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Research Interests: Extremal Graph Theory, Random Cayley Graphs, Extremal Combinatorics.

University Education:

- 10/2004 - 08/2007 Ph.D. in Mathematics, University of Cambridge.
Academic Advisor: Imre Leader.
Date of Viva: September 25th 2007.
- 10/2003 - 06/2004 Certificate of Advanced Study in Mathematics (Part III),
University of Cambridge. (With Distinction.)
- 10/2000 - 06/2003 B.A. in Mathematics, University of Cambridge.
(With first class in all three years.)

Positions Held:

- 09/2011 - 08-2013 Research Fellow, Queen Mary, University of London.
- 12/2010 - 08/2011 Postdoctoral Researcher, Charles University, Prague.
- 12/2009 - 11/2010 Postdoctoral Research Fellow, University of Warwick.
- 01/2008 - 11/2009 Research Fellow, University of Birmingham.
- 09/2007 - 12/2007 Guest Lecturer, Umeå University.

Teaching Experience:

- 02/2011 - 05/2011 New Trends in Graph Theory.
- 10/2010 - 11/2010 Discrete Mathematics and its Applications I.
- 01/2009 - 04/2009 Communication Theory.
- 09/2008 - 05/2009 Supervised an M.Sci. student (Project entitled 'Hamilton cycles').
I have given a three-lecture introductory course on *Sets and Numbers* for the first year mathematics undergraduates of Girton, Gonville and Caius, Newnham, and Pembroke colleges.
- September 2006 Undergraduate Supervisor, University of Cambridge. (I have supervised undergraduates on the following courses of the Cambridge Tripos: *Algebra and Geometry*, *Galois Theory*, *Graph Theory* and *Probability*.)
- 10/2003 - 06/2007

Other Professional Activities:

1. Co-organizer of 'Extremal Combinatorics Workshop', 15-16 September 2008, School of Mathematics, University of Birmingham.

2. Referee for: ‘Discrete Mathematics’, ‘Combinatorics, Probability and Computing’, ‘European Journal of Combinatorics’, ‘Information Processing Letters’, ‘Journal of Graph Theory’, and ‘ACM-SIAM Symposium on Discrete Algorithms’.
3. Internal examiner for MPhil. Thesis.

Awards: Smith Prize, University of Cambridge, 2006.

Talks at seminars and conferences:

1. A proof of the dense version of Lovász conjecture, Eurocomb 2011, Budapest, August 30, 2011.
2. Random Cayley graphs, Midsummer Combinatorial Workshop XVII, Charles University, July 26, 2011.
3. Randomised algorithms for the majority problem, Working Seminar on Formal Models, Discrete Structures, and Algorithms, Masaryk University, May 2, 2011.
4. Guessing numbers of graphs, DIMAP Workshop on Combinatorics and Graph Theory, University of Warwick, April 4, 2011.
5. Hamilton cycles in dense vertex-transitive graphs, Graph Theory Seminar, University of West Bohemia in Pilsen, March 22, 2011.
6. Winning lines in generalised Tic-Tac-Toe, Pure Mathematics Seminar, Royal Holloway, November 23, 2010.
7. Hamilton cycles in dense vertex-transitive graphs, Combinatorics Seminar, University of Birmingham, November 22, 2010.
8. A q -analogue of the four functions theorem, DIMAP Retreat, University of Warwick, September 28, 2010.
9. Randomized algorithms for the majority problem, DIMAP Junior seminar, University of Warwick, February 3, 2010.
10. Degree sequences forcing Hamilton cycles in directed graphs, Combinatorics Seminar, University of Birmingham, October 9, 2009.
11. Randomized algorithms for the majority problem, Eurocomb 2009, Bordeaux, September 10, 2009.
12. Chromatic numbers of random Cayley graphs, The 14th International Conference on Random Structures and Algorithms, Poznań, August 4, 2009.
13. Guessing numbers of graphs, Discrete Geometry and Combinatorics Seminar, University College London, March 25, 2009.
14. Randomized algorithms for the majority problem, Combinatorics Seminar, University of Birmingham, February 5, 2009.
15. Guessing numbers of graphs, Combinatorics Seminar, University of Birmingham, November 27, 2008.

