



# News

## General News

### **MATRIXMelbourne**

The University of Melbourne has decided to establish a MAThematical Research Institute, to be known as MATRIX. In the spirit of a number of overseas institutes, it aspires to be a destination for research-intensive, residential programs, where internationally renowned scientists can engage with the Australian mathematical sciences community for significant periods of time. The activities of MATRIX will take place at a fixed venue in regional Victoria (initially at Creswick).

MATRIX has put out a call to prospective organisers to apply for funding to organise a MATRIX program. A website with further information which will be published online soon. In the meantime, contact [office@matrixatmelbourne.org.au](mailto:office@matrixatmelbourne.org.au). In particular, send applications for 2016 funding to this address before Friday 30 October.

### **Nalini Joshi: Women of Influence 2015**

Professor Nalini Joshi has been announced as one of The Australian Financial Review and Westpac Women of Influence for 2015. The 100 Women of Influence were listed in the The Australian Financial Review on Thursday 24 September 2015. The overall winner and category winners will be announced at the Annual Gala held at the Sydney Town Hall on Thursday 15 October 2015.

The 100 Women of Influence Awards seek to recognise and highlight the profound ways influential women are driving change to create a more diverse future in Australia.

Our congratulations to Nalini!

### **International Mathematics Olympiad**

This year, in the International Mathematics Olympiad, Australia achieved its highest-ever placing of 6th (behind only the United States of America, People's Republic of China, Republic of Korea, Democratic People's Republic of Korea and Vietnam). Held in July in Thailand, the competition attracted almost 600 competitors from 104 countries.

Australian Team members included Alexander Gunning, from Glen Waverley Secondary College in Melbourne, who scored a gold and was ranked fourth overall, and Seyoon Ragavan, a year 11 student at Knox Grammar in Sydney, who also won a gold medal and was ranked nineteenth overall. The other four team members all won silver medals. Our congratulations to all of them.

See [http://www.imo-official.org/year\\_country\\_r.aspx?year=2015](http://www.imo-official.org/year_country_r.aspx?year=2015) for further details. A more detailed report will appear in the next issue.

### Heidelberg Laureate Forum

The Heidelberg Laureate Forum is an annual meeting bringing together winners of the most prestigious scientific awards in Mathematics (Abel Prize, Fields Medal and Nevanlinna Prize) and Computer Science (ACM Turing Award) with a select group of highly talented young researchers. Roughly 200 young scientists from all over the world have the unique opportunity to interact with their scholarly role models during lectures, panels and discussions. At the same time, the up and coming scientists can engage in inspiring and motivating conversations with the laureates during various social events. The Heidelberg Laureate Forum provides a platform for scientific dialogue across generations.

This year's took place 23–28 August, and five Australian research students and postdocs were selected to participate.

Our congratulations to:

- Philipp Bader, La Trobe University
- Anna Tomskova, The University of New South Wales
- John Tsartsafis, La Trobe University
- Matthew Tam, The University of Newcastle
- Melissa Lee, The University of Western Australia.

They all received funding from AMSI and AustMS to support their attendance at the event.

See <http://research.amsi.org.au/hlf> for further details about these young researchers, and <http://www.heidelberg-laureate-forum.org/> for details about the event. A more detailed report from them will appear in the next issue.

### Ian Sloan: 50 years at UNSW

On 31 July, the School of Mathematics and Statistics joyfully came together over lunch and celebrated Professor Ian Sloan's 50 years of invaluable service at UNSW.

### ANZIAM: The 2016 J.H. Michell Medal — Call for nominations

In honour of John Henry Michell, ANZIAM, a Division of the Australian Mathematical Society, has instituted an award for outstanding new researchers. At most one award will be made annually, but only to a candidate of sufficient merit. No person can receive more than one such award. The selection criteria for the award are:

1. The researcher must have carried out distinguished research in applied and/or industrial mathematics, where a significant proportion of the research work has been carried out in Australia and/or New Zealand; AND
2. On 1 January in the year in which the AWARD is made, the recipient will be within the equivalent of the first ten years of their research-related career\*, following the conferral of a PhD\*\*; AND
3. The researcher must have been a member of ANZIAM for at least the\*\* three calendar years preceding the year in which the AWARD is made. Backdating of membership is not acceptable.

Notes: \*Allowing for significant interruptions to research development, for example, parental duties, illness, career change.

\*\* Any exceptional circumstances should be forwarded to the Executive Committee to assess eligibility.

