



News

General News

Bulletin of the Australian Mathematical Society

A reminder that the *Bulletin of the Australian Mathematical Society* publishes 'Abstracts of Australasian PhD Theses'.

The *Bulletin* will accept abstracts of up to three pages (which may include references), and the submission may be the abstract included in the thesis itself. All the mathematical sciences are covered, including pure and applied mathematics, probability and mathematical statistics, mathematical physics, and mathematical computer science.

Complete details can be found on the *Bulletin* page of the Society's web site at www.austms.org.au/Bulletin.

All students who have recently completed their PhD are encouraged to consider publication in the *Bulletin*.

Media related to Group of Eight Review of Education in Mathematics, Data Science and Quantitative Disciplines

The recent Group of Eight Review of Education in Mathematics, Data Science and Quantitative Disciplines has stimulated a range of articles in the media, including two responses in *The Australian* of Wednesday 24 March to an opinion piece by the NSW Chief Scientist, Mary O'Kane.

One response, from the President, Nalini Joshi, is an Opinion and Analysis article 'The numbers don't add up in maths class'. The article can be found at www.theaustralian.com.au/higher-education/opinion-analysis/the-numbers-dont-add-up-in-maths-class/story-e6frgcko-1225844444839.

The other response, from the Chair of the National Committee for the Mathematical Sciences, Hyam Rubinstein, is a letter 'Few catch up'. It can be found at www.theaustralian.com.au/higher-education/letters/few-catch-up/story-e6frgcox-1225844441773.

A link to the GO8 report and links to earlier media responses can be found on the Society's web site at www.austms.org.au.

Science in Public

Science in Public helps science organisations get their research out of the lab and into the public space, usually through the media but also via public events. For more information Science in Public and their projects, visit their website, www.scienceinpublic.com.au.

Their recent bulletin contains the following information on science prizes and media training.

1. Prizes

Prime Minister's Prizes. The Prime Minister's Prizes for Science are now open for nomination. The Australian Government awards five prizes annually for outstanding scientific achievements and excellence in science teaching.

The prizes are the \$300 000 Prime Minister's Prize for Science, the \$50 000 Malcolm McIntosh Prize for Physical Scientist of the Year, the \$50 000 Science Minister's Prize for Life Scientist of the Year and two science teaching prizes.

Nominations close on Friday 21 May.

Visit <https://grants.innovation.gov.au/SciencePrize/Pages/Home.aspx> for more information, or contact pmprize@innovation.gov.au for expressions of interest.

L'Oréal Australia For Women in Science Fellowships. Each year, three \$20 000 L'Oréal Australia For Women in Science Fellowships are awarded for scientific excellence in early career researchers. The Fellowships are open to female scientists no more than five years past their PhD, excluding periods of maternity leave. These are one of the few fellowships which allow part of the funding to be spent on child care.

Nominations will open in April.

For more information, visit www.scienceinpublic.com/loreal.

2. Media training courses

Each month Science in Public runs a media training course in Melbourne for scientists and anyone who needs to communicate complex and technical ideas via the media. Three working journalists join participants over the course of the day to talk about what they are looking for in a news story and to conduct practice interviews. Each course runs from 9.30am to 5pm at The Clare Café in Carlton. The cost is \$650 + GST per person and includes morning tea, coffee and lunch.

More details at www.scienceinpublic.com/blog/training.

Completed PhDs

Monash University

- Dr Simon Caine, *The classification and simulation of precipitating convective regimes over Darwin, Australia*, supervisor: Associate Professor Steven Siems.
- Dr Douglas Stone, *On the number of Latin rectangles*, supervisor: Dr Ian Wanless.

University of Adelaide

- Dr Jessica Kasza, *Bayesian networks for high-dimensional data with complex mean structure*, supervisors: Gary Glonek and Patricia Solomon.
- Dr Penny Sanchez, *Optimal designs for two-colour microarray experiments*, supervisors: Gary Glonek and Andrew Metcalfe.
- Dr Hui Wong, *Drought predictions: applications in Australia*, supervisors: Andrew Metcalfe and Martin Lambert.
- Dr Kevin Mark, *Semilinear stochastic differential equations with applications to forward interest rate models*, supervisors: Alexei Filinkov and John Van der Hoek (UniSA).

