

# CURRICULUM VITAE

Date: May 24, 2018

## 1. Name:

**MARTIN RICHARD EVANS**

## 2. DoB: 17/07/1965

## 3. Address: School of Physics and Astronomy, University of Edinburgh

## 4. University education:

- 1987-1991** Ph.D. *Neural Network Models: their Theoretical Capabilities and Relevance to Biology*  
Department of Physics and Astronomy, University of Edinburgh  
Thesis advisors: Elizabeth Gardner and David J. Wallace FRS
- 1989-1990** Awarded 9 month Lady Davis Graduate Fellowship to further Ph.D. studies at the Hebrew University, Jerusalem  
Advisor: Daniel J. Amit
- 1983-1987** B.Sc. Hons (First class) in Mathematical Physics  
Department of Physics and Astronomy, University of Edinburgh

## 5. Career since graduation:

- 2008-** Professor of Statistical Physics, School of Physics and Astronomy,  
University of Edinburgh
- 2002-2008** Reader, School of Physics and Astronomy, University of Edinburgh
- 1995-2002** Lecturer, Department of Physics and Astronomy,  
University of Edinburgh
- 1994-1995** RSURF Research Fellow, Theoretical Physics, Oxford  
Advisor: David S. Sherrington FRS
- 1994-1999** Awarded five year Royal Society University Research Fellowship
- 1993-1994** Laboratoire de Physique Statistique de l'Ecole Normale Supérieure, Paris, France  
funded by a C.N.R.S. Foreign Researcher Fellowship  
Advisor: Bernard Derrida
- 1991-1993** Postdoctoral researcher at Service de Physique Théorique, Saclay, France  
Funded in 1991-1992 by a Royal Society European Exchange Fellowship  
and employed in 1992-1993 by C.E.A. Saclay  
Advisor: Bernard Derrida

## 6. Research supervision

**Principal supervisor** of the following PhD students who have graduated

- A. Tadrowski, Ph. D. (Edinburgh) 2017  
*The role of phenotype switching during biological evolution in static environments*
- J. Whitehouse, Ph. D. (Edinburgh) 2016  
*Stochasticity and Fluctuations in Non-equilibrium Transport Models*
- J. Venegas-Ortiz, Ph. D. (Edinburgh) 2013  
*Statistical Mechanics of Gene Competition*
- A. Costa, Ph. D. (Edinburgh) 2012  
*Phase Transitions in Low-Dimensional Systems*
- C. Barrett-Freeman, (Edinburgh) 2011  
*Effects of Advection on Non-equilibrium Systems*
- A. Proeme, (Edinburgh) 2011  
*A Non-equilibrium Dynamical Transition in the Asymmetric Simple Exclusion Process*
- K. E. P Sugden, Ph. D. (Edinburgh) 2009  
*Nonequilibrium statistical physics applied to biophysical cellular processes*
- A. G. Angel, Ph. D. (Edinburgh) 2006  
*Non-equilibrium Statistical Mechanics of the Zero-range Process  
and Applications to Networks*
- M. Clincy, Ph. D. (Edinburgh) 2003  
*Symmetry Breaking and Ordering in Driven Diffusive Systems*
- R. A. Blythe, Ph. D. (Edinburgh) 2001  
*Non-equilibrium Phase Transitions and Dynamical Scaling Regimes*
- O. J. O’Loan, Ph. D. (Edinburgh) 1999  
*Phase Transitions and Ordering in Model Driven Diffusive Systems*
- M. J. E. Richardson, D. Phil. (Oxford) 1997  
*Two-species Non-Equilibrium Processes in One Dimension*

**Current supervisor** of the following PhD students— start dates are given.

- A. Wood, September 2015
- F. Cagnetta, September 2016
- E. O’Laghleis, September 2016
- E. Mallmin, September 2017

**Second supervisor** of the following PhD students who have graduated

- C. P. G. Paterson, Ph.D (Edinburgh) 2017  
*Minimal Mathematical Models of Evolution in Cancer*
- F. D. C. Farrell, Ph.D (Edinburgh) 2014  
*Modelling Collective Behaviour and Pattern Formation in Bacterial Colonies*
- R. Concannon, Ph.D (Edinburgh) 2014  
*Statistical Mechanics of non-Markovian Exclusion Processes*
- D. Russell, Ph.D (Edinburgh) 2013  
*Macroscopic consequences of demographic noise in non-equilibrium dynamical systems*
- C. B. Holmes, Ph.D (Edinburgh) 2004  
*The Jamming of dense suspensions under imposed stress*
- S. M. Fielding, Ph.D (Edinburgh) 2000

*Ageing, driving and effective temperatures: from soft rheology to glassy dynamics*

