

Newsletter

Mathematics & Statistics

ISSUE 8/11



December 2011

2011 UNIVERSITY OF CANTERBURY RESEARCH MEDAL

Congratulations to Professor Douglas Bridges, a world authority on Constructive Mathematics, who is to be presented with the 2011 University of Canterbury Research Medal, the University's premier research award, at the graduation ceremony on the afternoon of 14 December.

HOD'S MESSAGE

Seasons Greetings!

I hope you all have a well-earned holiday over the Christmas and New Year period. Take the time to enjoy being with your family and friends. The Christmas break for me is always a refreshing time, and a chance to reflect on what I value the most, which for me is my family.

I've been at a conference in Rotorua and listened to a talk by one of our colleagues about how we adapted teaching after the February earthquake. Seeing the pictures of Christchurch and the campus brought the earthquake back all too quickly. Now the year is almost over, it's time to pause and think back. We won't ever forget this year. We've been through so much, but please don't ever forget that as a team we rose to the challenge and we got through it.

Have a great Christmas everyone, and thank you all for your hard work.

- Jennifer Brown



RESEARCHING THE CHATHAM ISLAND BLACK ROBIN



Raaz Sainudiin spent almost a month on the mammal-free Rangatira Island in the Chathams, with UC colleagues from Biological Sciences, doing a mix of field observations and on-site statistical computing. We have developed a novel spatial population pedigree model that accounts for the behavioural ecology of the Black Robins in an effort to better understand the extinction risk due to inbreeding depression. The Chatham Island Black Robin is the world's most endangered bird species that was rescued by intensive management in the 1980s from just one breeding pair.

- Raaz Sainudiin

(Additional photos inside)

CONGRATULATIONS

Congratulations to Rachael Tappenden, who has completed her PhD and will be graduating this month. She will soon depart New Zealand to take up a postdoctoral position in Edinburgh. Congratulations also to our other December graduands. Details and photos will follow in the next newsletter.

Congratulations to the following 2011 department prize winners:

- Cook Memorial Prize: Thomas Li
- Gordon Petersen Memorial Prize: Sophia Di
- Helen Wily Memorial Prize: Irene van Woerden
- Page Memorial Prize: Matthew Grice
- Peter Bryant Memorial Prize (100-level): Alex Warnaar
- Peter Bryant Memorial Prize (200-level): James McKay
- Statistics New Zealand Prize: Lisa-Marie Hall
- William Brent Wilson Memorial Prize: Simon Todd

Congratulations also to Rosalie Hosking, who has been granted a study award from the Canterbury Branch of the New Zealand Federation of Graduate Women towards her PhD research in Mathematics and Philosophy under the supervision of Clemency Montelle.

Congratulations to James Degnan, Clemency Montelle and Raaz Sainudiin who have been promoted to the rank of Senior Lecturer.

Irene David has been nominated by Jan Evans-Freeman to be the College representative on the new Board of Studies for Bridging Programmes.

Clemency Montelle recently took up the challenge of appearing on TV3's *Campbell Live* for a story on a boy whose birthday fell on 11/11/11 at 11am. Clemency made an appearance halfway through the item, to calculate the odds. Check her out on: <http://www.3news.co.nz/Turning-11-on-111111/tabid/817/articleID/232336/Default.aspx>

WELCOME TO OUR DEPARTMENT VISITORS

Visitor	Organization	Host	From	To	Room	Extn
Marcia Barbosa	Evora University, Portugal	J Brown	25.10.11	16.12.11	Ruth.309	6267
Ramasubramanian Sharma	Indian Institute of Technology	C Montelle	01.12.11	09.12.11	Ruth. 309	6267
Alain Franc	Bio Geo Co, France	J Degnan	04.12.11	10.12.11	Ruth 330	6682
Paul Wright	Austin Community College, Texas	J Hannah	15.12.11	17.05.12	Ruth. 309	6267

PAPER SUBMITTED

Barbosa, A.M., Real, R., Muñoz, A.R. and Brown, J.A.: *New measures for assessing under-prediction, over-prediction, and predicted range change in species distribution models* (submitted to Ecological Modelling).

Sargisson, R.J., McLean, I.G., Brown, J., and Bach, H.: *Environmental Determinants of Landmine Detection by Dogs: Findings from a Large-scale Study in Afghanistan* (submitted to Journal of ERW and Mine Action).

PAPER ACCEPTED

Asgari, H., Chen, X.Q. and Sainudiin, R.: *Considerations in Modelling and Control of Gas Turbines – a Review* (Proceedings of the 2nd International Conference on Control, Instrumentation and Automation, 27-29 December 2011, Shiraz, Iran)

PAPER PUBLISHED

Schillewaert, J. and Steinke, G.F.: *Flat Laguerre Planes of Kleinwillinghofer type III.B.* (Advances in Geometry 11, 637–652, 2011)

CONFERENCES AND VISITS

Phil Wilson has been visiting two collaborators at UCL (London) and two at York University (Toronto) as part of his sabbatical.

ConstruMathSouth2012 – Constructive Mathematics workshops on applications of non-classical logic, 13-16 January 2012 in Kaikoura, 26-28 January 2012 in Westport. This two-part workshop is aimed at fostering the exchange of ideas between subsections of the Mathematics and Statistics disciplines. One of the key aims will be to run some tutorials on various aspects of nonclassical logics, with a view to using these aspects in other areas of research. These meetings have been organised by Raaz Sainudiin and Maarten McKubre-Jordens and are supported by Marie Curie Grant PIRSES-GA-230822 from the European Union, with counterpart funding from the Ministry of Research, Science and Technology, NZ, for the project Construmath.

ABaCass 2012 (Algebraic Biology Workshop), 4-10 February 2012, in the Southern Alps. The objective of AbaCass 2012 is to facilitate uninterrupted and balanced Face-to-Face Transmissions in Contemporary Algebraic Biology, where Algebraic Biology is nothing more than algebraically flavoured mathematical communications in Biology! This workshop has been organised by Raaz Sainudiin and is supported by the Marsden Fund.

CHATHAM ISLAND BLACK ROBIN RESEARCH (continued)



Above: Raaz Sainudiin with a week-old Black Robin chick
Top right: Raaz striking a heroic pose on the North Summit of Rangatira Island, Chathams
Bottom right: The site where "Old Blue", matriarch of all Black Robins, was released on Rangatira in the mid-1980s.

Season's Greetings and Happy Holidays!