

## PERSONAL RECORD

### DUDLEY STARK

#### Academic Qualifications

- 1994 Ph.D. in mathematics, University of Southern California.
- 1985 M.A. in mathematics, University of California, Los Angeles.
- 1983 B.S. in physics, B.A. in mathematics, University of Rochester.

#### Membership of Professional Bodies

- 2016 – present Fellow of the Higher Education Academy.
- 2006 – present London Mathematical Society.
- 2003 – 2014 American Mathematical Society.
- 1992 – 2005 Institute of Mathematical Statistics.

#### Appointments Held

- 10/05 – present Reader, Queen Mary, University of London.
- 09/10 – 09/11 Secondment, University of Bristol.
- 01/09 – 06/09 Visiting Scholar, Green-Templeton College, University of Oxford.
- 10/02 – 09/05 Lecturer B, Queen Mary, University of London.
- 02/02 – 10/02 Lecturer A, Queen Mary, University of London.
- 01/00 – 01/02 Research Lecturer, Queen Mary, University of London.
- 11/97 – 12/99 Postdoctoral Fellow, BRIMS, Hewlett Packard, Bristol, England.
- 06/96 – 11/97 Research Fellow, University of Melbourne, Australia.
- 09/94 – 06/96 Postdoctoral Assistant, University of Zürich, Switzerland.
- 09/89 – 06/94 Teaching Assistant, University of Southern California.
- 09/83 – 06/85 Teaching Assistant, University of California, Los Angeles.

**Non-academic Employment:**

09/85 – 08/89    Member of Technical Staff    Hughes Aircraft Company  
El Segundo, California.

Helped to design and code the data analysis portion of the radar test software for the Magellan Venus radar mapping mission. Responsible for software quality assurance.

## TEACHING

### Departmental Teaching Duties

<u>SESSION</u>	<u>COURSES TAUGHT</u>
2023-2024	MTH5131 Actuarial Statistics MTH787P Advanced Derivatives Pricing and Risk Management New Module Development: Regulatory Risk Analytics
2022-2023	MTH5131 Actuarial Statistics MTH6154 Financial Mathematics I
2021-2022	MTH5131 Actuarial Statistics MTH6154 Financial Mathematics I
2020-2021	MTH5131 Actuarial Statistics MTH6154 Financial Mathematics I
2019-2020	MTH6141 Random Processes
2018-2019	MTH6136 Statistical Theory MTHM007 Measure Theory and Probability
2017-2018	MTH6136 Statistical Theory MTH6154 Financial Mathematics I
2016-2017	MTH6136 Statistical Theory MTHM012 Topics in Probability and Stochastic Processes
2015-2016	MTH6136 Statistical Theory MTHM012 Topics in Probability and Stochastic Processes
2014-2015	MTH6100 Actuarial Mathematics MTHM012 Topics in Probability and Stochastic Processes
2013-2014	MTH6100 Actuarial Mathematics MTHM012 Topics in Probability and Stochastic Processes
2012-2013	MTH6100 Actuarial Mathematics MTHM012 Topics in Probability and Stochastic Processes
2011-2012	MTH6126 Metric Spaces MTHM012 Topics in Probability and Stochastic Processes
2009-2010	SEJ026 Essential Foundation Mathematics MTH 6121 Introduction to Mathematical Finance
2008-2009	MTH 6121 Introduction to Mathematical Finance
2007-2008	MAS 231 Geometry II MAS 343 Introduction to Mathematical Finance
2006-2007	MAS 231 Geometry II

