



News

General News

CEM Pearce Memorial Symposium

The School of Mathematical Sciences at The University of Adelaide is hosting a Symposium on 17 June 2013 to honour the life and work of the Elder Professor of Mathematics, Professor Charles Edward Miller Pearce.

Tragically, Charles died in New Zealand on 8 June 2012. Charles was internationally known for his work on probabilistic and statistical modelling and analysis and he published over 300 research articles. He also supervised 30 successful PhD students.

A webpage will be established at www.maths.adelaide.edu.au/PearceSymposium.html.

To register your interest in giving a technical talk or attending the symposium please email cpearce.symposium@dsto.defence.gov.au.

Call for MPE guest bloggers

2013 is the International Year of Maths of Planet Earth and the International Year of Statistics. This is a once-in-a-decade PR opportunity for our discipline, AMSI is coordinating the national program for the year (www.MoPE.org.au). We are looking for guest bloggers to help us get the word out about the beauty and application of mathematics and statistics in the world around us. One blog post or a series of posts, whatever your time allows. We want to show how mathematics and statistics appear in transport networks, bone remodelling, bush fire prediction, economic forecasting, predicting weather patterns, nature, movie animation, gene sequencing or any of the many other areas. Whatever your area of mathematics or statistics we want to hear from you. This is an opportunity to showcase your research and teaching and help us show the limitless applications of mathematics and statistics to inspire the next generation.

Interested, or want more information? Contact Simi (simi@amsi.org.au).

Don't have time to write a blog post? But have a great idea for a post? Contact us: www.MoPE.org.au.

Fellows of the American Mathematical Society

Congratulations to those Society members who have been selected to be inaugural Fellows of the American Mathematical Society! These include the following members resident in Australia: Ben Andrews, Michael Eastwood, Chuck Miller, Cheryl Praeger, Arun Ram, Hyam Rubinstein, Ian Sloan and Neil Trudinger.

A full list of fellows, which contains some Society members resident outside Australia, can be found at www.ams.org/profession/fellows-list.

The goals of the program, which include honouring ‘not only the extraordinary but also the excellent’, and other general information can be found at www.ams.org/profession/ams-fellows/ams-fellows.

The Kurt Mahler Archive

The Kurt Mahler Archive is an online resource dedicated to the life and work of Kurt Mahler. The archive is hosted by the Centre for Computer-Assisted Research Mathematics and its Applications (CARMA), which is located at the University of Newcastle. Go to <http://carma.newcastle.edu.au/mahler/index.html> to access The Kurt Mahler Archive.

The collection grew out of a project started by Alf van der Poorten more than a decade ago and has recently been completed by his family, friends, and colleagues. In addition to papers collected by Alf van der Poorten, works have been collected by Jon Borwein, Yann Bugeaud, and Michael Coons.

While the collection of Mahler’s articles in the archive is complete, this resource will continue to be updated and amended. If there is anything that you feel should be included, updated, or changed, or if you have any comments at all, please feel free to contact Michael.Coons@newcastle.edu.au.

Women in Mathematics Special Interest Group

A Women in Mathematics Special Interest Group was approved by Council in September 2012. If any Society member (male or female) wishes to be a member of this group, they should email Anne Thomas (anne.thomas@sydney.edu.au).

We will be setting up a mailing list to discuss activities of this group, and will hold nominations and elections for an Executive Committee later this year. There is no membership fee.

Completed PhDs

Australian National University

- Dr Paul Lin, *The boundedness of the Riesz transform on a metric cone*, supervisor: Andrew Hassell.
- Dr Ingrid Chen, *Partial complements in finite soluble groups*, supervisor: John Cossey.
- Dr Paul Bryan, *Isoperimetric comparison techniques for low dimension curvature flows*, supervisor: Ben Andrews.