Nominations for the AWARD can be made by any member of ANZIAM other than the nominee. A nomination should consist of a brief CV of the nominee together with the nominee's list of publications and no more than a one-page resumé of the significance of the nominee's work. Nominations should be forwarded in confidence, electronically in pdf format, to Associate Professor Harvinder Sidhu ([h.sidhu@adfa.edu.au](mailto:h.sidhu@adfa.edu.au)), Chair of the Selection Panel, by 6 November 2015.

Further details of the application process and the award criteria are on the ANZIAM website: [www.anziam.org.au/The+JH+Michell+Medal](http://www.anziam.org.au/The+JH+Michell+Medal).

### The 2016 ANZIAM Medal: Call for nominations

Nominations are now sought for the ANZIAM Medal, which is the premier award of ANZIAM, a division of the Australian Mathematical Society.

Closing date: 6 November 2015.

Nominations for the AWARD can be made by any member of ANZIAM other than the nominee. A nomination should consist of a brief CV of the nominee together with the nominee's list of publications and no more than a one-page resumé of the significance of the nominee's work. Nominations should be forwarded in confidence, electronically to Professor Robert McKibbin ([R.McKibbin@massey.ac.nz](mailto:R.McKibbin@massey.ac.nz)), Chair of the Selection Panel, by 6 November 2015.

Further details of the application process and the award criteria are on the ANZIAM website: [www.anziam.org.au/The+ANZIAM+medal](http://www.anziam.org.au/The+ANZIAM+medal).

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## Completed PhDs

### ANU

- Dr Koenraad Lambertus Van Den Dungen, *Lorentzian geometry and physics in Kasparov's theory*, supervisors: Alan Carey (ANU) and Adam Rennie (University of Wollongong).

### Queensland University of Technology

- Dr Matthew Adams, *Mathematical models of calcium and tight junctions in normal and reconstructed epidermis*, supervisor: Dann Mallet.
- Dr Julian Back, *Stefan problems for melting nanoscaled particles*, supervisor: Scott McCue.
- Dr Nicole Cusimano, *Fractional models in space for diffusive processes in heterogeneous media with applications in cell motility and electrical signal propagation*, supervisor: Kevin Burrage.

- Dr Hala Hejazi, *Finite Volume Methods for Simulating Anomalous Transport*, supervisor: Timothy Moroney.
- Dr Daryl Kempthorne, *The development of virtual leaf surface models for interactive agrichemical spray applications*, supervisor: Ian Turner.
- Dr Matthew Moores, *Bayesian computational methods for spatial analysis of images*, supervisor: Kerrie Mengersen.

### Swinburne University of Technology

- Dr Afia Naheed, *A study of spatio-temporal spread of infectious disease: SARS*, supervisors: Manmohan Singh, David Lucy and David Richards.
- Dr Afsana Ahmed, *Molecular simulation study of gas storage and separation by novel micropore architectures*, supervisors: Billy Todd (Swinburne University) and Aaron Thornton (CSIRO).

### University of Melbourne

- Dr Bin Jia, *Link graphs*, supervisor: David Wood.
- Dr Xiaogang Liu, *Selected topics in spectral graph theory*, supervisor: Sanming Zhou.
- Dr Dean Dres, *Exact confidence intervals for proportions estimated by group testing*, supervisors: Graham Hepworth and Ray Watson.

### University of New South Wales

- Dr Bo Wang, *Modelling individual claim development processes in long tail insurance products*, primary supervisor: William Dunsmuir.
- Dr Yuguang Wang, *Filtered polynomial approximation on the sphere*, primary supervisor: Ian Sloan.

### University of Sydney

- Dr Nicole Sutherland, *Algorithms for Galois extensions of global function fields*, supervisors: Claus Fieker and Steve Donnelly.
- Dr Alice Dong, *Bayesian analysis of reserving models and applications*, supervisors: Jennifer Chan and Gareth Peters.
- Dr Victor Vera Ruiz, *Recoding of Markov processes in phylogenetic models*, supervisor: John Robinson.
- Dr Sanjaya Dissanayake, *Advancement of fractionally differenced Gegenbauer processes with long memory*, supervisor: Shelton Peiris.