16. Random Latin square graphs, Fête of Combinatorics and Computer Science, Keszthely, August 15, 2008.
17. Clique numbers of random Cayley graphs, Combinatorics Seminar, University of Birmingham, January 28, 2008.
18. Random Latin square graphs — clique numbers, Combinatorics Seminar, Umeå, November 15, 2007.
19. Lines in Hales-Jewett cubes, Combinatorics Seminar, Umeå, September 6, 2007.
20. Positional games, Postgraduate Seminar, University of Birmingham, March 21, 2007.
21. Induced lines in Hales-Jewett cubes, Horizon of Combinatorics, Balatonalmádi, July 22, 2006.
22. Induced lines in Hales-Jewett cubes, Combinatorial Theory Seminar, University of Oxford, January 24, 2006.
23. Lines in Hales-Jewett cubes, Combinatorics Seminar, University of Cambridge, November 24, 2005.
24. How many winning lines?, Prize Essay Seminar Series, University of Cambridge, November 18, 2005.
25. The Alon-Roichman theorem, Combinatorics Seminar, University of Cambridge, May 19, 2005.

Publications:

Journal Papers:

1. D. Christofides and [K. Markström](#), Random Latin square graphs, to appear in Random Structures Algorithms.
2. D. Christofides, A q -analogue of the four functions theorem, to appear in *Combinatorica*.
3. D. Christofides and [K. Markström](#), The guessing number of undirected graphs, *Electron. J. Combin.* **18** (2011), Research Paper 192, 19pp.
4. D. Christofides, [P. Keevash](#), [D. Kühn](#) and [D. Osthus](#), [A semiexact degree condition for Hamilton cycles in digraphs](#), *SIAM J. Discrete Math.*, **24** (2010), 709–756.
5. D. Christofides, [Influences of monotone Boolean functions](#), *Discrete Math.*, **310** (2010), 1401–1402.
6. D. Christofides, [On randomized algorithms for the majority problem](#), *Discrete Appl. Math.*, **157** (2009), 1481–1485.
7. D. Christofides and [K. Markström](#), [Expansion properties of random Cayley graphs and vertex transitive graphs](#), *Random Structures Algorithms*, **32** (2008), 88–100.
8. D. Christofides, [Induced lines in Hales-Jewett cubes](#), *J. Combin. Theory Ser. A*, **114** (2007), 906–918.

9. D. Christofides, [Pair lengths of product graphs](#), Discrete Math., **306** (2006), 2111–2114.

Conference Papers:

1. D. Christofides, [J. Hladký](#) and [A. Máthé](#), The Lovász conjecture for dense graphs, accepted.
2. D. Christofides, [Randomized algorithms for the majority problem](#), Electronic Notes in Discrete Mathematics, **34** (2009), 453–457.

Preprints:

1. D. Christofides, K. Edwards and [A. D. King](#), A note on hitting maximum and maximal cliques with a stable set, submitted.
2. D. Christofides and [K. Markström](#), The thresholds for diameter 2 in random Cayley graphs, submitted.
3. D. Christofides, A counterexample to a conjecture of Simonovits and Sós, submitted.
4. D. Christofides, [J. Hladký](#) and [A. Máthé](#), Hamilton cycles in dense vertex-transitive graphs, submitted.
5. D. Christofides, [D. Kühn](#) and [D. Osthus](#), Edge-disjoint Hamilton cycles in graphs, submitted.
6. D. Christofides, [P. Keevash](#), [D. Kühn](#) and [D. Osthus](#), Finding Hamilton cycles in robustly expanding digraphs, submitted.

Academic Referees:

1. Imre Leader, Department of Pure Mathematics and Mathematical Statistics, Centre for Mathematical Sciences, University of Cambridge, Cambridge CB3 0WB, United Kingdom, I.Leader@dpmms.cam.ac.uk.
2. Deryk Osthus, School of Mathematics, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom, osthus@maths.bham.ac.uk.
3. Dan Král', Faculty of Mathematics and Physics, Charles University, Malostranské náměstí 25, 188 00 Prague, Czech Republic, kral@kam.mff.cuni.cz.
4. Andrew Thomason, Department of Pure Mathematics and Mathematical Statistics, Centre for Mathematical Sciences, University of Cambridge, Cambridge CB3 0WB, United Kingdom, A.G.Thomason@dpmms.cam.ac.uk.