



News

General News

Heidelberg Laureate Forum

PhD students Alex Amenta from ANU, Murray Smith from La Trobe, and Michael Brand and Marsha Minchenko from Monash, have been selected to participate in the second Heidelberg Laureate Forum in September 2014. There are just 100 spaces available worldwide for PhD students and early-career researchers in each discipline of mathematics and computer science, so they deserve our congratulations.

The annual Heidelberg Laureate Forum brings together 38 laureates, all winners of either the Abel Prize, the Fields Medal, the Turing Award or the Nevanlinna Prize, for an inspiring week of scientific, social and outreach activities in Heidelberg.

Further details are available at <http://www.heidelberg-laureate-forum.org/>.

Lift-Off Fellowships

The Australian Mathematical Society Lift-off Fellowships are designed to help recent PhD graduates in Mathematics and Statistics jump-start their career by giving them financial support after they submit their PhD thesis, but before they take up their first postdoctoral position. The Fellowships can be used for living expenses, to attend conferences, for travel and to fund the visits of collaborators. The Lift-off Fellowships are awarded on the basis of academic merit. Applications for the AustMS List-Off Fellowship can be made at any time. To be eligible to apply, applicants must have submitted their PhD thesis for examination within the previous three months. Applications for, and enquiries about, this Fellowship should be sent to Lift-Off@austms.org.au. Full details about the award and the applications process can be found on the AustMS website at <http://www.austms.org.au/Lift-Off+Fellowship+information>.

Completed PhDs

Australian National University

- Dr Qi-Rui Li, *Regularity of Monge–Ampère type equations arising in optimal transportation*, supervisor: Xu-Jia Wang.
- Dr Griffith Ware, *Uniqueness of norm properties of Calkin algebras*, supervisor: Rick Loy.

Monash

- Dr Marsha Elizabeth Minchenko, *Counting subgraphs of regular graphs using spectral moments*, supervisor: Ian Wanless.

Swinburne University

- Dr Sergio De Luca, *Nanoscale pumping of polar fluids with rotating electric fields*, supervisors: Billy Todd (Swinburne), Peter Daivis (RMIT) and Jesper Hansen (Roskilde University, Denmark),

University of Sydney

- Dr Ivan Guo, *Competitive multi-player stochastic games with applications to multi-person financial contracts*, supervisors: Marek Rutkowski and Christian Ewald.
- Dr Erwin Lobo, *Modelling the role of interclonal cooperativity during early carcinogenesis*, supervisors: Mary Myerscough and James Guy Lyons.
- Dr Ellis Patrick, *Statistical methods for the analysis and interpretation of RNA-Seq data*, supervisors: Jean Yang, Michael Buchley and Uri Keich.

University of Wollongong

- Dr Ahmed Hussein Msmali, *The effect of incomplete mixing in biological and chemical reactors*, supervisors: Mark Nelson and Maureen Edwards.

Awards and other achievements**La Trobe University**

- Ms Lucy Ham (Honours in Mathematics) received the 2013 D.M. Myers (University) Medal at her recent graduation.

University of New England

- OLT extension grant: Acquiring and applying a shared meaning of quantitative skills (QS) across core first year science units with a focus on distance education. Jackie Reid, Janelle Wilkes, Trevor Brown and Geoff Hinch. Name of original project: Quantitative Skills (QS) in Science: Curriculum models for the future (2010) Reference ID PP10-1640.

University of New South Wales

- Ian Sloan was elected a Fellow of the newly reinvigorated Royal Society of New South Wales.

University of Newcastle

- Dr Mike Meylan has had an article published in *Nature*. The article ‘Storm-induced sea-ice breakup and the implications for ice extent’ by A.L. Kohout, M.J.M. Williams, S.M. Dean and M.H. Meylan was published online. The authors show that the propagation of large waves through sea-ice around Antarctica extends much further than previously thought, and demonstrate the relationship between the location of the sea-ice edge and wave height over more than a decade. Congratulations on a fine paper!
- Dr Judy-anne Osborn gave a talk in the Australian Academy of Science ‘Science stars of tomorrow’ series on ‘Tipping the balance towards scientific thinking, via Zombies and Maths’.

University of Wollongong

- On 28 May at the inaugural induction of inductees to the Wollongong Academy of Tertiary Teaching and Learning Excellence (WATTLE), Associate Professor Anne Porter was inducted as a Senior Fellow. Dr Caz Sandison was inducted as a 2014 Octal (Outstanding contribution to teaching and learning) recipient.