LaTrobe University

- Dr Connie Li Wai Suen, *Influence diagnostics for high-dimensional principal component analysis*, supervisors: Luke Prendergast and Robert Staudte.
- Dr Sarah Johansen, *Dualisability of relational structures*, supervisors: Brian Davey and Jane Pitkethly.
- Dr Bao Ho, *Combinatorial aspects of variants of the game on Nim*, supervisors: Grant Cairns and John Banks.

Macquarie University

- Dr Olena Shafalyuk, *Electrodynamic simulation of open axially-symmetrical compact resonators: 2-D initial boundary value and boundary value problems*, supervisors: Paul Smith and Elena Vynogradova.

University of Adelaide

- Dr Bin (Leo) Shen, *Financial risk measures — the theory and applications of backward stochastic difference/differential equations with respect to the single jump process*, supervisors: Robert Elliott and Alexei Filinkov.

University of Melbourne

- Dr Stephen Lane, *Topics in functional data analysis*, supervisors: Andrew Robinson, Richard Huggins and Thomas Baker.
- Dr Paul Williams, *Unifying fractional calculus with time scales*, supervisors: Craig Hodgson, Hyam Rubinstein and Jerry Koliha.
- Dr Cornelis Anthony van Eysden, *Cantilever beams vibrating in fluid at arbitrary mode number with applications to the Atomic Force Microscope*, supervisor: John Sader.

University of Southern Queensland

- Dr Budi Pratikno, *Test of hypotheses for linear regression models with non-sample prior information*, supervisors: Shahjahan Khan and Rachel King.

University of Sydney

- Dr Sai Hung Marten Ting, *Asymptotic techniques and stochastic volatility in option pricing problems*, supervisor: Neville Weber.
- Dr Alex Fun, *Raising operators, recurrences, and the Littlewood–Richardson polynomials*, supervisors: Alex Molev and David Easdown.
- Dr Samuel Butler, *Inverse scattering transform method for lattice equations*, supervisors: Nalini Joshi and Holger Dullin.

University of Western Australia

- Dr Carmen Amarra, *Symmetric graphs of diameter two*, supervisors: Cheryl Praeger and Michael Giudici.
- Dr Hartono Hartono, *Numerical methods for constrained optimal control problems*, supervisors: Les Jennings and Song Wang.

Awards and other achievements

La Trobe University

- Reinout Quispel has been awarded the 2013 Lars Onsager Professorship and Medal by the Norwegian University of Science and Technology.

University of Queensland

- Benjamin Babao was awarded an AMSI Vacation Research Scholarship for 2012/2013.
- PhD student Aminath Shausan won the prize for the best student talk at the 2012 QANZIAM Conference.

University of Sydney

- Congratulations to Anthony Henderson on the award of the Australian Mathematical Society Medal for 2012.

Walter and Eliza Hall Institute of Medical Research

Professor Terry Speed has been awarded the 2012 Victoria Prize for life sciences for his work in bioinformatics.

Some further details can be found at www.wehi.edu.au/site/latest_news/solving-big_research_questions_with_statistics_wins_2012_victoria_prize or www.theage.com.au/national/gene-data-guru-and-stormwater-expert-win-top-prize-20121121-29q5v.html.

Congratulations to Terry!

Appointments, departures and promotions

Deakin University

- Dr Simon James has been promoted to Lecturer level B.
- Associate Professor Gleb Beliakov has been promoted to Professor.

Monash University

- Dr Andrea Collecchio commenced on 30 October 2012 as Research Fellow. His research interests include reinforced processes, processes defined on Galton–Watson trees, large deviations, statistical mechanics and preferential attachment models.

Royal Melbourne Institute of Technology

- Dr Joanne Hall, former RMIT PhD student, has secured an Early Career Lecturer Academic position at QUT and will be starting in early 2013.

Swinburne University of Technology

- Professor Billy Todd became the new Head of the Mathematics Discipline, replacing Professor Geoff Brooks.

