President's Column

Kate Smith-Miles*

What a privilege it is to be the 31st President of the Australian Mathematical Society, walking in the footsteps of a collection of truly remarkable Australian mathematicians as past presidents. I have been reading about the history of the society in Graeme Cohen's fascinating book *Counting Australia In: The People, Organisations and Institutions of Australian Mathematics*. Sixty years ago, when AustMS was formed, mathematics departments were certainly a very different world. There is much we can learn from considering the history of our discipline, understanding how we have reached today's environment, and pausing to reflect upon the implications for our future trajectory. While the field of mathematics is very old, our context is continually evolving, and it is timely for us to start thinking about the next 60 years.

I believe that one of the roles of AustMS is to provide a forum for mathematicians to not only discuss mathematical questions, but also to debate fundamental questions about our discipline: what is the most successful way to teach mathematics in today's university environment? What is the role of mathematics in interdisciplinary applications? How can we ensure mathematics advances from interdisciplinary collaborations and industry engagements, and that we are not just merely providing a service to other fields? What should be the role of mathematics teaching in newer degrees such as data science? How can we modify mathematics degrees to produce the kind of graduates that industry tells us they seek without diluting mathematical content? What is the definition of 'good mathematics' in a 21st century context, especially with more porous boundaries between fields? How do we support stronger gender equity in the mathematical sciences, and tackle the many perception issues that limit our pool of future mathematicians? How do we better engage with the many mathematically trained people working in industry, as well as those working in other disciplines within university and research institute environments? And of course, how do we continue to protect the need for fundamental research in an environment increasingly focused on reporting short-term engagement and impact? There are many topical questions like these that need to be considered in response to current challenges. Open debate, and sharing of best practice will benefit our discipline, and I look forward to providing opportunities for such debate within the society during my term as President.

My background as an applied mathematician with much interdisciplinary experience, as well as a former Head of a School of Mathematical Sciences, has given me a certain perspective. I believe it is possible to set strategic directions that simultaneously balance the advancement of new fundamental mathematics, while highlighting the impact of existing mathematics — and need for new mathematics — through interdisciplinary and industry engagement. Sixty years ago, these issues were of less concern, but moving forward they have now

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become paramount. It is vital that we can articulate a position and support strength and balance across the mathematical sciences — pure, applied, statistics, and interdisciplinary/translational mathematics — for the benefit of the discipline as a whole.

As the impact of mathematics becomes more recognized in many fields, so too we have seen challenges to the role of university mathematics departments as sole custodians of mathematical knowledge. Indeed, there are many excellent mathematicians and statisticians employed at universities in other departments such as biology, computer science, economics, and engineering who are still engaged in mathematical work, but have lost touch with the discipline. In addition to expanding reciprocal agreements between AustMS and like-minded overseas societies, this year we will also be seeking to grow AustMS membership through reciprocal agreements with other Australian societies in '01' fields such as mathematical biology, statistics, mathematical physics, and operations research. Harnessing the collective mathematical talent pool in Australia, including mathematically trained industry practitioners, will make the Australian Mathematical Society richer for its increased breadth of perspective.

Related to a focus on diversity, I am delighted that Professor Aidan Sims has volunteered to chair a working group to examine the London Mathematical Society's 'Good Practice Scheme' for gender equity and adapt it for an Australian context, also ensuring that all society processes conform to this best practice.

I'd like to end by thanking Professor Tim Marchant, as immediate Past President, for his outstanding work on behalf of the society, as well as our remarkable volunteers Dr Peter Stacey (Secretary) and Dr Algy Howe (Treasurer). I am delighted that my Presidency will continue to benefit from their support and experience, and that Tim will remain as Chair of the Membership and Marketing Committee, guiding us as we seek to grow membership. Critical to that process is to develop an understanding of how members perceive that the society can best support them. I look forward to hearing from any of you who would like to share your thoughts about how the Australian Mathematical Society can best support you as mathematicians into the future.

Kate Smith-Miles is a Georgina Sweet Australian Laureate Fellow, Professor of Applied Mathematics at Monash University, and inaugural Director of the Monash Academy for Cross & Interdisciplinary Mathematical Applications (MAXIMA). She was Head of the School of Mathematical Sciences at Monash from 2009–2014. She is member of the ARC College of Experts, Chair of the Advisory Board for the AMSI Choose Maths program, serves on the MATRIX Advisory Board, and is a member of the Federal Government's Knowledge Nation 100 group. Kate is a Fellow of the Australian Mathematical Society, and Fellow of Engineers Australia. She was awarded the Australian Mathematical Society Medal in 2010 and the EO Tuck Medal from ANZIAM in 2017.