Appointments, departures and promotions

Australian National University

MSI staff departures

- Dr Julie Clutterbuck will depart ANU in June to take up a position at Monash. She was working with Professor Ben Andrews.
- Dr Paul Leopardi (was working with Dr Conrad Burden).
- Dr Tarje Bargheer (was working with Dr Vagleik Angeltveit).
- Dr Jian Lu (was working with Prof Xu-Jia Wang).
- Dr Zihua Guo (was working with Prof Thierry Coulhon).

MSI staff arrivals

- Dr Shibing Chen is joining Professor Xu-Jia Wang.
- Dr Qi-Rui Li is joining Professor Xu-Jia Wang.
- Dr Garth Tarr is joining Professor Alan Welsh.
- Dr Feida Jiang is joining Professor Neil Trudinger.

MSI promotions

- Dr Vagleik Angeltveit from B to C.
- Dr Qinian Jin from B to C.
- Dr David Smyth from B to C.
- Prof Ben Andrews from D to E.
- Prof Alex Isaev from D to E.

Emeritus

- Professor John Hutchinson
- Professor Neil Trudinger

La Trobe University

- On 1 July, Dr Luke Prendergast became Head of the Department of Mathematics and Statistics, replacing Associate Professor Grant Cairns who has capably served as acting Head of Department for over a year.

Macquarie University

- Vladimir Gaitsgory was appointed Professor of Mathematics in the Macquarie University Department of Mathematics, commencing 28 March 2014. Vladimir was Strategic Research Professor in Mathematics at Flinders University. His research interests include the study of optimal control of dynamical systems. He has a distinguished track record of publications and ARC grants including a currently held DORA.

Monash University

- Dr Sarada Herke commenced as Research Fellow. Sarada's research interests are graph theory and combinatorial design theory. In particular, graph decompositions, Steiner triple systems and mutually orthogonal Latin squares.
- Dr Daniel Harvey commenced as Research Fellow. Daniel's research interests are in graph structure theory, specifically treewidth, graph minors, graph colouring; graph algorithms.
- Dr Nevena Francetic commenced as Research Fellow. Nevena's research interests are in combinatorial design theory: generalization of covering arrays, graph decompositions, application of probabilistic methods in combinatorial design and applications of designs.
- Dr Carla Ewels commenced as Research Fellow. Carla's main research interests are in Bayesian methods. These include Bayesian modelling, model comparisons, classification, clustering, statistical genetics, data analysis of high-throughput data and Markov chain Monte Carlo methods. Her applied interests are in the field of genetics, health, agriculture and fishery.
- Dr Maria Lugaro, Senior Lecturer in Astrophysics resigned on 30 April 2014 to travel and to take on a new academic position in Europe.

Queensland University of Technology

Recent appointments at QUT are:

- Eleftherios Kirkinis: Lecturer in Applied Mathematics.
- Robyn Araujo: Lecturer in Applied Mathematics.
- Associate Professor Steven Stern: Statistics.

We apologise for incorrectly listing these in the previous issue.

University of Adelaide

- Sarthok Sircar has joined as lecturer in Applied Mathematics.
- Richard Larkang will be working as a research associate with Finnur Larusson.

UNSW Canberra

- Dr Jason Sharples has been promoted to Associate Professor.

University of Newcastle

- Dr Paul Vbrick will be joining the University of Newcastle as a postdoctoral fellow.
- Professor Natasha Boland is leaving the University of Newcastle for a position at Georgia Institute of Technology.
- Professor Martin Savelsburgh is leaving the University of Newcastle for a position at Georgia Institute of Technology.

Conferences and Courses

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

2014 AMSI Winter School on Contemporary Aspects of Cryptography

Date: 7–18 July 2014

Venue: University of Queensland

Web: <http://amsi.org.au/WS>

Registration is now open for the 2014 AMSI Winter School on Contemporary Aspects of Cryptography. The speaker line-up includes: Professor Alexei Miasnikov (Stevens Institute of Technology) and Professor Tanja Lange (Technische Universiteit Eindhoven).

Workshop on Optimization, Nonlinear Analysis, Randomness and Risk

Date: Saturday 12 July 2014

Venue: CARMA, The University of Newcastle

Web: <http://carma.newcastle.edu.au/meetings/risk2014/>

GAGTA8: Geometric and Asymptotic Group Theory with Applications

Date: 21–25 July 2014

Venue: Newcastle, Australia

Web: <https://sites.google.com/site/gagta8/>

For more information, see the website, or *Gazette* 40(5), pp. 353-354.

