

# Newsletter

## Mathematics & Statistics

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### 7<sup>th</sup> JOINT AUSTRALIA-NEW ZEALAND MATHEMATICS CONVENTION 8-12 DECEMBER 2008



*Mareike Fischer, winner of the NZMS Aitken Prize at the A-NZ Maths Convention, and Scott Graybill, whose talk was highly commended.*



*Conference delegates gathering*

The population of mathematicians on the UC campus swelled to over 300 in the second week of December (8-12th) as the Department hosted the joint annual meetings of the Australian and New Zealand Mathematical Societies. Australians slightly outnumbered New Zealanders (118 to 115), and substantial numbers came from Fiji, North America, Europe (including Poland, Russia and Slovakia) and elsewhere.

The Convention was a spectacular success for UC. With 303 delegates, we can apparently claim to have hosted New Zealand's largest ever meeting of mathematicians (the joint AMS-NZMS meeting last year had 299). Being good Cantabrians, we also claim to have hosted the best ever such meeting! We had 10 plenary invited speakers of "international superstar" status, and 16 themed special sessions attracting scores of high quality speakers from around the world. The programme featured an evening public lecture by Prof Karen Parshall, "4000 years of Algebra", which was attended by approximately 160 people.

As well as the many excellent plenary addresses, highlights of the conference included: a clean sweep of the best student talk prizes by UC students (the NZMS Aitken prize by Mareike Fischer and the AustMS BH Neumann prize by Nicole Kleinstreuer); a fantastic book display from Springer-Verlag; a well-attended NZIMA-sponsored reception at the Staff Club; and excursions to walk sections of the Crater Rim walkway. We were, fortunately, unable to repeat the spectacle of Bayesian and Frequentist statisticians almost coming to blows on the stage at the first joint Convention hosted at Canterbury in 1978!

We received many compliments on the quality of the lecture rooms (Central Lecture Theatres and Commerce), catering (White Tie), mathematical programme, computer facilities for delegates and smoothness of the organisation.

*(contin.)*

The Convention was organised by Rick Beatson, Rua Murray and a hardworking committee: Douglas Bridges, Qui Bui, Hannes Diener, Ben Martin, Clemency Montelle and Phil Wilson. Paul Brouwers put in his usual stellar effort with IT and web support. The Department's PhD students did a splendid job of helping out during the week: staffing the registration desk, helping to orient delegates and their laptops, and offering a warm welcome to graduate students from outside Christchurch. The UC conference office provided registration and financial processing services; we particularly thank Anna Burns for her reliability and flexibility as we put the meeting together. The AustMS selected and funded the travel of six of the plenary speakers. Finally, we gratefully acknowledge the very significant financial sponsorship from the Department, the AustMS, NZIMA and the NZMS.

- Rua Murray



Bob Broughton, David Wall & Garry Newsom



Registration desk: Clemency Montelle, Anna Burns, Hannes Diener, Scott Graybill & Nicole Kleinstreuer



Hannes Diener & Douglas Bridges

### HoD NEWS

Thanks to Rick, Rua and the team for the many hours they put into organizing and running the Joint Australia-New Zealand Mathematics Convention. Judging by the feedback from conference delegates, everything went very well. It was a most successful meeting. I cannot miss mentioning how sweet it was that two of our students won student presentation prizes.

Talking of winners in this department, I'm delighted to report that the College of Engineering research awards have gone to Mike Steel and to "emerging researcher" Mike Plank. Congratulations to both Mikes!

Thanks to those who were able to make it to the annual Departmental Planning Day at Clearwater Resort last week. It was a useful exercise and I have a good idea what the Department wants at the 100/200 levels with the 15-point structure. We will set up some special committees to provide the finer details and will present these to the Department in the new year.

It just remains for me to thank you for all your hard work throughout the year, which I hope has been an enjoyable one, and to wish you the compliments of the season. I trust you will now take time to recharge your batteries for the busy year ahead.

Merry Christmas and a Happy New Year!