University of Sydney

- Dr Thomas Fung, *Tail dependence and mixing in the variance gamma and related models*, supervisor: Professor Eugene Seneta.
- Dr James Kennedy, *On the isoperimetric problem for the Laplacian with Robin and Wentzell boundary conditions*, supervisor: Dr Daniel Daners.
- Dr Yang Shi, *q-discrete Painlevé equations and the associated linear problems*, supervisor: Professor Nalini Joshi.
- Dr Van Minh Nguyen, *W-graphs for Hecke algebras*, supervisor: Associate Professor Bob Howlett.
- Dr Ziad Jomaa, *The CASL method for vortex flows in irregularly shaped domains and the numerical solution of the Poisson equation*, supervisor: Associate Professor Charlie Macaskill.
- Dr Richard Finlay, *The variance gamma (VG) module with long range dependence*, supervisor: Professor Eugene Seneta.
- Dr Alhaji Bactiar, *A study of planar dynamos and related issues*, supervisor: Associate Professor Ron James.

University of Western Australia

- Dr Wen Li, *Numerical methods for the solution of the HJB equations arising in European and American option pricing with proportional transaction costs*, supervisors: Professors Song Wang and C.J. Goh.

Awards and other achievements

Australian Academy of Science

Seventeen of Australia's leading scientists were honoured on 24 March by election to the Australian Academy of Science in recognition of their research that has significantly advanced the world's scientific knowledge.

The elections include Professor Vladimir Victorovich Bazhanov FAA, for theoretical physics in the field of solvable models in statistical mechanics and field theory

and Professor Jonathan Michael Borwein FAA, for experimental mathematics in a number of disciplines including optimisation, number and computation theory.

Clay Mathematics Institute

The Clay Mathematics Institute has announced that the Millennium Prize for the resolution of the Poincaré conjecture has been awarded to Dr Grigoriy Perelman of St Petersburg, Russia. See www.claymath.org for details.

University of Sydney

- Mitchell Lewis was awarded the T.M. Cherry Prize for the best student talk at the ANZIAM 2010 conference held in Queenstown.

University of Wollongong

- Associate Professor Rod Nilsen won the Vice Chancellor's award for Outstanding Contribution to Teaching and Learning (OCTAL).
- Associate Professor Ken Russell received an ALTC Citation for Outstanding Contributions to Student Learning, for inspiring students and staff to connect with statistics and research design through formal courses, workshops and the statistical consulting service.
- Dr Annette Worthy and Dr Mark Nelson were presented with peer recognition awards by the Illawarra/South Coast Regional Group of the Australian College of Educators. Annette was cited for 'her guidance, support and understanding for all teachers and students in the BMathEd program'. Mark was cited for 'his outstanding ability to make Mathematics real and relevant for the students he teaches'.
- Alex Badran won the ANZIAM A.F. Pillow Applied Mathematics Top-up Scholarship for research in applied mathematics. This follows his University Medal for his Bachelor of Mathematics Advanced Honours degree.

Appointments, departures and promotions

Flinders University

- Simon Williams has been appointed as a research assistant to Murk Bottema, working on image processing of screening mammograms. In February 2010, he was awarded his DPhil from Oxford University supervised by Professor Sir Roger Penrose. The title of his thesis is *On some identifications of twistor space*. It was on general relativistic description of cosmic strings as well as four-dimensional conformal field theory.

Monash University

- Mohan Krishnamoorthy has left for Mumbai where he will head the IITB-Monash Research Academy.

- Dr Alireza Valizadeh commenced as a research fellow, working with Professor Joseph Monaghan, in the School of Mathematical Sciences on 9 March 2010. His research interests are in environmental hydrodynamics, oil spill, free surface flows, hydraulic structures (concrete dam), marine structures, sediment transport, computational fluid dynamics, SPH method and multi-phase fluids.
- Dr Michael Rezny commenced as Senior Software Specialist in e-research on 1 March 2010. His appointment is shared between the School of Mathematical Sciences and the Science IT Department.
- Dr Maria Athanassenas has resigned from her position as Senior Lecturer in pure mathematics.

University of Adelaide

- Dr Joshua Ross, from King's College, Cambridge has joined the School as lecturer in applied mathematics.
- Dr Philip Haines, from University of Manchester, has joined the School as a postdoctoral associate in applied mathematics. He will be working with Jim Denier.

University of Ballarat

- Dr Xinwen Wu resigned effective April 16, 2010.

University of Melbourne

- Dr Johanna Ziegel has been appointed as Research Fellow commencing 12 April 2010.
- Professor Kannan Senthamarai has been appointed as Research Fellow commencing 18 May 2010.
- Mr Mark Mudge has been appointed as Schools Project Officer, AMSI.
- Ms Antje Leigh-Lancaster has been appointed as Schools Project Officer. AMSI.
- Dr Andrea Bedini has been appointed as Research Fellow.

