

NEW HONORARY 'GOLDEN KEY' MEMBER



(L to R) Andrew Collins (Golden Key President), Emma Gin (Golden Key Vice-President), Nello Angerilli (PVC International & Student Services), Clemency Montelle, Richard Hartshorn (Chemistry), and volunteers.

Clemency Montelle was recently invited to serve as an Honorary Member on the University of Canterbury Chapter of the Golden Key International Honour Society. Golden Key is a non-profit academic honour society that recognises and rewards academic excellence. It draws on the top 15% of students at universities worldwide and provides members with access to scholarships, study abroad opportunities, career and training material, leadership and community service initiatives.

Clemency's selection as an Honorary Member was based on her excellence in teaching and her field of research. Other Honorary Members of the University of Canterbury Chapter include Margaret Mahy, Reuben Thorne and Gary Moore. Clemency was presented with a certificate of recognition at the New Member Reception at which she gave the Honorary Member Address on the importance of research in society.

CONGRATULATIONS

Congratulations to Dr Scott Graybill, who came through his PhD viva with flying colours on 28 May. Rumours abound that the colours continued to fly at the celebrations late into the night!

- Alex James

Congratulations to Clemency Montelle and Michael Plank for their success in the recent round of the Bilateral Research Activities Programme, Royal Society of New Zealand. Their projects are titled *The History of Numerical Tables and Computational Procedures in Sanskrit Sources* and *Exclusion Process Models for Cell Migration and Proliferation*, respectively. The next round is later in the year. For details, see:

<http://www.royalsociety.org.nz/site/funding/isat/default.aspx>

- Charles Semple

Raazesh Sainudiin has been appointed as a Visiting Scientist at the Theoretical Statistics and Mathematics Unit of the Indian Statistical Institute, Bangalore Centre, India (<http://www.isibang.ac.in/~statmath/>).

- Charles Semple

SCHOOLS OUTREACH



On 15 June 2010, a group of 30 Room 1 students from Ilam Primary School came to the Maths and Stats Department for a so-called "Primary Sage Hour", where they were introduced to the Sage Computing Environment. All of them were given a Sage account in our Sage Notebook Server and were shown the rudiments of arithmetic with Sage. Their Sage account can be used to log-in from their home/school computers with a basic web browser such as Firefox. They were encouraged to keep at it on their own to master other aspects of Sage, including advanced Mathematics and Statistics, at their own pace. They were also entertained with the Sage interactive activities titled *What can you do with Mathematics and Statistics?* and the Quincunx. (<http://www.math.canterbury.ac.nz/~r.sainudiin/primarymathhour/>)

- Raazesh Sainudiin

FAREWELLS

Farewell to Leo van Iersel, who has been an Allan Wilson Centre Postdoctoral Fellow for 1.5 years, working with Charles Semple and Mike Steel. Leo is heading back to the Netherlands later this month before heading on to Africa to undertake volunteer work.

Beata Faller also returned to Europe this month after completing her PhD studies. She has been offered a postdoctoral fellowship with the distinguished Hungarian mathematician Laszlo Lovasz.

- Mike Steel

PAPER SUBMITTED

Massaro, M., Sainudiin, R., Poole, A.M., Briskiel, J.V. and Hale, M.L.: *Human-assisted Spread of a Maladaptive Behaviour in a Critically Endangered Bird*.

McKubre-Jordens, M. and Wilson, P.L.: *Logical Proof that William Shakespeare probably was not a Dactylographic Monkey*.

Moradi, M., Brown, J.A. and Hodge, M.: *Minimal Sufficiency in Rare Populations* (submitted to the Journal of Statistical Planning and Inference).

Sober, E. and Steel, M.: *Entropy Increase and Information Loss in Markov Models of Evolution* (submitted to British Journal for the Philosophy of Science).

Van Iersel, L., Semple, C. and Steel, M.: *Locating a Tree in a Phylogenetic Network* (submitted to Information Processing Letters).

PAPERS ACCEPTED

Clark, K.M. and Montelle, C.: *Logarithms: The Early History of a Familiar Function* (Loci, June 2010, DOI: 10.4169/loci00349).

