AMSI News

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A good federal budget outcome for mathematics and statistics

The Priority 1 recommendation of the The National Strategic Review of Mathematical Sciences Research, reporting in December 2006, was to raise mathematics and statistics to a higher-funded cluster within the Department of Education, Science and Training (DEST) Relative Funding Model (RFM). This objective has now been achieved following the Minister's review early in 2007 of the RFM and the adjustments subsequently announced in the federal budget.

The national strategic review was partly funded by AMSI, using members' contributions. This was one of the main reasons why, unlike the national discipline review of 10 years ago, university mathematics departments were not asked to share the costs. Following the release of the report by the Review Working Party, there were many follow-up meetings and discussions. For several months, the AMSI Executive Officer devoted most of her time to this work.

All members of the Review Working Party, as well as the Chair of its Advisory Council must be thanked for this major contribution.

A year of domestic undergraduate education in mathematics now attracts at least $2700 extra funding from DEST to the universities. The funding increase from even a modest enrolment of 100 equivalent full-time student units will pay for approximately three salaries. Of course, this increase reflects an acknowledgement by the government that more money should actually be spent to educate a student in mathematics and statistics. We should be very interested to see if and how this money actually flows on to its intended purpose.

Universities will have some flexibility in how this money is distributed internally. However, even if the increase merely shows a healthier balance on the universities' internal accounting systems, it will help to reduce some pressure.

Events

The ICE-EM (International Centre of Excellence for Education in Mathematics) Industry Short Course, Mathematics of Electricity Supply and Pricing, was held in Surfers Paradise during the ANZAC week. The workshop, organised jointly by AMSI, MASCOS (Centre of Excellence for Mathematical and Statistics of Complex Systems) and MITACS (the Mathematics of Information Technology and Complex systems), was an outstanding success. Sixty-five people attended and more than half of those were from industry. A number of very interesting topics arose and lectures are available at http://www.amsi.org.au/Electricity.php

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From 26 November to 14 December, AMSI and MASCOS will run a joint theme program, 'Concepts of Entropy and their Applications'. Invited speakers so far include Ingo Müller (Berlin), Frank van Hollander (Leiden), Reuven Rubinstein (Technion, Haifa), Richard Kleeman (New York) and Angas Hurst (Adelaide).

The early part of the theme will re-examine the historical foundations in thermodynamics. The second part will be linked to information theory, including topics such as quantum computing, computational complexity, coding, genetics, approximation theory and forecasting. On 10 December, there will be a one-day symposium on the 'Cross Entropy Method' for rare-event simulation and combinatorial optimisation. At other times, we are hoping to run sessions on other loosely related topics. These may include genetics, simulated annealing and entropy-based theory of partial differential equations. I invite anyone interested to contact me — the structure of the program will be determined by your interests.

Please consult the AMSI and ICE-EM web sites (http://www.amsi.org.au and http://www.ice-em.org.au) for upcoming events.

Director of AMSI since 2005, Phil Broadbridge was previously a professor of applied mathematics for 14 years, including a total of eight years as department chair at University of Wollongong and at University of Delaware.

His PhD is in mathematical physics (University of Adelaide). He has an unusually broad range of research interests, including mathematical physics, applied nonlinear partial differential equations, hydrology, heat and mass transport, and population genetics. He has published two books and more than 80 refereed papers, including one with 147 ISI citations. He is a member of the editorial boards of three journals and one book series.