	MAS 343	Introduction to Mathematical Finance
	MTHM012	Topics in Probability and Stochastic Processes
2005–2006	MAS 228	Probability II
	MAS 231	Geometry II
	MTHM012	Topics in Probability and Stochastic Processes
2004–2005	MAS 228	Probability II
	MTHM012	Topics in Probability and Stochastic Processes
2003–2004	MAS 228	Probability II
	MTHM007	Measure Theory and Probability
	MTHM012	Topics in Probability and Stochastic Processes
2002–2003	MAS 223	Complexity and Optimisation in Operational Research (taught jointly with Dr. Peter Dobcsanyi)
	MAS 307	Applied Stochastic Processes
	MTHM012	Topics in Probability and Stochastic Processes
2001–2002	MAS 223	Complexity and Optimisation in Operational Research (taught jointly with Professor Wilfrid Hodges)
	MAS 307	Applied Stochastic Processes
	MTHM007	Measure Theory and Probability
	MTHM012	Topics in Probability and Stochastic Processes
2000–2001	MAS 210	Graph Theory (taught jointly with Professor Wilfrid Hodges)
	MAS 307	Applied Stochastic Processes
	MTHM012	Topics in Probability and Stochastic Processes

<u>SESSION</u>	<u>EXERCISE CLASSES AND COMPUTER LABORATORIES</u>
2020–2021	MTH 4213 Numbers, Sets and Functions
2019–2020	MTH 4116 Probability and Statistics I
	MTH 4213 Numbers, Sets and Functions
2018–2019	MTH 4207 Introduction to Probability
	MTH 4213 Numbers, Sets and Functions
	MTH 6154 Financial Mathematics I
2016–2017	MTH 4110 Mathematical Structures
	MTH 5122 Statistical Methods
2015–2016	MTH 4110 Mathematical Structures
	MTH 5112 Linear Algebra I
2014–2015	MTH 4107 Introduction to Probability
	MTH 4110 Mathematical Structures

	MTH 5104	Convergence and Continuity
2013–2014	MTH 4110	Mathematical Structures
2012–2013	MTH 4105	Introduction to Mathematical Computing
	MTH 4110	Mathematical Structures
2011–2012	MTH 4105	Introduction to Mathematical Computing
	MTH 6100	Actuarial Mathematics
2009–2010	MTH 6120	Further Topics in Mathematical Finance
2006–2007	MAS 108	Probability I
	MAS 114	Geometry I
2005–2006	MAS 101	Calculus I
2004–2005	MAS 224	Actuarial Mathematics
	MAS 101	Calculus I
2003–2004	MAS 232	Statistical Modelling I
	MAS 106	Matrices and Geometry
	MAS 108	Probability I
2002–2003	MAS 106	Matrices and Geometry
	MAS 108	Probability I
	MAS 109	Statistics I
	MAS 224	Actuarial Mathematics
2001–2002	MAS 106	Matrices and Geometry
	MAS 108	Probability I
	MAS 109	Statistics I
2000–2001	MAS 106	Matrices and Geometry
	MAS 108	Probability I
	MAS 109	Statistics I
	MAS 200	Actuarial Statistics
	MAS 210	Graph Theory
1999–2000	MAS 200	Actuarial Statistics

### Supervision of Students:

- M.Sc. student supervised, Papageorgiou Ioannis, graduated with distinction, 2002. Project title: On a Theorem of Shift-Tightness.
- B.Sc student supervised, Ryan Condron, graduated 2003. Project title: An Analysis Of Shuffling by Machine.