Dress, A.W.M., Moulton, V., Steel, M. and Wu, T.: *Species, Clusters and the 'Tree of Life': a Graph-Theoretic Perspective* (Journal of Theoretical Biology).

Magnuson-Ford, K., Mooers, A., Rioux Paquette, S., Steel, M.: *Comparing Strategies to Preserve Evolutionary Diversity* (Journal of Theoretical Biology).

Montelle, C.: *Having the Answers: Writing the History of Mathematics in India* (Historia Mathematica, 19pp, DOI: 10.1016/j.hm.2010.03.007)

Montelle, C.: *'Greek Numbers', 'Roman Numbers', and 'Diophantus'* (Encyclopaedia of Ancient History, Roger Bagnall, Craige Champion, Andrew Erskine and Sabine Huebner eds, Wiley-Blackwell Publishing, ISBN: 9781405179355)

Steel, M. and Mooers, A.: *Expected Length of Pendant and Interior Edges of a Yule Tree* (Applied Mathematics Letters).

PAPERS PUBLISHED

Steinke, G.F. and van Maldeghem, H.: *Generalized Quadrangles and Projective Axes of Symmetry* (Beiträge zur Algebra und Geometrie 51, 191-207, 2010).

WELCOME TO OUR DEPARTMENT VISITORS

Visitor	Organization	Host	From	To	Room	Extn
Peter Olsson	Chalmers University	D Wall	26/3/10	30/6/10	607	8028
Harold Moyse (Research Student)	York University	A James	1/5/10	31/8/10	520	8916
Celina Wong (Research Student)	York University	M Plank	10/5/10	27/8/10	514	8871
John Bamberg	University of W Australia	G Steinke	14/6/10	30/6/10	605	8028
Josh Collins (Research Student)	Massey University	Martin/Sainudiin	19/6/10	7/7/10	512	8377
Xuan Dong	MacQuarie Univeristy	Q Bui	28/6/10	2/7/10	605	8028

CONFERENCES & VISITS

James Degnan: to present a talk entitled *The Effect of Sequence Length on Estimated Distributions of Gene Trees* at the NZSA conference at Massey University, Palmerston North from 29 June to 1 July 2010.

John Hannah: funding for a short visit by Dr Sepideh Stewart from the Mathematics Education Unit at the University of Auckland. Dr Stewart will be interviewing students about their understanding of concepts in linear algebra, as part of a research project into how students learn linear algebra.

Miriam Hodge: to present a talk entitled *Correcting for Fix Bias due to Habitat Conditions in Radio Telemetry Studies* at the 10th Iranian Statistical Conference, University of Tabriz, Iran, 3 – 5 August 2010.

Raazesh Sainudiin: to present a 75-minute talk about his recent research at the interface of massive data analysis, algebraic statistics of metric-leaved trees and approximate sufficiency at the 13th Centre for Statistical and Survey Methodology (CSSM) Fellows Research Meeting at Goulburn, Australia on 21 July 2010. (<http://cssm.uow.edu.au/fellows/index.html>).

Gloria Teng.: to present a talk entitled *Adaptive Histograms from a Randomized Queue that is Prioritized for Statistically Equivalent Blocks* at COMPSTAT 2010, the 19th International Conference on Computational Statistics, in Paris, 22-27 August 2010. (Authors: Gloria Teng, Jennifer Harlow and Raazesh Sainudiin).

Yuancheng Wang: to give a talk entitled *Assessing the Performance of Matrix Representation with Parsimony* at the NZSA conference at Massey University, Palmerston North, from 29 June to 1 July 2010. (Authors: Wang Yuancheng and James Degnan).

"NUMB3RS"



The *Numb3rs* learning community celebrated its 34th Friday of *Numb3rs* with pizza. High school students, parents, members of the Christchurch community, undergraduates, postgraduates, post-doctorates and members of the Mathematics and Statistics faculty meet to view and discuss the TV show *Numb3rs*. This celebration was jointly sponsored by MATHSOC and an external grant from the Ministry of Tourism.

- Miguel Moyers-Gonzalez & Raazesh Sainudiin

PROBLEM CORNER

Prove, by induction, that any positive integer is equal to every positive integer that doesn't exceed it!

- Maarten McKubre-Jordens