



# AMSI News

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## **AMSI Intern — evidence of success**

We recently surveyed 63 (of 99) participants in the AMSI PhD Intern program. I hope that the results will inspire you, both students and supervisors, to visit our new website, [www.amsiintern.org.au](http://www.amsiintern.org.au), and sign up!

Here's a snapshot of what we found:

- 100% of mentors said they would do it again
- 100% of government agencies said they would take another intern
- 100% of interns enjoyed the experience
- Over 80% of PhD students said that the internship prepared them for future employment
- 80% of mentors said the internship added value to the PhD program
- 95% of participants were satisfied with AMSI's service.

At our new website you can see past and current projects, testimonials and FAQs about the scheme. If you are a prospective intern you can create an account and apply online. Once we've approved your application you'll be able to take some online pre-placement training (communication skills, time management, etc.) and we'll start looking for a suitable industry partner for you.

## **Australian Council of Engineering Deans**

In mid-April this year I gave an invited presentation to the Australian Council of Engineering Deans. I touched on the sort of issues that were dealt with at our February forum. There was a large amount of discussion and I came away with the impression that the teaching of mathematics to engineering undergraduates is not particularly significant to them (but remember that deans probably worry about resources more than anything else). What they did seem concerned about is the way that mathematics is taught in schools and the decline in the number of students taking calculus-based mathematics at Year 12. At a superficial level these concerns seem to be aligned with our own, but two views emerged. The first is that some of the deans think that school mathematics should be taught entirely 'in context' and not just accompanied by it. I didn't take the bait on this and a couple of other members of the Council expressed a contrary view over lunch. Secondly, one Go8 dean quoted a survey which indicated that advanced mathematics at Year 12 was not an indicator of undergraduate success, the only such indicator being a high

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ATAR score. This result is used as justification for not having advanced mathematics or even intermediate mathematics as a prerequisite for (some) engineering degrees. The difficulty is that the absence of such pre-requisites for engineering and science degrees is one of the reasons for the declining numbers, a situation which is choking the supply of mathematics graduates and hence qualified mathematics teachers. By not supporting some reasonable level of prerequisites the deans of engineering risk choking off their own supply of undergraduates as the numbers drop further, especially those with the high ATAR score!

All is not lost though, and Professor Ian Chubb (the Australian Chief Scientist) has said that he will chair a meeting of deans of science and engineering to discuss the pre-requisite issue. AMSI's stated view is that some levels of prerequisites should be nationally agreed upon and introduced five years after the commencement of the new Year 11 and 12 curriculum, probably in 2015. This timeline will give the school system time to adjust, but of course this measure cannot be taken in isolation. At the time of writing we have not yet seen the response of the Government to the Chief Scientist's recommendations or the recommendations themselves. Let's hope for some progress!



I was a Monash undergraduate and took out a La Trobe PhD in 1981 in geometric mechanics and Lie groups. This was followed by a postdoc at the Institute for Advanced Study in Dublin. I've enjoyed teaching at RMIT, UNE and La Trobe. My research interests lie mainly in differential equations, differential geometry and the calculus of variations. I'm a proud Fellow of the Society, currently a Council and Steering Committee Member. I became AMSI director in September 2009.