- M.Sc. student supervised, Luke Barrow, graduated 2006. Project title: Pricing Call Options, graduated with merit.
- Ph.D. student supervised, third supervisor for Jan Frederik Forst (computer science), 2009. Project title: Probabilistic Information Retrieval.
- Ph.D. student supervised, second supervisor for Irina Galstian, 2011-2013.
- Ph.D. student supervised, third supervisor for Paul Mortimer, 2012-2013.
- M.Sc. student supervised, Amir Dastjerdi. Project title: Variable Interest Rates, 2012-2014.
- M.Sc. student supervised, Rebecca Townsend, graduated with merit. Project title: Poisson Approximation for Relative Entropy, 2012-2013.
- M.Sc. student supervised, Mohammed Karim. Project title: Information Loss in Top-to-Random Shuffling, 2012-2013.
- M.Sc. student supervised, Cadron Marlin. Project title: The Distribution of the Loan Portfolio Value, 2013-2014.
- M.Sc. student supervised, Dao Shyan Liew. Project title: The Copula Method for Estimating Risk, 2016–2017.
- B.Sc student supervised, Sahed Ahmed, Project title: Martingales and Gambling, 2016–2017.
- B.Sc student supervised, Daniil Kolodkin, Project title: Martingales for American Options, 2017–2018.
- B.Sc student supervised, Natasha Perkins, Project title: Martingales: Probability and the Efficacy of Gambling, 2018–2019.
- Ph.D student assessed, second assessor for Iftikhar Ahmed, 2020-present.
- M.Sc. student supervised, Maximillian Michaelides, 2021-2022. Project title: Coherent Measures of Risk.

- M.Sc. student supervised, Quentin Berry, 2021-2022. Project title: Coherent Measures of Risk: A study on the subadditivity of VaR for discrete random variables.
- M.Sc. student supervised, Anand Panesar, 2021-2022. Project Title: A study on coherent measures of risk.
- B.Sc S&E BAME Intern supervised, Yasir Barlas, 2021. Project title: Research into Total Variation Distance for the Law of Small Numbers.
- M.Sci. student supervised, Mohammed Rahman, 2021-2022. Project Title: The Janson Inequalities
- M.Sci. student supervised, Junyi Yang, 2022-2023. Project Title: Jensen's Inequality
- M.Sci. student supervised, Kiranpal Bhattel, 2023, Project Title: Coherent measures of risk: a rigorous evaluation of existing and emerging measures
- M.Sci. student supervised, Aisha Khalid, 2023, Project Title: Factor investing: with special emphasis on the case of momentum investing
- M.Sci. student supervised, Abdul Sami, 2023, Project Title: Factor investing: the case of momentum investing
- M.Sci. student supervised, Syed Jahim, 2023, Project Title: Factor investing: the case of momentum investing
- Ph.D. student supervised, second supervisor for Christopher Morrison, 2022-present.

## RESEARCH AND SCHOLARSHIP

### Publications and Preprints

1. Dudley Stark, First occurrence in pairs of long words: a Penney-ante conjecture of Pevzner. *Combinatorics, Probability & Computing*, **4**, 279–285 (1995).
2. Richard Arratia, Dudley Stark and Simon Tavaré. Total variation asymptotics for Poisson process approximations of logarithmic combinatorial assemblies. *Annals of Probability*, **23**, 1347–1388 (1995).
3. Boele Braaksma and Dudley Stark. A Darboux-type theorem for slowly varying functions. *Journal of Combinatorial Theory, Series A*, **77**, 51–66 (1997).
4. Dudley Stark. Explicit non-zero limits of total variation distance in independent Poisson approximations of logarithmic combinatorial assemblies. *Combinatorics, Probability & Computing*, **6**, 87–106, (1997).
5. Dudley Stark. Total variation asymptotics for independent process approximations of logarithmic multisets and selections. *Random Structures and Algorithms*, **11**, 51–80 (1997).
6. Dudley Stark and Nicholas Wormald. Asymptotic enumeration of convex polygons. *Journal of Combinatorial Theory, Series A*, **80**, 196–217 (1997).
7. Arnold Knopfmacher, Andrew Odlyzko, Boris Pittel, L. Bruce Richmond, Dudley Stark, George Szekeres and Nicholas Wormald. On set partitions with unequal parts. *Electronic Journal of Combinatorics*, **6** R2, 36 pp. (1999).
8. Dudley Stark. Total variation asymptotics for refined Poisson process approximations of logarithmic combinatorial assemblies. *Combinatorics, Probability & Computing*, **8**, 567–598 (1999).
9. Ayalvadi Ganesh, Ben Hambly, Neil O’Connell, Dudley Stark, and Paul Upton. Poissonian behavior of Ising spin systems in an external field. *Journal of Statistical Physics*, **99**, 613–626 (2000).

