



News

General News

2008 Australian Museum Eureka Prizes

Entries in the 2008 Australian Museum Eureka Prizes are now open, and close on 2 May 2008.

Presented annually by the Australian Museum, the Australian Museum Eureka Prizes reward excellence in the categories of Research and Innovation, Science Leadership, School Science, and Science Communication and Journalism

There is something for everyone in this year's competition with 20 prizes worth over \$200 000 available including the brand new Action Against Climate Change (School Science), Taxonomic Research (Research and Innovation), and Research in support of Defence or National Security (Research and Innovation).

In addition, the always-popular Sleek Geeks Science Prize has been expanded to include Primary, Secondary and University students. And the New Scientist science photography prize is open to anyone over 17 years of age.

For further information on the prizes and how to enter, go to australianmuseum.net.au/eureka or email eureka@austmus.gov.au.

CSIRO

On 12–13 December, CSIRO Mathematical and Information Sciences hosted a workshop for CSIRO scientists on computational and simulation science. Held in Sydney at the Macquarie University campus, about 125 scientists from across CSIRO attended.

The objectives of the workshop included building a greater understanding within CSIRO of the potential contributions to research of computational and simulation science, and growing networks of researchers to develop CSIRO's capability in this area.

Geoff Garrett, CSIRO CEO, opened the workshop. Invited speakers included Kent Winchell, Systems and Technology Group–Deep Computing, IBM, USA, and Ian Gorton, Chief Architect, Data Intensive Computing Initiative, Pacific Northwest National Laboratory, USA.

For more information, contact Dr John Taylor (john.a.taylor@csiro.au).

Monash University

Monash School of Mathematical Sciences Shares Piece of Nobel Prize

Two scientists from the School are sharing in the prestige of the 2007 Nobel Peace Prize, awarded jointly to the intergovernmental Panel on Climate Change and former US Vice-President Al Gore. Associate Professor Steve Siems and Professor

Michael Manton were among the scientists honoured with the award as a result of their involvement in the international network of scientists. For more information, see <http://www.monash.edu.au/news/monashmemo/stories/20071017/nobel.html>.

JSTOR All-Stars

The work of two of Monash University's Honorary Members in the School of Mathematical Sciences figures prominently in the JSTOR All-Stars list at <http://www.maa.org/news/101807jstor.html>. Released in October 2007 by the Mathematical Association of America, this list contains the most accessed articles of those published in American Mathematical Monthly and placed in electronic form on JSTOR. Of 37 094 articles, John Stillwell's Galois theory for beginners comes in at number 5 and Mike Deakin's Hypatia and her mathematics at number 8. Congratulations to both John and Mike.

Completed PhDs

Australian Defence Force Academy, University of New South Wales

- Dr James Caunce, *Modelling the wool scour bowl*, supervisors: Steve Barry, Geoff Mercer (and Tim Marchant from the University of Wollongong).
- Dr Leesa Sidhu, *Analysis of recovery/recapture data for Little Penguins*, supervisor: Ted Catchpole.

La Trobe University, Bundoora

- Dr Anthony Nielsen, *Topological transitivity of group actions*, supervisor: Grant Cairns.

Monash University

- Dr Mark Williams, *A diagnosis of the tropical global circulation from the perspective of four planetary waves driven by multiple heat sources*, supervisor: Associate Professor Steve Siems.
- Dr Valerio Bisignanesi, *Scalar plumes in canopies and atmospheric surface layers*, supervisor: Associate Professor Steve Siems.
- Dr Bernard Kuowei Ee, *Weakly dispersive hydraulic exchange flow through a contraction*, supervisor: Dr Simon Clarke.
- Dr Andrew Craig Tupper, *The effect of environmental conditions on the nature and detection of volcanic clouds*, supervisor: Professor Michael Reeder.

University of Ballarat

- Dr Shahnaz Kouhbor, *Optimal number and placement of network infrastructure in wireless networks*, supervisors: the late Professor Alex Rubinov, Professor Sid Morris, Dr Julien Ugon and Dr Alex Kruger.

University of Melbourne

- Dimetre Triadis, *Indentation models for colloid science and nanotechnology*, supervisor: Barry Hughes.
- Jennifer Slater, *Growing network models with an application to neurogenesis*, supervisors: Kerry Landman and Barry Hughes.