Workshop in Harmonic Analysis and its Applications

Date: 21–25 July 2014

Venue: Macquarie University

Web: <http://rutherglen.science.mq.edu.au/ha2014/>

For further details, see the website, or *Gazette* 40(5), p. 354.

Geometric Analysis and Probabilistic Methods in Geometry

Date: 21–25 July 2014

Venue: University of Queensland

Web: <http://www.smp.uq.edu.au/GASMG-2014>

For further details, see the website, or *Gazette* 41(2), p. 134.

International Congress of Mathematicians

Date: 13–21 August 2014

Venue: Seoul, Korea

Website: <http://www.icm2014.org/>

For further details, see the website, or *Gazette* 41(1), p. 64.

Robust Statistics and Extremes

Date: 8–11 September 2014

Venue: ANU

Web: <http://maths.anu.edu.au/events/robust-statistics-and-extremes>

Statistics today is faced with many challenges, especially relating to such topical issues as the analysis of ‘big data’ through to understanding the complexities of climate change — and many others. Floods, fires, variations in temperature on local through to global scales, etc., have provided impetus for recent vigorous redevelopments of extreme value analysis. Extremely large data sets and high dimensional data now becoming available in genetics, finance, physics, astronomy, and many other areas, have spurred exponential advances in statistical theory and practice with special emphasis on robustness issues, in recent years. The need to analyse large, linked, data sets in health, crime, agriculture, surveys, and industry, just to name a few, has revolutionised our profession. It’s an exciting time to be a statistician.

The aim of the Robust Statistics and Extremes (RS&E) conference is to provide an opportunity for researchers to present up-to-date accounts of the present state of the art in the topics of Robust Statistics and Extremes. A number of distinguished speakers, both international and Australian, will give keynote addresses in their areas of interest. Special provision will be made for student participation.

Distinguished invited speakers

- Professor Peter Hall (University of Melbourne)
- Professor Aurore Delaigle (University of Melbourne)
- Professor Debbie Dupuis (Montreal)

- Professor Manuel Febrero-Bande (University De Santiago de Compostela)
- Professor Ana Ferreira (Lisbon, Portugal)
- Dr Luke Prendergast (Latrobe University)
- Professor Elvezio Ronchetti (University of Geneva)
- Professor Matias Salibian-Barrera (University of British Columbia, Canada)

For more information on Robust Statistics and Extremes, see the website, or contact us by email (Admin.research.msi@anu.edu.au) or telephone (02) 6125 2897.

EVIMS 2: Effective use of Visualisation in the Mathematical Sciences workshop

Date: 21–23 November 2014

Venue: ANU

Web: <http://maths.anu.edu.au/events/effective-use-visualisation-mathematical-sciences-evims-2>

New Directions in Fractal Geometry workshop

Date: 24–28 November 2014

Venue: ANU

Web: <http://maths.anu.edu.au/events/new-directions-fractal-geometry>

CTAC 2014

Date: 1–3 December 2014

Venue: ANU

Web: <http://maths.anu.edu.au/events/ctac-2014>

CTAC is organised by the special-interest group in computational techniques and applications of ANZIAM, the Australian and New Zealand Industrial and Applied Mathematics Division of the Australian Mathematical Society. The meetings provide an interactive forum for researchers interested in the development and use of computational methods applied to engineering, scientific and other problems. Our aim is to conduct a high-quality conference on computational mathematics; scientific, technical, and industrial applications; and high performance computing. The special themes for the meeting will include:

- Computational fluid dynamics
- Data assimilation
- Optimisation
- Inverse problems

For more information about CTAC 2014 go to the website, or phone/email us on: E: CTAC2014@anu.edu.au; T: (02) 6125 2897.

BioInfoSummer 2014

Date: 1–5 December 2014

Venue: Monash University (Caulfield Campus), Melbourne

Web: <http://www.amsi.org.au/index.php/higher-education/bioinfosummer>

Bioinformatics is an exciting, fast-moving area analysing and simulating the structures and processes of biological systems. BioInfoSummer introduces students, researchers and others working in related areas to the discipline.

The program features:

- Introduction to molecular biosciences and bioinformatics
- Next-generation DNA sequencing and sequence evolution
- High-throughput technology and omics data analysis
- Methods in bioinformatics
- Systems biology

38th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing

Date: 1–5 December 2014

Venue: Victoria University of Wellington, New Zealand

Web: <http://msor.victoria.ac.nz/Events/38ACCMC>

Contributed talks to the 38th ACCMCC will be sought from all areas of discrete and combinatorial mathematics and related areas of computer science. The invited speakers are:

- Mike Atkinson (University of Otago),
- Simeon Ball (Universitat Politècnica de Catalunya),
- Alice Devillers (University of Western Australia),
- Jaroslav Nesetril (Charles University),
- Sergey Norin (McGill University),
- James Oxley (Louisiana State University),
- Andrew Thomason (University of Cambridge),
- Mark Wilson (University of Auckland),
- Stefan van Zwam (Princeton University).