### University of Wollongong

- Dr Khaled Sadoon N. Al Noufaey, *Semi-analytical solutions for reaction diffusion equations*, supervisors: Tim Marchant and Maureen Edwards.
- Dr Abdurahim Fares M. Alharbi, *Schedule design for liner shipping networks with port time windows*, supervisors: Pam Davy and Shuaian Wang.
- Dr Asma Olyan M. Alharbi, *The biological treatment of wastewater: mathematical models*, supervisors: Mark Nelson, Annette Worthy and Harvinder Sidhu (UNSWCanberra).

- Dr Amirah Azmi, *Solitary waves in colloidal media*, supervisor: Tim Marchant.
- Dr Luise Patricia Lago, *Imputation of household survey data using mixed models*, supervisors: Robert Clark and Ray Chambers.
- Dr Payam Mokhtarian Dehkordi, *Outliner robust bounded bootstrap small area estimation*, supervisors: Ray Chambers and Thomas Suesse.
- Dr Andrew Holder, *Mathematical models for tumour invasion*, supervisor: Marianito Rodrigo.

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## Awards and other achievements

### Australian National University

#### *Australian Laureate Fellowship for Professor Ben Andrews*

Congratulations to Professor Ben Andrews on being awarded an ARC Australian Laureate Fellowship for his project on ‘Geometric analysis of eigenvalues and heat flows’. The total funding for this project is \$2,080,100. The project summary reads:

This fellowship project aims to build on Australia’s leading position in the areas of nonlinear partial differential equations and geometric analysis to exploit new and highly innovative mathematical methods. It is expected that the methods will affect a range of related fields including stochastic modelling and finance, image processing, and the basic sciences. The project seeks to serve as a focal point for a developing community of Australian researchers in this field, providing a training ground for young researchers and students at the forefront of a vigorous and internationally active area of research, and bringing top international researchers to Australia to interact with the local research community.

For more information see the minister’s media release and links therein:

[http://www.arc.gov.au/media/releases/Minister\\_FL23June15.htm](http://www.arc.gov.au/media/releases/Minister_FL23June15.htm).

### Flinders University

We congratulate Vladimir Ejov, Associate Professor of Mathematics in the School of Computer Science, Mathematics and Engineering. He has been awarded the status of Adjunct Professor at Moscow State University.

### La Trobe University

Ioannis (John) Tsartsafis, a 3rd year HDR student in LTU (supervisors: Yuri Nikolayevsky, Grant Cairns) joins Philipp Bader, post-doc at LTU (supervisor: Reinout Quispel), as two of just five young mathematicians from Australia and of only 100 worldwide who received an invitation to attend the prestigious Heidelberg Laureate Forum (Germany, 23–28 August). John, Philipp, Yuri and Luke Prendergast (Head of Department) featured on the SBS news on 4 August.

### University of New South Wales

- Scientia Professor Trevor McDougall was awarded an Australian Laureate Fellowship commencing 2015.
- Scientia Professor Trevor McDougall has been elected as one of two vice-presidents of IPASO, the International Association for the Physical Sciences of the Oceans.

### University of South Australia

- *ARC Linkage Project*. Title: Co-variant analysis and statistical modelling for improved crop yield. CIs: Professor Stanley J. Miklavcic, Dr Hamid Laga, Dr Jinhai Cai PI: Dr Haydn Kuchel. Partner Organisation: Australian Grain Technologies, Pty Ltd Amount awarded: \$395,000 for the period 2015–2018.
- *ARC Linkage Project LP150100749*. Title: Improving train flows with connected driver advice systems. Investigators: Peter J. Pudney, Amie R. Albrecht, Philip G. Howlett, Scott A. Mackenzie. Industry partner: TTG Transportation Technology Pty Ltd. Amount awarded: \$430,000 for the period 2015–2018.

### University of Sydney

- Dr Stephan Tillmann was awarded the Faculty of Science Learning and Teaching Award.
- Mary Myerscough and Jean Yang were members of different teams that were finalists in different categories in the 2015 Eureka Prizes; for the full lists of finalists and winners see <http://australianmuseum.net.au/eureka>.

Mary Myerscough was a member of The Bee team (Macquarie University and University of Sydney) which identified a mechanism for the mysterious population collapses in bee hives that have impacted honey bees worldwide. This team was a finalist, for the UNSW Eureka Prize for Scientific Research.

Jean Yang was a member of the BioCode team (University of Sydney, CSIRO and Garvan Institute of Medical Research), which developed innovative analysis and visualisation methods that will benefit researchers in many areas of life science. This team was a finalist, for the UNSW Eureka Prize for Excellence in Interdisciplinary Scientific Research.