- Judy-anne Osborn, *Combinatorics of pavings and paths*, supervisors: Richard Brak, Aleks Owczarek and Ole Warnaar.
- Armando Rodado, *Weierstrass points and canonical cell decompositions of the moduli and teichmüller spaces of Riemann surfaces of genus two*, supervisor: Iain Aitchison.

University of Queensland

- Dr Xin Liu, *Inner geometric structures of gauge fields and topological excitations*, supervisors: A/Prof Yao-Zhong Zhang and Prof Tony Bracken.
- Dr Benjamin Angus Mee Gladwin, *Long timescale path integral molecular dynamics from equations of motion*, supervisor: Dr Thomas Huber.
- Dr Carlo Hamalainen, *Latin bitrades and related structures*, supervisor: A/Prof Diane Donovan.

University of Sydney

- Dr Lucy Gow, *Yangians of Lie superalgebras*, supervisor: Associate Professor Alex Molev.
- Dr Mark Hopkins, *Quantum affine algebras: quantum Sylvester theorem, skew modules and centraliser construction*, supervisor: Associate Professor Alex Molev.
- Dr Brad Roberts, *On bosets and fundamental semigroups*, supervisor: Associate Professor David Easdown.
- Dr Karl Rodolfo, *A comparative study of American option valuation and computation*, supervisor: Dr Peter Buchen.
- Dr Christopher Ormerod, *Associated linear theory of ultradiscrete Painlevé equations*, supervisor: Professor Nalini Joshi.
- Dr Shona Yu, *The cyclotomic Birman–Murakami–Wenzl algebras*, supervisor: Associate Professor Bob Howlett.

University of Western Australia

- Dr Geoffrey Pearce, *Transitive decompositions of graphs*, supervisors: Professor Cheryl Praeger and Dr John Bamberg.

Awards and other achievements

The Australian National University

- Neil Trudinger has been awarded the prestigious American Mathematical Society's Leroy P Steele Prize for Mathematical Exposition for his book *Elliptic Partial Differential Equations of Second Order* written with the late David Gilbarg. The award was presented to Neil at the New Zealand Mathematics Research Institute, Auckland recently.

See <http://www.ams.org/ams/press/steele-exposition-2008.html>

- Xu-Jia Wang has been awarded the prestigious Morningside Gold Medal of Mathematics at the International Congress of Chinese Mathematicians. The award was recently presented to Xu-Jia at the International Congress of Chinese Mathematicians, Hangzhou.

See http://news.xinhuanet.com/english/2007-12/17/content_7269051.htm

University of Queensland

- Leesa Wockner has been awarded a Smart State PhD Scholarship.
- Gareth Evans has won the I-Sim/ACM-SIGSIM Best Student Paper Prize for his paper, 'Parallel cross-entropy optimization', at the Winter Simulation Conference held in Washington.

University of Southern Queensland

- Patricia Cretchley has been awarded a USQ Citation for Outstanding Contribution to Student Learning.
- Birgit Loch has been awarded the Faculty of Sciences Award for Teaching Excellence (Early Career), and a USQ Associate Teaching Fellowship for 2008.

Victoria University

- The Vice-Chancellor's 2007 Peak Award for Excellence in Research in the Research Team category was awarded to the Research Group in Mathematical Inequalities and Applications (RGMIA) Team from the Faculty of Health, Engineering and Science, School of Computer Science and Maths, Associate Professor Neil Barnett, Associate Professor Peter Cerone, Professor Sever Dragomir, Associate Professor Anthony Sofo and Dr Xun Yi.

Appointments, departures and promotions

Australian Defence Force Academy, University of New South Wales

- Harvinder Sidhu has been appointed as Associate Professor from 1 January 2008.

La Trobe University, Bundoora

- David McLaren has retired.

La Trobe University, Bendigo

- Lex Milne retired in February this year.

Macquarie University

- Xuan T. Duong has been promoted to Professor of Mathematics.

