



President's column

Peter Taylor*

Often when a person acquires the title 'President', it happens as a result of a contested election. This doesn't usually happen with the presidency of the Australian Mathematical Society (AustMS). It has the positions 'Incoming President', which is occupied by prospective presidents in the year before they ascend to the job, and 'Outgoing President', which is occupied by presidents in the year after they finish. This system is obviously good for stability and succession planning. However, it means that presidents arrive in the position without having to outline 'a set of policies' and convince an electorate that the policies are good for the organisation.

At the recent AustMS meeting at the University of Queensland, a number of people came up to me and asked what my vision is for the mathematical sciences over the next two years. In effect, they asked me for a statement of my 'policies' in the sense that I used the word above.

I have to say that I found this a difficult question to answer. I have been involved in the leadership of the Australian mathematical community for quite a while now, as a long-term head of department at the University of Melbourne, as Chair of ANZIAM in 2006 and 2007, as a board member and head of the host department of the Australian Mathematical Sciences Institute (AMSI), as a member of the Academy's National Committee for Mathematical Sciences (NCMS), and as a member of the recently formed Australian Council of Heads of Mathematical Science Departments (ACHMS). Becoming President of AustMS feels to me like an extension of these activities, rather than a completely new undertaking.

However, the question is legitimate and thinking about it forced me to put into words my overall view of the current state of the mathematical sciences in this country and, in particular, the role that AustMS should take in their development over the next few years. The starting point for my answer is to refer back to the previous two presidents of the AustMS, Peter Hall and Nalini Joshi.

I'm sure that I don't need to tell readers of the *Gazette* that Peter is one of the most respected research statisticians in the world. However, he is also a very effective academic leader and, as President of AustMS from 2006 to 2008, he instituted some important initiatives that moved the society in the direction of being more inclusive

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of all the various parts of our community than it had been before. It was Peter's idea to have the ANZIAM lecturer at the annual conference and to set up the early-career workshop. Along with the idea of asking people across the spectrum of the mathematical sciences, including mathematical education and statistics, to organise sessions at the annual conference, these initiatives have been responsible for bringing a large number of people to the meeting, who would otherwise not have attended. The annual conference has been revitalised, to the extent that the two most recent conferences are the best that I have ever attended.

In her report to the 2010 AustMS AGM, Nalini noted that her activities had involved three different spheres of activity:

- within the Society, helping the profession and members,
- at a national level, making representations to government, and
- internationally, engaging with the rest of the international mathematical community and the International Mathematical Union (IMU).

As President, Nalini made a significant contribution in all of these areas. Within the Society she was the driving force behind the introduction of the Lift-off Fellowships, which provide funding for people who find themselves in the difficult bridging period between submission of their PhD and the start of their first post-doctoral position. Nalini has also had a major role in facilitating and promoting the Australian Learning and Teaching Council (ALTC) funded project, led by Leigh Wood, to develop discipline-specific training in university teaching for young academics.

On a national level, I don't think that we should underestimate the positive impact for the mathematical sciences that followed Nalini's involvement in journal-ranking process for the ERA. Whether we like it or not, scrutiny of our research output will be a fact of life for the rest of our careers, for those of us who work in universities. I firmly believe that it is much better for a discipline to control the way that it is assessed than to opt out and leave it up to others.

It would be fair to say that the mathematical sciences community got off on wrong foot with the Australian Research Council in relation to the journal-ranking exercise. Nalini restored the relationship and, with colleagues, negotiated with the ARC to achieve an agreement that has resulted in a number of people from other disciplines coming up to me complaining about the 'favourable treatment' of the mathematical sciences.

Also on the national level, Nalini has been an excellent public face of the mathematical sciences community. She has been heard on radio, and written a number of *op ed* articles for the major newspapers. I remember, in particular, Nalini's reply when the Chief Scientist of New South Wales Mary O'Kane suggested that girls were at a natural disadvantage in the mathematical sciences.

Finally, Nalini has been a very good representative internationally. She led the Australian delegation to the recent IMU general assembly in Hyderabad. She came

back very impressed with the operation of the IMU, and with a recommendation that Australia upgrade its membership status from grade three to at least grade four. I strongly support this recommendation, which is a matter for the Australian Academy of Science to decide upon.

My first 'policy' as President of AustMS is to carry on the effort that Peter started and Nalini continued, to be inclusive. As an applied mathematician, I strongly believe that the mathematical sciences community has to be respectful of all areas of mathematical endeavour, of different fields of research, of early career researchers, of women mathematicians, of primary and high school teachers, and of mathematicians and statisticians working in industry. Furthermore, it is better to be open than closed at the boundaries of our discipline. Some of the greatest mathematical discoveries have come from people nominally working in cognate disciplines such as engineering or computer science, something which is worthwhile remembering if one is tempted to say 'she is not a mathematician' or 'he is not a statistician'.

My second 'policy' is to represent the discipline to government in as effective a way as possible on issues such as measurement of research output, mathematics teaching in schools and universities, and the effort to establish an Australian national research centre in the mathematical sciences. In this last endeavour, I'll be part of a team including such people as Nalini, who will be moving on to be the Chair of the MCMS, AMSI Director Geoff Prince, ACHMS Chair Cheryl Praeger, ANZIAM Chair Tim Marchant, the President of the Statistical Society Geoff Lee and other senior mathematicians and statisticians around the country.

My third 'policy' is to act as a positive public face for our community in Australia and internationally. It is interesting that developments that happen in Australia sometimes anticipate those in the international arena. For example, the IMU has constituted a committee to look at the idea of ranking journals in the mathematical sciences. Following her experience with the ERA exercise, Nalini has been invited to chair this committee.

An opportunity for Australia to have further input on the international scene will occur in late February/early March next year when the IMU Executive will meet for the first time in this country, in Perth. Cheryl Praeger, who sits on the Executive, has suggested that the Australian mathematical community should organise some type of event around this meeting, an idea that I strongly support. One possibility, which admittedly will involve less-than-ideal timing, is to try to schedule the 2011 meeting of ACHMS in Perth at that time.

I'll finish off by saying that my overall 'policy' is that the resources of AustMS ought to be used for the benefit of our community. We have to remain financially prudent, but it is arguable that, in the past, AustMS has had an overly risk-averse attitude to expenditure. With ideas such as the Lift-Off scheme and more extensive assistance for early career researchers, this attitude has started to change over the

last few years. I will certainly encourage AustMS to continue this trend. The best way for it to happen would be for you, the members of AustMS, to come up with good ideas for promoting the goals of the society and communicating them to me or other members of the Council.



Peter Taylor received a BSc(Hons) and a PhD in Applied Mathematics from the University of Adelaide in 1980 and 1987 respectively. In between, he spent time working for the Australian Public Service in Canberra. At the beginning of 2002, after periods at the Universities of Western Australia and Adelaide, he moved to the University of Melbourne. In January 2003, he took up a position as the inaugural Professor of Operations Research and became Head of the Department of Mathematics and Statistics in 2005.

Peter is the editor-in-chief of *Stochastic Models*, an associate editor of *Queueing Systems* and a member of the editorial board of the *Journal of Applied Probability* and *Advances in Applied Probability*.

Peter's research interests lie in the field of applied probability, with particular emphasis on applications in telecommunications, biological modelling and healthcare. Recently he has become interested in the interaction of stochastic modelling with optimisation and optimal control under conditions of uncertainty.