

# Lovkush Agarwal

www.lovkush.com

## Employment

2017-  
Present Teaching Fellow, University of Leicester, Department of Physics & Astronomy  
Teaching foundation year students Mathematics and Physics. Responsibilities include: lecturing, creating e-assessment, marking presentations, writing and marking exams, and curriculum design.

## Education

2012-2016 PhD in Pure Mathematics, University of Leeds  
Thesis: Reducts of  $\aleph_0$ -categorical structures. Supervisor: Prof. John Truss.

2008-2012 MMath in Mathematics, University of Cambridge  
Part III: Distinction, Part II: 2.1, Part IB: 1st, Part IA: 1st

## Publications

2015 Sep  $2^{\aleph_0}$  pairwise non-isomorphic maximal-closed subgroups of  $\text{Sym}(\mathbb{N})$  via the classification of the reducts of the Henson digraphs.  
Joint with M. Kompatscher. ArXiv: 1509.07674. Submitted.

2014 Nov Reducts of the Generic Digraph  
Annals of Pure and Applied Logic 167 (2016) 370-391.

## Other Teaching Experience

2014-2016 Postgraduate Tutor, Maths Support, University of Leeds  
Helped students of any level requiring help with maths at the 'Maths Drop-In' session.

2012-2016 Postgraduate Tutor, School of Mathematics, University of Leeds  
Ran weekly tutorials of roughly 10 students. Included marking and designing handouts.

2013-  
Present Private tuition with Elite IB Tutors  
I am a 'top tier' tutor and have focussed on online tutoring of mathematics.

## Positions of Responsibility, Teaching

2013-2015 Member of the Teaching Enhancement Scheme (TES) Working Group, University of Leeds  
The group monitors and creates a framework for how the university improves its teaching.

2013-2016 Member of TES Groups, School of Mathematics, University of Leeds  
These groups discuss how the School of Mathematics can improve the quality of its teaching.

2015-2016 TES Group: Alternative Methods of Classroom Teaching

2014-2015 TES Group: Assessment and Feedback

2013-2014 TES Group: Alternative Methods of Classroom Teaching

2015 Oct Interview Panellist for the Head of Maths Support, Leeds University Library

## Events Attended, Teaching

- 2016 May LMS Education Day, London Mathematical Society, London
- 2016 Feb Sigma Network North East and Yorkshire Hub Meeting, University of Leeds
- 2016 Feb Mathematics Teaching in China, Yorkshire Branch of the Mathematical Association
- 2015 Dec School of Mathematics Teaching Away Day, University of Leeds
- 2015 Sep CETL-MSOR Conference, University of Greenwich
- 2015 Jun Sigma Network North West and North Wales Hub Meeting, Liverpool J.M. University
- 2015 Jun 'How Hard Can Mathematics Be?', Yorkshire Branch of the Mathematical Association
- 2014 Nov PRiSM Launch Event, University of Leeds
- 2014 Oct Sigma Network Tutor Training, University of Sheffield
- 2014 Sep Workshop on innovative e-assessment, University of Leeds
- 2012 Oct Supporting Postgraduates who teach Mathematics & Statistics, University of Leeds

## Organiser/Committee Member

- Oct 2015 Higher Infinite Programme PhD Event, Isaac Newton Institute, Cambridge
- Sep 2015 British Logic Colloquium PhD Day, University of Cambridge
- Mar 2015 Leeds Logic Day, University of Leeds  
Sole organiser. Combined the inaugural Leeds PhD Logic Day and the Cambridge-Leeds Seminar.
- 2013-2014 Pure Maths Postgraduate Seminar, University of Leeds  
Sole Organiser. Re-established regular weekly talks after 3 years of stagnation.
- Jan 2014 British Postgraduate Model Theory Conference, University of Leeds
- Sep 2013 British Logic Colloquium PhD Day (Inaugural), University of Leeds
- 2010-2012 President then Treasurer of The Cambridge University Mathematical Society

## Invited Talks

- Jun 2016 Leeds Model Theory Seminar, University of Leeds
- May 2016 Model Theory Month in Münster, University of Münster, Germany
- Oct 2015 Higher Infinity Programme, Isaac Newton Institute, UK
- Sep 2015 Leeds Algebra, Logic and Algorithms Seminar, University of Leeds
- Jul 2015 LMS-EPSRC Durham Symposium, Permutation Groups and Transformation Semigroups
- Jan 2015 North British Semigroups and Applications Network, University of York
- Jan 2015 Lancashire-Yorkshire Model Theory Conference, University of Leeds
- Jan 2015 British Postgraduate Model Theory Conference, University of Oxford
- Oct 2014 Cambridge-Leeds Logic Seminar, University of Cambridge
- Sep 2014 British Logic Colloquium PhD Day, University of Central Lancashire
- Apr 2014 Cambridge-Leeds Logic Seminar, University of Leeds
- Nov 2013 Leeds Model Theory Seminar, University of Leeds
- Sep 2013 Cambridge-Leeds Logic Seminar, University of Cambridge
- Dec 2011 Part III Seminar Series, University of Cambridge