University of Newcastle

- Dr Faram Engineer has been appointed Lecturer in mathematics. Dr Engineer is a recent graduate of the Georgia Institute of Technology.
- Dr Bishnu Lamichhane has been appointed Lecturer in mathematics. Dr Lamichhane was previously at ANU.

University of NSW

- Dr Denis Potapov has been appointed to a lectureship (UNSW) in pure mathematics.
- Dr David Harvey has been appointed to a lectureship (Courant Institute) in pure mathematics.

University of Queensland

- Associate Professor Jamie Alcock has joined the University of Queensland on a fractional appointment to teach mathematical finance (March 2010). He graduated with a PhD in mathematical finance from the University of Queensland in 2005. Jamie also teaches during the Australian summer (2008–) at the University of Cambridge. His research interests include asymmetric dependence, quantitative funds management, equity valuation models, capital management, financial derivatives, risk management and computational finance.
- At recent meeting, the University's Senate conferred the title of Professor Emeritus on Professor Tony Bracken.
- Dr Tom Molle has been appointed as a fixed-term lecturer in mathematics. His research interests are in reaction-diffusion systems and their application to understanding self-organisation in biological systems, in particular the variants of the Keller–Segel equations which model chemotactic aggregation in large cell populations. He is also interested in mathematical finance, in particular, firm valuation in a stochastic earnings environment.
- Dr Leonardo Rojas-Nandayapa has been appointed as a lecturer in mathematics. One of the main objectives of his research is to provide better approximations for tail probabilities of functions of heavy-tailed dependent random variables by means of sharp asymptotic expressions and Monte Carlo estimators.
- You-Gan Wang, Senior Science Leader in CSIRO Mathematics, Informatics and Statistics, has accepted a position of Chair of Applied Statistics and Centre for Applications in Natural Resource Mathematics (CARM). His main interests are robust inferences and correlated data analysis in environmental sciences and natural resource mathematics.

University of Southern Queensland

- Dr Birgit Loch is leaving in July after five years at the university, to take up a position as Senior Lecturer in Mathematics Education at Swinburne University of Technology. Dr Trevor Langlands will take over as local correspondent. The *Gazette* thanks Birgit for her time as correspondent.

University of Sydney

- Associate Professor Robert Howlett and Dr Donald Cartwright have retired.

University of Technology, Sydney

- Stephen Woodcock has joined the Department as a lecturer.

University of Western Australia

- Simon Guest, a postdoctoral research associate, commenced on 1 January 2010.

- James Springham, a postdoctoral research associate, commenced on 4 January 2010.

University of Western Sydney

- Dr Laurence Park has been appointed lecturer in statistical and computational methods.
- Dr Zhi Guo has been appointed lecturer in financial mathematics.

University of Wollongong

- Dr Thomas Suesse has joined the Centre for Statistical and Survey Methodology.
- Dr Yue Chan has joined the nanomechanics group.
- Dr Peter Tritcher has joined the Simulation, Modelling and Analysis for Research and Teaching (SMART) infrastructure facility.
- Dr Sooran Kang has joined the school.
- Dr Tung Pham has joined the school.
- Dr John Ormerod and Dr Georgy Sofronov have left.



Conferences and Courses

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

Victorian Mathematics and Statistics Students' Conference

Date: 2 July 2010

Venue: Department of Mathematics and Statistics, University of Melbourne

Web: www.2010vmssc.ms.unimelb.edu.au

The aims of the 2010 Victorian Mathematics and Statistics Students' Conference (2010vmssc) are:

- to stimulate communication between mathematics and statistics graduate students from different Victorian universities
- to provide a forum in which students may share experiences of graduate study
- to provide Victorian graduate students an opportunity to gain an understanding of the research being conducted across the state
- to provide honours and masters students with opportunities to explore PhD research options and gain personal perspective from PhD students from across Victoria.

The conference is run by students for students.

10th Australasian Conference on Mathematics and Computers in Sport

Date: 5–7 July 2010

Venue: Crowne Plaza, Darwin

Web: www.anziam.org.au/The+10th+Australasian+Conference+on+Mathematics+and+Computers+in+Sport

Directors: Dr Anthony Bedford (anthony.bedford@rmit.edu.au)
A/Prof Ian Tim Heazlewood (ian.heazlewood@cdu.edu.au)

Dynamics Days Asia Pacific 6 (DDAP6)

Date: 12–14 July 2010

Venue: School of Mathematics and Statistics, UNSW

Web: conferences.science.unsw.edu.au/DDAP6/DDAP6.html

1st Conference of the European Society for Mathematics and the Arts

Date: 19–20 July 2010

Venue: Institut Henri Poincaré, Amphi Hermite, Paris

Contact: C.P. Bruter (bruter@univ-paris12.fr), Hervé Lehning (lehning@noos.fr)

STATPHYS 24: The XXIV International Conference on Statistical Physics of the International Union for Pure and Applied Physics

Date: 19–23 July 2010

Venue: Convention Centre, Cairns, Queensland

Web: www.statphys.org.au

International Congress of Mathematicians: ICM2010

Date: 19–27 August 2010

Venue: Hyderabad International Convention Centre, Hyderabad, India

Web: www.icm2010.org.in

There are posters for ICM2010 at www.icm2010.org.in/posters.php. Feel free to print them out and display them at appropriate locations.

