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A Decadal Plan for the Mathematical Sciences: the first steps

Decadal adj. means of or relating to the number ten; belonging to a decade or period of 10 years¹.

Imagine the state of mathematical sciences in Australia in 2024. What would you like it to be? Can you imagine a change that would have long-term consequences on the calibre of Australian mathematical sciences?

What is that change? Should it be to make the study of mathematics compulsory for senior high school students? Should it be to have a national research centre that would be available to support every major area in the mathematical sciences? Should it be to ensure that there is a mathematics specialist teacher in every primary school? If you haven't thought about it yet, start imagining now.

This collective imagining process is the intent of a long-term, strategic plan called the *Decadal Plan for the Mathematical Sciences*, which is being initiated by the National Committee for Mathematical Sciences (NCMS), a committee of the Australian Academy of Science, with the financial support of six additional national bodies and ten university departments of mathematical sciences² from around the country so far. The process being initiated now aims to take your feedback into account and leads to a decadal plan³ to be produced in 2014, with a view to the next 10 years.

If you have trouble imagining 2024, try thinking back to 1998. The apparently relentless decline in government funding since then, the loss of students majoring in the mathematical sciences and the decrease in numbers of qualified teachers occurring over the past 14 years have made it difficult to create an optimistic, long-term view for the mathematical sciences. But, we are the best-placed people

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¹Oxford English Dictionary, 2nd edition, 1989

²I would like to explicitly acknowledge and thank the Australian Association of Mathematics Teachers (AAMT), the Australian Mathematical Sciences Institute (AMSI), the Australian Mathematical Society (AustMS), CSIRO Division of Mathematics, Informatics and Statistics (CMIS), the Defence Science and Technology Organisation (DSTO), and Mathematics Education Research Group of Australasia Incorporated (MERGA) as well as the ten departments, disciplines and schools of mathematical sciences at the Australian National University, Flinders University, Latrobe University, Monash University, the Universities of Canberra, Queensland, South Australia, Sydney, Tasmania and Western Australia for providing support. In the period February–July 2012, we have raised a total of over \$90 000 as support for the production of the decadal plan.

³Please visit <http://science.org.au/natcoms/nc-maths.html> for documents on this.

to provide such a view. If we don't produce a plan of what we think is the best way to improve mathematical sciences in the long-term, then who will?

To turn around the situation, we need to formulate and put forward what we collectively agree is important for us. Then we will have to provide some steps for how we should move together to make this happen. This is what the aim of the decadal plan is.

We have started this process by forming a Steering Committee for the decadal plan, which will report to the NCMS. I am happy to report that Professor Peter Hall (The University of Melbourne) has agreed to chair this Steering Committee. This committee will have six working groups (or subcommittees), with the following areas of responsibility:

- mathematical and statistical education in schools and colleges
- mathematical and statistical education and training in universities
- mathematics and statistics in government organisations
- mathematics and statistics in business and industry
- research centres, present and future, in mathematics and statistics
- writing committee.

Chairs for these working groups are being invited and appointed as you read this. The respective Chairs, in consultation with the Chairs of the Steering Committee and the NCMS will invite people to join these working groups. Once these appointments are made, the work that will lead to the decadal planning exercise will commence.

Please collect and sharpen your ideas and bring them to the many meetings we will have. Given the budget for this decadal plan, it is likely that these meetings will be mostly virtual, being held as Skype, AGR, Google+ or other social media events. In the meantime, don't hesitate to email me if you have any suggestions or comments.



Nalini Joshi is the Chair of Applied Mathematics at The University of Sydney and was the President of the Australian Mathematical Society during 2008–2010. She was elected a Fellow of the Australian Academy of Science in 2008, became the Chair of the National Committee of Mathematical Sciences in 2011, and was elected to the Council of the Australian Academy of Science in 2012.