

# Newsletter

## Mathematics & Statistics

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Greatness lies not only in being strong  
but in the right use of strength.

*Henry Ward Beecher, 1813 - 1887*



### CHRISTMAS MESSAGE from HOD

I would like to wish everyone a merry Christmas and happy New Year. I hope you all have a good break and come back fresh and enthusiast in 2005.

*David Wall*

### PAPERS ACCEPTED

M. Bate, B. Martin, G. Rohrle. A geometric approach to complete reducibility. *Inventiones Mathematicae*.

M. Liebeck, B Martin, A. Shalev. On a zeta function associated with the maximal subgroups of finite simple groups. *Duke Mathematical Journal*.

R.S.Laugesen & N.A.Watson, Another way to say subsolution: The maximum principle and sums of Green functions. *Mathematica Scandinavica*.

### PAPER SUBMITTED

M. Steel, Should phylogenetic models be trying to 'fit an elephant'? *Trends in Genetics*

### CONGRATULATIONS – Thesis Accepted

Congratulations to Mihaela Baroni for completing her PhD. Her thesis is titled "Hybrid Phylogenies: A Graph-Based Approach to Represent Reticulate Evolution".

## CONGRATULATIONS

Norhayati completes her PhD.

On the 14<sup>th</sup> December the examiners unanimously recommended that Norhayati Hamzah be recommended for her PhD in Computational and Applied Mathematics subject to making the changes recommended satisfactorily. Her thesis was entitled "A Bifurcation Analysis of a Multi-Compartment Phyto-plankton, Zooplankton, Nutrient Interaction". Yati is now a lecturer in Mathematics at her University of Brunei Darussalam, and resumes this role next week.

Congratulations and well-done from us all.

A big thank you is due to Dr Alex Ross, previously of NIWA, soon to return to his native Scotland, for his strong input into the co-supervision of this work.

*Graeme Wake*

## DEPARTMENT RESEARCH FUNDS

Congratulations also to the following who have been awarded grants towards conference expenses:

1. To attend the NZMS Dunedin Colloquium held in early December:  
Easaw Chacko  
Arno Berger  
Ben Martin  
Alex James
2. Charles Semple - NZIMA Conference in Combinatorics and its Applications being held in Taupo in this month.

## LIBRARY NEWS

As well as via our current access through Project Euclid (<http://projecteuclid.org/http://projecteuclid.org>), journals from the Institute of Mathematical Statistics will soon also be available through the ArXiv Open Access project (<http://www.arxiv.org/http://www.arxiv.org>).

To read more on this bold decision of the IMS go to <http://www.imstat.org/publications/arxiv.html> and/or <http://www.imstat.org/publications/arxiv.html>

The Physical Sciences Library is running a survey on their display of Recently Arrived Journals and would very much like to know your views.

If you have not already, please take a minute to fill out their 60 second survey [http://library.canterbury.ac.nz/forms/jnl\\_survey\\_psl.shtml](http://library.canterbury.ac.nz/forms/jnl_survey_psl.shtml)

*Adam Cath*

## GRADUATION PHOTOS

Last Wednesday was a very unusual day for the Department, in that we had five students graduating with PhD degrees. (Can any current member of staff recall such a number of PhD graduands from the Department at one ceremony?)

Our congratulations go to Marian and Mihaela Baroni (perhaps our first husband-and-wife team to graduate with PhDs at the same time), Michelle Dalrymple, Robin Turner and Bernie Tsang for making the day such a special occasion for us all.

**Our PhD graduates**



**Getting prepared for the big walk**



**Bernie, Michelle and Robin**



**Dr, Dr, Dr, Dr**



**Dr duo and matching others**



**Hungry Technicians**



**Graeme and Tsang family**



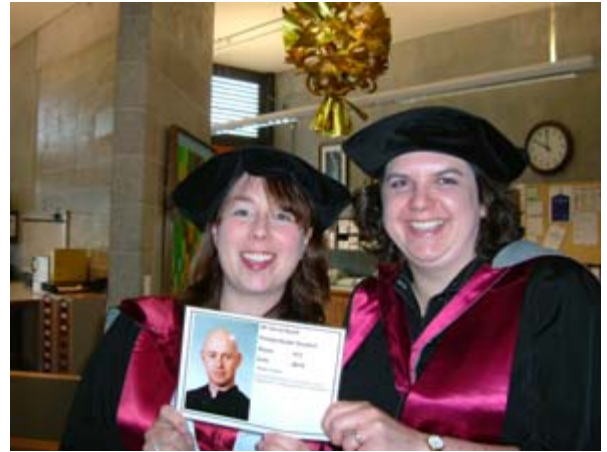
**Happy Baroni Family**



**Happy Baroni Family 2**



**The Trihedral**



**Town Hall Stage**



**Robyn with husband and parents**



## PROBLEM CORNER

Q A rabbit is in a box with two holes in the lid. After 1 second after being put in, it pops its head out of one hole. After another 1/2 second, it pops its head out of the other hole. After another 1/4 second, it again pops its head out of the first hole. This pattern continues. After what time will the rabbit be popping its head out of both holes at the same time?

Answer at end of Newsletter

Question 2.

For a subset  $A$  of the natural numbers recall the Cesaro density is  $\lim_{n \rightarrow \infty} \{|A \cap \{1,2,3,\dots,n\}|/n\}$

And find sets  $A$  and  $B$  such that this limit exists for both, but not for  $A \cap B$ .

*Bill Taylor*

## DEPARTMENT VISITORS

Current Visitors	Name of Organization	From	To	Room	Ext No
Prof. Claude Belisle	Université Laval	15 Dec 2004	30 Jun 2005	501	8376
Visitors due to arrive	Name of Organization	From	To	Room	Ext No
Prof. Jotun Hein and Dr Annamette Hein	University of Oxford	5 Jan 2005	8 Apr 2005	620	7431
Prof. Vincent Moulton Dr Katherine Huber	University of East Anglia	7 Feb 2005	9 Apr 2005	607	8875
Prof. Hajime Ishihara	Japan Adv Institute of Science Tech	14 Feb 2005	1 Mar 2005	605	8028
Dr Burkard Polster	Monash University	21 Feb 05	10 Jun 2005	605	8028
Prof. James Oxley Prof. Geoff Whittle	Louisiana State University Victoria University of Wellington	14 Mar 2005	18 Mar 2005	710	7694
Associate Professor Richard Laugeson	University of Illinois	1 Jun 2005	16 Aug 2005	607	8875
Prof. Daniel Naiman	John Hopkins University, Maryland	9 Jul 2005	14 Aug 2005	710	7431
Prof. Dominic Welsh	University of Oxford	1 Sep 2005	1 Dec 2005	620	7431

### Problem Corner Answer

Theoretically, the answer is 2 seconds, if you really want to split hares!