- David Wall

### CONGRATULATIONS TO THE 2008 DEPARTMENTAL PRIZE WINNERS

Cook Memorial Prize:	<b>Ashley Lightfoot</b>
Gordon Petersen Memorial Prize:	<b>Saran Tunyasuvunakool</b>
Page Memorial Prize:	<b>Thomas Steinke</b>
Peter Bryant Memorial Prize (100-level):	<b>Calvin Lim</b>
Peter Bryant Memorial Prize (200-level):	<b>William Frost</b>
Statistics New Zealand Prize:	<b>James Dawber &amp; Chakira Phingkarawat (joint winners)</b>
William Brent Wilson Memorial Prize:	<b>David Rezza Baqae</b>

## NZMASP 2008



The second annual New Zealand Mathematics and Statistics Post-Graduate conference (NZMASP) was held in Whitianga on the beautiful Coromandel Peninsula, over 18-21 November 2008. The University of Canterbury Department of Mathematics and Statistics was well represented by Douglas Bridges and sixteen students including: Josh Collins, Liene Daukste, Hannes Diener, Shannon Ezzat, Beata Faller, Mareike Fischer, Scott Graybill, Miriam Hodge, Johnny Humphries, Nicole Kleinstreuer, Daniel Lond, Anna MacDonald, Michael Snook, Rachael Tappenden, Gloria Teng, and Joe Zhu.

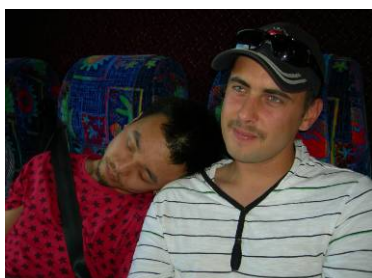
Canterbury took away both prizes for the second year running. Marieke Fischer won the "Best Talk" award for "Why DNA Sequences can be Perfectly Misleading" and Johnny Humphries won the "People's Choice" award for "Nesting Polynomials in Infinite Radicals". Overall the talks were of a high quality and received comments to this effect from the attending staff.

The conference attendees gained valuable preparation and presentation skills, made strong connections with other post-graduates, and broadened their mathematical horizons during their time in Whitianga.

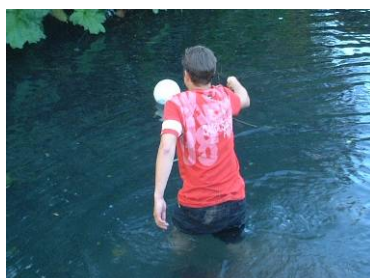
The conference was well organised, ran smoothly, and showcased the strength of NZ Maths and Stats postgraduates as well as the beauty of the Coromandel Peninsula. The organising committee consisted of Howard Cohl (UA, Maths), Alethea Rea (UA, Stats), Maarten Jordens (Massey, Albany), Haydn Cooper (Massey, Albany), Lyndon Walker (UA, Stats), Dion O'Neale (Massey, PN), and Beata Faller (UC) who did a superb job.

We all look forward to attending NZMASP 2009. Shannon Ezzat and Rachael Tappenden have already put their names forward for the 2009 organising committee.

– Scott Graybill & Johnny Humphries



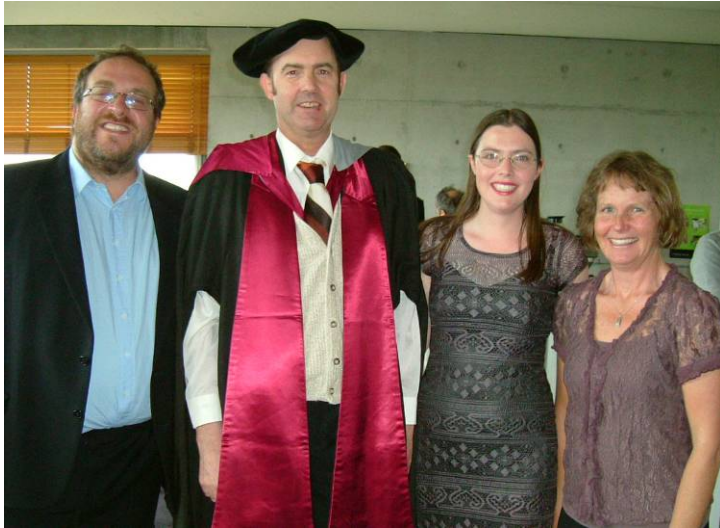
*A pooped postgrad en route to the conference!*



*The end-of-year Honours barbecue descends to new depths!*



## GRADUANDS' MORNING TEA



Bill Rea (PhD) & daughter Alethea Rea with supervisors Marco Reale and Jennifer Brown