At this stage, the website contains only basic information. Information will be added as we get closer to the start date—so bookmark the page now. A further announcement will be made when registration opens. Queries should be sent to the head of the organising committee, Dillon Mayhew (dillon.mayhew@msor.vuw.ac.nz).

International mathematical conference at the University of Goroka, PNG

Date: 1–5 December 2014

Venue: University of Goroka, PNG

Web: <http://icpam-goroka2014.blogspot.com/>

The Society has been asked by Samuel Kopamu, President of the PNG Mathematical Society, to help to promote an international mathematical conference at the University of Goroka, which is being hosted by the PNGMS.

Details of the conference and a registration form can be found at <http://icpam-goroka2014.blogspot.com.au/>.

The conference is being supported by American Mathematical Society (AMS), European Mathematical Society (EMS) and the African Mathematical Union (AMU) and is advertised at the following sites of AMS, EMS and UOG:

http://www.ams.org/meetings/calendar/2014_nov24-28_papua.html

<http://www.euro-math-soc.eu/node/4640>

<http://icpam-goroka2014.blogspot.com/>

8th Australia–New Zealand Mathematics Convention

Date: 8–12 December 2014

Venue: University of Melbourne

Web: <http://www.austms2014.ms.unimelb.edu.au/>

The combined meeting of the Australian and New Zealand mathematical societies is held every six years, and will next be held at Melbourne University from 8–12 December 2014. It will incorporate the 3rd annual meeting of ANZAMP (the Australian and New Zealand Association of Mathematical Physics).

Confirmed plenary speakers:

- Rosalind Archer (University of Auckland, NZ)
- Mark Gross (University of California, San Diego, USA)
- John Hearn (RMIT, Australia), ANZIAM Lecturer
- Nicolas Monod (École Polytechnique, Switzerland)
- Robert Penner (Caltech, USA and Aarhus, Denmark)
- Jill Pipher (Brown University, USA)
- Nicolai Reshetikhin (University of California, Berkeley, USA)
- Hyam Rubinstein (University of Melbourne, Australia)
- Nina Snaith (University of Bristol, UK), Hanna Neumann lecturer
- Mariel Vazquez (San Francisco State University, USA)

The following Special Sessions are planned as part of the conference:

- Algebra/Combinatorics
- Algebraic Geometry
- Applied Dynamical Systems
- Geometry and Topology
- Groups and Dynamics
- Harmonic Analysis and PDE
- Mathematical Biology
- Mathematics Education
- ANZAMP/Mathematical Physics
- Number Theory
- Operator Algebras/Functional Analysis
- Probability
- Representation Theory

We invite further suggestions from people willing to organise a session. Each registered participant is restricted to talk in at most one special session unless one of the sessions is Mathematics Education. There will be a poster session, continuing

a tradition of the NZMS, which may help those who would like to present more than once.

2015 AMSI Summer School

Date: 2–28 January 2015

Venue: University of Newcastle

Web: <http://www.amsi.org.au/index.php/higher-education/summer-school>

Planning for Summer School 2015 is well underway. You can register for updates via the Summer School website.

ICIAM mini-symposium

Date: 10–14 August 2015

Venue: Beijing, China

Web: <http://www.iciam2015.cn/>

We encourage you to think about taking part in ICIAM 2015. Arguably, the best way to participate is to be part of a minisymposium, and one way to ensure this is to propose one yourself. The call for minisymposia is now live. A minisymposium should have at least four speakers, and ideally should be international in scope and speaker locations.

See <http://www.iciam2015.cn/Submissions.html> for more information.

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.