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## Appointments, departures and promotions

### Australian National University

#### *Staff departures:*

- Dr Wilse Travis departed on 21 July 2015.
- Dr Katharina Neusser departed on 4 July 2015.

*Staff arrivals:*

- Dr Xiong Changwei, Research Fellow, arrived on 13 July 2015.
- Dr Zhang Jun, Research Fellow, arrived on 6 July 2015.

**Charles Sturt University**

- Professor Ken Russell has retired.
- Dr Ryan Ip has joined as a lecturer in statistics.

**Flinders University**

- Professor Raja Huigol retired from the school of Computer Science, Engineering and Mathematics on Friday 31 July 2015, after an impressive 40 years of distinguished service at Flinders University.

**Monash University***New arrivals:*

- Prof Hans de Sterck
- Associate Professor Jessica Purcell
- Dr Yann Bernard
- Dr Jane Gao

**University of Melbourne***New staff:*

- Professor Christian Haesemeyer
- Dr Marcy Robertson
- Dr Daniel Murfet

**University of New South Wales***New staff:*

- Dr Liangyi (Lee) Zhao, Senior Lecturer in Pure Mathematics. Dr Zhao has a PhD from Rutgers University, USW, and comes to UNSW from Nanyang Technological University, Singapore.
- Dr Michael Feischi comes as postdoc with Thanh Tran for five months and then with Josef Dick. Dr Feischi has a PhD from Vienna University of Technology.
- Dr Loic Thibaut comes as postdoc with David Warton. Dr Thibaut has a PhD in Marine Biology from James Cook University.

*Promotions:*

- Dr Pinhas Grossman has been promoted to Senior Lecturer effective 1 July 2015.

**University of Sydney**

- Slaven Kozic has joined the School as Postdoctoral Research Associate.
- The School welcomes Dr Anne Thomas as a Senior Lecturer.

## University of Wollongong

*New staff:*

- Dr Bohai Zhang, a postdoc, is working with Prof Noel Cressie.

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## Conferences and Courses

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

### IGA/AMSI workshop: Australia-Japan Geometry, Analysis and their Applications

Dates: 19–23 October 2015

Venue: The University of Adelaide

Website: <http://www.iga.adelaide.edu.au/workshops/WorkshopOct2015/>

Global analysis relies on combining ideas from the complementary areas of geometry and analysis. This workshop will bring together researchers from Australia and Japan with interests in these areas with the aim of building capacity both in interdisciplinary pure research and in applications.

Distinguished international speakers include:

- Professor Mikio Furuta (University of Tokyo)
- Professor Martin Guest (Waseda University)
- Professor Motoko Kotani (Tohoku University)
- Professor Yoshiaki Maeda (Tohoku University)

For more details please refer to the website.

### Analysis and Geometry in non-Riemannian spaces

Dates: 2–4 November 2015

Venue: University of New South Wales

Web: <http://conferences.science.unsw.edu.au/SR2015/>

Non-Riemannian geometries occur in different areas of pure and applied mathematics, including rigidity of lattices, hypoelliptic differential operators, heat diffusion and wave propagation on manifolds, several complex variables, control theory, non-holonomic mechanical systems, and neurobiology. We propose to bring together researchers interested in several of these areas, to create a scientific environment for exchanging ideas and developing new interactions.

The website of the event is now online. Please follow the instructions therein to inform us of your interest to attend.

Speakers (now confirmed) include:

- Professor Xuan Duong, Macquarie University
- Professor Michael Eastwood, University of Adelaide
- Professor Tom ter Elst, University of Auckland
- Professor Rod Gover, University of Auckland



- Dr Enrico Le Donne, University of Jyväskylä
- Dr Thomas Leistner, University of Adelaide
- Dr Ji Li, Macquarie University
- Professor Gerd Schmalz, University of New England
- Dr Adam Sikora, Macquarie University
- Dr Anne Thomas, University of Glasgow
- Professor Lesley Ward, University of South Australia

### **Recent trends on Nonlinear Evolution Equations**

Dates: 4–5 November 2015

Venue: University of Sydney

Web: <http://www.maths.usyd.edu.au/u/dhauer/nonlinear-evolution/index.html>

In recent years, there has been spectacular progress in the study of nonlinear diffusion equations and geometric flows. Therefore the fundamental aim of the workshop is to showcase these advances. Key challenges for the future that we target include the quantitative analysis of the dynamics of solutions arising from flows generated by deterministic, nondeterministic, and geometric evolution equations.

