

CONFERENCES

VICTORIA INTERNATIONAL CONFERENCE: VIC 2004

The idea for VIC 2004 grew out of the visit of Professor Vitali Milman to work with Vladimir Pestov in 2002. Vitali, then president of the Israel Mathematical Union agreed with Rod Downey as president of the NZ Mathematical Society that they would hold a joint meeting in the summer of 2004. The meeting was held at Victoria University of Wellington from 9-13 February 2004. The meeting was supported financially by the NZ Institute of Mathematics and its Applications and by the Royal Society's International Conference Fund. The Israeli Foreign Ministry also provided some support for participants attending from Israel. We warmly acknowledge this funding, which enabled us to cover costs for some of the plenary speakers, and to set zero registration fee for graduate students as well as providing travel and accommodation grants for them.

The meeting was attended by 100 mathematicians (including 25 from Israel), from 13 different countries. Fourteen participants were graduate students. The quality of the presentations was uniformly high and represented research in a number of areas of fundamental importance in contemporary mathematics. The organisers felt that the conference was highly successful in creating an opportunity for interaction and collaboration.

The two mathematical societies each proposed plenary speakers and a number of special sessions were established, generally co-organised by mathematicians from each country. Plenary speakers were:

- Rod Downey (Victoria) *Algorithmic Randomness and Complexity*
- Vaughan Jones (Berkeley) *Two Subfactors*
- David Kazhdan (Harvard and Hebrew) *The Langlands Program*
- Janos Makowsky (Technion) *Splitting Formulas for Graph and Knot Polynomials and their Algorithmic Use*
- Robert McLachlan (Massey) *Geometric Numerical Integration*
- Andr Nies (Auckland) *Randomness Notions and Lowness Properties*
- Victor Palamodov (Tel Aviv) *Reconstruction from Boundary Measurements*

- Ran Raz (Weizmann Institute) *Multilinear Formulas for Permanent and Determinant are of Super-Polynomial Size*
- Hugh Woodin (Berkeley) *A Structural Equivalence for the Determinacy of Real Games*

Fifty-six talks were given in special sessions, which ran on the following topics:

- Computational Complexity, organized by Rod Downey
- Surface Approximation, organized by Shayne Waldron
- Geometric Aspects of Functional Analysis, organized by Vitali Milman and Vladimir Pestov
- Operator Algebras and Representation Theory, organized by David Kazhdan and Chris Atkin
- Nonlinear Analysis and Optimization, organized by Bruce Calvert
- Game Theory, organized by John Hillas, Arkadii Slinko and Jacek Krawczyk
- Functional-Differential Equations and Applications, organized by Bruce van Brunt and Gregory Derfel

A further 3 contributed talks were also included in the programme.

Talks from two of the sessions will be published: Computational Complexity is to appear in the *Annals of Pure and Applied Logic*, and Nonlinear Analysis and Optimization in the *Journal of Nonlinear and Convex Analysis*, later this year. Slides of some of the plenary talks will be made available via the website www.mcs.vuw.ac.nz/~mathmeet/vic2004/index.shtml as an additional resource.

The presence of a significant number of speakers in computational complexity and logic was partly a result of the ongoing 6-month programme in Logic and Computation funded by NZIMA.

Further funding for the GAFA and OART streams was provided through Vladimir Pestov's Marsden Fund project "Geometry of high-dimensional structures: dynamical aspects". The first stream of the GAFA session was dedicated to geometry in high dimensions, GAFA-II was largely devoted to links between dynamics and geometric aspects of functional analysis and

the unifying topic for the GAFA-III session was applications. The OART-I session dealt with groups and their representations and OART-II was largely centred on C^* -algebras.

Professor Pestov reported that there was a great number of informal mathematical discussions, facilitated by the (mostly) beautiful weather. Overall, the conference, in particular the GAFA and OART sessions, was a definite success and participants expressed the view that it should be repeated in the not too distant future.

These views are endorsed by the conference organisers, who were Vitali Milman and Allan Pinkus (IMU), Rod Downey and myself (VUW), John Fouhy and Joe Miller (website and proceedings), Ginny Nikorima and Rowan McCaffery (administration, budget, accommodation, activities).

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