V. M. Kendon, Ph.D (Edinburgh) 1999

*Finite Reynolds number effects in fluid mixtures:*

**Advisor** of the following Postdoctoral Research Assistants

C. Nardini 2014-15

J. Szavits-Nossan 2012–2016

P. Greulich 2011–2013

B. Waclaw 2010–2012

J. Tailleur 2007–2009

P. Visco 2007–2009

T. Hanney 2001–2004

## 7. Principal research grants

1. (**£5.1M**) 2012-16 Co-Investigator of EPSRC EP/J007404/1 ‘Edinburgh Programme Grant: Design Principles for New Soft Materials’ (Investigators Prof ME Cates, Prof WCK Poon, R. J. Allen, Prof M.R. Evans, Dr P Clegg, Dr C MacPhee, Dr D. Marenduzzo)
2. (**£3.98M**) 2007-11 Co-Investigator of EPSRC EP/E030173 ‘Edinburgh Soft Matter and Statistical Physics Group: Programme Grant’ (Investigators Prof ME Cates, Prof WCK Poon, Dr M.R. Evans, Dr P Clegg, Dr C MacPhee, Dr D. Marenduzzo, Prof GJ Ackland)
3. (**£2.01M**) 2003-07 Co-Investigator of EPSRC GR/S10377 ‘Edinburgh Soft Matter and Statistical Physics Group: Programme Grant’ (Investigators Prof ME Cates, Prof WCK Poon, Prof PN Pusey, Dr SU Egelhaaf, Dr MR Evans, Dr GJ Ackland)
4. (**£155.2K**) 2005-06 Co-Investigator for Newton Institute Programme ‘Principles of Dynamics of Non-equilibrium Systems’, award from EPSRC grants to the Newton Institute GR/N09114 and GR/S31174.
5. (**£63.0K**) 2001-02 Principal Investigator of EPSRC GR/R52497 research grant ‘Dynamics of Non-equilibrium Systems’. The grant employed a postdoctoral research assistant (Dr T. Hanney).
6. (**£5.2K**) 1998-99 Principal Investigator, EPSRC visiting Fellowship GR/M22512 ‘Statistical Mechanics of Non-equilibrium Phase Transitions’ for Professor D. Mukamel
7. (**£20.0K**) During the period of my Royal Society Research Fellowship + I applied to the Royal Society for four research expense grants of 5K each

The Programme Grants above comprise several integrated sub-programmes and have a single PI (Prof M.E. Cates FRS). I have led or lead the subprogrammes ‘Fundamental Studies of Nonequilibrium Dynamics’, ‘Biophysical Traffic’, ‘Fundamentals of Nonequilibrium Steady States’, ‘Physics of Rare Events’, comprising approximately 1/5th of the grants.

## 8. Administrative Positions

1. Member of School Academic Board 2014-18
2. Member of School Teaching Committee 2016-18
3. Member of School Research Committee 2014-2015
4. Director of Graduate School from 2011– 2014
5. Member of College of Science and Engineering Research Training Committee from 2011–2014.
6. Member of SUPA (Scottish Universities Physics Alliance) Graduate School Management Committee from September 2011–August 2014.
7. Member of College of Science and Engineering review of non-specialist mathematics courses November 2009.
8. Postgraduate Co-ordinator for the Condensed Matter Group (comprising 24 permanent staff and 50 Ph. D. Students ) 2006–2015

## 9. Membership of Societies

Elected Fellow of Institute of Physics 2007

## 10. Membership of National/International Committees

1. Member of Advisory Board for EPSRC NetworkPlus ‘Emergence and Physics far from Equilibrium’ renewal, November 2016 – November 2019
2. Member of International Advisory Board for Fundamental Problems in Statistical Physics XIII, to be held in Bruneck, July 2017
3. Organiser with Dr R. J. Allen, Dr R. A. Blythe, Professor C. E. MacPhee, Professor D. Marenduzzo and Dr B. Waclaw of Institute of Physics Topical Meeting ‘Physical Principles of Biological and Active Systems’ held at The Higgs Centre for Theoretical Physics, January 2016
4. Organiser with Dr J. Keeling (St Andrews) and Prof. S. Simon (Oxford) of workshop ‘Classical and quantum matrix product states: exploring the structure of non-equilibrium states’ held at The Higgs Centre for Theoretical Physics, September 2015
5. Member of Advisory Board for EPSRC NetworkPlus ‘Emergence and Physics far from Equilibrium’, October 2012-October 2015.
6. Member of topical committee ‘Non-equilibrium Systems’ for ‘StatPhys23’ IUPAP triennial International Conference on Statistical Physics, held in Genoa, July 2007
7. Organiser with Professor S. Franz (Trieste), Professor C Godrèche (Saclay), and Professor D Mukamel (Weizmann) of six month programme ‘Principles of Dynamics of Non-Equilibrium Systems’ held at The Isaac Newton Institute for Mathematical Sciences, Cambridge 2006.

8. Organiser with Professor J. Cardy FRS (Oxford), Professor D. Mukamel (Weizmann) and Professor H. Spohn (Munich) of European Science Foundation School ‘Non-equilibrium Dynamics of Interacting Particle Systems’ 27 March–7 April 2006, Isaac Newton Institute, Cambridge.
9. Member of Institute of Physics Theory of Condensed Matter Group Committee 2004-2008
10. Organiser of the annual Theory of Condensed Matter Summer School, funded by EPSRC and Institute of Physics, held at St Martin’s College, Ambleside, September 2003
11. Executive Committee member for the 53<sup>rd</sup> Scottish Universities Summer School in Physics, Soft and Fragile Matter: Non-Equilibrium Dynamics, Metastability and Flow, St. Andrews, July 1999.