Mogens Bladt; IIMAS-UNAM; 1–15 November 2014; applied probability; SMP at UQ; Leonardo Rojas-Nandayapa

José Blanchet; Columbia University; January 2015; applied probability; SMP at UQ; Leonardo Rojas-Nandayapa

A/Prof Xiyu Cheng; Lanzhou University, China; February 2014 to February 2015; nonlinear analysis; UNE; Yihong Du

Dr Pavel Chigansky; The Hebrew University, Israel; 1 October 2013 to 30 September 2014; probability, stochastic processes, nonlinear filtering, control and stability; MNU; Kais Hamza

Mr Romain Couvreur; École Normale Supérieure, France; 1 February to 1 August 2014; UMB; Paul Pearce

A/Prof Anto Dzhamay; University of Northern Colorado; 22 July to 7 August 2014; applied; USN; Nalini Joshi

Dr Lance Fiondella; University of Massachusetts, USA; April to August 2014; computer science; RMIT; P. Zeephongsekul

Prof Vyacheslav Futorny; University of São Paulo; 30 October to 30 November 2014; pure; USN; Alexander Molev

- Dr Ganes Ganesalingam; Massey University, NZ; 1 July 2014 to 30 June 2015; statistics; USN; Shelton Peiris
- Dr Nhan Bao Ho; La Trobe University; March to August 2014; combinatorial games and complexity; MNU; Graham Farr
- Prof Satoshi Koike; Hyogo University, Japan; 8–23 September 2014; pure; USN; Laurentiu Paunescu
- Dr Uwe Leck; University of Wisconsin, USA; July; school level enrichment activities and Extremal Set Theory; CDU; Ian Roberts
- Dr Claire Lemarchand; Roskilde University, Denmark; 3.5 weeks starting on 17 June 2014; non-equilibrium molecular dynamics applications; SUT
- Prof Weidong Liu; Shanghai Jiao Tong University, China; 6 July to 2 August 2014; statistics; USN; Qiying Wang
- Dr Frank Lubeck; RWTH, Aachen; 30 May to 30 June 2014; UWA; Alice Niemeyer and Stephen Glasby
- Hou Lvlin; National University of Defense Technology, PR China; 11 November 2013 to 11 November 2014; UWA; Michael Small
- Prof Vladimir Matveev; University of Jena, Germany; 23 April to 3 May 2014; differential geometry; LTU; Yuri Nikolayevsky
- A/Prof Si Mei; Shanghai Jiaotong University, China; 9 August 2014 to 8 August 15; pure; USN; Andrew Mathas
- Kassem Mustapha; King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia; 14 June to 14 July 2014; UNSW; Dr Bill Mclean
- Andrew Oster; Eastern Washington University, USA; mathematical biology and computational cell biology; UAD; Edward Green
- Prof Joon Park; Indiana University, USA; 5–13 July 2014; stats; USN; Qiying Wang
- Prof Jessica Purcell; Brigham Young University; 21 December 2013 to 20 August 20 2014; UMB; Craig Hodgson
- Prof Aixia Qian; Qufu Normal University, China; December 2013 to December 2014; nonlinear analysis; UNE; Yihong Du
- Mr Fazli Rabbi; 31 January to 31 July 2014; stats; USN; Samuel Mueller
- Iain Raeburn; 16 June to 2 July; UOW
- Dr Csaba Schneider; Federal University of Minas Gerais, Brazil; 6–20 July 2014; UWA; Cheryl Praeger
- Ms Thidaporn Seangwattana; Naresuan University, Thailand; 20 September to 20 December 2014; optimisation; FedUni; Alex Kruger
- Dr Ratana Srithus; Silpakorn University, Nakhon Pathom, Thailand; 21 May to 17 June 2014; universal algebra and clone theory; LTU; Brian Davey
- Tim Steger; 16 June to 17 July 2014; UOW
- Dr Anne Thomas; University of Glasgow, UK; 28 July to 8 August 2014; UWA; Michael Giudici
- Dr Qian Wang; University of Oxford; 1 March to 31 December 2014; ANU; Markus Hegland
- Prof Rabian Wangkeeree; Naresuan University, Thailand; 20–26 September 2014; optimisation; FedUni; Alex Kruger
- A/Prof Lei Wei; Jiangsu Normal University, China; February 2014 to February 2015; nonlinear partial differential equations; UNE; Yihong Du

A/Prof Dongsheng Wu; University of Alabama, USA; 17 August to 15 November 2014; stats; USN; Qiyang Wang
A/Prof Yuezhu Wu; Changsu Institute of Technology; 1 October 2013 to 30 September 2014; Lie superalgebras; USN; Ruibin Zhang
Mr Panu Yimmuang; Naresuan University, Thailand; 20 September to 20 December 2014; optimisation; FedUni; Alex Kruger
Prof Hechun Zhang; Tsinghua University, China; 20 July to 13 September 2014; pure; USN; Ruibin Zhang
Assoc Prof Jin-Xin Zhou; Beijing Jiaotong University; 16 November 2013 to 16 November 2014; UWA; Cai Heng Li
Prof Wu Ziku; Qingdao Agricultural University, China; 1 October 2014 to 1 March 2015; applied; UNS; Georg Gottwald
