

From the President



Greetings everyone! As expected, the 2015 biennial conference, *Mathematics: Learn, Lead, Link*, was a great success. Over four hundred delegates enjoyed three days of meeting old and new friends; learning exciting things about maths, about teaching, and about resources; exploring Adelaide and surrounds; and, of course, enjoying the social events at the Adelaide Wine Centre and the Adelaide Oval. One of many highlights for me was the launch of the new *Connect with Maths* online community *Digital Learning and Mathematics*. I have just spent some time browsing the proceedings to catch up on sessions that I was not able to attend. Many thanks are owed to the delegates who presented papers or workshops, including the excellent keynote speakers of course. Thanks also to the volunteers who reviewed the papers, and to Neil Davis who was the lead editor of the proceedings. To all the conference organisers, especially Kate Manuel and Toby Spencer, a resounding “Well done” and “Thank you”! I also acknowledge and thank our sponsors: The University of South

Australia, The Department for Education and Child Development of the Government of South Australia, Education Perfect, ASIC’s MoneySmart Teaching, Casio, and the Australian Mathematics Trust. AAMT was very pleased to be in partnership with our affiliate the Mathematical Association of South Australia (MASA), which provided many capable volunteers who contributed enthusiastically to important tasks, ranging from assistance with the professional program, to securing the venue, to acting as guides. Their local knowledge was invaluable and we thank them sincerely.

Earlier in the year, the AAMT Council were among the participants at the annual conference of the Mathematical Association of Tasmania. The theme was *Understanding Reasoning and Fluency: What’s the problem?* Lauren Beams led the team hosting this conference at Queechy High School in Launceston. The keynote presenters, Catherine Attard and Di Siemon, made us think and gave us tools for thinking further about pedagogy, reasoning and fluency. Everyone enjoyed the crisp Tassie climate, warm Launceston hospitality, and many creative and inspiring workshops.

The Annual General Meeting of AAMT was held at the end of the MAT conference, and it was a significant occasion as three Councillors were stepping down at the end of their terms: Kim Beswick (Immediate Past President), Sylvia Eadie (Tas.), John Bament (NT) and Richard Korbosky (WA). I cannot thank Kim enough for her contributions to AAMT and to the Council. She ensured that AAMT had a voice at a national level, including writing a large part of the *Decadal Plan for the Mathematical Sciences*, and also helped to win one of the AMSPP grants that will see support for the Affiliated Associations in the form of Implementation Officers. This boost to professional staff in the various States and Territories will be of great benefit to the Affiliates in future years. Sylvia is someone who always ensured that at Council discussions we considered the position of primary teachers and members from the smaller States. John will be missed for similar breadth of knowledge and experience, along with his practical jokes. Richard brought his vast experience from MAWA leadership roles, as well as a commitment to primary education. Newcomers on Council are Lauren Beams (Tas.),

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Rom Cirillo (WA) and Matt Skoss (NT). Jurek Paradowski (ACT) stays on Council as Treasurer since Allason McNamara has left that position to become President Elect. We also welcome Bronwyn Welch who is now the ACT Councillor.

I leave you with this puzzle that Barbara Jaworski from the UK has had me thinking about. I will also post it on the AAMT email discussion list so that anyone who wants to share solution methods can chat there:

Imagine you are lost somewhere like the Nullarbor Plain and can see no road or rail tracks. You know that there is a long straight railway line somewhere. You hear a train whistle blast just once, but cannot see the train. In which direction should you walk so that you have the best chance of meeting the train?

Mary Coupland, President
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From the CEO



AAMT has 14 Life Members, three of whom have sadly passed away. The award is for people who have given extraordinary service to the asso-

ciation over many years, often in a variety of roles. All of the AAMT's State and Territory Affiliates also have life membership as their highest form of recognition. These are all treasured colleagues who deserve our respect, admiration and thanks.

I have been privileged to attend when several of these awards have been presented. Without exception, recipients' comments have been to the effect of saying, "I always felt that I got much more out of being a part of AAMT than I thought I

contributed," frequently going on to cite the professional stimulation, networking, and often the lasting friendships they developed with people who share their passion for mathematics and its teaching.