10. Ben Hambly, Peter Keevash, Neil O’Connell and Dudley Stark. The characteristic polynomial of a random permutation matrix. *Stochastic Processes and Applications*, **90**, 335–346 (2000).
11. Dudley Stark. Compound Poisson approximations of subgraph counts in random graphs. *Random Structures & Algorithms*, **18**, 39–60 (2001).
12. Ayalvadi Ganesh, Neil O’Connell and Dudley Stark. Information loss in riffle shuffling. *Combinatorics, Probability & Computing*, **11**, 79–95 (2002).
13. Peter Cameron and Dudley Stark. A prolific construction of strongly regular graphs with the  $n$ -e.c. property. *Electronic Journal of Combinatorics*, **9** R31, 12 pp. (2002).
14. Dudley Stark. Information loss in top to random shuffling. *Combinatorics, Probability & Computing*, **11**, 607–627 (2002).
15. Dudley Stark. The vertex degree distribution of random intersection graphs. *Random Structures & Algorithms*, **24**, 249–258 (2004).
16. Dudley Stark. Convergence in distribution for subset counts between random sets. *Electronic Journal of Combinatorics*, **11** R59, 9pp. (2004).
17. Boris Granovsky and Dudley Stark. Asymptotic enumeration and logical limit laws for expansive multisets. *Journal of the London Mathematical Society* (2), **73**, 252–272 (2006).
18. Dudley Stark. Logical limit laws for logarithmic structures. *Mathematical Proceedings of the Cambridge Philosophical Society*, **140**, 537–544 (2006).
19. Peter Cameron, Thomas Prellberg and Dudley Stark. Asymptotic enumeration of incidence matrices. *Journal of Physics: Conference Series* **42**, 59–70 (2006).
20. Jerzy Jaworski, Michał Karoński and Dudley Stark. The degree of a typical vertex in generalized random intersection graph models, *Discrete Mathematics*, **306**, 2152–2165 (2006).

21. Peter Cameron, Thomas Prellberg and Dudley Stark. Asymptotics for incidence matrix classes. *Electronic Journal of Combinatorics*, **13** R85, 19pp. (2006).
22. Jerzy Jaworski and Dudley Stark. The vertex degree distribution of passive random intersection graph models. *Combinatorics, Probability & Computing* **17**, 549–558 (2008).
23. Boris Granovsky, Dudley Stark and Michael Erlihson. Meinardus' theorem on weighted partitions: extensions and a probabilistic proof. *Advances in Applied Mathematics* **41**, 307–328 (2008).
24. Dudley Stark, Peak production in an oil depletion model with triangular field profiles. *Journal of Interdisciplinary Mathematics* **11**, 695–706 (2008).
25. Dudley Stark. The limit of the statistic R/P in models of oil discovery and production. *Applied Mathematical Sciences* **3**, 2703–2706 (2009).
26. Peter Cameron, Thomas Prellberg and Dudley Stark. Asymptotic enumeration of 2-covers and line graphs. *Discrete Mathematics* **310**, 230–240 (2010).
27. Peter Cameron, Mihyun Kang and Dudley Stark. Random preorders and alignments. *Discrete Mathematics* **310**, 591–605 (2010).
28. Katarzyna Rybarczyk and Dudley Stark. Poisson approximation of the number of cliques in random intersection graphs. *Journal of Applied Probability* **47**, 826–840 (2010).
29. Dudley Stark. Oil production models with normal rate curves. *Probability in the Engineering and Informational Sciences* **25**, 205–217 (2011).
30. Dudley Stark. The edge correlation of random forests. *Annals of Combinatorics* **15**, 529–539 (2011).
31. Boris Granovsky and Dudley Stark. A Meinardus theorem with multiple singularities. *Communications in Mathematical Physics* **314**, 329–350 (2012).

