NEWSLETTER

Department of Mathematics & Statistics

Issue No. 4/03 **Friday, 14 March 2003**

This Week: **BOOK CHAPTER ACCEPTED FOR PUBLICATION**
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BOOK CHAPTER ACCEPTED FOR PUBLICATION

Supertree methods for divergence dates and other applications. David Bryant, Charles Semple, Mike Steel in *Supertrees, O. Bininda-Emonds (ed). Kluwer*.

Mike Steel

PAPERS ACCEPTED FOR PUBLICATION

Turner, R.M., Hudson, I.L., Butler, P.H. and Joyce, P.R. Brain Function and Personality in Normal Males: A SPELT Study using Statistical Parametric Mapping - *Journal Neuroimage*.

Irene Hudson

Congratulations Robin.

DEPARTMENTAL RESEARCH AWARDS

Congratulations to:

Mark Hickman who has been awarded $3000 research funds to present a paper at the sixth Asian Symposium on Computer Mathematics, in Beijing, China, April 17-19th. The title of his talk (joint work with W. Hereman) is "Densities and fluxes of differential equations."

Simona Vita, who has been awarded $1000 research funds towards costs associated to her attendance at conferences in Italy, Romania and Spain. Her first talk on this trip is "Separateness in apartness spaces" at Venice University on May 12-16.

Mike Steel

RESEARCH INITIATIVE

Graeme has secured a grant of $4,000 from the Royal Society of New Zealand to support the launching of Industrial Mathematics Initiative 2003, Korea in Taejon, Korea in the first week of July, at the Korea Advanced Institute of Science and Technology where he visited in January. This is awarded under the umbrella of the Memorandum of Understanding for scientific cooperation between South Korea and New Zealand. The grant will be used to support New Zealand participation in this initiative.

Graeme Wake

RESEARCH REPORT UCDMS2003/3

The space of edge-weighted trees is a euclidean cell for trees with exactly one interior vertex.

Bill Baritompa

MATHEMATICAL LEGO SCULPTURES

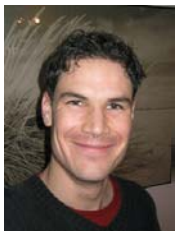
Go to www.maa.org/features/lego.html to view a Mobius band, a figure 8 knot, a hinged Klein bottle, and a Costa surface, made out of LEGO!

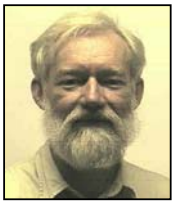
Neil Watson

HOLMES SHOW

Did you see the Holmes show on Wednesday night which featured Mike Steel (Prof Mike) and Mike Liu (little Mike)? Prof Mike set little Mike the "duck and the fox" problem to solve live in half an hour but, given a small hint, little Mike got it out in a couple of minutes. Mike Liu, who was the top scholar in our STAR course last year, was first in NZ in the Bursary and Scholarship Calculus exams.

DEPARTMENTAL VISITORS

Current Visitors	Organisation	Room No.	Ext. No.	
Dr. David **Bryant**	McGill University	616	8876	
Tobias **Dezulian**	Tubingen University	721	8338	
Dr. Wim **Hordijk**	Santa Fe Institute	720	8337	
Assoc. Prof. Peter **Lockhart**	Massey University	616	8876	

Current Visitors	Organisation	Room No.	Ext. No.	
Prof. Philippe **Toint** - *Erskine Fellow*	University of Namur, Belgium	501	8376	
Prof. Rainer **Lowen** - *Erskine Fellow*	University of Braunschweig	502	7663	
Dr John **Marshall**	University of Auckland	720	8337	

JOKE OF THE DAY

The USDA wished to promote research to improve production in the dairy industry. First, they consulted the foremost biologists and recombinant DNA technicians to build them a better cow. The scientists requested rare chemicals, weird bacteria, tons of quarantine equipment (they started a typhus epidemic by accident), and 2 years later they came back with the "new, improved cow." It had a milk production improvement of 2% over the original.

They then tried with the greatest Nobel Prize-winning chemists around. The chemists worked for six months, and, after requisitioning tons of chemical equipment and poisoning half the neighboring town, they got a 5% improvement in milk output.

The physicists tried for a year, and, after ten thousand cows were subjected to radiation therapy, they got a 1% improvement in output..

Finally, in desperation, they turned to the mathematicians. The team of mathematicians told the delegation that they could come back in the morning for the solution. The next day the USDA was given a piece of paper with the computations for the new, improved cow with a 300% increase in milk output. It read, "A Proof of the Attainability of Increased Milk Output from Bovines: Consider a spherical cow . . ."

Molly

PROBLEM CORNER

1. Prove there are no natural numbers *x, y* such that $x^2 = y^2 + y + 1$
2. Evaluate $\int_0^1 \frac{x^4(1-x)^4}{1+x^2}dx$

   It's not specially hard, but the answer is rather amusing.

Bill Taylor