There are hundreds of others who are currently working hard as volunteers in the interest of mathematics. There are, of course, the people who have roles—big and small—in your local association. Without them and their efforts, across the country teachers' professional lives would be impoverished in many ways. I would also like to acknowledge all the volunteers who contribute to the work of the Australian Mathematics Trust and its programs that foster engagement in mathematics and informatics among students with interest and aptitude in the subject.

Sometimes those of us involved in mathematics teacher associations feel that education systems and governments in general just want to shift more and more of their responsibility to us. Certainly in some jurisdictions the school authorities seem to have withdrawn from providing anything like adequate levels of professional learning in mathematics for their people. Understandably this creates a demand that is well beyond what the often limited resources of local associations can provide. Even in more populous states the demand for services can exceed supply.

What can we do about it? Of course AAMT and the Affiliates can and should argue for a better deal for associations. One of the arguments we need to make is that professional learning conducted by professional associations has a significant multiplier effect on any funding provided by government—one estimate from a few years ago is that for every dollar

provided to an association to run professional learning for teachers there is between \$3 and \$4 of value in return. This 'value' is in terms of hard measures like total hours of engagement of teachers that result from the volunteerism and good will inherent in the work of associations.

The demand for associations' services is not going to diminish in the foreseeable future, however. Better funding would help with the 'supply side', but there is another option: to bring more and more teachers and others into sharing their work, engaging in networks and building communities of practice beyond their own school, and so on. Your local mathematics teacher association is an ideal vehicle for this. It could be that you take on a role on the committee, or just contribute to a single event—every little bit counts. And just like the Life Members, you are very likely to get more out of it than you put in.

AAMT provides some means for national connections between teachers, most notably through the *Connect with Maths* project and the long established email discussion list (see www.aamt.edu.au/Communities to see how you can get involved). Over the next months and years, AAMT is involved in projects, particularly through the Australian Mathematics and Science Partnerships Programme (see March *HCF* for details) in which one of our key roles is 'connecting with the profession'. These projects will provide opportunities for you to put your hand up to be involved as well, so stay tuned for details.

Will Morony,
Chief Executive Officer
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International Mathematics Olympiad

The 2015 International Mathematics Olympiad (IMO) was held in July in Chiang Mai, Thailand—and saw Australia's best result in 35 years of competition.

The team improved Australia's ranking from 11th last year to 6th in the world, and members came home with two Gold and four Silver medals. Multi-medallist Alexander Gunning scored Gold and was ranked individually 4th in the world. With three Golds and a Bronze he is now the highest Australian on the IMO Hall of Fame leader board. Seyoon Ragavan was also awarded Gold for his 19th placing. All our other team members scored Silver: Yang Song, at his second IMO, Jeremy Yip, Kevin Xian and Ilia Kucherov on their first attempt.

The competition attracted 577 contestants from 104 countries.



New online community

The latest *Connect with Maths* online professional community, *Digital Learning and Mathematics*, was launched at the recent AAMT conference.

There you will find teaching ideas, links to resources, and most importantly, a bulletin board to facilitate questions and conversations among educators.

A single registration now also allows you access to all the other *Connect with Maths* communities too. Go to: <http://connectwith.digital.aamt.edu.au>.



The IMO team after the Closing Ceremony with their medals, from left: Dr Angelo Di Pasquale, Team Leader, Jeremy Yip, Seyoon Ragavan, Yang Song, Ilia Kucherov, Alexander Gunning, Kevin Xian and Andrew Elvey Price, Deputy Team Leader.

AAMT conference

The AAMT conference that was held in Adelaide in July was a great success—and the AAMT office has received a great deal of positive feedback from delegates.

More than 400 delegates from across Australia and overseas enjoyed four invigorating keynote speakers: Lynne McClure (University of Cambridge and former Director of NRIC), Amie Albrecht (University of South Australia, who delivered the Hanna Neumann Memorial Lecture), Merrilyn Goos (University of Queensland, who spoke passionately about teacher–researcher collaboration), and Val Westwell (SA Department for Education and Child Development). This was the first AAMT conference to have had four female keynote speakers!