32. Dudley Stark. The asymptotic number of spanning forests of complete bipartite labelled graphs. *Discrete Mathematics* **313**, 1256-1261 (2013).
33. Boris Granovsky and Dudley Stark. Asymptotic enumeration of decomposable combinatorial structures with multiple singularities (Abstract). *Electronic Notes in Discrete Mathematics* **43**, 15–20 (2013).
34. John Baptist Gauci, Anthony J.W. Hilton and Dudley Stark. Wiggles and finitely discontinuous  $k$ -to-1 functions between graphs. *Journal of Graph Theory* **74**, 275–308 (2013).
35. Boris Granovsky and Dudley Stark. Developments in the Khintchine-Meinardus probabilistic method for asymptotic enumeration. *Electronic Journal of Combinatorics*, **22**, Paper No. 4.32, 26pp. (2015).
36. Dudley Stark. Bin sizes in time-inhomogeneous infinite Polya processes. *Statistics and Probability Letters*, **113**, 49–53 (2016).
37. Katarzyna Rybarczyk and Dudley Stark. Poisson approximation of counts of subgraphs in random intersection graphs. *Discrete Mathematics*, **340**, 2183–2193 (2017).
38. Dudley Stark and Dominic Cortis. Balancing the book: is it necessary and sufficient? *Journal of Gambling Business and Economics*, **11** 1–6 (2017).
39. Dudley Stark and Nicholas Wormald. The probability of nonexistence of a subgraph in a moderately sparse random graph, *Combinatorics, Probability & Computing*, **27** 672–715 (2018).
40. Dudley Stark. The component counts of random injections. *Electronic Journal of Combinatorics*, **28**, Paper No. 1.5, 15 pp, (2021).
41. Dudley Stark. The asymptotic number of weighted partitions with a given number of parts. *The Ramanujan Journal*, **57**, 949–967 (2022). <https://doi.org/10.1007/s11139-020-00350-2>
42. Dudley Stark. The component counts of random functions. *Discrete Mathematics*, **345** Paper No. 112977, 9 pp, (2022).

43. Dudley Stark. The small cycle counts of random feedback shift registers. *The Australasian Journal of Combinatorics*, **86**, 414–422, (2023).
44. Alexander Gnedin and Dudley Stark. Random partitions and queues. *Advances in Applied Mathematics*, **149** 102549, (2023).
45. Yasir Barlas (BAME Intern) and Dudley Stark. An investigation into the law of small numbers using R. *Ball State Undergraduate Mathematics Exchange*, bf 17 2–14, (2023)
46. Christo Morison, Dudley Stark and Weini Huang. Single-cell mutational burden distributions in birth-death processes. Submitted.
47. Dudley Stark. Markov chains generating random permutations and set partitions. Submitted.
48. Dudley Stark and Nicholas Wormald. The distribution of small subgraph counts in a moderately sparse random graph. Preprint.

### **Book Reviews**

1. Dudley Stark, “Logarithmic Combinatorial Structures: A Probabilistic Approach by Richard Arratia, A. D. Barbour, and Simon Tavaré”. *London Mathematical Society Bulletin*, (2005), 157-159.

### **Research Funding Secured**

- Grant of £760 awarded to attend the Workshop on Combinatorial and Computational Aspects of Statistical Physics/Random Graphs and Structures at the Isaac Newton Institute, Cambridge, September 2002.
- Royal Society Conference Grant of £815 awarded to attend IMS meeting in Barcelona, 2004.
- Royal Society Conference Grant of £506 awarded to attend Random Structures and Algorithms meeting in Poznan, 2005.

### **Service as Referee**

I have served as referee for the following journals.

