

# Curriculum vitae

Robert A. Hancock

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## PERSONAL INFORMATION

*Citizenship* UK  
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## EDUCATION

**University of Birmingham**, Birmingham, UK (Sept. 2014 – present).

PhD supervised by Dr Andrew Treglown.  
Funded by an EPSRC scholarship.

**University of St Andrews**, St Andrews, UK (Sept. 2010 – May 2014).

MMath Mathematics (Fast Track).  
Grade: “1st” (awarded June 2014).  
Overall Mark: 18.0 GPA on the 20pt scale used by St Andrews.  
Awards: Dean’s List Award (awarded each year 2011-2014).

**Wallace High School**, Stirling, UK (Aug. 2004 – June 2010).

Advanced Highers: (A) in Mathematics, Physics, Chemistry, Mechanics.  
Highers: (A) in Mathematics, Physics, Chemistry, Geography, English.  
Awards: 2010 Best in year Advanced Highers: Chemistry, Mechanics.  
2009 School Dux: Best overall performance in Higher exams.  
2009 Best in year Advanced Highers: Mathematics.  
2009 Best in year Highers: Chemistry, English, Geography.  
2005-10 Scottish Mathematical Challenge Gold Award.

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## PUBLICATIONS AND PREPRINTS

- (1) **On solution-free sets of integers** (with Andrew Treglown, *European Journal of Combinatorics*, **66** (2017), 110–128).
  - (2) **On solution-free sets of integers II** (with Andrew Treglown, *Acta Arithmetica*, **180** (2017), 15–33).
  - (3) **Independent sets in hypergraphs and Ramsey properties of graphs and the integers** (with Katherine Staden and Andrew Treglown, submitted, 32 pages).
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## CONFERENCE PAPERS

- (1) **Enumerating solution-free sets in the integers** (with Andrew Treglown, *Electronic Notes in Discrete Mathematics*, **56** (2016), 21–30).

Based on the first two papers above. The corresponding talk was given at the 1st IMA Conference on Theoretical and Computational Discrete Mathematics.

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## AWARDS

- Prize for the best Postgraduate poster, at the LMS/EMS Joint Anniversary Mathematical Weekend, University of Birmingham. Judges: Noga Alon and Aner Shalev.
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## SEMINAR AND CONFERENCES TALKS

- Extremal Combinatorics, University of Warwick (18th-22nd September 2017).
  - The 18th International Conference on Random Structures and Algorithms, Gniezno (7th-11th August 2017).
  - 26th British Combinatorial Conference, University of Strathclyde (3rd-7th July 2017).
  - Barcelona Combinatorics Seminar (6th June 2017).
  - Scottish Combinatorics Meeting, University of St Andrews (24th-25th April 2017).
  - SIAM Discrete Mathematics, Georgia State University, Atlanta, Georgia, USA (6th-10th June 2016).
  - Scottish Combinatorics Meeting, University of Glasgow (26th-27th April 2016).
  - 1st IMA Conference on Theoretical and Computational Discrete Mathematics, Derby (22nd-23rd March 2016).
  - Birmingham Combinatorics Seminar (18th January 2016).
  - Birmingham weekly Reading Group (on various topics): I have presented on 7 occasions.
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## CONFERENCES AND WORKSHOPS ATTENDED

- Interactions with Combinatorics, University of Birmingham (29th-30th June 2017).
  - Random Discrete Structures and Beyond, Barcelona Graduate School of Mathematics:
    - Week 2: David Conlon - Embedding large structures in random graphs (29th May-2nd June 2017).
    - Week 3: Seminar + BGSMath Workshop (6th-9th June 2017).
  - One-Day Meeting in Combinatorics, University of Oxford (24th May 2017).
  - 2017 Colloquia in Combinatorics, Queen Mary University of London/London School of Economics (10th-11th May 2017).
  - Gregory Gutin's 60th Birthday Conference, Royal Holloway University of London (7th-8th January 2017).
  - One-Day Meeting in Combinatorics, University of Oxford (1st June 2016).
  - 2016 Colloquia in Combinatorics, Queen Mary University of London/London School of Economics (11th-12th May 2016).
  - Birmingham Young Mathematician Colloquium, University of Birmingham (20th April 2016).
  - Workshop on Extremal and Probabilistic Combinatorics, University of Birmingham (21st-23rd September 2015).
  - LMS/EMS Joint Anniversary Mathematical Weekend, University of Birmingham (18th-20th September 2015).
  - LMS-CMI Research School "Regularity and Analytic Methods in Combinatorics", University of Warwick (1st-5th July 2015).
  - One-Day Meeting in Combinatorics, University of Oxford (27th May 2015).
  - 2015 Colloquia in Combinatorics, London School of Economics (14th May 2015).
  - Birmingham Young Mathematician Colloquium, University of Birmingham (13th May 2015).
  - Postgraduate Combinatorial Conference 2015, Queen Mary University of London (13th-15th April 2015).
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## TEACHING EXPERIENCE

- Postgraduate teaching assistant at the University of Birmingham (2014–present). I have assisted in example classes and computer labs for a number of undergraduate maths modules including: Number Theory, Communication Theory, Combinatorics, Linear Algebra, Multivariate Analysis, Numerical Programming and also a variety of 1st year topics.
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## OTHER EXPERIENCE

- Referee for 'Electronic Journal of Combinatorics' (twice) and 'Discrete Mathematics'.
- Summer 2013 - Summer Research Programme at the University of St Andrews School of Mathematics and Statistics. I worked with Dr Collin Bleak and other undergraduates on a problem in linear mathematics.
- Summer 2012 - Summer Research Programme at the University of St Andrews School of Mathematics and Statistics. I worked with Dr James Mitchell and other undergraduates on writing algorithms for the Semigroups package for GAP.