There were also 130 presentations made by teachers, researchers and others, held in parallel over 13 sessions; and 20 trade booths enabled delegates to peruse services and resources.

Delegates were also treated to social events in the amazing venues of the National Wine Centre and the Adelaide Oval.

Feedback from delegates is being considered to help improve the next AAMT conference to be held in Canberra in 2017.



TEMPEST surveys

The *Towards Educating Mathematics Professionals Encompassing Science and Technology* (TEMPEST) project managed by the University of Tasmania is one of the AMSPP-funded projects in partnership with AAMT.

One of the aims of the project is to develop a quality assurance framework for professional learning. In order to assist with that development, input is sought from mathematics educators (at all levels) via two surveys:

The first survey is to find out what professional learning programs are available in 2015–16 for teachers of mathematics:

http://tiny.cc/tempest_audit.

The second survey asks teachers of mathematics to identify the characteristics of quality professional learning for teachers of mathematics:

http://tiny.cc/tempest_traits.

Your input (and that of colleagues) would be of great assistance to the development of what will become a highly useful tool for teachers!

Tinkerplots

Users of the dynamic data exploration software Tinkerplots will know that there have been changes to the distribution and licencing arrangements. The temporary free licences that were recently available will expire at the end of August. However, new licencing is now available (at very reasonable prices). For more information about the software and licencing, go to www.tinkerplots.com.

National Mathematics Day

Friday 21 August was National Mathematics Day and AAMT chose to ‘Shine a light on the Proficiencies’. Available through the AAMT website are several open-ended tasks courtesy of NRICH (<http://nrich.maths.org>) which were highlighted by Lynne McClure (former Director of NRICH) as part of her keynote at the AAMT conference, along with further questions and links to the Proficiencies in the *Australian Curriculum: Mathematics*. You can also download Lynne McClure’s paper from the AAMT conference proceedings. Go to www.aamt.edu.au/Student-activities/National-Maths-Day/National-Maths-Day-2015.

Maths Ad(d)s

Maths Ad(d)s is a careers publication produced by the Australian Mathematical Sciences Institute (AMSI) which helps students and their parents (and also careers advisors) understand the wide range of job opportunities open to capable students who enjoy maths.

The AAMT Council sees increasing the wider community’s appreciation of the broad range of career pathways that rely on mathematics as an important general goal, so even if your work is not related to students in the age bracket targeted by *Maths Ad(d)s*, please take a look at it for your general interest.

You can download the new 2015 edition for free from <http://careers.amsi.org.au/mathsadds>.

Desktop review

Earlier this year, AAMT was commissioned by Australian Government Department of Education and Training to undertake a desktop review of the evidence relating to gaps in current pedagogical approaches and learning resources for the teaching of mathematics. The paper addresses a number of questions that the Department considered relevant to their planning for future initiatives. The paper is now available at www.aamt.edu.au/Library/Other/Desktop-Review.

Beth Southwell Practical Implications Award

AAMT sponsors the Beth Southwell Practical Implications Award which is made at the Annual Conference of the Mathematics Education Research Group of Australasia (MERGA). The PIA this year was awarded to Jodie Hunter (Massey University, NZ) for her paper *Teacher Actions to Facilitate Early Algebraic Reasoning*. You can download the PDF paper from www.merga.net.au/documents/PIA2015.pdf.



Jodie Hunter, and AAMT Life Member Max Stephens who presented the Award.

The Australian Association of Mathematics Teachers (AAMT) Inc. is a federation of:

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| Canberra Mathematical Association (CMA) | Mathematical Association of Western Australia (MAWA) |
| Mathematical Association of New South Wales (MANSW) | Mathematical Association of Victoria (MAV) |
| Mathematical Association of South Australia (MASA) | Mathematics Teachers Association of the Northern Territory (MTANT) |
| Mathematical Association of Tasmania (MAT) | Queensland Association of Mathematics Teachers (QAMT) |