During the two-day workshop, talks from both communities are intertwined, serving to highlight salient ideas, proofs and questions, which are important fertile ground for pushing forward research in Australia and world-wide. In particular, this event has the intention to give PhD students and early career researchers the opportunity to meet some of the leading experts in the field of geometric evolution equations and nonlinear evolution equations. Every interested researcher is invited to attend and participate at this event.

Please use Eventbrite <https://www.eventbrite.com.au/e/recent-trends-on-nonlinear-evolution-equations-tickets-18681297263> to register for this workshop if you would like to attend (free). The schedule of the days, title of the talks with abstracts can be found at the home page (see link above).

### **The 21st International Congress on Modelling and Simulation (MODSIM2015)**

Date: Sunday 29 November to Friday 4 December 2015

Venue: Gold Coast Convention and Exhibition Centre, Broadbeach, Queensland

Web: <http://www.mssanz.org.au/modsim2015/index.html>

For further details see the website or *Gazette* 42(1), p. 56.

### **$SM^2$ Statistical Mechanics of Soft Matter**

Dates: 30 November to 1 December 2015

Venue: Swinburne University of Technology

Further details to follow.

**Australian Mathematical Sciences Student Conference**

Dates: 30 November to 2 December 2015

Venue: University of Tasmania

Further details to follow.

**Engineering Mathematics and Applications Conference (EMAC)**

Date: 6–9 December 2015

Venue: UniSA, City West Campus Adelaide

Web: <https://emac2015.unisa.edu.au/>

Abstract submission is now open for EMAC 2015 and closes on 9 October. This meeting provides a forum for researchers interested in the development and use of mathematical methods in engineering and applied mathematics. It aims to foster interactions between mathematicians and engineers, from both academia and industry.

The ANZIAM/CSIRO Student Support Scheme will be available to student attendees of EMAC. Applications close 23 October.

Early-bird registration also closes on 23 October.

To register or find out more, visit the website (above).

**KOZWaves 2015**

Date: 6–9 December 2015

Venue: The University of Adelaide

Web: <http://www.maths.adelaide.edu.au/kozwaves2015/index.html>

The second international Australasian conference on wave science: see *Gazette* 42(1) p. 56 or the website for further details.

**Guttman 2015: 70 and Counting**

Dates: 7–8 December 2015

Venue: Noahs on the Beach, Newcastle

Further details to follow.

**Seventh China-Australia Workshop on Optimization: Theory, Methods and Applications and The Second International Conference on Optimization and Control**

Date: 7–10 December 2015

Venue: Chongqing Normal University, the University Town, Chongqing 401331

Website: <http://icoco2015.csp.escience.cn>

### **39th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing**

Date: Monday 7 December to Friday 11 December 2015

Venue: University of Queensland

Web: <http://39accmcc.smp.uq.edu.au/>

Registration is now open for 39ACCMCC, which will be held at the University of Queensland, in Brisbane, Australia, from Monday 7 December to Friday 11 December 2015.

Please make sure that you register during the early-bird registration period, which ends on Sunday 1 November. All registration will close on Monday 16 November.

The invited speakers are:

- Peter Cameron (University of St Andrews and Queen Mary University of London)
- Saad El-Zanati (Illinois State University)
- Nevena Francetic (Monash University)
- Catherine Greenhill (University of New South Wales)
- Penny Haxell (University of Waterloo)
- Jonathan Jedwab (Simon Fraser University)
- Gordon Royle (University of Western Australia)
- Charles Semple (University of Canterbury)

Attendees are invited to submit an abstract for a contributed talk of 25 minutes duration (including time for questions), covering some topic in discrete or combinatorial mathematics or a related area of computer science.

Information on registration, submission of abstracts, and accommodation can all be found at the website.

Queries should be sent to Darryn Bryant [db@maths.uq.edu.au](mailto:db@maths.uq.edu.au).

We look forward to seeing you in Brisbane.

### **BioInfoSummer 2015**

Date: 7–11 December 2015

Venue: The University of Sydney

Website: <http://bis15.amsi.org.au/>

The BIS symposium introduces bioinformatics as well as mathematical and computational biology to students, researchers and professionals. If you work in mathematics or statistics, information technology or complex systems analysis, any computer science field, or you're biological, chemical or medical sciences engineer, stay ahead with BIS.