University of Adelaide

- Dr David Baraglia (Lecturer) has joined Pure Maths.
- Dr Wolfgang Globke (ARC Research Associate) has joined Pure Maths.
- Dr David Roberts (ARC Research Associate) has joined Pure Maths.
- Dr Raymond Vozzo has left for Glasgow University, UK.

University of Ballarat

- Dr Nadezda Sukhorukova has resigned to take a full-time lecturing position at Swinburne University, starting December 2012.

University of Melbourne

- Dr Wellington Galleas has left the University.

University of Newcastle

- Dr Judy-anne Osborn has commenced as a lecturer.

University of New England

- Dr Beatrice Bleile has been promoted to Senior Lecturer.
- Dr Gerd Schmalz has been promoted to Associate Professor.

University of Queensland

- Elizabeth Billington retired in mid-October after 41 continuous years of employment at the University as a tutor, senior tutor, senior lecturer, and associate professor. She is now continuing in an honorary role.

- Pádraig Ó Catháin has commenced as a Postdoctoral Research Fellow in the School of Mathematics and Physics working with Darryn Bryant and Daniel Horsley. His research interests are in design theory and related areas.

University of the Sunshine Coast

- Dr Robert McDougall has joined the School of Science, Engineering and Education.

University of Western Australia

- Professor Tony Pakes retired at the end of June but has been re-appointed as an Honorary Research Fellow for three years.
- Professor Akos Seress resigned from his position as Australian Professorial Fellow in the School on 31 August 2102.
- Dr Steve Su has resigned from his position effective 20 December 2012, but will continue his association with the School via an Adjunct Associate Professorship.

University of Wollongong

- Dr Glen Wheeler and Dr Valentina Wheeler have joined the school as ARC research associates, working with Dr James McCoy (and Dr Ben Andrews, at ANU).

Erratum

In the article ‘ANZIAM 2012: the 48th Applied Mathematics Conference’, published in issue 35(4) of the *Gazette*, a name was omitted from the list of invited speakers. The list should have included

- Professor Barry Hughes, University of Melbourne, ‘Continuum models of cohesive stochastic swarm’.

New Books

University of Adelaide

- Lárusson, F. (2012). *Lectures on Real Analysis*. Cambridge University Press.

University of Newcastle

- Borwein, J. and Skerritt, M. (2012). *An Introduction to Modern Mathematical Computing: With Mathematica* (Springer Undergraduate Series in Mathematics and Technology), Springer.

Conferences and Courses

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

ANZAMP Inaugural Meeting

Date: 2–5 December 2012

Venue: Cumberland Lorne Resort, Lorne, Victoria

Web: www.anzamp.austms.org.au/meetings/2012

Contacts: Jan de Gier (Director, office@anzamp.austms.org.au)

Kerry Hill (anzamp.meeting@gmail.com)

The 36th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing (36ACCMCC)

Date: 10–14 December 2012

Venue: University of New South Wales, Sydney

Web: <http://conferences.science.unsw.edu.au/36accmcc>

Baum Fest

Date: 12–14 December 2012

Venue: John Dedman Building 27, ANU Acton Campus

Web: <http://maths.anu.edu.au/events/baum-fest>

This coming December, Professor Paul Baum will receive an honorary degree from The ANU. We are commemorating the occasion with a conference during December 12–14.

Paul Frank Baum is a mathematician of great international repute. Leading mathematical researchers agree that his work has had significant impact on several important fields of mathematical study. In particular, the Baum–Connes conjecture, formulated jointly with Alain Connes of the Collège de France, has opened a new avenue of research for future mathematicians to explore for many years to come. It has served as one of the starting points of a new area of mathematics, called noncommutative geometry.