## 11. Major Lecture Series given as Guest Lecturer

1. Invited lecture series (Four ninety-minute lectures) *Stochastic Resetting* as part of the Program *Stochastic Dynamics Out of Equilibrium*, Institut Henri Poincare, Paris, May 2017. Recorded for educational purposes and available on YouTube.
2. Invited lecture series (five ninety-minute lectures) on *Interacting Particle Systems* at *Bangalore School on Statistical Physics - VII* International Centre for Theoretical Sciences, Bangalore 4-15/07/2016. Recorded for educational purposes and available through ICTS website.
3. Four two-hour Master Class Advanced Topic Lectures *Stochastic Dynamics of Nonequilibrium Systems*, KCL, London 13-17/01/2014
4. Invited lecture series (4, 75-minute lectures) *Statics and Dynamics of Exclusion Processes* Tata Institute for Fundamental Research, Mumbai, Jan- Feb 2011
5. 16-22/02/2011 Invited lecture series *Statics and Dynamics of Exclusion Processes* (3, 75 minute lectures); Indian Institute for Mathematical Sciences, Chennai
6. Two seventy-five minute invited lectures *Growth Processes and Non-equilibrium Phase Transitions* at the Heraeus International School ‘Interfaces between Physics and Computer Science’, International University Bremen, June 11-22, 2007, sponsored by the Heraeus Foundation.
7. During the period 2001–2004 I gave a course of six lectures *Statistical Physics* at the annual Theory of Condensed Matter Summer School, funded by EPSRC and Institute of Physics. The school is held at St Martin’s College, Ambleside in the Lake District and caters for 60 students.
8. Four one-hour invited lectures *Non-equilibrium Dynamics in Low Dimensional Systems* at the 10th international summer school entitled ‘Fundamental Problems in Statistical Physics’, Altenberg, Germany, sponsored by the Lorentz Fund, and by the European Physical Society. These schools are held every four years and host 100 students, generally in the final year of their Ph.D., from all over Europe.
9. Series of five guest lectures on *Exclusion Processes: A Matrix Product Approach* during a visit to the Tata Institute for Fundamental Research, Bombay, December 1999 . The trip was financially supported by the Royal Society.

## 12. Talks at international meetings and seminars

1. Invited talk *Stochastic resetting* 31/12/2017 12/01/2018 International conference ‘MECO43, Conference of the Middle European Cooperation in Statistical Physics’, AGH, Krakow 01-04/05/2018,
2. Invited talk *Renyi Entropy of the Totally Asymmetric Exclusion Process* Correlations, Fluctuations and anomalous transport in systems far from equilibrium, Weizmann Institute of Science, Israel 31/12/2017 12/01/2018
3. Invited talk *Stochastic resetting* at The NetworkPlus Focus Workshop: Systems out of equilibrium - Maths meets Physics, Warwick, 27/11/2017

4. Selected talk *Jamming and Attraction of Interacting Run-and-Tumble Random Walkers* at the triennial, international meeting StatPhys 26, Lyon, July 2016, sponsored by the International Union for Pure and Applied Physics
5. Selected talk *Model of antibiotic action on bacterial population growth* at annual international Meeting, MECO-41, Vienna 15/02/2016
6. Invited talk *Explosive condensation in nonequilibrium systems*, Weizmann Statistical Mechanics Day VIII, Weizmann Institute of Science, Israel, 21/12/2015
7. Invited Review Talk *Antimicrobial resistance: modelling the efficacy of antibiotic treatment*, Israel Physical Society Conference, Bar-Ilan, Israel, 03/12/2015
8. Invited talk *Explosive condensation in nonequilibrium systems*, in ‘Tri-seminaire de Physique Statistique’, CE Saclay, France, 22/10/2015
9. Invited talk *Dynamics of condensation in nonequilibrium systems*, Theoretical Physics Seminar, Laboratoire d’Annecy-le-Vieux de Physique Théorique 17/09/2015
10. Invited talk *Condensation transition in joint large deviations of linear statistics*, International Meeting ‘Large Deviation: Statistical Mechanics and Computation of Large Deviation rate functions’ (16/06/2015-19/06/2015), Ecole Normale Supérieure, Lyon, France 17/06/2015
11. Invited talk *Dynamics of condensation in stochastic particle systems*, International Workshop ‘Non-equilibrium Processes at Negative Temperatures’ (23/10/2014-24/10/2014), University of Strathclyde, Glasgow, UK 24/10/2014
12. Invited talk *The Asymmetric Exclusion Process: an exactly solvable nonequilibrium system* International Meeting ‘Recent Advances in Quantum Integrable Systems 14’ (01/09/2014-05/09/2014) University of Bourgogne, Dijon, France 05/09/2014
13. Invited talk *Speed Selection in Coupled Fisher Waves* International Workshop Nonequilibrium Statistical Physics of Complex Systems (08/07/2014-11/07/2014), The 6th KIAS conference on Statistical Physics, KIAS Seoul 09/07/2014
14. Invited talk *Explosive condensation in one-dimensional particle systems* International Workshop ‘Advances in Nonequilibrium Statistical Mechanics: large deviations and long-range correlations, extreme value statistics, anomalous transport and long-range interactions’, The Galileo Galilei Institute for Theoretical Physics, Firenze 21/05/2014
15. Invited talk *Speed Selection in Coupled Fisher Waves* International conference ‘MECO 39, Conference of the Middle European Cooperation in Statistical Physics’, University of Coventry 8-10 April 2014, 09/04/2014
16. *Speed Selection in Coupled Fisher Waves* University of Montpellier, France Theoretical physics seminar, 04/04/2014
17. *Explosive Condensation in one-dimensional particle systems*, Groupe de travail ‘Mécanique statistique, systèmes de particules’ Institut Henri Poincaré, Paris 13/03/2014
18. Invited talk *Speed Selection in Coupled Fisher Waves* in ‘Tri-seminaire de Physique Statistique’, CE Saclay, France, 03/02/2014