2010 AustMS Early Career Workshop

Date: 25–26 September 2010

Venue: Rydges Oasis Resort, Caloundra, Queensland

Web: www.maths.uq.edu.au/~tillmann/austms10

54th Annual Meeting of the Australian Mathematical Society

Date: 27–30 September 2010

Venue: University of Queensland, St Lucia campus

Web: www.smp.uq.edu.au/austms2010

2010 New Zealand Mathematical Society Colloquium

Date: 6–9 December 2010

Venue: University of Otago, Dunedin, NZ

Web: www.maths.otago.ac.nz

The 2010 New Zealand Mathematical Society Colloquium is to be held at the University of Otago, Dunedin, in the period 6–9 December 2010. Further details will be available on the website of the Mathematics and Statistics Department (www.maths.otago.ac.nz).

ANZIAM 2011

Date: 30 January — 3 February 2011

Venue: Stamford Grand, Glenelg, South Australia

Contact: anziam2011@adelaide.edu.au

Organising committee: Co-Director, Jim Denier (Adelaide); Co-Director, John Boland (UniSA); Secretary, Julia Piantadosi (UniSA); Matt Finn (Adelaide); Joshua Ross (Adelaide); Ben Binder (Adelaide); Barbara Ridley (UniSA); Sara Browning (UniSA).

Invited speakers: Dr Bob Anderssen (CSIRO); Professor Andrea Bertozzi (Director of Applied Mathematics, UCLA); Professor Darren Crowdy (Imperial College); Associate Professor Georg Gottwald (University of Sydney); Professor Valerie Isham (University College London); Professor John Sader (University of Melbourne); Professor Kate Smith-Miles (Monash University).

7th International Congress on Industrial and Applied Mathematics (ICIAM 2011)

Date: 18–22 July 2011

Venue: Vancouver, British Columbia, Canada

Web: www.iciam2011.com

Email: info@iciam2011.com

ICIAM 2011 will highlight the most recent advances in the discipline and demonstrate their applicability to science, engineering, and industry. In addition to the traditional, strong focus on applied mathematics, the Congress will emphasize industrial applications and computational science. An integrated program will highlight the many outstanding contributions of applied mathematics. ICIAM 2011 will also be an opportunity to demonstrate to young researchers and graduate students the vast potential of mathematics.

The Congress is being planned by the Canadian Applied and Industrial Mathematics Society, the Mathematics of Information Technology and Complex Systems, and the Society for Industrial and Applied Mathematics.

Scientific Program Committee (Co-Chairs): Ivar Ekeland (Professor, Mathematics, University of British Columbia), Jerrold Marsden (Professor, Control and Dynamical Systems, California Institute of Technology).

The invited speakers include Dr Kerry Landman from the University of Melbourne. For the entire list, see the conference webpage.

Deadlines to remember:

- 18 August 2010: early deadline for minisymposium proposals; online registration opens
- 17 September 2010: early decisions announced for minisymposium proposals
- 4 October 2010: final submission deadline for minisymposium proposals
- 29 October 2010: final decisions announced for minisymposium proposals
- 15 December 2010: submission deadline, accepted minisymposia abstracts; submission deadline, contributed paper abstracts
- 14 January 2011: notifications sent to accepted contributed speakers
- February/March 2011: ICIAM 2011 program posted online.

Special focus themes:

- computational and modelling challenges in industry
- control theory and applications
- design and verification of complex systems
- dynamical systems and its applications
- economics and finance
- environmental science, including ocean, atmosphere, and climate
- fluid mechanics
- graphics, visualisation, and computation
- image and signal processing
- materials science
- mathematical biology
- mathematical medicine and physiology
- mathematical physics
- mathematical programming and industrial applications
- molecular simulation: quantum and classical
- numerical analysis
- ODE, PDE, and applications
- scientific computing
- solid mechanics
- statistical 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 Mohammed Abouzaid; MIT; 14–22 July 2010; – UAD; –
 Brian Alspach; University of Newcastle; 1 May to 20 May 2010; –; UWA; Neville Fowkes

