

Newsletter

Issue No. 10/04

Friday, 25th June 2004

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Persons of good sense I have since observed, seldom fall into argument except lawyers, university men, and men of all sorts that have been bred at Edinburgh".

Quote from Benjamin Franklin's Autobiography

DEPARTMENTAL RESEARCH FUND

Congratulations to Simona Vita who has been awarded a grant towards conference expenses. Simona is presenting at The Sixth International Workshop on Computability and Complexity in Analysis, Germany; Spatial Representation Conference, Germany; and Symposium on Constructive Mathematics, Sweden.

CONGRATULATIONS

We congratulate Andrew Rudge, MacDiarmid Young Scientist of the Year, who is a past MATH104 student who has taken numerous other math/stat papers.

PAPERS PUBLISHED

Wake, G.C. The numbers game: Mathematics-in-Industry Study Group comes to New Zealand. *NZ Science Review*, Vol 61 (1), 2004, pp11-17.

PAPERS ACCEPTED

The following papers have been accepted for the 26th International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS 2004), to be held in San Francisco on September 1-5 2004:

- Lin, J., Chase, J.G., Shaw, G.M., Lotz, T., Hann, C.E., Doran, C.V., and Lee, D.S., *Long term verification of glucose-insulin regulatory system model dynamic.*
- Rudge, A.D., Chase, J.G., Shaw, G.M. and Lee, D.S., *Physiologically-based minimal model of agitation-sedation dynamics.*
- Rudge, A.D., Chase, J.G., Shaw, G.M. and Lee, D.S., *Automated agitation management accounting for saturation dynamics.*
- Chase, J.G., Shaw, G.M., Lin, J., Doran, C.V., Hann, C.E., Robertson, M.B., Brown, P.M., Lotz, T., Wake, G.C. and Broughton, B. (2004). *Adaptive Bolus-Based Set-Point Regulation of Hyperglycemia in Critical Care.*

Rudge, AD, Chase, JG, Shaw, GM, Lee, DS, Wake, GC, Hudson, I and Johnston, L (2004). Impact of Control on Agitation-Sedation Dynamics, *Control Engineering Practice (CEP)*, accepted June 04.

D.S. Bridges, 'First steps in constructive game theory', *Math. Logic Quarterly*.

D.S. Bridges, H. Ishihara, L. Vita, 'Products in the category of apartness spaces', *Cahiers de Topologie et Geometrie Differentielle*.

D.S. Bridges, P.M. Schuster, L.S. Vita, 'Strong continuity implies uniform sequential continuity', *Archiv fur Math. Logik*.

D.S. Bridges and L.S. Vita, 'A general constructive proof technique', *Elec. Notes in Theor. Comp. Sci.*

L.S.. Vita, 'Extending strongly continuous functions between apartness spaces', *Archiv fur Math. Logik*.

PAPERS SUBMITTED

Random autocatalytic networks, by Elchanan Mossel and Mike Steel. Submitted to *Journal of Theoretical Biology*.

Phylogenetic diversity and the greedy algorithm Mike Steel, to *Systematic Biology*.

DEPARTMENT SEMINARS

Michael Plank 15th July, 4.10pm Rm446 "Heart Disease and calcium signaling in endothelial cells"

Frank Lad 29th July, 4.05pm Rm446 "How big is your mathematics"

HOUSE NEEDED

If anyone knows of a furnished house that might be available for 3 months to rent (January to the end of March) next year, preferably in Beckenham-Cashmere area, for a professor from the UK and his family - please let Mike Steel know.

THE HEAT PUMP PROBLEM

"You should get yourself a heat pump. They're only about \$3,000", said my plumber. Not having the income of a plumber, I decided to work out the economical value of a heat pump. My power bill averages out at around \$100 per month, so it takes me about 2.5 years to spend \$3,000 on electricity. If a heat pump were to miraculously cut my power bill to zero, it would therefore pay for itself in 2.5 years. More realistically, it might cut my bill by 10%, and so pay for itself in 25 years. I'm 55 years old, so in 25 years will be 80, or more likely dead as the life expectancy for males in NZ is less than 80. So a heat pump should eventually pay for itself, but I probably won't live to see it.

ANON

DEPARTMENTAL VISITORS

Current Visitors	Name of Organisation	From	To	Room	Ext No
Peter Lockhart, Dr	Massey University	6-Oct-02	20-Oct-04	616	8876
Gyou-Bong Lee, Prof	Paichai University, Korea	15-Jul-03	14-Jul-04	502	7663
Willy Hereman, Prof	Colorado School of Mines	15-Jun-04	20-Aug-04	710	7694
Visitors due to arrive	Name of Organisation	From	To	Room	Ext No
Robin Havea	University of the South Pacific, Fiji	12-July-04	30-July-04	602	8687
Others due later:	Oxley, Whittle, Szekely, Glasbey				