



Communications

ANZIAM 2007: 43rd Applied Mathematics Conference

28 January – 1 February 2007, Fremantle, Western Australia

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The 43rd Applied Mathematics conference was held in Fremantle in Western Australia from 28 January to 1 February 2007. The dates were a week earlier than usual after a swap with the MISG (held in Wollongong) in order to get access to the excellent venue at the Esplanade Hotel.

Fremantle is the port of Perth in Western Australia and has a village atmosphere in spite of its proximity to a large city. It is a lively area with many restaurants and coffee shops available for mathematical discussions.



2006 ANZIAM medal winner,
Graeme Wake

The conference was opened by Professor Graeme Wake from Massey University, the most recent recipient of the ANZIAM medal for distinguished contributions to the community. There were 127 delegates for the full conference and another 20 day-registrants for the statistics day. Of the total, 30 registered as students thanks partly to travel assistance provided by ANZIAM.

The first day of the conference was designated to be a statistics day to enhance collaboration and understanding of two closely related communities. Thanks go to Brenton Clarke and the WA Branch of the Australian Statistical Society for coming to the party! In the spirit of this, the first invited speaker was Adrian Baddeley from the University of Western Australia who gave an entertaining discourse entitled ‘Sampling

theory for vegetables’, assuring us that the title did not refer to the audience but the subject matter. Before lunch, Nigel Bean spoke on ‘Markovian Binary trees; a model of the macro evolutionary process’. The successful day was concluded by Ian James from Murdoch University who spoke on ‘Estimation of natural HIV disease progression with unknown or uncertain dates of infection’. The day was attended by 20 day-registrants from the WA statistics community and was generally regarded to be successful with some significant cross-fertilisation.

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Tuesday began with Graeme Wake fulfilling his obligations as the most recent ANZIAM winner with his talk on ‘Modeling of cancer treatment’, and Phil Howlett took us to the afternoon break with ‘Inversion of analytically perturbed linear operators that are singular at the origin’. No particular excursion was organised for the rest afternoon due to the rich variety of possible activities within Fremantle itself. Several delegates did get ‘down and dirty’ by taking the underground tunnel tour of Fremantle Prison.

On Wednesday morning, Hinke Osinga from the University of Bristol spoke on ‘Global bifurcations of the Lorenz manifold’. Hinke is famous in the non-mathematical world (and within) for crocheting the Lorenz Manifold and this was picked up by the ABC during her visit to Australia giving mathematics some air time on ABC radio. She was an enthusiastic participant in the conference and was happy to show off her creation.

Mark McGuinness from the University of Wellington provided ‘A salty tale — modeling the growth of sea ice in Antarctica’ replete with computational display pyrotechnics, and Thursday morning’s speaker was Peter Clarkson from the University of Kent giving some ‘Rational solutions of the Painleve equations and applications to soliton equations’.



Hinke Osinga (with Natasha Boland, right) shows off her crocheted Lorenz Manifold



Andrew Bassom presents Sharleen Harper with the TM Cherry student prize

The conference dinner was ushered in by the music of a local string trio, ‘Angel Sounds’. The evening began with Ernie Tuck proposing a toast to the memory of Ren Potts who passed away in 2005 and was a dominant and much-loved member of ANZIAM for 40 years. Ren was awarded the first ANZIAM medal at the last Applied Mathematics Conference to be held in Western Australia, the 1995 Busselton Conference.

In addition to the invited talks there were 102 contributed talks, of which 24 were student presentations eligible for the TM Cherry Prize. Andrew Bassom from the University of WA chaired the prize committee that consisted of Robert McKibbin, Yvonne Stokes, Hinke Osinga, Alex James, Scott McCue, Mark Lukas and Belinda Barnes. Thanks to all for their major

contributions to this important activity. As usual the standard of talks was extremely high, threatening to embarrass some of us more seasoned campaigners, but after a tight vote, the TM Cherry Prize was awarded to Sharleen Harper from Massey University for her talk entitled 'A continuum approach to modeling droplet interception by a shelterbelt'.

Another link to the 1995 conference was the Cherry Ripe prize for the best non-student talk, selected by the students. Initiated by the students, lead by David Marlow (see *Gazette* **22**(3), August 1995 for a transcription of his talk); this was devised at the 1995 conference as revenge for years of 'torture' of the students by the fraternity. The inaugural winner of this award, Natashia Boland, created an abridged version of the original speech which was read with great enthusiasm by Melanie Roberts. Kim Levy then presented this years winner, Geoff Mercer, with the award for his talk 'Exact and approximate continuous methods for finding the minimal risk route through a minefield' with the words 'We have been *tracking* the best non-student speaker for the last three days according to *random* criteria. Given we only had *partial differential* observers, there is no guarantee the solution is *optimal*, or even *asymptotically stable*'.

The last formal activity of the conference dinner was the presentation of the best new researcher award, the JH Michell medal. Larry Forbes was the chair of the committee and announced this year's winner to be Yvonne Stokes from Adelaide University.

As usual, it is the participants that make a conference a success, and the organising committee would like to thank all those that attended, and all of those who helped out in various ways as the week progressed. As the Director, I would like to conclude by thanking the other members of the committee and those staff of Murdoch University and of the University of Western Australia who helped in so many ways, in particular, Duncan Farrow, Des Hill and Andrew Bassom for their enormous efforts over the whole year. Modern conferences rely almost exclusively on the internet for communications and I must thank those organisers of earlier conferences who developed the software that we used. Special thanks also must go yet again to Bill Summerfield for his advice on many of the issues that arose during the year. His impending retirement as secretary of ANZIAM will leave a large hole not only in the continuity of knowledge for the conference but the Division as a whole.