- Advances in Probability
- Algorithmica
- Annales de l'Institut Fourier
- Annals of Probability
- Ars Combinatoria
- Bernoulli
- Combinatorics, Probability & Computing
- Computational Methods and Function Theory
- Contributions to Discrete Mathematics
- Discrete Analysis
- Discrete Mathematics
- Electronic Communications in Probability
- Electronic Journal of Combinatorics
- Electronic Journal of Probability
- European Journal of Combinatorics
- Frontiers of Mathematics in China
- Formal Power Series and Algebraic Combinatorics (conference) 2016
- IEEE Transactions on Network Science and Engineering
- Information Processing Letters
- International Journal of Number Theory
- Journal of Applied Probability
- Journal of Combinatorial Theory, Series A

- Journal of Combinatorial Theory, Series B
- Journal of the London Mathematical Society
- Latin American Journal of Probability and Mathematical Statistics
- Mathematical Biosciences
- Mathematical Proceedings of the Cambridge Philosophical Society
- Monatshefte für Mathematik
- Osaka Journal of Mathematics
- Random Structures & Algorithms
- Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas
- Risks
- SIAM Journal on Discrete Mathematics
- Symposium on Discrete Algorithms (conference) 2011, 2015
- Statistics & Probability Letters
- Stochastic Processes and their Applications
- The Ramanujan Journal
- Theoretical Computer Science

I reviewed a book proposal for Springer in 2007.

I reviewed a research proposal for the Dutch National Science Council in 2007.

Peer-reviewer for South Africa's National Research Foundation in 2011.

### **National or International Standing**

I have given presentations at these meetings and seminars.

- 26 November, 1997 Southwest Probability Seminar, BRIMS, Hewlett Packard Corporation. “A total variation distance invariance principle for primes, permutations and polynomials” (invited).
- August, 1997, IMS, Park City Utah. Special session on Random Combinatorial Structures. “A total variation distance invariance principle for primes, permutations and polynomials” (invited)
- 26 November, 1997 Southwest Probability Seminar, BRIMS, Hewlett Packard Corporation. “A total variation distance invariance principle for primes, permutations and polynomials” (invited).
- 17 February, 1998 University of Cambridge Statistical Laboratory Seminar. “A total variation distance invariance principle for primes, permutations and polynomials” (invited).
- 12 June, 1998 Department of Applied Mathematics, University of Zürich. “Subgraph counts in the random graph at threshold” (invited).
- 23 October, 1998, University of Bristol, Statistics and Probability Seminars. “Poisson approximation for mixing sequences” (invited).
- 16 February 1999, Universität Bielefeld, 5th Workshop on Probability Theory and Its Applications. “Compound Poisson approximation for subgraphs counts of random graphs”.
- 25th-27th January 1999, Department of Computer Science University of Liverpool, Phase Transition Phenomena in Combinatorial Problems, (Workshop). “Compound Poisson approximation for subgraphs counts of random graphs”.
- July 1999 17th British Combinatorial Conference University of Kent at Canterbury. “Distribution of small subgraph counts in a random graph”.
- July 2001, 18th British Combinatorial Conference University of Sussex, Brighton. “A Prolific Construction of Strongly Regular Graphs with the  $n$ -e.c. property”.

- August 2001, 10th International Conference on Random Structures and Algorithms, Poznan. “A Prolific Construction of Strongly Regular Graphs with the  $n$ -e.c. property”.
- 7th February 2002, University of Essex, Mathematics Seminar. “Information Loss in Top to Random Shuffling” (invited).
- 4th September 2002, Isaac Newton Institute, Workshop on Combinatorial and Computational Aspects of Statistical Physics/Random Graphs and Structures, “Information Loss in Top to Random Shuffling” (invited).
- 17th February 2003, Queen Mary, University of London, Anniversary Lecture. “Poisson approximation and card shuffling”. (invited)
- 8th April 2003, Adam Mickiewicz University Mathematics Seminar, “Poisson approximation and card shuffling”. (invited)
- 22nd May 2003, University of Cambridge Combinatorics Seminar, “A Prolific Construction of Strongly Regular Graphs with the  $n$ -e.c. property” (invited)
- 13th August 2003, 11th International Conference on Random Structures and Algorithms, Poznan, Poland. “The vertex degree distribution of random intersection graphs”.
- 1st March 2004, Pure Mathematics Seminar, Queen Mary University of London, “Probability and permutations”.
- 24th June 2004, XI-th International Summer Conference on Probability and Statistics, Sozopol, Bulgaria. “Asymptotic enumeration and logical limit laws for expansive multisets and selections” (invited).
- 28th July 2004, IMS/Bernoulli Society Meeting, Barcelona, “Asymptotic enumeration and logical limit laws for expansive multisets and selections”.
- January 27, 2005, Pure Mathematics Seminar, University of Exeter, “Random Preorders” (invited).

