



# Editorial

At a recent speech delivered in Melbourne, immunologist Sir Gustav Nossal, former president of the Australian Academy of Science and Australian of the year in 2000, remarked

“...there is a problem in science education. While the biological sciences are doing well and subjects like medicine and biotechnology are exceedingly popular, there has been a move away from mathematics, physics and chemistry ...

Part of the problem here is that society is vitally interested in the fruits, the products of research, but hardly at all interested in the process of research. Indeed, many people wear their illiteracy in science as a badge of honour. It is not ok for a scientist, or a doctor or an engineer to be ignorant of Mozart or Shakespeare. But it is quite alright for a lawyer, or a banker, or a writer to profess indifference to an Einstein, a Rutherford or a Watson and Crick ...”

Part of the problem is perhaps that mathematics, physics and chemistry are such hard and unyielding subjects to learn, as opposed to, for example, learning to speak Japanese or to play the violin. In **Math matters** Larry Forbes tries to dispel the myth that mathematics is hard, and argues that we mathematicians, through our style of teaching and often insular and exclusive attitudes, are part of the problem (and the solution). How to make mathematics teaching more inclusive at secondary level is also the topic of the paper *Increasing access to mathematical thinking* by Sullivan, Mousley and Zevenbergen.

Several surprisingly hard but fun mathematics problems are described in Norman Do's **Mathellaneous**, and such seemingly simple tasks as turning (burnt) pancakes may not be so trivial after all. Certainly not easy is Igor Shparlinski's **10th problem** on bounds of exponential and character sums. Perhaps some lessons on how to solve hard problems may be drawn from nature; the capability of ant colonies to collectively solve optimisation problems is beautifully described by Andre Costa in *Ants, stochastic optimisation and reinforcement learning*.

For those of us wondering if there is life outside of academia for professional mathematicians there is the new series **My brilliant career**. In this issue Romesh Silva details his life as a human rights data analyst, currently working in Timor-Leste (formerly East Timor).

Finally we thank Rob May for his time as local correspondent at RMIT University and welcome his successor Yan Ding.