Monash University

- Dr Boris Buchmann commenced in September 2007 as Lecturer (Level B). His research interests are in statistics and fluctuation theory of stochastic processes and time series.
- Dr Justin Peter commenced in October 2007 as Research Fellow. Although his appointment is at Monash, Justin will be located mainly at the Bureau of Meteorology.
- Dr Daniel Delbourgo commenced in November 2007 as Senior Lecturer (Level C). His research interests are elliptic curves and modular forms; automorphic representations; Iwasawa theory of motives; deformations of Galois representations; Euler systems attached to varieties.

- Dr Zhenyang Li commenced in December 2007 as Research Fellow. His research interest is in differential geometry.
- Dr Steve Siems was promoted to Associate Professor in January 2008.

Murdoch University

- Professor Ian James has begun a secondment for four years at the Centre for Clinical Immunology and Biomedical Statistics at Royal Perth Hospital/Murdoch University.
- Associate Professor Ross Taplin has resigned to take up a position as Professor in the Curtin Business School.
- Ha Nguyen has been appointed as a Lecturer for a three-year term.
- Dr Helen Middleton has been appointed as a Lecturer for a one-year term.

Swinburne University of Technology

- Dr Patrick Tobin has resigned as Lecturer in Mathematics at Swinburne University of Technology as of the end of January. He will be taking up a new position of Lecturer in Mathematics at Australian Catholic University.

University of Ballarat

- Allison Plant joined the School on 2 January 2008 as a lecturer in mathematics, after submitting her PhD at the University of Tasmania.

University of Melbourne

- Dr Ben Binder, Dr Kerem Akartunali and Mr Chris Ormerod have been appointed as research fellows.
- The following academic staff members retired on 31 December 2007: Dr Ian Aitchison, Ms Karen Baker, Dr Dave Coulson, Dr Meei Ng, Dr Ken Sharpe and Dr Moshe Sniedovich.

University of Queensland

- Dr Murray Elder and Dr Ian Wood have both started as Lecturers, and in July Dr S. Ole Warnaar takes up a Chair in Pure Mathematics.

University of Sydney

- Dr Jean Yang and Dr Martin Wechselberger have been promoted to Senior Lecturer.
- Dr Alex Molev has been promoted to Associate Professor.
- Dr Samuel Mueller has started as a Lecturer in Statistics.
- Associate Professor Holger Dullin has been appointed for three years to lecture in biomechanics.
- Dr James East has been appointed as a University Postdoctoral Fellow for five years.
- Dr Lucy Gow and Dr Vivek Jayawal have been appointed as Research Associates.

University of Western Australia

- Dr Samuel Mueller, Dr Elena Pasternak and Professor Jiti Gao have left.
- Professor Kaipillil Vijayan has retired.

New Books

LaTrobe University, Bundoora

- Kulinskaya, E. (Imperial College, London), Morgenthaler, S. (École Polytechnique Federale de Lausanne, Switzerland) and Staudte, R.G. (LaTrobe University) (2008). *Meta Analysis: A Guide to Calibrating and Combining Statistical Evidence*, Wiley Series in Probability and Statistics. John Wiley & Sons, Chichester.

University of Ballarat

- Hofmann, K.H. (Technische Universität Darmstadt, Germany) and Morris, S.A. (University of Ballarat) (2007). *The Lie Theory of Connected Pro-Lie Groups*, European Mathematical Society, EMS Tracts in Mathematics Vol. 2.

University of Queensland

- Rubinstein, R.Y. and Kroese, D.P. (2007). *Simulation and the Monte Carlo Method*, 2nd edn. John Wiley & Sons.
- The companion solutions manual is: Kroese, D.P., Taimre, T., Botev, Z.I. and Rubinstein, R.Y. (2007). *Solutions Manual to Accompany the Monte Carlo Method*, 2nd edn. John Wiley & Sons.

Conferences and Courses

Conferences and courses are listed in order of the first day.