19. Invited talk *Speed Selection in Coupled Fisher Waves* International Workshop ‘Small Systems far from Equilibrium: Order, Correlations, and Fluctuations’ 14 - 18 October 2013, Max Planck Institute for Complex Systems, Dresden, 14/10/2013
20. Invited talk *Speed Selection in Coupled Fisher Waves* International Symposium ‘Models from Statistical Mechanics in Applied Sciences’ (09/09/2013-13/09/2013) Mathematics Institute, University of Warwick, 13/09/2013
21. Invited talk *Explosive Condensation in a mass transport model*, In International Workshop ‘Condensation in Stochastic Particle Systems’, (07/01/2013-09/01/2013), Mathematics Institute, University of Warwick, 07/01/2013
22. Invited talk *Explosive Condensation in one-dimensional particle systems*, International Workshop, ‘Nonequilibrium Statistical Mechanics: Mathematical Understanding and Numerical Simulation’ (11/11/2012- 16/11/2012), Banff International Research Station, Banff, Canada, 14/11/2012
23. Invited seminar *Diffusion with Stochastic Resetting* Theoretical Physics seminar, University of Cologne, 13/07/2012
24. Invited talk *Diffusion with stochastic resetting*, In International Meeting ‘Computation Of Transition Trajectories And Rare Events In Non-Equilibrium Systems’ (June 1115, 2012), Centre Blaise Pascal, ENS de Lyon, France, 11/06/2012
25. Invited talk *Diffusion with Stochastic Resetting*, International Workshop ‘Statistical physics of granular and molecular systems: Non-equilibrium properties’ (13–17/05/2012), Research Workshop of the Israel Science Foundation, Technion, Haifa, 15/05/2012
26. Invited talk *The Asymmetric Exclusion Process: an exactly solvable nonequilibrium system*, International Workshop ‘Nonequilibrium Physics and Asymmetric Exclusion Processes’ (08–09/12/2011), organised by IoP Mathematical and Theoretical Physics Group, International Centre for Mathematical Sciences, Edinburgh 08/12/2011
27. Invited talk *Diffusion with stochastic resetting*, International Program ‘Foundations and Applications of Non-Equilibrium Statistical Mechanics’ 19/09/2011–14/10/2011, Nordita, Stockholm, 07/10/2011
28. Invited Seminar *Models of Switching in Biophysical Contexts* Department of Physics, Hebrew Univeristy Jerusalem, 14 August, 2011
29. Invited talk *Diffusion with Stochastic Resetting* International seminar *Large Fluctuations in Non-Equilibrium Systems*, Max Planck Institute for Complex Systems, Dresden, 11 July, 2011
30. Invited talk *Real Space Condensation and Extreme Value Statistics*, International workshop ‘Extreme Value Statistics in Mathematics, Physics and Beyond’, Lorentz Center, Leiden. 4 July, 2011
31. Invited talk *Diffusion with Stochastic Resetting* at symposium ‘Statistical Mechanics Day IV’ Weizmann Institute of Science, Israel, 23 June, 2011
32. Invited International talk *Diffusion with Stochastic Resetting* at symposium ‘Nonequilibrium Statistical Mechanics’ of *The Brazilian Meeting of Physics 2011* (05/06/2011–10/06/2011) Foz do Iguacu, Parana, Brazil, 9 June, 2011



