

## ANZIAM 2014

*In fond memory of Professor Geoff Mercer who packed the auditorium  
for the last plenary talk of the conference*

**Steve Taylor\***

The 50th ANZIAM Conference was held on 2–6 February 2014 in the Millennium Hotel, Rotorua, New Zealand. The conference was well attended, with 99 students and 136 non-students resulting in a very full programme of eight one-hour plenary talks and 209 shorter talks, of which 95 were given by students. Highlights of the conference included the plenary talks, the Women in Mathematics Lunch, the Early Career Workshop on 7 February, a special session on Industrial Mathematics, and the Conference Dinner and Awards Ceremony.

The plenary talks comprised five invited talks and three 2013 Medalist talks:

- Alison Etheridge (Oxford): ‘Modelling evolution of different genetic types in spatially structured populations’;
- Lisa Fauci (Tulane): ‘Modelling the bio-fluid dynamics of reproduction: successes and challenges’;
- Douglas Heggie (Edinburgh): ‘Mathematics, astronomy and physics – a three-body problem’;
- Shane Henderson (Cornell; Fonterra Speaker): ‘Real-time control of ambulance fleets through statistics, simulation and optimization’;
- Shaun Hendy (University of Auckland; E.O. Tuck Medalist): ‘Slippery issues in micro and nanoscale flows’;
- Bernd Krauskopf (Auckland): ‘Discovering the geometry of chaos’;
- The late Geoff Mercer (ANU; E.O. Tuck Medalist): ‘Disease modelling and its impact on policy decisions’;
- Terry O’Kane (CSIRO; J.H. Michell Medalist): ‘The statistical dynamics of geophysical flows with application to ensemble prediction and data assimilation’;

Further details of the talks, including short biographies of the speakers, are at the conference website <http://anziam2014.auckland.ac.nz>. For the wonderful selection of invited speakers, we owe our thanks to the conference invited speaker committee: Robert McKibbin, Massey (Chair); Graeme Hocking, Murdoch; Vivien Kirk, Auckland; Kerry Landman, Melbourne; Geoff Mercer, ANU; Winston Sweatman, Massey; Tim Marchant, Wollongong; Graham Weir, IRL; Ilze Ziedins, Auckland.

The Women in Mathematics Lunch was designed to highlight the mathematical careers of Professors Alison Etheridge and Lisa Fauci, the female plenary speakers at

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ANZIAM 2014, to celebrate women in mathematics, and to stimulate conversation on topics that impact the careers of all mathematicians. All conference delegates were invited to this special lunch in the Millennium's Nikau Restaurant, which was filled to capacity. The lunch began with a *Karanga*, a traditional Maori welcome given by a Maori woman. The lunch was associated with question–answer documents completed by Lisa and Alison which can be found at the conference website and at <http://www.austms.org.au/ANZIAM2014-QA>. The event was organised by Nalini Joshi (University of Sydney) with help from Bronwyn Hajek (University of South Australia) and Sarah Lobb (University of Sydney). It was supported by ANZIAM, the Women in Mathematics special interest group of the AustMS and the Australian Research Council through Nalini Joshi's Georgina Sweet Australian Laureate Fellowship.

The Early Career Workshop ran on Friday 7 February, a day after the ANZIAM Conference ended. This is the first time that such an event has occurred with an ANZIAM conference but they presently occur in association with Australian Mathematical Society Meetings. Fifty-seven people registered for the free event and approximately 50 of these attended. Ten of the participants were postdoctoral fellows or early career academics. All others were PhD students. There were four invited speakers (Pen Holland, Landcare Research; James McCaw, Melbourne; Clemency Montelle, Canterbury; Claire Postlethwaite, Auckland), who, along with the organisers formed the panel and offered advice at the sessions. Feedback from participants was very positive and the Workshop organising committee (Alex James, Canterbury (Chair); Roslyn Hickson, Newcastle; Richard Brown, Massey) also managed to keep the costs low, so they did a wonderful job arranging the event. The venue of the workshop was the Millennium where the main conference was held. Although workshop finances were run through the main conference account, the workshop itself was not funded by conference registrations; instead there was an agreement between AMSI, AustMS and ANZIAM to cover the costs. For more details of the Workshop, see [http://www.math.canterbury.ac.nz/ANZIAM\\_ECW\\_2014/](http://www.math.canterbury.ac.nz/ANZIAM_ECW_2014/).