Mathematical Evolutionary Biology

Date: 25–30 March 2008

Venue: Blanche Cave, Naracoorte Caves National Park, SA

Web: <http://www.adelaide.edu.au/acad/events/>

Conference enquiries: Maria Lekis (maria.lekis@adelaide.edu.au)

We are pleased to announce that the Adelaide Conference on Mathematical Evolutionary Biology, the first of an annual series, will take place within Blanche Cave, Naracoorte Caves National Park, South Australia on 25–30 March 2008 (Comm. Vac. Week). This five-day meeting is designed to bring together mathematicians and biologists from Australia and internationally, in an informal collaborative atmosphere limited to just 50 places. The meeting is closely modelled on the very successful Phylogenetics Meeting series held annually in New Zealand <http://www.math.canterbury.ac.nz/bio/whitianga08/>. We are particularly interested in talks that discuss work in progress and present current biological problems with the aim of developing new collaborative research projects and areas. Four of the leading members of the New Zealand group will help lead and direct the Naracoorte meeting, and facilitate communication between the mathematical and biological fields — identifying key conceptual and terminology differences, and overcoming the domain barriers which currently prevent interaction of these groups within Australia.

ICTAM 2008

Date: 24 August 2008

Venue: Adelaide Convention Centre

Web: <http://ictam2008.adelaide.edu.au>

ICTAM 2008 will be held at the Adelaide Convention Centre, and hosted by the Adelaide Theoretical and Applied Mechanics community.

Important dates: 1 May 2008: notification of acceptance of short papers; 27 June 2008: early-bird registration deadline; 24 August 2008: Congress starts.

To keep abreast with developments regarding the organisation of ICTAM 2008 please subscribe to the Congress RSS feed through our web site.

Asiacrypt 2008

Date: 8–11 December 2008

Venue: Deakin University

Contact: Lynn Batten (lbatten@deakin.edu.au)

Deakin University is hosting Asiacrypt 2008, the premier cryptography conference in the Asia-Pacific region, on 8–11 December 2008.

7th Australia – New Zealand Mathematics Convention

Date: 8–12 December 2008

Venue: University of Canterbury, Christchurch, New Zealand

Web: <http://www.math.canterbury.ac.nz/ANZMC2008/>

Contact: ANZMC2008@math.canterbury.ac.nz

The next annual meeting of the Society, and the 52nd AGM, will be held at the University of Canterbury, Christchurch, New Zealand, as the 7th Australia - New Zealand Mathematics Convention, from Monday 8 to Friday 12 December 2008.

Group Theory, Combinatorics and Computation Conference

Date: 5–16 January 2009

Venue: The University of Western Australia, Perth

Web: <http://sponsored.uwa.edu.au/gcc09/welcome>

ICM 2010

Date: 2010

Venue: Hyderabad, India

Web: <http://www.mathunion.org/Publications/CircularLetters/2008-03.pdf>

The IMU is calling for nominations for invited plenary and sectional speakers at the ICM 2010 in Hyderabad, India.

Any names people wish to propose should be forwarded to Professor Hyam Rubinstein (rubin@ms.unimelb.edu.au) since he is Chair of the National Committee for the Mathematical Sciences.

Visiting mathematicians

Visitors are listed in alphabetical order and details of each visitor are presented in the following format: name of visitor; home institution; dates of visit; principal field of interest; principal host institution; contact for enquiries.