33. Invited seminar *Diffusion with Stochastic Resetting* Probability and Statistics seminar, University of Buenos Aires, Buenos Aires, 1 June, 2011
34. Invited seminar *Diffusion with Stochastic Resetting* Lunchtime Seminar, Department of Physics, Technion - Israel Institute of Technology, Haifa. 25 May, 2011
35. Invited seminar, *Models of Switching in Biophysical Contexts* Statistical Mechanics Seminar, Department of Physics of Complex Systems, Weizmann Institute, Israel, 16 May, 2011
36. Invited speaker Theoretical Physics Colloquium *Models of Switching in Biophysical Contexts* Tata Institute for Fundamental Research, Mumbai, 8 March, 2011
37. Invited Seminar *Diffusion with Stochastic Resetting* Indian Institute for Mathematical Sciences, Chennai, 22 February, 2011
38. Invited seminar *Diffusion with Stochastic Resetting* Statistical physics seminar, Indian Institute of Science, Bangalore, 14/02/2011
39. Invited seminar *Real-space Condensation and Extreme Value Statistics* Seminar, Indian Institute of Science, Bangalore, 10/02/2011
40. Invited seminar *Models of Switching in Biophysical Contexts* Biophysical Seminar, National Centre for Biological Sciences, Bangalore, 09/02/2011
41. Invited seminar *Mean first passage time for a diffusion process with resetting* Seminar, Raman Research Institute, Bangalore. 08/02/2011
42. Invited seminar *Models of Switching in Biophysical Contexts* Seminaire Commun LPTMS/LPT, Université Paris-Sud, 17 December, 2010
43. Invited Colloquium *Models of Switching in Biophysical Contexts* General Interest Colloquium, Institut de Physique Théorique, CE-Saclay, France, 30 November, 2010
44. Invited talk *Real-space Condensation and Extreme Value Statistics* at Workshop ‘Applications of Random Graphs and Extreme Value Statistics’ as a part of a Nordita (Stockholm) Programme: Random Geometry and Application Stockholm, 22-23 November, 2010
45. Invited talk *Condensation phenomena in nonequilibrium systems* at International meeting ‘Perspectives in Physics: a JPhysA Showcase Meeting’ October 18-23, 2010, Chongqing, China.
46. Invited talk *Growth of Populations in Catastrophic Environments* at international workshop ‘Non-equilibrium dynamics of spatially extended interacting particle systems’ as part of the EPSRC Symposium on the Mathematics of Complexity Science and Systems Biology, Mathematics Institute, University of Warwick 11-13 January 2010
47. Invited talk *Matrix representation of the stationary measure for the multispecies asymmetric simple exclusion process.* at International workshop ‘Steady-states, fluctuations and dynamics of non-equilibrium systems’, Technion, Israel, 7-11 June 2009

48. Invited plenary talk *Condensation phenomena in nonequilibrium systems* at meeting of Marie Curie Research and Training Network ‘Random Geometry and Random Matrices: From Quantum Gravity to Econophysics’ Max Planck Institute for Complex Systems, Dresden May 18 - 22, 2009
49. Invited talk *Dynamics of genetic switches* at International workshop ‘Many-Body Systems far from Equilibrium: Fluctuations, Slow Dynamics and Long-Range Interactions’ Max Planck Institute for Complex Systems, Dresden, February 16 - 27, 2009
50. Invited talk *Matrix representation of the stationary measure for the multispecies asymmetric simple exclusion process.* at workshop ‘Aggregation, condensation and coagulation in particle systems’, Mathematics Institute, University of Warwick February 2-3 2009
51. Invited talk *Matrix representation of the stationary measure for the multispecies TASEP.* at International workshop ‘Interacting particle systems and percolation’, Institut Henri Poincare, Paris, 27-31 October 2008
52. Invited talk *Einstein relation for non-equilibrium steady states* at International workshop ‘Fluctuation and Dissipation Phenomena in Driven Systems far from Equilibrium’, Max Planck Institute for Complex Systems, Dresden July 16 - 18, 2007
53. Selected talk *Modelling Fungal Hyphal Growth with an Exclusion Process* at the triennial, international meeting ‘StatPhys 23’, Genoa, July 2007, sponsored by the International Union for Pure and Applied Physics
54. Invited talk *An Exclusion Process for modelling Fungal Hyphal Growth* at 5th workshop on ‘Statistical physics and low dimensional systems’ the Henri Poincare University, Nancy, France 23-25 May 2007, sponsored by Laboratoire de Physique des Matériaux
55. Invited talk *An exclusion process for modelling fungal hyphal growth* at triennial International Conference ‘Statphys-Kolkata VI’, Fort Radisson, India 5-9 January 2007 sponsored by Centre for Applied Mathematics and Computational Science, Saha Institute of Nuclear Physics
56. Invited talk *A coarse-grained model of hyphal growth* at International Symposium ‘Spontaneous symmetry breaking in particle systems far from equilibrium’, Oosterend, Ter-schelling; 6-8 September, 2006 sponsored by European Science Foundation and the Forschungszentrum Jülich
57. Invited visit to International University Bremen, giving General Physics seminar *Condensation Transitions in Non-equilibrium Steady States* and informal lectures *Interacting Particle Systems and Dynamics of Networks* to the group of Professor Meyer-Ortmann
58. Invited talk *Condensation Transitions in Non-equilibrium Steady States* at 2nd KIAS International Conference on Statistical Physics: ‘Non-equilibrium Statistical Physics of Complex Systems’, Korean Institute for Advanced Study, Seoul 3-6 July 2006 sponsored by KIAS
59. Invited talk *Condensation Transitions in Non-equilibrium Steady States* at 31st International Conference of the Middle European Cooperation in Statistical Physics, Primosten, Coatia 23-26 April 2006 sponsored by MECO, Institute of Physics, Zagreb, Croatian Physical Society

