desman. The simulated GRTS designs were developed using ArcGIS and R software. Dr d’Amico and I aim to complete the pilot study within the river valley near Pau this season. Providing all goes as planned, the design and protocol will then be used on a county and national scale.

In addition to learning how to say “blister”, “tent”, “what an amazing view” and “look out, there’s a rock fall!” in French, I’m looking forward to making habitat models with data we collect in the field.

I am deeply grateful to the Department for supporting my travel to France and am thankful for the opportunity to develop international research links. The exceptional travel and collaboration experiences that I’ve been allowed as a Canterbury grad. student are invaluable to my future career endeavours. Many thanks!”

PAPERS SUBMITTED

M DeGiorgio & J H Degnan: *Rescuing concatenation with maximum likelihood using supermatrix rooted triples.* (Submitted to Molecular Biology and Evolution).

C Wang, Z A Szpiech, J Degnan, M Jaboksson, T J Pemberton, J A Hardy, A B Singleton & N A Rosenberg: *Comparing spatial maps of human population-genetic variation using Procrustes analysis.* (Submitted to Statistical Applications in Genetics and Molecular Biology).

PAPERS ACCEPTED

Liene Daukste, Britta Basse, Bruce C Baguley & David J N Wall: *Using a stem cell and progeny model to illustrate the relationship between cell cycle times of in vivo human tumour cell tissue populations, in vitro primary cultures, and the cell lines derived from them.* (Journal of Theoretical Biology).

PAPERS PUBLISHED

Neil A Watson: *A unifying definition of a subtemperature* (NZ Journal of Mathematics, V38, 2008: 197-223).

COLLABORATION WITH THE LEARNING SKILLS CENTRE

The Department is working with the Learning Skills Centre to offer basic maths and stats to students across the university, as the following quote from that Centre reveals:

“We are pleased to offer new courses in essential maths and stats skills. That is why the Learning Skills Centre has joined forces with the Mathematics & Statistics Department to offer this refresher course to students at UC.”

Please refer to <http://www.uco.canterbury.ac.nz/lsc/lsc-course-LSSE.php> for further information.

- Irene David

CONFERENCES & VISITS

Jennifer Brown has just returned from a research visit to France and Norway (see following page for photo and further details.)

Irene David: to attend the DELTA 2009 Conference, Cape Town, South Africa, 29 November – 4 December 2009.

James Dawber: to attend the NZ Statistical Association Conference in Wellington, 1-3 September 2009. Talk entitled: *A Statistical Analysis of Bird Counts in Nelson Lakes.*

David Fortune: to attend the NZ Association of Mathematics Teachers at Palmerston North, 29 September – 2 October 2009

Anna MacDonald: to attend the NZ Statistical Association Conference in Wellington, 1-3 September 2009.

Chris Price: to attend the 53rd Meeting of the Australian Mathematical Society in Adelaide, 27-30 September 2009.

Charles Semple: a research visit to the School of Mathematics, Statistics and Operations Research at Victoria University, 20-24 July 2009.

Mike Steel undertook a four-week, whirlwind tour of Germany, Sweden, Switzerland, Holland and Hungary in June, giving talks in Berlin, Budapest, Jena, Zurich, Bielefeld and Stockholm, visiting Professor Daniel Huson in Tübingen and making the most of his one-month unlimited first class Eurail Pass! While in Sweden, Mike acted as a ‘formal opponent’ at a PhD defence, in which one is encouraged to issue a long series of confrontational questions of the candidate in full view of the department, family, aunts, grandparents, etc, before the big celebration party afterwards. Fortunately, the candidate survived the ordeal! Mike got a second excuse to wear his suit and tie at the Alexander von Humboldt annual meeting in Berlin with its breakfast reception at the residence of the President of Germany.

Other highlights of the trip included meeting Gunter Ziegler’s group at TU Berlin, and returning home to find his Singapore Airlines status had ticked over from silver to gold!

