President's Column

Tim Marchant*

The 60th annual AustMS Meeting is fast approaching, to be held in Canberra 5–8 December. The conference is part of the MathsFest initiative where the meeting is sandwiched by two major mathematical workshops, creating three weeks of events in Canberra. A joint initiative of AMSI and the AustMS, the idea is to create stronger international interest in the AustMS conference, raising the number of overseas participants, whose primary interest may be one of the specialist workshops. The two specialist workshops are titled 'Advances in ergodic theory, hyperbolic dynamics and statistical laws' and 'Nonlinear and geometric partial differential equations' and both have large sets of world-class speakers. I strongly encourage you to register for one or more of these events and help make MathsFest a success.

I was attending a conference in Beijing when the results of the Brexit poll was announced. There was general dismay among the British academics at the meeting about the poll result and its likely effect on the UK university system. There is a lot of uncertainty regarding future fees for EU students and the work rights of academics in the UK. Impacts are already being felt with UK academics dropped from research grants proposals and staff seeking work elsewhere. Australia is fortunate that its university sector has high numbers of staff with international qualifications and experience and a vibrant international student market. However, government visa rules and requirements are continuously changing and universities need be strong advocates for a system that allows free two-way flow of talented staff and students.

Is the lecture becoming an outdated teaching method? Lecture attendance rates at Australian universities have been dropping for quite a few years now. The ANU reports, the Australian 10/2/16, that lecture attendance rates drop to 30% after the first two weeks. Interestingly, the ANU use thermal body-counting technology to measure their attendance rates. This trend is clearly a challenge for mathematics teaching as much 1st and 2nd year content is delivered via large-class lectures. The lecture is a long standing and efficient one (lecturer) to many (students) teaching method but new technologies now provide alternatives. Most universities record lectures and students can view these electronically. Many students may well prefer to watch lectures on an electronic device at home than spend a long time commuting to uni and sitting in a large lecture hall. Clearly a quality educational experience requires face-to-face interaction between the teacher and the student but for many this would occur in tutorials and workshops, rather than at the lecture. The challenge then is to find new engaging teaching methods that are

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relatively cheap to deliver (flipped classrooms could be part of the answer) and can be used with large groups of students. So will the lecture survive? I think for many years it will continue but that it would be unwise for universities to invest in building any new (mostly empty) lecture halls.



Tim Marchant received his Doctorate from Adelaide University in 1989. After graduation he joined Wollongong University where he is currently Dean of Research and Professor of Applied Mathematics. His research areas include nonlinear optics, nonlinear waves and combustion theory. Tim is a Fellow of the Australian Mathematical Society, a Member of the Endeavour Awards selection panel and on the editorial board of *Applied Mathematical Modelling*. His other interests include playing bridge and learning Mandarin.

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