60. Invited talk *Disorder and non-conservation in a driven diffusive system* at International Workshop ‘Relaxation Dynamics of Macroscopic Systems’, Isaac Newton Institute, Cambridge 9-13 January, 2006 sponsored by ESF
61. Invited talk *Factorised Steady States and Condensation Transitions* at 94th Statistical Mechanics Conference, Rutgers University, 18-20 December 2005
62. Plenary talk *Phase Transitions in Stochastic Models of Flow* at the international meeting ‘Traffic and Granular Flow ’05’, Berlin, 10-12 October 2005, sponsored by DFG and DLR Institute of Transport Research
63. Visiting fellowship and General seminar *Condensation Transitions in Driven Systems and Network Models* Laboratoire de Physique Theorique et Modeles Statistiques, Orsay, France, June 2005.
64. Invited talk *Superdomain Dynamics in the East Model* at the international workshop ‘Lengthscales and Heterogeneous Dynamics in Glassy Materials’, New College, Oxford, UK, 22-25 September 2004 sponsored by the ESF
65. Invited talk *Condensation Transitions in Non-equilibrium Steady States* at the triennial, international meeting ‘StatPhys 22’, Bangalore, July 2004 sponsored by the International Union for Pure and Applied Physics
66. Invited talk *Superdomain Dynamics in the East Model* at the international conference ‘Unifying Concepts in Glass Physics III’, Bangalore, India, 28 June-1 July 2004, sponsored by Jawaharlal Nehru Centre and ICTP, Trieste.
67. Invited talk *Shock formation in particle hopping models with non-conservation of particles*, at the International workshop ‘Non-Equilibrium Statistical Physics in Low Dimensions and Reaction Diffusion systems’, Dresden, September 2003, sponsored by the Max Planck Institute for Complex Systems.
68. Invited seminar (28/11/02) and Visiting Fellow *Condensation Transitions in Non-equilibrium Steady States* at Theoretical Physics, University of Saarbrueken
69. Invited seminar (12/11/02) *Condensation Transitions in Non-equilibrium Steady States*, and Visiting Fellow at Institut Henri Poincare, Paris
70. Invited talk *Condensation Transitions in Non-equilibrium Systems* at the International meeting ‘International Conference on Theoretical Physics’, Paris, 22-27 July sponsored by the International Union for Pure and Applied Physics and the European and French Physical Societies
71. Invited talk *Anomalous coarsening and glassy dynamics* at E.S.F. network meeting ‘Glassy Behaviour of Kinetically Constrained Models’, Barcelona, 22–25 March 2001, sponsored by the European Science Foundation.
72. Invited talk *Alternating Steady State in a Simple Model of Flocking*, at the international meeting ‘Fifth Claude Itzykson Meeting: Dynamics of Non-Equilibrium Systems’, CE Saclay, France, 20–23 June 2000, sponsored by CEA, CNRS and ESF.
73. Invited talk *An Exactly Solvable Driven Diffusive System* at the Indian National conference ‘Recent Trends in Non-Equilibrium Statistical Physics’, Indian Institute of Science, Bangalore, 15–25 November 1999.

74. Invited talk *Glassy Relaxation In Simple Dynamical Models* at the international meeting ‘Workshop on Dynamics of Non-Equilibrium Systems’, International Centre for Theoretical Physics, Trieste, 16–27 August 1999
75. Invited talk *Exact Solution of a Model of Hopping Particles* at the international meeting ‘Integrable Models and Applications to Statistical Mechanics’, Institut Henri Poincare, Paris 27–29 July 1998, sponsored by CEA and CNRS.
76. Three week visit to Department of Mathematics, Rutgers University, New Jersey to give seminar *Phase Separation in a one-dimensional system* and also lecture to postgraduate students on *Non-equilibrium Dynamics and Steady States*. Visit was funded by the (U. S.) National Science Foundation, Center for Discrete Mathematics & Theoretical Computer Science.
77. Invited talk *The Bus Route Model* at the international workshop ‘Recent Developments in Non-Equilibrium Statistical Physics’ held at KFKI, Budapest 10–15 September 1997 and sponsored by Hungarian Academy of Science.
78. Invited talk *Phase Transitions In Disordered Exclusion Models: Bose Condensation In Traffic Flow?* at the international workshop ‘Dynamics of Non-Equilibrium Systems’, International Centre for Theoretical Physics , Trieste, 19–30 August 1996.
79. Invited talk *Symmetry breaking in a one-dimensional system* at the international workshop ‘Collective Phenomena far from Equilibrium’, Weizmann Institute, Israel, 25 June–13 July 1995, sponsored by the Einstein Minerva Foundation for Theoretical Physics.
80. Invited talk *Current fluctuations in the 1d asymmetric exclusion model with open boundaries* at the international meeting ‘Mathematical Physics of Disordered Systems’, la Sorbonne, Paris, 25-27 July 1994, sponsored by the International Congress of Mathematical Physics and European Science Foundation.
81. Invited talk *Exact steady state properties of the 1d asymmetric exclusion model* at the international meeting ‘Middle-European Cooperation in Statistical Physics 19’, Smolenice, Slovakia, 11-15 April 1994, sponsored by Slovak Academy of Science and European Physical Society
82. Invited talk *Exact solution of the one dimensional asymmetric exclusion model* in the international programme ‘ Cellular Automata, Aggregation and Growth’, Isaac Newton Institute, Cambridge, participant Jan-Feb 1994.

