

Equivariant Geometry and Algebraic Stacks
Kioloa Coastal Campus, Australian National University
14–18 March 2016

Jarod Alper* and Jack Hall**

A workshop, where 21 experts in equivariant geometry and algebraic stacks from Australia and abroad were brought together.

Organising committee

- Professor Amnon Neeman (Australian National University)
- Dr Jarod Alper (Australian National University)
- Dr Jack Hall (Australian National University)
- Dr Masoud Kamgarpour (University of Queensland)

Topics covered

The topics covered over the course of the workshop were algebraic geometry, algebraic stacks, moduli theory, equivariant geometry, deformation theory and geometric representation theory.



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Special presenters

- Matthew Ballard, University of South Carolina
- Daniel Bergh, University of Bonn
- Dan Edidin, University of Missouri
- Barbara Fantechi, SISSA
- Yi Hu, Arizona
- Ariyan Javanpeykar, Johannes Gutenberg-Universität Mainz
- Masoud Kamgarpour, The University of Queensland
- Amalendu Krishna, Tata Institute
- Martin Olsson, University of California, Berkeley
- Brian Osserman, University of California, Davis
- David Rydh, Royal Institute of Technology (KTH)
- Matt Satriano, Waterloo
- Ronan Terpereau, Johannes Gutenberg-Universität Mainz
- Fabio Tonini, Humboldt University
- Angelo Vistoli, Scuola Normale Superiore
- Jonathan Wise, University of Colorado
- Daniel Litt, Columbia University

Report

The conference ‘Equivariant Geometry and Algebraic Stacks’ brought together many prominent international researchers to discuss their latest advances in the interrelated fields of equivariant geometry and algebraic stacks.

Algebraic geometry has a central role in modern mathematics, with equivariant geometry and algebraic stacks representing important subfields. Equivariant geometry concerns group actions on varieties. Algebraic stacks were conceived by Alexander Grothendieck, David Mumford, Pierre Deligne and Michael Artin and provide a fundamental mathematical structure to study questions in geometry, topology and number theory. In particular, algebraic stacks are useful in studying equivariant geometry and moduli problems.

There are several Australian researchers working in this discipline. This conference brought them together with other preeminent leaders outside Australia in a hyper-collaborative environment for one week. There were three or four talks a day by the participants. Additionally, there were several hours in the afternoon and evening where participants informally collaborated. There were many interesting ideas exchanged and several collaborative projects were initiated.

Organisers’ opinion of success

This conference was wildly successful. There were more prominent leaders that accepted our invitation than we anticipated. The lectures were phenomenal and were very well received by the participants. During each lecture, the audience was receptive and active and offered interesting questions. Outside the formal presentations, there was ample time for collaborative discussions. I believe several collaborative projects formed during this time.

Feedback after the event indicated that participants sincerely enjoyed this conference.