- March 3, 2005, CDAM Seminar on Discrete and Applicable Mathematics, London School of Economics, “Random Preorders” (invited).
- July 14, 2005, 20th British Combinatorial Conference, University of Durham. “Random Preorders”.
- 4th August 2005, 12th International Conference on Random Structures and Algorithms, Poznan, Poland. “Random Preorders”.
- 21st December 2005, Combinatorics Seminar, Technion - Israel Institute of Technology, Haifa, Israel. “Vertex degree in random intersection graphs” (invited).
- 25th December 2005, Combinatorics Seminar, Tel Aviv University, Israel. “Vertex degree in random intersection graphs” (invited).
- 21 January 2005, Combinatorics Workshop, Queen Mary, University of London. “Random Preorders”.
- 28th April 2006, Research Seminar, Algorithms and Complexity Group, Institute of Computer Science, Humboldt University, Germany. “Vertex degree in random intersection graphs” (invited).
- 11th July 2006, Sixth Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications, Prague, Czech Republic. “Random preorders and alignments”.
- 23rd March 2007, Combinatorics Workshop, Queen Mary, University of London. “Asymptotic enumeration of 2-covers and line graphs”.
- 20th June 2007, Seminar in Enumerative Combinatorics and Random Structures, Centre de Recerca Matemàtica, Barcelona, “Vertex degree in random intersection graphs” (invited).
- 28th June 2007, Conference on Enumeration and Probabilistic Methods in Combinatorics, Centre de Recerca Matemàtica, Barcelona, “Asymptotic enumeration of line graphs and 2-covers”.
- 13th July 2007, 21st British Combinatorial Conference, University of Reading, “Asymptotic enumeration of line graphs and 2-covers”.

- 25th June 2008, Workshop on Combinatorial and Probabilistic Inequalities, Isaac Newton Institute, Cambridge, “Poisson approximation of the number of cliques in random intersection graphs”.
- 29th January 2009, Networks Group Seminar, Queen Mary, University of London, “Coupling and the M/M/1 queue”.
- 13th February 2009, Combinatorics Workshop, Queen Mary, University of London, “The edge correlation of random forests”.
- 27th February 2009, Combinatorial Theory Seminar, University of Oxford, “The edge correlation of random forests” (invited).
- 24th March 2009, Pure Mathematics Seminar, Royal Holloway, University of London, “Poisson approximation of the number of cliques in random intersection graphs” (invited).
- 7th August 2009, 14th International Conference on Random Structures and Algorithms, Poznan, Poland. “The edge correlation of random forests”.
- 5th November 2010, Probability Seminar, University of Bristol, “Meinardus’ theorem on weighted partitions: extensions and a probabilistic proof”.
- 1st April 2011, Combinatorics Workshop, Queen Mary, University of London, “The asymptotic number of spanning forests of complete bipartite graphs”.
- 7th July 2011, 23rd British Combinatorial Conference, University of Exeter, “The asymptotic number of spanning forests of complete bipartite graphs”.
- 10th May 2013, Random Combinatorial Structures and Statistical Mechanics Workshop, held jointly between Warwick and Queen Mary, Venice, Italy, “Developments in the Khintchine-Meinardus probabilistic method for asymptotic enumeration”.
- 24th July 2013, London Mathematical Society – EPSRC Durham Symposium on Graph Theory and Interactions, “Poisson approximation of counts of subgraphs in random intersection graphs”.