Unlike many contemporary researchers Paul Baum has achieved a ‘universality’ in his research, being one of the few who think deeply across distinct specialised fields. His ability to connect multiple mathematical research topics has helped advance areas such as algebraic geometry, topology, and functional analysis. He has astounded the experts by finding ways to understand deep and complicated mathematics in fundamentally simple ways. His name is associated with many

justly famous results such as the Baum–Bott theorem, and the Baum–Fulton–MacPherson theorem. One of his great innovations is Baum–Douglas geometric K -homology on which he continues to work with researchers at ANU.

Speakers: Astrid An Huef (Otago), Paul Baum (PennState), Hitoshi Moriyoshi (Nagoya), Jacqui Rammage (Wollongong), Adam Rennie (Wollongong), Iain Raeburn (Otago), Aidan Sims (Wollongong), Mathai Varghese (Adelaide), Bryan Wang (ANU) and Craig Westerland (Melbourne).

This event is co-sponsored by AMSI through its travel allowance to each of its member universities. Students and early career researchers from AMSI member universities without access to a funding source may apply to their Head of Mathematical Sciences (or equivalent) for subsidy of travel and accommodation from the departmental travel allowance.

Participants, other than the invited speakers, are asked to make their own travel and accommodation arrangements.

AMSI Summer School 2013

Date: 7 January – 1 February 2013

Venue: Melbourne

Web: www.ms.unimelb.edu.au/~amsi2013

International Workshop on Math Models of Tumour-Immune Dynamics

Date: 7–10 January 2013

Venue: University of Sydney

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

NZMRI Workshop 2013: Geometric Mechanics and Shape

Date: 13–19 January 2013

Venue: Ohope Beach, near Whakatane, New Zealand

Web: <http://seat.massey.ac.nz/NZMRI13>

2013 MISG Graduate School on Industrial and Applied Mathematics

Date: 22–26 January 2013

Venue: Science and Engineering Centre at QUT, Brisbane

Web: www.mathsinindustry.com

Contact: Professor Troy Farrell (misg@qut.edu.au)

2013 Mathematics-In-Industry Study Group

Date: 29 January to 2 February 2013

Venue: Science and Engineering Centre at QUT, Brisbane

Web: www.mathsinindustry.com

Contact: Professor Troy Farrell (misg@qut.edu.au)

Mathematics of Planet Earth Australia Launch and Simons Foundation Public Lecture

Date: 29 January 2013

Time: 5:45 pm to 7:00 pm

Venue: Sidney Myer Asia Centre, University of Melbourne

Web: <http://mathsofplanetearth.org.au/events/simons>

Australian Chief Scientist and MPE Australia Patron Professor Ian Chubb, will officially launch the Australian participation in the International Year of Maths of Planet Earth.

This will be followed by the Simons Foundation Public Lecture ‘The challenge of sustainability and the promise of mathematics’ by Professor Simon Levin, Princeton University.

For more information and to register for this event please visit our website.

ANZIAM 2013

Date: 3–7 February 2013

Venue: Newcastle City Hall

Web: <http://anziam2013.newcastle.edu.au/>

Collective Motion and Swarm Behaviour Workshop

Date: 8 February 2013, 9.30am–3pm

Venue: Room TBC, University of Newcastle, Callaghan, NSW

Contact: Mary Myerscough (mary.myerscough@sydney.edu.au)

This workshop was organised by ANZIAM Mathematical Biology Special Interest Group as a satellite meeting to ANZIAM 2013.

The workshop is for anyone with an interest in the mathematics of collective motion and swarm behaviour, whether of vertebrates, insects, robots, cells or groups of any other sort of individuals. The workshop will provide an excellent opportunity for students and researchers with an interest in collective behaviour to see a range of modelling and measurement techniques applied to a number of different systems.

The workshop will commence with a series of talks on different aspects of collective behaviour. Speakers include Zoltan Neufeld (Queensland) and Matt Simpson (QUT) on collective motion in cells, Jerome Buhl (Sydney) on collective motion in locusts and other animals, and Bernd Meyer (Monash) on generic rules and swarm behaviour in engineering and IT.