Andrew Richens (MSc) & family with supervisors Dominic Lee and Marco Reale

### PAPERS ACCEPTED

**D S Bridges & L S Vita:** *A Constructive Theory of Apartness on Lattices* (Scientiae Mathematicae Japonicae)

**D S Bridges & R S Havea:** *Constructive notions of maximality for ideals* (J. Universal Computer Science)

**H-Q Bui & M Paluszynski:** *On the phi and psi Transforms of Frazier and Jawerth* (Math. Nachr.)

### PAPERS PUBLISHED

**D S Bridges & L S Vita:** (Book Chapter) *Journey into Apartness Space in "Logicism, Formalism, Intuitionism – What has Become of Them?"*, S Lindström, E Palmgren, K Segerberg & V Stoltenberg-Hansen eds (Synthese Library 341, 167-188, Springer-Verlag, Berlin 2008.)

### APPOINTMENTS

**Rick Beatson** has been returned to the NZMS Council.

**Charles Semple** has been elected incoming Vice-President of the NZMS.

**Mike Steel** has been appointed Deputy Director of the Allan Wilson Centre.

## MATH199 BARBECUE



A good time was clearly had by all at Phillipa Williams' home when the MATH199 (STAR) students gathered for a barbecue to celebrate the end of exams. A game of "Mafia" was greatly enhanced by a live piano accompaniment improvised by George Buchanan, one of our students who is also a very talented pianist.

## DEPARTMENTAL VISITORS

<u>Visitor</u>	<u>Organization</u>	<u>Host</u>	<u>From</u>	<u>To</u>	<u>Room</u>	<u>Extn</u>
Prof Christopher Bose	University of Victoria, Canada	R Murray	1/7/08	31/12/08	605	8028
Jenny Burrow	University of York, UK	M Plank	11/10/08	6/12/08	703	8878
Dr Radu Mihaescu	UC Berkeley	M Steel	8/12/08	1/3/09	720/616	8876
Dr Katharine Huber	University of East Anglia	M Steel	8/12/08	20/12/08	616	8876
Prof. Vincent Moulton	University of East Anglia	M Steel	8/12/08	20/12/08	616	8876
Assoc Prof Lior Pachter	UC Berkeley	M Steel	8/12/08	20/12/08	620	7431
Damien Sellier	SCION	M Plank	5/12/08	6/12/08	702	6664
Dr Frank D'Amico	Univ. de Pau & Pays del'Ardour	J Brown	6/12/08	4/1/09	620	7431
Dr Robin Havea	University of the Sth Pacific	D Bridges	6/12/08	19/12/08	605	8028
Prof. Richard Laugesen	University of Illinois	Q Bui	8/12/08	19/12/08	607	8875
Prof. Charmaine Dean	Simon Fraser University	J Brown	10/12/08	22/12/08	607	8875
Ass. Prof. Irene Hudson	University of Sth Australia	-	11/12/08	14/12/08	702	6664
Dr Bhalchandra Thatte	University of Oxford	M Steel	11/1/09	10/2/09	605	8028
Dr Magnus Bordewich	Durham University	C Semple	12/1/09	27/3/09	720	8337
Prof. Andreas Dress	CAS-MPG Shanghai	M Steel	Feb	Mar	605	8028
Prof. Daniel Huson	University of Tübingen	M Steel	4/2/09	1/3/09	620	7431
Dr Regula Rupp	University of Tübingen	M Steel	4/2/09	1/3/09	620	7431

### **A MESSAGE FROM TIM ROBINSON IN WYOMING**

A copy of our November newsletter featuring a photo of his newborn daughter was sent to 2008 visitor Tim Robinson, who replied as follows on 2 December:

***"Hey, the newsletter is fantastic! This is such a keepsake for us. We sure miss you guys. All is well here in Wyoming as we get ready for our winter. It's a bit late arriving this year but we are supposed to get nice snow this evening. The snow will be nice for Christmas. We go and cut our tree down this weekend and there is usually snow up to our knees...will cut the tree and then have a big meal with friends. We are staying home this year. It was awfully nice last year to be celebrating Christmas in NZ...will never forget it! Okay, better run. Say hello to everyone and thanks again for sending the newsletter and thinking to include us in there!"***

***- Tim"***

### **BABY UPDATE**

As promised in our previous newsletter, the first photograph of Carl and Tiye Scarrott's daughter, Clover Alice.

Carl reports that Clover, who was born 6 weeks early, was discharged from the neonatal unit last weekend and is doing well.



*Happy Holidays!*