The New Zealand branch of ANZIAM sponsored a special session on Industrial Mathematics on the first day of conference talks. This session was aligned with other contributed talks on Industrial Mathematics and the Fonterra-sponsored plenary talk given by Shane Henderson. The session itself consisted of four talks followed by a panel discussion on methods to foster the interaction between academia and industry. The talks: Kevin Ross (Fonterra) 'Analytics at Fonterra and beyond'; Bernd Krauskopf (Auckland) 'The dynamics of aircraft as ground vehicles'; Troy Farrell (QUT) & Winston Sweatman (Massey) 'Reflections on MISG 2014'; Jo Simpson (Fonterra) 'Determining cheese brining times: outcomes from MISG 2014'. Graeme Wake facilitated the following panel discussion with panelists Shaun Hendy (Auckland), Kevin Ross (Fonterra), Bram Smith (KiwiNet) and lively audience participation.

The Blue Baths was the venue for the Conference Dinner and Awards Ceremony. This art deco building opened in 1933 with geothermally heated swimming pools and it has since been converted to a unique venue for dinners and live shows. Conference delegates enjoyed a wonderful meal and jazz music which complemented the art deco setting from leading Rotorua band Count Me In. What makes this

event so special is that it serves as the venue for announcements of the special awards of ANZIAM. The following awards were announced:

- The 2014 ANZIAM Medal: Professor Kerry Landman (University of Melbourne). The ANZIAM Medal is the premier award offered by ANZIAM. It is presented biennially.



Kerry Landman receives the ANZIAM medal and the congratulations of the new ANZIAM president, Larry Forbes. Bob Anderssen reads the citation.

- The 2014 J.H. Michell Medal: Dr Ngamta (Natalie) Thamwattana (University of Wollongong). The J.H. Michell Medal is awarded annually by ANZIAM to at most one outstanding new researcher who has carried out distinguished research in applied or industrial mathematics within Australia and New Zealand.
- The T. M. Cherry Prize: This prize is for the best student talk at the ANZIAM conference and sometimes goes to two students. Two students received the prize at ANZIAM 2014: Mr Matthew Chan (University of Sydney) for his talk ‘Modelling the spread of a deliberate Wolbachia introduction’ and Mr David Khoury (University of New South Wales) for his talk ‘Removal of malaria parasites by an infected host’. David also won this prize at ANZIAM 2013!
- The Cherry Ripe Prize: This prize is for the best non-student talk at the conference and its winner is chosen by students. This year’s winner was Dr Peter Kim (University of Sydney).
- The 2014 A. F. Pillow Applied Mathematics Top-up Scholarship: This award is for student research in applied mathematics. Ms Audrey Markowski (Macquarie University) was awarded the A. F. Pillow Applied Mathematics Top-up Scholarship for 2014.

For further details of these awards please see the March 2014 edition of the Gazette: <http://www.austms.org.au/Publ/Gazette/2014/Mar14/ANZIAM.pdf>.



David Khoury wins the T. M. Cherry Prize.  
Alona Ben-Tal (Massey University) presented the two prizes.



Matthew Chan (University of Sydney), on behalf of Peter Kim (also from University of Sydney), accepts the Cherry Ripe Prize from the ANZIAM student representative Michael Rose. Matthew had won the T. M. Cherry Prize a few minutes earlier.

We are very grateful to Dr Alona Ben-Tal of Massey University and the other members of her T. M. Cherry Prize Committee who took up the challenge of selecting prize winners from a record 95 student talks.

The ANZIAM conferences are very supportive of student involvement which is only possible with suitable funding for student attendance. For this we particularly wish to acknowledge the CSIRO sponsorship of 44 students to attend the conference.

We also thank our sponsors, especially our major sponsors, Fonterra and the New Zealand Mathematical Society, for their sponsorship of the conference.

Finally, I personally wish to thank the conference organising committee, Graeme Wake and Winston Sweatman (Massey), Andrea Raith, Richard Clarke and Shixiao Wang (Auckland) for all of their hard work.