

## Representation Theory in Geometry, Topology and Combinatorics

University of Melbourne, 28 October – 7 November 2013

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The Australian mathematics community is flowering in this modern and exciting field bridging representation theory, topology, and category theory. Recent hires, such as Tony and Joan Licata and Scott Morrison at ANU, Kari Vilonen and Ting Xue at University of Melbourne, Alan Stapledon, Geordie Williamson and Oded Yacobi at University of Sydney, Masoud Kamgarpour at UQ, and associated research fellows on temporary positions Martina Lanini, Stephen Griffeth, and Paul Sobaje at University of Melbourne, Peter McNamara at University of Sydney, Pedram Hekmati, are complementing existing strengths (for example, Gus Lehrer, Anthony Henderson, Andrew Mathas, Ruibin Zhang, Alex Molev at Sydney University, Arun Ram at University of Melbourne, Jie Du at UNSW, John Bamberg and Alice Devillers at UWA) to make Australia a driving force in the international community in this field. This conference hosted a (mostly younger) group of internationally acclaimed movers and shakers in the field as plenary speakers and boasted significant attendance from Australian *and* international students. It was an exciting and stimulating couple of weeks, leaving all participants with a feeling of being swept up with a wave of enthusiasm and excellence.

The conference took place over two weeks, centred around 17 principal speakers: Dave Anderson (IMPA, Brazil), John Bamberg (UWA), Alice Devillers (UWA), Ben Elias (MIT, USA), Alexander P. Ellis (Oregon, USA), Stephen Griffeth (Talca, Chile), Pedram Hekmati (Adelaide), Anthony Henderson (Sydney), Daniel Juteau (Caen, France), Masoud Kamgarpour (University of Queensland), Nicolas Libedinsky (Santiago, Chile), Joan Licata (ANU), Anthony Licata (ANU), Peter McNamara (Sydney), Scott Morrison (ANU), Geordie Williamson (MPI Bonn, Germany), Oded Yacobi (Sydney); three minicourses:

- Dave Anderson (IMPA, Brazil), ‘Geometry of Schubert varieties. A short course for graduate students in research in Algebraic Geometry’,
- Martina Lanini (Melbourne), ‘Moment graph tasting plate. A short course for graduate students in research in Algebra’,
- Joan Licata (ANU), ‘Introduction to contact geometry. A short course for graduate students in research in Topology’;

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and a day of talks by international students and postdocs with speakers: Jacopo Gandini (Goettingen, Germany), Emanuele Ghedin (Oxford, UK), Jacinta Perez Gavilan Torres (Cologne, Germany), Antonio Sartori (Bonn, Germany), Neil Saunders (Bristol, UK), Alexander Weekes (Toronto, Canada).

As well as more senior participants, Jose Ayala Hoffmann (Melbourne), David Bowman (Adelaide), Joseph Chan (Melbourne), Dougal Davis (Melbourne), Alastair Dyer (Monash), Amelia Gontar (Sydney), Joshua Howie (Melbourne), Yi Huang (Melbourne), Guang Rao (UWA), Arthur Suvorov (Monash), Ioannis Tsartsafis (La Trobe) and Jon Xu (Melbourne) were among the students and postdocs that made the whole experience wonderfully vibrant and provided a feeling of rapidly growing community and rapport transcending traditional frameworks.

The conference was supported by AustMS, AMSI and the University of Melbourne Mathematics and Statistics Department. Further details are available at the website at <http://www.ms.unimelb.edu.au/~ram/RepTheoryConference/>