### 13. National Invitations

#### 13.a Invited Seminars (from 2000)

1. *Model of antibiotic action on bacterial population growth* CANES Doctoral Centre, KCL, UK, 16/11/2016
2. *Speed Selection in Coupled Fisher Waves* ICSMB, University of Aberdeen, UK, Mathematical Biology Seminar, 4/11/2014
3. *The Asymmetric Exclusion Process: an exactly solvable nonequilibrium system* Department of Mathematics, University of Glasgow, UK, Integrable Systems and Mathematical Physics Seminar, 24/09/2014

4. *Speed Selection in Coupled Fisher Waves* Rudolf Peierls Centre for Theoretical Physics, University of Oxford, 28/02/2014
5. *Diffusion with Stochastic Resetting*, Centre for Complexity Science, Warwick, 24/11/2011
6. *A Biological Traffic Model of Fungal Hyphal Growth* Bristol Centre for Applied Nonlinear Mathematics, 2/02/07
7. *Condensation Transitions in Non-equilibrium Steady States* Theoretical Physics, Oxford, 10/03/06
8. *Product Measure Steady States and Condensation Transitions in interacting particle systems* Probability seminar, Department of Pure Mathematics and Mathematical Statistics, Cambridge, 31/01/06
9. *Condensation transitions in Non-equilibrium Statistical Mechanics* Department of Applied Mathematics, Open University, Milton Keynes, 19/04/05
10. *Condensation transitions in non-equilibrium systems* Condensed Matter Theory, Department of Mathematics, Imperial College, London, 9/03/05
11. *Condensation transitions in non-equilibrium systems* Condensed Matter Theory, School of Physics, University of Birmingham, 4/03/04
12. *Condensation transitions in non-equilibrium systems* Department of Mathematics, University of Strathclyde, 11/12/02
13. *Bose-Einstein Condensation in out of equilibrium systems* Theoretical Physics, Oxford, 17/05/02
14. *45 Years of Directed Percolation* General Interest Colloquium, Department of Mathematics, King's College, London, 16/11/01
15. *Non-equilibrium Statistical Mechanics and q-deformed Oscillators* Condensed Matter Theory, Cavendish Laboratory, Cambridge University, 18/01/01
16. *Non-equilibrium Statistical Mechanics and q-deformed Oscillators*, Condensed Matter Theory Seminar, Department of Physics, Warwick University, 9/11/00
17. *Non-equilibrium Statistical Mechanics and q-deformed Oscillators* Neural Networks and Disordered Systems Seminar, Department of Mathematics, King's College, London, 8/11/00

### 13.b Invitations (accepted) at National Conferences

1. Invited talk *The Asymmetric Exclusion Process: an exactly solvable nonequilibrium system* at the workshop 'Non-Equilibrium Collective Dynamics' Station Hotel Perth, 21/02/2017, sponsored by SUPA and Higgs Centre
2. Invited talk *Jamming and Attraction of Interacting Run-and-Tumble Random Walkers* Launch Meeting of Network Plus on *Emergence and Physics Far From Equilibrium*, Manchester 14-15/12/2016

3. Invited talk *Dynamics of Condensation on and within Networks* at the conference ‘Edinburgh University Workshop on Complex Networks’, Informatics Forum, University of Edinburgh 12 December 2014
4. Contributed talk *Speed Selection in Coupled Fisher Waves* at the national mini-conference ‘Statistical Mechanics of Glassy and Complex Systems’, Kings College London, 21 May 2013
5. Contributed talk *Diffusion with Stochastic Resetting* at the national mini-conference ‘Statistical Mechanics of Glassy and Complex Systems’, Kings College London, 22 May 2012
6. Invited seminar *Diffusion with Stochastic Resetting Complex Systems and Statistical Physics Seminar Series*, University of Manchester, 2 May 2012
7. Review talk *Real-space condensation in interacting particle systems.* at the national meeting ‘Complex Systems Dynamics – Interacting Particle Systems’, Institute for Mathematical Sciences, Imperial College London, 21 May 2010, sponsored by London Mathematical Society.
8. Contributed talk *Dynamics of Genetic Switches* at the national mini-conference ‘Statistical Mechanics of Glassy and Complex Systems’, Kings College London, 26 May 2009
9. Invited talk *Matrix representation of the stationary measure for the multispecies asymmetric simple exclusion process* at the national meeting ‘Aggregation, condensation and coagulation in particle systems’ held at Mathematics Research Centre and Centre for Complexity Science University of Warwick, 2- 3, February 2009
10. Invited talk *Phase Transitions in Non-equilibrium Systems* at the Statistical Physics session of the national meeting ‘Condensed Matter and Materials Physics’, Belfast, 6-9 April 2003, sponsored by the Institute of Physics.
11. Invited talk *Non-equilibrium Statistical Mechanics and a  $q$ -deformed Oscillator Algebra* at the national meeting ‘Baxter Meeting on Integrable Models in Statistical Mechanics’, York, 19th April 2001, sponsored by the London Mathematical Society
12. Organiser of the Statistical Physics Session of the Institute of Physics Conference ‘Condensed Matter and Materials Physics’, Manchester, December 1998
13. Invited talk *Exact solution of the one dimensional asymmetric exclusion model* at the national meeting ‘Condensed Matter and Materials Physics’, Warwick, 19-21 December 1994, sponsored by the Institute of Physics.