The 2015 program features:

- Introduction to biology and bioinformatics
- Epigenomics
- Translational genomics

- Proteomics and metabolomics
- Systems biology, networks and data integration.

#### *International speakers*

- Professor Keith Baggerly (University of Texas, MD Anderson Cancer Centre)
- Professor Susan Holmes (Stanford University)
- Associate Professor Katerina Kechris (University of Colorado Denver)
- Dr Ioannis Xenarios (Swiss Institute of Bioinformatics)
- Dr Judith Zuagg (European Molecular Biology Laboratory)

#### *National speakers*

- Associate Professor Aaron Darling (University of Technology Sydney)
- Dr Richard Edwards (University of New South Wales)
- Associate Professor Neville Firth (University of Sydney)
- Dr Jerry Gao (Walter and Eliza Hall Institute of Medical Research)
- Dr Eleni Giannoulatou (Victor Chang Cardiac Research Institute)
- Professor Vanessa Hayes (Garvan Institute of Medical Research)
- Dr Joshua Ho (Victor Chang Cardiac Research Institute)
- Professor David James (University of Sydney)
- Professor Sean O'Donoghue (Garvan Institute of Medical Research)
- Professor Shoba Ranganathan (Macquarie University)
- Professor Terry Speed (Walter and Eliza Hall Institute of Medical Research)
- Professor Claire Wade (University of Sydney)
- Professor Marc Wilkins (University of New South Wales)
- Professor Sue Wilson (Australian National University)

Please register at the website.

Earlybird registration closes: 1 October 2015.

Travel Grant Applications are now open and close on 16 October 2015.

Poster abstract submissions close: 6 November 2015.

Registration closes: 27 November 2015.

### **Fourth ANZAMP Meeting**

Dates: 9–11 December 2015

Venue: Newcastle

Web: <http://www.anzamp.austms.org.au/meetings/current/>

The Fourth Annual Meeting of the Australian and New Zealand Association of Mathematical Physics (ANZAMP), and the first since ANZAMP became a Division of AustMS, will be held in Newcastle from 9–11 December. Registration is now open.

We are delighted announce that the following keynote speakers will be attending.

- Mireille Bousquet-Mélou (University of Bordeaux)
- Denis Evans (Australian National University)

- Daniel Jafferis (Harvard University)
- Rod Gover (The University of Auckland)
- Kentaro Hori (IPMU, The University of Tokyo)
- Sarah Post (University of Hawaii)

For further details please see the website. In particular, the direct link for the registration page is: <http://www.anzamp.austms.org.au/meetings/current/register>.

Attendees are encouraged to register prior to the early registration deadline of 23 October, and to make early bookings for their accommodation and travel.

### Conference on Geometric and categorical representation theory

Dates: 14–18 December 2015

Venue: Mantra Hotel, Mooloolaba, Queensland

Web: <https://sites.google.com/site/masoudkomi/mooloolaba>

### 2016 AMSI Summer School

Dates: 4–29 January 2016

Venue: RMIT University

Web: <http://ss16.amsi.org.au/>

The AMSI Summer School is an exciting opportunity for mathematical sciences students from around Australia to come together over the summer break to develop their skills and networks.

The four-week residential school offers eight exciting honours level subjects designed to give you the opportunity to study areas that are not available at your university. You can choose to take one or two of the subjects that are on offer and may be able to take these for credit at your home institution.

Program extras include icebreaker events, special guest lectures, careers and women in mathematics events.

- Calculus of Variations: Theory and Practice — Julie Clutterbuck and Anja Slim, Monash University
- Complex Networks — Stephen Davis, RMIT University
- Conic Programming — Vera Roshchina, RMIT University
- Design and Analysis of Experiments — Stelios Georgiou, RMIT University
- Linear Control Theory and Structured Markov Chains — Yoni Nazarathy, The University of Queensland
- Modern Numerical Methods for Diffusion Equations on Generic Grids — Jerome Droniou, Monash University
- Projective Geometry — John Bamberg, The University of Western Australia
- Stochastic Modelling — Giang Nguyen, The University of Adelaide

Remember that

- Travel Grant applications and first registration close: 1 November 2015.
- Final registration closes: 25 November 2015.

