

MathWest workshop and IMU Meeting at The University of Western Australia

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From 27 February to 4 March 2011, we were honoured to have the Executive Committee of the International Mathematical Union (IMU) visiting Perth for their first meeting in Australia. The committee consists of a host of eminent mathematicians, pictured above with the manager of the IMU secretariat. They are, from left to right: Vasudevan Srinivas (India), Marcelo Viana (IMU Vice-President, Brazil), László Lovász (IMU Past President, Hungary), Wendelin Werner (France), Manuel de León (Spain), Cheryl Praeger (Australia), Ingrid Daubechies (IMU President, USA), Christiane Rousseau (IMU Vice-President, Canada), Martin Grötschel (IMU Secretary, Germany), Sylwia Markwardt (manager of the IMU secretariat), Alexander Mielke (IMU Treasurer, Germany), John Toland (UK) and Yiming Long (China).

Following the two-day committee meeting, a workshop was held, with a dazzling line-up of lectures from the IMU Executive Committee. These lectures were accessible to a broad mathematically inclined audience, and were recorded via Lectopia*.

The presenters and titles of the talks were:

- Ingrid Daubechies: ‘Comparing surfaces using mass transportation’
- László Lovász: ‘General questions about extremal graphs’
- Christiane Rousseau: ‘Mathematics of Planet Earth’

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*See <http://www.maths.uwa.edu.au/community/year-of-maths/mathwest-workshop-2011>.

- John Toland: ‘Waves with prescribed distribution of vorticity’
- Marcelo Viana: ‘Entropy, old and new’
- Wendelin Werner: ‘Random surfaces and fractal carpets’

Additionally, the workshop included a forum consisting of three talks on ‘Mathematics: how a nation plans for the future—the Spanish, Indian and Chinese experience’, by Manuel de León, Vasudevan Srinivas and Yiming Long. These three members of the IMU each had direct experience in the organisation of the International Congress of Mathematicians in their respective countries.

On the first day of the two-day workshop, an industry breakfast was sponsored by the Dean of the Faculty of Engineering, Mathematics and Computing (Professor John Dell) and the Dean of the Faculty of Education (Professor Helen Wildy). Martin Grötschel (IMU) gave an excellent presentation, ‘Production Factor Mathematics’, on the application of optimisation methods in industry. Martin pointed out that the mathematics that sped up algorithms had actually contributed more to the solution of these problems than increases in computer speed. His talk was followed by a presentation by UWA’s Professor of Zoology and WA Chief Scientist, Professor Lyn Beazley, on the ever-increasing role of mathematics in science and industry.

Following the workshop, most of the IMU Executive made a two-day trip to the south-west of Western Australia, and in particular, to Bunbury Cathedral Grammar School, where some 120 students from local schools were in attendance. Martin Grötschel spoke again about maths in the real world, from the routing of garbage collection to the electro-physiology of the heart. Martin’s presentation was followed by an interactive activity given by us (John Bamberg and Michael Giudici) on ‘The game of Nim’.

We are extremely grateful and privileged to have had the IMU Executive hold their meeting in Perth, to have been enlightened by their presentations, and to have discussed with them matters mathematical.