#### **14. External examiner for the award of doctoral degree**

I have been the External Examiner at the oral examinations of the following students:

1. Silvia Bartolucci, (Kings College London, PhD), June 2016
2. Liang Wang, (Division of Mathematics, University of Dundee, PhD), August 2015
3. Julien Cividini (LPT, University of Paris Sud, France, PhD), June 2014  
(invited international rapporteur at the public examination)
4. Alexandre Lazarescu (IPT, Saclay, France, PhD), 25 September 2013  
(membre du jury)
5. Paul Chleboun, (Complexity Science DTC, University of Warwick, PhD),  
November 2011
6. Xavier Durang (University of Nancy, France, PhD), September 2011  
(invited international rapporteur at the public examination)
7. Max Ebbinghaus (University of Saalanes, Saarbrucken, PhD), April 2011  
(invited international rapporteur at the public examination)
8. Sebastian V. Fallert (St. Catharine's College, Cambridge, PhD), December 2008
9. David A. Smith (University of Bristol, PhD), February 2008
10. Otto Pulkkinen (University of Jyväskylä, Finland, PhD), September 2007  
(invited international 'opponent' at the public examination)
11. Alessia Annibale (Kings College London, PhD), September 2007
12. Panos Gonos (University of Manchester, PhD), September 2005
13. Rosemary Harris (St John's College, Oxford, DPhil), September 2004
14. Andrea Jimenez (Somerville College, Oxford, DPhil), March 2004
15. George H M A Ehrhardt (University of Manchester, PhD), October 2003
16. Martin Depken (Merton College, Oxford, DPhil), September 2003
17. Stephen J O'Donoghue (University of Manchester, PhD), May 2002

#### **15. Other relevant information**

##### **15.a Visiting Professorships**

2017 1 Month CNRS Visiting Professorship (*CDD Chercheur Invite*) to LPTMS, Université Paris-Sud, France, October 2017

2017 Visiting Professorship *Chaire Joliot* to visit ESPCI, Paris, April 2017

2016 1 Month CNRS Visiting Professorship to LAPTh, Laboratoire d'Annecy-le-Vieux de Physique Théorique, May 2016

2015 Weston Visiting Professorship, Department of Physics of Complex Systems, Weizmann Institute of Science, Rehovot.

2014 Awarded 1 month CNRS Visiting Professorship to LPTMS, Université Paris-Sud, France, May 2014

2011 Weston Visiting Professorship, Department of Physics of Complex Systems, Weizmann Institute of Science, Rehovot, March-August 2011

2010 Awarded 3 month CNRS Visiting Professorship to LPTMS, Université Paris-Sud, France, October-December 2010

2007/8 Awarded 1 month CNRS Visiting Professorship to LPTMS, Université Paris-Sud, France

Visits to the Department of Physics of Complex Systems, Weizmann Institute of Science, Rehovot. These visits are funded by fellowships from Albert Einstein Minerva Center for Theoretical Physics.

### **15.b Editorial Appointments**

2014-2018 Editor-in-Chief *Journal of Physics A: Mathematical and Theoretical*  
Leading international journal in Mathematical and Theoretical Physics published by Institute of Physics Publishing.

2008–2013 Statistical Physics Section Editor and member of international editorial board of *Journal of Physics A: Mathematical and Theoretical*

2004-2015 Member of the international editorial board of the *Journal of Statistical Mechanics: Theory and Experiment* which is an international electronic journal created by International School for Advanced Studies (SISSA) and Institute of Physics Publishing (IOP) dealing with papers in the field of statistical physics.

Principal editor for a special edition of *Journal of Statistical Mechanics: Theory and Experiment* July 2007 'Dynamics of Non-equilibrium Systems'.

From 2000-2003: 2012-15 Member of the International Editorial Board of the *Journal of Statistical Physics* which is a respected international journal publishing original papers in the fields of statistical mechanics and thermodynamics of equilibrium and non-equilibrium processes.

### **15.c Refereeing Duties**

In addition to the above Editorial duties I act regularly as referee for international research journals such as *Physical Review Letters*, *Physical Review E*, *European Physics Journal B*, *Physica A* and *EPL*. Referee for European Research Council PE2 panel.