In the afternoon, attendees will have the opportunity to give short informal presentations about their current work. There will be plenty of time for questions, discussions and interactions. One of the aims of the workshop is to promote contacts and to build networks among mathematicians, biologists, statisticians, computer scientists, engineers and anyone else who is interested in collective behaviour.

To register, please contact Mary Myerscough before Friday 25 January 2013. Please indicate whether you want to present a short talk about your current work.

The cost of the workshop is \$40 per person and \$10 for students to cover lunch and morning and afternoon tea. This will be collected on the morning of the workshop.

The timing of the workshop allows participants to travel from Sydney by train and to return to Sydney in time to catch domestic flights leaving from around 7.30pm.

If you have any questions, please contact Mary Myerscough.

South Pacific Optimization Meeting: SPOM 2013

Date: 9–12 February 2013

Venue: Noah's On the Beach Newcastle, NSW

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

After the success of the South Pacific Conferences in Mathematics (SPCM), which took place in New Caledonia (2005 and 2010), the third edition of this conference, to be called the South Pacific Optimization Meeting (SPOM 2013), will be organised by CARMA. The meeting immediately follows ANZIAM 2013.

EMAC 2013

Date: 1–4 December 2013

Venue: Queensland University of Technology, Brisbane

Web: www.emac2013.com.au

MODSIM2013: International Congress on Modelling and Simulation

Date: 1–6 December 2013

Venue: Adelaide Convention Centre, South Australia

Web: <http://mssanz.org.au/modsim2013>

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.

Pierre-Olivier Amblard; CNRS, France; 1 August 2010 to 28 February 2013; –; UMB; Owen Jones

Dr Tarje Bagheer; University of Copenhagen, Denmark; 14 February 2012 to 13 February 2013; –; UMB; Craig Westerland

Prof Marco López Cerda; University of Alicante; 22 January to 5 February 2013; variational analysis; UBR; Alex Kruger

Jinyuan Chang; University of Peking, China; 7 October to 30 December 2012; –; UMB; Peter Hall

Dr Yukun Cheng; Zhejiang University, PRC; 1 August 2012 to 31 July 2013; –; UMB; Sanming Zhou

- Alireza Faraz; Université de Liège, Belgium; 1 July to 31 December 2012; multivariate control charts; UNS; David Warton
- Prof Chris Field; Dalhousie University, Halifax, Canada; 18–23 November 2012; stats; USN; Qiying Wang
- Dr Ganes Ganesalingam; Massey University; 1 September to 30 November 2012; statistical science program; ANU; Alan Welsh
- Dr Tanya Garcia; Texas A&M; 4 November to 2 December 2012; stats; USN; Samuel Mueller
- Dr Ed Green; University of Adelaide; 3–7 December 2012; –; UWA; Andrew Bassom
- Prof Liang Han-Ying; Tongji University; 10 December to 22 February 2013; stats; USN; Qiying Wang
- Robin Hirsch; University College London; 18 November to 4 February 2013; –; ULT; Marcel Jackson
- Ferdinand Ihringer; Justus Liebig Universität, Giessen; 20 February to 4 April 2013; –; UWA; John Bamberg
- Dr James Isenberg; University of Oregon; 10 to 14 December 2012; pure; USN; Zhou Zhang
- Michael Joswig; TU Darmstadt, Germany; 19–23 November 2012; computational geometry and topology; UQL; –
- Andreas Paffenholz; TU Darmstadt, Germany; 19–23 November 2012; computational geometry and topology; UQL; –
- Prof Hiroyuki Kashima; Aoyama Gakuin University, Japan; 1 April 2012 to 31 March 2013; –; UMB; Peter Hall
- Dr Mikko Kempainen; University of Helsinki; 1 September to 31 December 2012; statistical science program; ANU; Dr Pierre Portal
- Prof Daniel Knopf; University of Texas; 10–14 December 2012; pure; USN; Zhou Zhang
- Prof Krzysztof Kurdyka; Université de Savoie; 23 November to 20 December 2012; pure; USN; Laurentiu Paunescu
- Mr Liang Li; York University; 3 November to 3 December 2012; PDEs; USN; Ben Goldys
- Prof Malwina Luczak; Queen Mary, University of London; 3–12 January 2013; applied probability; UQL; Phil Pollett
- Prof Klaus Lux; University of Arizona; 1 November to 15 December 2012; –; UWA; Alice Niemeyer
- Dr Hiroshi Matsuzawa; Numazu National College of Technology, Japan; April 2012 to March 2013; nonlinear PDE; UNE; Yihong Du
- Dr Mihai Mihailescu; University of Craiova; 1 August to 30 November 2012; partial differential equations; USN; Florica Cirstea
- Dr Kok Haur Ng; University of Malaya; 1 February to 31 May 2013; stats; USN; Shelton Peiris
- Dr Tat Thang Nguyen; Vietnamese Academy; 1 November 2012 to 28 January 2013; pure; USN; Laurentiu Paunescu
- Prof Jirí Outrata; Academy of Sciences of the Czech Republic; 22 January to 5 February 2013; variational analysis; UBR; Alex Kruger

