

## Mathematics-in-Industry Study Group 2006

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The third (and last, for now at least) of the ANZIAM Mathematics-in-Industry Study Groups to be held in New Zealand (MISG2006), took place at Massey University at Auckland, 30th January to 3rd February 2006. Hosted by the Centre for Mathematics in Industry at Massey University, the problem-solving week was directed by Professor Graeme Wake, Professor of Industrial Mathematics. Administrative support was provided by the Institute of Information and Mathematical Sciences (headed by Professor Robert McKibbin) and MISG2006 Administrator was Nikki Luke. Deputy Directors were Associate-Professor Mark McGuinness from Wellington (VUW), and Dr Winston Sweatman from Massey.

Seven problems were presented, six from New Zealand and one from Australia, as in the previous year. About 110 persons attended from eight countries. Nineteen student financial grants were given. In the following reference, non-technical outlines of the problems, and the progress made, are given. Feedback is very welcome.

The Centre for Mathematics in Industry was formed to provide a national base for MISG and has also built links with emerging similar activities, in South Korea and Thailand (the latter in 2004). This years MISG was fortunate in attracting yet another member of the well-known Oxford Group: Dr Peter Howell, of the Oxford Centre for Industrial and Applied Mathematics in the United Kingdom, as an overview facilitator. The Minister of Science and Technology, Hon Dr Steve Maharey provided a keynote opening address providing welcome support for MISG2006. He was followed by the Vice-Chancellor of Massey University,

Professor Judith Kinnear, who endorsed our initiative and gave the Minister a warm vote of thanks. Significantly a strong statistical content was evident this year, a trend noted also in 2005. This attracted several well-known statisticians to attend and contribute, notably several from Statistics New Zealand, a government agency. Student workshops were held and addressed by Dr Howell, Richard Penny, from Statistics NZ, and MISG2006 Director Professor Graeme Wake. During the plenary session on Wednesday 1st February, Dr Brian Pink, the Government Statistician attended. One of his colleagues Dr Walter Davis, along with Dr Howell, gave addresses. Once again we were fortunate in obtaining a significant grant from the Foundation for Research, Science and Technology in New Zealand under their Smart Start programme, which is gratefully acknowledged. Last but not least we acknowledge the immense work provided by the problem moderating team, which again this year included a postgraduate student in each case. The contribution of the moderators often beyond the call of duty is warmly acknowledged. Without this input, MISGs just would not happen.

The seven problems presented are nicely summarised on the website, which we invite you to visit. See

<http://misg2006.massey.ac.nz/MISG2006Eqn%20free%20Booklet.pdf>

These are non-technical versions of the problems and outcomes, which can be used for presentations and information for the public or students on newer uses of mathematics. All Departments in Australian and New Zealand Universities are being posted copies so that they can be used for promotional purposes.