



Editorial

“Doom and Gloom.” That was our overriding impression after a final proof-reading of this issue of the *Gazette*. Coming soon after the demise of Mathematics at Charles Darwin University, the University of New England has announced several forced redundancies in its School of Mathematics, Statistics and Computer Science (see page 18). Grant Cairns, in the **Math Matters** column, sketches an equally bleak picture for mathematics at La Trobe University. Grant writes

“This [drop in student numbers] is partly due to a general decline in traditional science enrolments. In part this is a consequence of the drop in standards of commencing students; as the mathematical abilities drop and their pass rates fall, their home departments are naturally inclined to drop or reduce the number of mathematics units that these students must take.”

A drop in standards of commencing students; is there anything that can be done about this? In such gloomy times it is perhaps fitting to tell the uplifting story of what recently occurred in the Netherlands. Similar to other western countries, the number of mathematics units taken by secondary school students in the Netherlands has fallen by 40% in recent years. Universities have been slow to adapt to the drop in standards of first year students; this has led to a significant increase in the drop-out rate of mathematics and physics students, many of whom fail to bridge the widening gap between actual and assumed entry levels in mathematics.

A group of disgruntled science students, mainly from the “Leidsche Flesch” (a very active organisation for science students at the University of Leiden) decided that enough was enough and wrote an open letter to the Dutch Minister of Education, Culture and Science, Maria van de Hoeven. This letter was quickly picked up by large sections of the Dutch media, and the initiative became widely known as *lievemaria* (dearmaria), see <http://www.lievemaria.nl> (basic knowledge of the Dutch language is helpful). So strong became the support for *lievemaria* that it led to meetings between *lievemaria* and parliamentarians, and public correspondence with senior bureaucrats within the ministry. This was then followed by a special session in parliament, culminating in the recent announcement by the minister of 15% extra mathematics units plus an extra mathematics stream for prospective science students.

We probably have all complained about the doom and gloom and lack of support for mathematics. However, the campaign started by the “Leidsche Flesch” demonstrates that strong lobbying can be very successful. It is not inconceivable that a *dearjulie* could happen in Australia.

And if you thought the conditions for doing mathematics were tough now, then you should read Hans Lausch’s **Historical** titled *mathematics in detention*. Being interned in Australia as a consequence of the outbreak of WWII, a group of German scientists kept spirits high by teaching mathematics. To deal with a lack of paper, lecture notes were taken on soup-can labels!

In the third issue of the *Gazette* in 2005, Ian Roberts asked readers to send in their favourite definition of mathematics. He also challenged the editors to give a two-sentence-line definition. Somewhat ducking the question, here is one from the daughter of one of the editors. To tell her friends that her father is a mathematician, she explains “That is someone who invents really big sums, like 19057364 times 89473478245 plus 6.” Quite similar in spirit to one of Ian’s: “Mathematicians do hard sums”.

That (some) mathematicians do more than just big or hard sums follows from Michael Anderson’s contribution to **My brilliant career**. After completing his Ph.D in mathematics Michael ended up in the visual effects world, working for Rising Sun Research, the company responsible for the VFX in the *Return of the King*.

We all know about Hilbert’s twenty three problems, posed in 1900 at the International Congress of Mathematicians. The third problem was the first to be solved, and in **Mathellaneous** Norman Do recounts Max Dehn’s discovery of Dehn invariants, proving that not all polyhedra of equal volume are scissors congruent.

Some positive news from the youngest generation of mathematicians is Daniel Horsley’s solution — joint with his supervisor Darryn Bryant — of the long-standing Lindner conjecture. You can read about their solution in this *Gazette*.

Vacancy: Editor(s) for the Gazette

The present Editors of the Gazette, Drs Jan de Gier and S. Ole Warnaar, are sadly stepping down from their position on 31 December 2006. So the hunt is on for a replacement Editor or Editors, to carry the Gazette forward from 2007 on. An overlap in the position of a few months, from about October 2006, is envisaged, to enable a smooth transition.

Anyone interested in the position of Editor is invited to send (via e-mail) a brief resumé and covering letter to both the President and the Secretary, at President@austms.org.au and Secretary@austms.org.au.

There is financial assistance available for part-time secretarial help. Knowledge of L^AT_EX is essential. For further information about what the position entails, please contact the present Editors at gazette@ms.unimelb.edu.au.

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