David Wall has also been travelling in northern Europe, Scandinavia to be precise, on an Erskine Fellowship. He’s been enjoying the midnight sun, although sleep can be elusive when the sun is still shining at 2am!

TEACHING DEVELOPMENT GRANT 2009

Congratulations to Postdoctoral Fellow Kathy Clark who has been awarded a Teaching Development Grant to travel to South Africa to present a paper entitled *“Expert” vs “Advanced”*: Investigating Differences in Problem-solving Practices at the Southern Right Delta Conference. This study, in conjunction with Alex James and Clemency Montelle, was undertaken to obtain insights into the ways in which students enrolled in an advanced calculus course participate in weekly problem-solving sessions associated with the course. This experiment, and the research to investigate outcomes, investigated the actions and behaviours of higher-ability students when working on problems in small groups. For this reason, it was considered important to share the knowledge gained with other mathematics teachers and researchers.

Teaching development grants are available on a contestable basis to support staff in projects and other activities which will support the enhancement of teaching, learning and assessment at the University.



JENNIFER'S RESEARCH VISIT

The Crau Reserve near Marseilles, where Jennifer Brown was working during a recent research visit to France – not quite the stunning setting that Meghan Williams is currently enjoying in the Pyrenees! (See page 3.) While in France, Jennifer spent time in the field helping to set up a monitoring programme for an endangered grasshopper. The other monitoring programme she's involved with, along with Meghan Williams, is for the endangered river mole, the Pyrenees Desmen. Jennifer also visited Trondheim, Norway, where she caught up with David Wall (see photo on page 2), and spent time with Michael Chappell, a PhD student who completed in 2007.

POSITIVE FEEDBACK

The following email sent to Phillipa Williams was copied to me by Dr David Fortin, Dean of Commerce:

Hi Phillipa

We had a little morning tea function this morning in our college for our first-year students who received a scholarship to come to UC from high school based on their performance at NCEA level. As we were chatting about how they are enjoying their courses, several mentioned your name as the lecturer they found the most engaging and interesting, even in that 8am time slot!

Just thought I would let you know because as academics we sometimes don't get to hear this feedback directly and I am very pleased to hear these comments from students who take courses out of our faculty as part of their degree requirements. So well done and keep doing whatever it is you are doing in that class, seems to be working really well.

*Cheers
Dave*

Well done, Phillipa!

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> |
|--------------------------------|-----------------------------------|-------------|-------------|-----------|-------------|-------------|
| Simon van Gennip | University of York, UK | A James | 9/5/09 | 15/9/09 | 605 | 8028 |
| Prof. Tae-Young Yang | Myong Ji University, Sth Korea | M Steel | 12/7/09 | 12/12/09 | 620 | 7431 |
| Prof. John Rhodes (Erskine) | University of Alaska Fairbanks | M Steel | 15/7/09 | 1/11/09 | 607 | 8875 |
| Prof. Elizabeth Allman | University of Alaska Fairbanks | M Steel | 15/7/09 | 1/11/09 | 616 | 8876 |
| Prof. Huaxiong Huang (Erskine) | York University, Toronto | P Wilson | 19/7/09 | 22/8/09 | 607 | 8875 |
| Elisabeth Bauma | Westfälische Wilhelms Universität | P Wilson | 23/7/09 | 21/8/09 | 703 | 8878 |
| Prof James Oxley | Louisiana State University | C Semple | 27/7/09 | 3/8/09 | 605 | 8028 |
| Prof Geoff Whittle | Victoria University | C Semple | 27/7/09 | 3/8/09 | 605 | 8028 |



PRIMA CONGRESS

Rick Beatson, Rua Murray and the members of "BIRP" (Bob Broughton, Ian Coope, Rachael Tappenden and Peter Renaud!), attended the 1st Pacific Congress (PRIMA) at the University of New South Wales in the last week of the break. Here, we see Ian Coope and Bob Broughton at Darling Harbour in Sydney, exploring budget travel options for the return home!