- Dr Chengming Bai; Chern Institute of Mathematics; 15 April 2010 to 15 May 2010; Pure Mathematics; USN; A.I. Molev
- Mehdi Behzad; Shahid Beheshti University; 11–18 July 2010; –; UWA; Cheryl Praeger
- Anton Betten; Colorado State University; 10 August to 15 January 2011; –; UWA; Gordon Royle
- Dr Andrew Byrne; University College Cork, Ireland; 21 September 2009 to 30 June 2010; cryptography; RMIT; Kristine Lally
- Dr Luigi Cantini; LPTMS Universite Paris-Sud, France; 8–28 February 2011; –; UMB; Dr Jan de Gier
- Prof Alan Carey; Australian National University; 15–16 July 2011; –; USA; Vladimir Gaitsgory
- Dr Florica Cirstea; University of Sydney; 14 July 2008 to 14 July 2011; applied and nonlinear analysis; ANU; Neil Trudinger
- Dr Robert Clark; University of Wollongong; 1 July 2008 to 1 July 2011; statistical science; ANU; Alan Welsh
- Dr Ashraf Daneshkhah; Bu-Ali Sina University; 15 October 2008 to 24 June 2010; –; UWA; Cheryl Praeger
- Dr David Dereude; Universite De Valenciennes; 01 January 2010 to 31 August 2010; –; UWA; Adrian Baddeley
- Mr Gnanadarsha Dissanayake; Troy State University; 1 March 2010 to 31 December 2010; time series; USN; M.S. Peiris
- Prof Zongming Guo; Henan Normal University; 12 March to 11 May 2010; nonlinear PDE; UNE; Prof Yihong Du
- Mr Christian Habighorst; Universität Münster; 16 November 2009 to 16 May 2010; random walks on p-adic Lie groups; USN; J. Parkinson
- Prof Mark Handcock; University of Washington; 30 November 2009 to June 2010; –; UWA; Adrian Baddeley
- Moharram Iranalmasa; Shahid Beheshti University; March 2010 to September 2010; –; UWA; Cheryl Praeger
- Wei Jin (student); Central South University, China; 20 September 2008 to September 2010; –; UWA; Cheryl Praeger
- Ik Sung Kim; Korea Maritime University, Busan; 1 March 2010 to 28 February 2011; computational mathematics, image processing; UNSW; Bill McLean
- Prof Alexander Kleshchev; University of Oregon, USA; 17 June to 7 July 2010; –; UMB; Prof Arun Ram
- David Mason; University of the Witwatersrand; 2 May to 3 July 2010; –; UWA; Neville Fowkes
- Dr Lynne McArthur; RMIT University; June 2010; –; USA; John Boland
- Prof Daniel Nakano; University of Georgia; 1 February 2010 to 30 June 2010; classical Lie superalgebras, cohomological transfer theorems; USN; G.I. Lehrer
- Dr Benjamin Nill; University of Georgia, USA; 30 May 2010 to 20 June 2010; computational geometry; USN; J.J. Cannon
- A/Prof Kay O'Halloran; Interactive and Digital Media Institute Singapore; 2 August 2010 to 28 January 2011; –; UWA; Kevin Judd
- Prof Makato Ozawa; Komazawa University, Japan; 1 April 2009 to 31 March 2011; –; UMB; Prof Hyam Rubinstein

Mr Kyle Pula, PhD student; Colorado, USA; 31 August 2010; combinatorics and non-associative algebra, transversals of Latin squares; Ian Wanless
A/Prof Andrei Ratiu; Istanbul Bilgi University; 21 September 2009 to 31 August 2010; –; UMB; A/Prof Craig Hodgson
A/Prof Alistair Savage; University of Ottawa, Canada; 30 May to 4 June 2010; –; UMB; Prof Arun Ram
Dr Alistair Savage; University of Ottawa; 6–23 May 2010; geometry, algebra, representation theory; USN; A. Henderson
Dr Keiichi Shigechi; University of Amsterdam, The Netherlands; 24 February to 31 August 2010; –; UMB; Dr Jan de Gier
Mr Shavak Sinanan; Warwick University; 15 April 2010 to 23 May 2010; computational group theory; USN; J.J. Cannon
Shujiao Song; Tsinghua University; 1 February 2010 to 31 July 2010; –; UWA; Cai Heng Li
Prof Stuart Whittington; University of Toronto, Canada; 30 June 2010 to 10 July 2010; –; UMB; Prof Tony Guttman
Prof Xiaoyan Zhang; Shandong University, China; 16 January 2010 to 16 January 2011; nonlinear analysis; UNE; Prof Yihong Du