- Dr Steen Andersson; University of Indiana; 13 March to 21 April 2008; –; UWA; A/Prof Les Jennings
- Azizollah Azad; University of Isfahan, Iran; 28 October 2007 to 28 April 2008; –; UWA; Prof Cheryl Praeger
- Prof Cathy Baker; Mount Allison University, Canada; 3 January to 30 April 2008; combinatorics; UQ; Elizabeth Billington
- Prof Rudy Beran; University of California at Davis, USA; 3 February 2008 to 15 March 2008; –; UMB; Prof Peter Hall
- Dr Daniela Bubboloni; University Firenze, France; March 2008 to April 2008; –; UWA; Prof Cheryl Praeger
- Prof Song X Chen; Iowa State University, USA; 21 January 2008 to 6 April 2008; –; UMB; Prof Peter Hall
- Dr Angelina Yan Mui Chin; University of Malaya; 1 to 30 September 2008; computational algebra; USN; J.J. Cannon
- Dr Tim Burness; University of Southampton; 21 January to 21 March 2008; –; UWA; Prof Cheryl Praeger
- Dr Ashraf Daneshkhah; Bu-Ali Sina University; 3 September 2007 to June 2008; –; UWA; Prof Cheryl Praeger
- Mr Chris Davies; Leeds University; 24 January 2008 to 31 March 2008; geomagnetic dynamo theory; USN; D.J. Ivers
- Dr Silvo Dolfi; University Firenze, France; March 2008 to April 2008; –; UWA; Prof Cheryl Praeger
- Prof Alireza Ematollahi; Shiraz University; 15 September 2007 to 15 September 2008; –; ANU; Alan Welsh
- Prof Philip Griffin; Syracuse University; 1 February to 30 April 2008; Centre for Financial Mathematics; ANU; Alan Welsh
- Prof David Gubbins; Leeds; 20 September 2007 to 19 September 2008; magnetohydrodynamic dynamo theory and the geodynamo; USN; D.J. Ivers
- Dr M. Iranmanesh; Yazd University, Iran; 22 October 2007 to 10 March 2008; –; UWA; Prof Cheryl Praeger
- Rishabh Kothari; Indian Institute of Technology; 1 May to 10 July 2008; –; UQL; Dirk Kroese
- Dr Felipe Leitner; University of Stuttgart; 5 March 2008 to 11 March 2008; –; UNE; Gerd Schmalz
- Ms Nan Li; The Sichuan Normal University, China; 1 February 2008 to 31 January 2009; –; UWA; A/Prof Song Wang
- Dr Youyun Li; Hunan Changsha University; 1 May 2006 to 1 May 2008; –; UWA; A/Prof Song Wang
- Ms Sheona Masterton; University of Leeds; 28 January 2008 to 31 March 2008; applied maths; USN; D.J. Ivers
- Prof Ian Morrison; Fordham; 10 March 2008 to 30 June 2008; algebraic geometry; USN; G.I. Lehrer
- Dr Alireza Nematollani; University of Shiraz; 15 December 2007 to 15 December 2008; multivariate analysis and time series; USN; N.C. Weber

- Dr Alessandro Nigro; University of Milan 1, Italy; 17 January 2008 to 14 April 2008; –; UMB; A/Prof Paul Pearce
- Dr James Parkinson; Technical University of Graz; 14 to 29 March 2008; buildings and Hecke algebras; USN; D.I. Cartwright
- Prof Feng Qi; Henan Polytechnic University, China; 1 March 2008 to 1 March 2009; mathematical inequalities, mean values, special functions, numerical integration, classical analysis, differential geometry; VU; Prof P. Cerone and the RGMIA
- Ms Weiwei Ren; Yunnan University, China; August 2007 to August 2008; –; UWA; A/Prof Caiheng Li
- Dr Frederic Robert; Université de Nice; 14 November 2007 to 3 November 2008; applied and nonlinear analysis; ANU; Florica Cirstea
- Dominic Schuhmacher; University of Zurich; 1 April 2006 to 31 May 2008; –; UWA; Prof Adrian Baddeley
- Dr Qiao Shouhong; Sun Yat-sen University, China; 01 March 2008 to March 2009; –; UWA; A/Prof Cai Heng Li
- Prof Daniel Silver; University of South Alabama, USA; 1 February 2008 to 31 May 2008; –; UMB; Prof J.H. Rubinstein
- Prof Daniel Silver; University of South Alabama; 7 April 2008 to 9 May 2008; symbolic dynamics to knot theory; USN; J.A. Hillman
- Dr Isar Stubbe; Universiteit Antwerpen, Belgium; 12 February 2008 to 6 April 2008; category theory and physics; MQU; R.H. Street
- Dr Nader Tajvidi; Lund Institute of Technology; 1 January to 1 May 2008; statistics; USN; M. Raimondo
- Prof Susan Williams; University of South Alabama, USA; 1 February 2008 to 31 May 2008; –; UMB; Prof J.H. Rubinstein
- Prof Susan Williams; University of South Alabama; 7 April 2008 to 9 May 2008; symbolic dynamics to knot theory; USN; J.A. Hillman
- Prof Richard Wood; Dalhousie University, Canada; 1 January to 30 March 2008; category theory; MQU; R.H. Street
- Dr Huoxiong Wu; Xiamen University, China; January 2008 to November 2008; harmonic analysis and partial differential equations; MQU; X.T. Duong
- Dr Paul Yip; University of Hong Kong, China; 7 March 2008 to 19 March 2008; –; UMB; A/Prof Ray Watson
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