- Dr Stefan Papadima; Institute of Maths, Romanian Academy; 1 December 2012 to 31 January 2013; singularity theory; USN; Laurentiu Paunescu
- Xiao-Long Peng; Shanghai University; July 2012 to June 2013; –; UWA; Michael Small
- Katja Sagershnik; University of Vienna; 1 May 2011 to 31 December 2012; –; ANU; Michael Eastwood
- Ms Maryam Siddiq; University Lahore; November 2012 to June 2013; –; UWA; –
- Prof Yucai Su; Tongji University; 18 January to 24 February 2013; representation theory; USN; Ruibin Zhang
- Prof Alexandru Suci; Northeastern University; 1 November to 15 December 2012; pure; USN; Laurentiu Paunescu
- Xiaoran Sun; Harbin Institute of Technology; October 2012 to September 2013; –; UWA; Michael Small
- Prof Michel Théra; University of Limoges; 22 January to 5 February 2013; variational analysis; UBR; Alex Kruger
- Ms Riikka Tuovinen; University of Helsinki; 1 September to 31 December 2012; statistical science program; ANU; Pierre Portal
- Dr Leo Tzou; University of Helsinki; 30 July to 24 November 2012; nonlinear analysis; USN; Neville Weber
- Dr Melvin Varughese; University of Cape Town, South Africa; 1 July to 31 December 2012; –; UMB; Aihua Xia
- Dr Hanchao Wang; Zhejiang University, China; 1 November 2012 to 31 January 2013; stats; USN; Qiying Wang
- Mr Wei Wu; UNSW; 30 July 2012 to 30 June 2015; financial maths; USN; Ben Goldys
- Ms Ting Zhang; University of Science and Technology, China; 1 September to 31 August 2013; applied and nonlinear analysis program; ANU; Xu-Jia Wang
- Ruoxi Xiang; Hong Kong Polytechnic University; 1 July 2012 to 1 March 2013; –; UWA; Michael Small
- Prof Xi'an Xu; Xuzhou Normal University, China; 20 November 2011 to 20 November 2012; nonlinear PDE; UNE; Yihong Du
- Dr Jinghao Xue; University College London, UK; 9 June to 15 December 2012; –; UMB; Peter Hall
- Prof Yubo Yuan; East China University; 15 October to 23 November 2012; canonical duality theory; UBR; David Gao
- Prof Zhitao Zhang; Chinese Academy of Sciences; 19 October to 24 November 2012; pure; USN; Prof Norman Dancer
- Prof Mei Zheng; Chongqing College of Electronic Engineering, China; February 2012 to February 2013; optimization theory and algorithms; UBR; Zhiyou Wu
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