## Gromov–Witten Theory, Gauge Theory and Dualities

Date: 6–15 January 2016

Venue: ANU/Kioloa

Web: <http://maths.anu.edu.au/events/gromov-witten-theory-gauge-theory-and-dualities>

The workshop on ‘Gromov–Witten theory, Gauge Theory and Dualities’ is one of the major events hosted by the 2015 MSI special year on ‘Geometry and Physics’. The workshop will begin on 6 January 2016 in Canberra with an introductory workshop followed by an international conference at the ANU Kioloa campus from 10 January 2016. The introductory workshop aims to familiarise postgraduate students and young researchers to some of the main mathematical techniques for the study of the moduli spaces from gauge theory and Gromov–Witten theory. The purpose of the conference is to bring together leading international researchers in the areas of geometry and physics, with a main focus on the geometry and topology of moduli spaces arising from gauge theory and Gromov–Witten invariants, mirror symmetry and other dualities.

### *Introductory workshop*

The introductory workshop will be held at the Australian National University from 6–9 January 2016.

### *Introductory mini course speakers*

- Bohui Chen (geometry of moduli spaces from Gromov–Witten theory and gauge theory)
- Kenji Fukaya (Floer homology of 3-manifolds with boundary)
- Kaoru Ono (Gromov–Witten theory and mirror symmetry)
- Gang Tian (gauge theory and calibrated geometry)

### *International conference*

The conference will be held at the ANU Kioloa Coastal Campus from 10–16 January 2016. For information on the ANU Kioloa Coastal Campus click [here](#).

### *Invited speakers*

- Jim Bryan (University of British Columbia)
- Bohui Chen (Sichuan University)
- Cheol-Hyun Cho (Seoul National University)
- Huijun Fan (Beijing University)
- Bohan Fang (Beijing University)
- Kenji Fukaya (Simons Centre for Geometry and Physics, Stony Brook)
- Andriy Haydys (University of Bielefeld)
- Ko Honda\* (UCLA)
- Jianxun Hu (Zhongshan University)
- Hiroshi Iritani (Kyoto University)
- Jesper Jacobsen\* (ENS Paris)
- Bumsig Kim (KIAS, Seoul)
- Conan Leung (Chinese University of Hong Kong)

- Xiaobo Liu (University of Notre Dame)
- Alina Marian (Northeastern University)
- Ignasi Mundet (University of Barcelona, Spain)
- Yong-Geun Oh (IBS, South Korea)
- Hiroshi Ohta (Nagoya University)
- Kauro Ono (Kyoto University)
- Yongbin Ruan (University of Michigan)
- Gang Tian (Princeton University/Beijing University)
- Rui Wang (University of California at Irvine)
- Siye Wu (National Tsing-Hua University, Taiwan)
- Aleksey Zinger\* (University of New York, Stony Brook)

\*To be confirmed

*Organising Committee*

- Peter Bouwknegt (Australian National University)
- Brett Parker (Australian National University)
- Paul Norbury (University of Melbourne)
- Bryan Wang (Australian National University), Chair

*Scientific Committee*

- Yakov Eliashberg
- Kenji Fukaya
- Alexander Givental
- Yongbin Ruan
- Gang Tian

**Mathematics in Industry Study Group (MISG) 2016**

Dates: 1–5 February 2016

Venue: University of South Australia

Further details to follow.

**ANZIAM 2016**

Date: Sunday 7 February 2016 to Thursday 11 February 2016

Venue: QT Canberra Hotel, Canberra

Web: <http://anziam2016.com/>

Registration for the 2016 Australian and New Zealand Industrial and Applied Mathematics (ANZIAM) Conference is now open. This conference is the premier annual meeting in Australia and New Zealand, where leading, as well as young, applied mathematicians gather to exchange ideas to promote and advance the application of mathematics to science, engineering and industry.

Abstract submission closes: 8 January 2016.

Early-bird registration closes: 8 January 2016.

To register and submit an abstract, or to find out further details, please visit the website.

**AMSI Big Day In**

Date: 10–11 February 2016

Venue: Trinity College, The University of Melbourne

Web: [vrs.amsi.org.au/big-day](http://vrs.amsi.org.au/big-day)

Further details to follow.

**Capital Number Theory**

Dates: 8–9 April 2016

Venue: The Australian National University

Further details to follow.

**Mathematical Methods for Applications**

Date: 11–14 November 2016

Venue: Hangzhou, China

Further information: Phil Broadbridge ([P.Broadbridge@latrobe.edu.au](mailto:P.Broadbridge@latrobe.edu.au))

This is a joint meeting of ANZIAM and ZAPA, the Zhejiang Applied Mathematics Association.

