

Ewan Davies

Positions

University of Amsterdam
Postdoc

Amsterdam, Netherlands
October 2017 – December 2018

Education

London School of Economics and Political Science
Ph.D. Mathematics
Thesis title: *Extremal and probabilistic results for regular graphs*
Supervisors: Prof. Jozef Skokan, Dr. Peter Allen

London, UK
October 2013 – September 2017

Jesus College, University of Cambridge
M.Math. Mathematics, Distinction
B.A. (Hons) Mathematics, First Class

Cambridge, UK
September 2012 – June 2013
September 2009 – June 2012

Research Interests

Extremal and probabilistic combinatorics, graphs, Gibbs measures, hypergraphs, Ramsey theory

Awards and Grants

- 2016 Jan **Santander Scholarship**, Santander Travel Research Fund at LSE
- 2015 Oct **Cyril Offord Trust Award**, London School of Economics
- 2014 Jul **Mathematics Department New Teacher Prize**, London School of Economics
- 2013 Sep **Ph.D. Studentship**, London School of Economics
- Jun **Foundation Scholarship and R.A. Watchman Prize**, Jesus College, Cambridge
for top results in Part III Mathematics examinations
- 2012 Jun **Foundation Scholarship and Sir Harold Spencer Jones Prize**, Jesus College, Cambridge
for top results in Part II Mathematics examinations
- 2011 Jun **Foundation Scholarship and Ware Prize**, Jesus College, Cambridge
for top results in Part IB Mathematics examinations
- 2010 Jun **Foundation Exhibition and Bronowski Prize**, Jesus College, Cambridge
for top results in Part IA Mathematics examinations

Papers

Submitted

- [7] E. Davies, M. Jenssen, W. Perkins and B. Roberts. Tight bounds on the coefficients of partition functions via stability (2017). arXiv: [1704.07784](https://arxiv.org/abs/1704.07784).

Journal publications

- [6] E. Davies, M. Jenssen, W. Perkins and B. Roberts. Extremes of the internal energy of the Potts model on cubic graphs. *Random Structures & Algorithms* (to appear). arXiv: [1610.08496](https://arxiv.org/abs/1610.08496).
- [5] E. Davies, M. Jenssen, W. Perkins and B. Roberts. On the average size of independent sets in triangle-free graphs. *Proceedings of the American Mathematical Society* 146 (2018), 111–124. doi: [10.1090/proc/13728](https://doi.org/10.1090/proc/13728). arXiv: [1606.01043](https://arxiv.org/abs/1606.01043).

- [4] E. Davies, M. Jenssen and B. Roberts. Multicolour Ramsey numbers of paths and even cycles. *European Journal of Combinatorics* 63 (2017), 124–133. DOI: [10.1016/j.ejc.2017.03.002](https://doi.org/10.1016/j.ejc.2017.03.002). arXiv: [1606.00762](https://arxiv.org/abs/1606.00762).
- [3] E. Davies, M. Jenssen, W. Perkins and B. Roberts. Independent Sets, Matchings, and Occupancy Fractions. *Journal of the London Mathematical Society* 96 (2017), 47–66. DOI: [10.1112/jlms.12056](https://doi.org/10.1112/jlms.12056). arXiv: [1508.04675](https://arxiv.org/abs/1508.04675).

Conference publications

- [2] E. Davies, M. Jenssen, W. Perkins and B. Roberts. Tight bounds on the coefficients of partition functions via stability (extended abstract). *Electronic Notes in Discrete Mathematics* 61 (2017), 317–321. DOI: [10.1016/j.endm.2017.06.054](https://doi.org/10.1016/j.endm.2017.06.054).
- [1] E. Davies. Counting in hypergraphs via regularity inheritance (extended abstract). *Electronic Notes in Discrete Mathematics* 49 (2015), 413–417. DOI: [10.1016/j.endm.2015.06.058](https://doi.org/10.1016/j.endm.2015.06.058).

Talks

Conferences and workshops

2017	Aug	European Conference on Combinatorics, Graph Theory and Applications (EUROCOMB 2017)	Vienna, Austria
	May	Two one-day Colloquia in Combinatorics, LSE (invited)	London, UK
2016	Aug	Student Combinatorics Day (invited)	Birmingham, UK
2015	Aug	European Conference on Combinatorics, Graph Theory and Applications (EUROCOMB 2015)	Bergen, Norway
	Jul	Novi Sad Workshop on Foundations Of Computer Science	Novi Sad, Serbia
	Apr	Postgraduate Combinatorial Conference, QMUL	London, UK
2014	Jul	SUMMIT 190: Balogh, Csaba, Hajnal, and Pluhar are 190 (invited)	Szeged, Hungary

Seminars

2017	Oct	Discrete Mathematics Seminar, KdVI / CWI	Amsterdam, Netherlands
	Feb	Combinatorics Seminar	Oxford, UK
	Feb	Discrete Mathematics Seminar, KdVI / CWI	Amsterdam, Netherlands
	Jan	PhD Seminar on Combinatorics, Games and Optimisation, LSE	London, UK
2016	Apr	Seminário de Teoria da Computação, Combinatória e Otimização	São Paulo, Brazil
2015	Nov	Discrete Geometry and Combinatorics Seminar, UCL	London, UK
	Oct	Mathematics Lunchtime Seminar, LSE	London, UK
	Apr	Combinatorics Seminar, Freie Universität	Berlin, Germany
2013	Nov	Mathematics Lunchtime Seminar, LSE	London, UK

Research Visits

2016	Apr	Universidade de São Paulo , Departamento de Ciência da Computação with <i>Yoshiharu Kohayakawa</i>	São Paulo, Brazil
	Mar	Instituto Nacional de Matemática Pura e Aplicada with <i>Rob Morris</i>	Rio de Janeiro, Brazil
2015	Sep	Group Workshop , Institute of Mathematics, Freie Universität Berlin with <i>Tibor Szabó</i>	Děčín, Czech Republic

Schools

2015	Jul	Regularity and Analytic Methods in Combinatorics University of Warwick	Coventry, UK
2014	Jun	Budapest Summer School in Discrete Mathematics Eötvös Loránd University	Budapest, Hungary

Teaching

2016		Mathematics Support Centre , one-to-one tuition in a variety of courses	LSE
2015		Mathematics Support Centre , one-to-one tuition in a variety of courses	LSE
		Real Analysis (MA203) , class teacher for 2 groups of 15 students	LSE
2014		Graph Theory (MA316) , class teacher for 1 group of 15 students	LSE
		Further Mathematical Methods (MA212) , class teacher for 3 groups of 15 students	LSE
2013		Mathematical Methods (MA100) , class teacher for 3 groups of 15 students	LSE

Academic Service

Peer review

European Journal of Combinatorics

Journal of Graph Theory

Other Experience

Athena Swan Assessment Team Member, London School of Economics and Political Science, Jan 2016

Green Impact Team Member, London School of Economics and Political Science, Sep 2015