- 3rd July 2014, 11th International Vilnius Conference on Probability and Mathematical Statistics, “Poisson approximation of counts of subgraphs in random intersection graphs”.
- 7th August 2017, 18th International Conference on Random Structures and Algorithms, Gniezno, Poland, “The probability of nonexistence of a subgraph in a moderately sparse random graph”.
- 23rd February 2018, Geometry-Topology-Genomics Study Group, Queen Mary, University of London, “Neutral Mutation Models”.
- 7th November 2018, Old Codger’s One-Day Combinatorics Colloquium, University of Reading, “The probability of nonexistence of a subgraph in a moderately sparse random graph”.
- 15th May 2019, Analysis and Probability Seminar, Lancaster University, “Extensions to The Khintchine-Meinardus probabilistic method of enumerating weighted partitions”.
- 26th March 2021, Combinatorics Study Group, Queen Mary, University of London, “The component counts of random injections”.
- 8th July 2021, British Combinatorial Conference 2021, “The component counts of random injections”.

### **Professional Activities**

- Member of the organizing committee of the ICCMCC3 mathematics conference held at Melbourne University, 1996.
- Organizer of the Workshop on Probability and Combinatorics held at Hewlett Packard Laboratories, Bristol, 1999.
- I was a reviewer for Mathematical Reviews, 2000–2004.
- External Assessor for James Clapperton, University of Derby, 2008.
- Internal Assessor for Victor Falgas-Ravry, 2009, 2011.
- External Examiner for Christopher Melsa, University of Essex, 2010.

- Talk given for the Mathematics with Business or Finance: University of London Taster Course, 8th July 2010.
- Talk given for the Mathematics with Business or Finance: University of London Taster Course, 11th July 2012.
- Member of the organizing committee of the 1st joint QMUL-Warwick Combinatorial Probability and Statistical Mechanics Workshop, 2012.
- Talks given for the Mathematics with Business or Finance: University of London Taster Course, 2nd and 4th July 2013.
- Talk given for the Mathematics with Business or Finance: University of London Taster Course, 26th June 2014.
- External Examiner for Christopher Westley, University of Essex, 2015.
- Mathematics alumni panel discussion member for the University of Rochester Society of Undergraduate Mathematics Students, 1st April 2021.

## ADMINISTRATION

### Departmental Responsibilities

- January 2000 – February 2002  
Responsible for distribution and collection of questionnaires.
- August 2001 – September 2001  
Assisted with clearing for undergraduate students.
- February 2002 – September 2005  
Assistant Secretary to the Mathematics Subject Examination Board.  
Responsible for checking that students satisfied degree title requirements.
- September 2007 – September 2008  
Pastoral Tutor, Member of the Examination Team.
- September 2009 – September 2010  
Member of the Examination Team, SEFP Advising.
- September 2011 – September 2012  
Admissions Selector.
- September 2012 – September 2013  
Admissions Selector, Programme Director, Clearing.
- September 2013 – September 2014  
Deputy Admissions Tutor, Programme Director, Clearing.
- September 2014 – September 2016  
Programme Director, BSc Mathematics with Actuarial Science Working Group.
- September 2016 – September 2017  
Programme Director, Study Programme Advisor.
- April 2017 – September 2017  
Programme Director, Study Programme Advisor, Combinatorial Group Representative to the Research Committee.

- September 2019 – September 2020  
Academic Advising Co-ordinator, PGT Exam scrutiny and scaling.
- September 2020 – September 2021  
PGT Exam scrutiny and scaling.
- September 2021 – September 2023  
Programme Director (Joint Honours)
- September 2023 – September 2024  
Scrutiny Committee