**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.

Prof Dmitri Alekseevsky; Russian Academy of Sciences; 4–14 October 2015; homogeneous Riemannian geometry, Lie groups and algebras; LTU; Yuri Nikolayevsky

Dr Joel Andersson; Stockholm University; 1–31 October 2015; pure; USN; Leo Tzou

Paul Baird; Laboratoire de Mathématiques, De Bretagne Atlantique; September to December 2015; UWA; Lyle Noakes

Dr Elizabeth Beazley; Haverford College, USA; 1 August 2015 to 31 January 2016; UMB; Arun Ram

Prof Louis Chen; National University of Singapore; 10–19 September 2015; UMB; Aihua Xia

Dr Aline Aparecida de Souza Leao; University of Sao Paulo, Brazil; 1 July to 1 November 2015; UMB; Alysson Costa

Louis Guillot; Ecole Normale Supérieure; 1–16 September 2015; UMB; Richard Huggins and James McCaw

A/Prof Jianyu Han; Anhui University, PRC; 1 August 2015 to 31 July 2016; UMB; Dr Guoqi Qian

A/Prof Mengbo Hou; Shandong University of China; February 2015 to February 2016; cryptography; USA; Raymond Choo



- Mr He Huang; Peking University; 1 September 2015 to 31 August 2016; UMB; Sanming Zhou
- Dr Bernt Jensen; Gjøvik University College, Norway; 24 July 2015 to 9 January 2016; representations of algebras; UNS; Jie Du
- Prof Satoshi Koike; 7 October to 7 November 2015; pure; USN; Laurentiu Paunescu
- Prof Shrawan Kumar; University of North Carolina; 16 July to 15 December 2015; pure; USN; Gus Lehrer
- A/Prof Jingjian Li; Guangxi University P.R. China; September 2015 to September 2017; UWA; Cai Heng Li
- Zhe Liu; Zhejiang University; 1 April 2015 to 31 March 2016; UWA; Cai Heng
- Johnathan Manton; University of Melbourne; 1 January to 31 December 2018; ANU; Alan Carey
- Dr Djordje Milicevic; Bryn Mawr College, Pennsylvania; 1 August 2015 to 31 January 2016; UMB; Arun Ram
- Prof Pierre Milman; University of Toronto; 15 October to 15 November 2015; pure; USN; Laurentiu Paunescu
- Samuel Mueller; University of Sydney; 1 January to 31 December 2016; ANU
- Dr Simona Paoli; University of Leicester, UK; 1 August to 31 December 2015; higher category theory; MQU; Ross Street
- Dr Peter Price; 30 March 2015 to 31 December 2016; ANU; Dr Lilia Ferrario
- Mr Muhamad Shoaib; Higher Education Commission, Pakistan; 1 May to 30 November 2015; statistics; USN; Shelton Peiris
- Alexander Stolin; University of Gothenburg, Sweden; 7–18 August 2015; quantum groups, quantum Lie algebras, Lie bialgebras; LTU; Yuri Nikolayevsky
- A/Prof Lianta Su; Quanzhou Normal University, PRC; 1 August 2015 to 31 January 2016; UMB; Guoqi Qian
- Dr Xiuping Su; University of Bath; 24 July 2015 to 9 January 2016; representations of Algebras; UNS; Jie Du
- A/Prof Kaibiao Sun; Dalian University of Technology, P.R. China; August 2015 to August 2016; biological system modeling, biological cybernetics, optimization theory; SUT; Tonghua Zhang
- Prof Anatoliy Swishchuk; University of Calgary; 9–13 December 2015; probability theory and financial mathematics; LTU; Andriy Olenko
- Dr Garth Tarr; 1 March 2015 to 31 December 2015; ANU; Alan Welsh
- A/Prof Yuan Tian; Dalian University of Technology, P.R. China; August 2015 to August 2016; mathematical biology; SUT; Tonghua Zhang
- Prof Ruth Williams; University of California, San Diego; 9–27 September 2015; statistics; UMB; Peter Hall
- Dr Jeroen Wouters; 25 February 2015 to 24 February 2017; applied; USN; Georg Gottwald
- Mr Wei Wu; UNSW; 30 July 2012 to 31 May 2016; financial maths; USN; Ben Goldys
- Hui Zhou; Peking University, PRC; September 2015 to March 2017; UWA; Cheryl Praeger, Alice Devillers and Michael Giudici
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