Professor S. J. Hogan

1. PERSONAL INFORMATION

Full name:	Stephen John Hogan
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2. PRESENT APPOINTMENT

Professor of Mathematics in the Faculty of Engineering, University of Bristol (since 1 September 1992).

3. PREVIOUS APPOINTMENTS

1990-1992	SERC Advanced Fellow, Mathematical Institute, Oxford; Fellow by Special Election and College Lecturer, St. Catherine's College, Oxford
1984-1990	CEGB Research Fellow in Applied Mathematics, St. Catherine's College, Oxford
1980-1984	Junior Research Fellow, King's College, Cambridge.
1979-1980	Postdoctoral Research Fellow in Applied Mathematics, California Institute of Technology, Pasadena, California, USA

4. ACADEMIC QUALIFICATIONS

1979	Ph.D. Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge Title: Surface tension and steep water waves. (Supervisor: Professor M. S. Longuet-Higgins, F.R.S.)
1979	M.A., University of Cambridge
1976	Mathematical Tripos Part III with Honours, University of Cambridge (M.Math.)
1975	B.A. (Hons.) Mathematics (Wrangler), University of Cambridge

5. HONOURS, PRIZES & AWARDS

2010	Doctor *Honoris Causa*, Faculty of Mechanical Engineering, Budapest University of Technology & Economics, Hungary
2006	Visiting Professor, Centre for Chaos and Complex Networks, City University of Hong Kong
2006	Visiting Professor, Ecole Polytechnique Federale Lausanne (EPFL), Switzerland
2004	University of Bristol Research Fellow
1988	Visiting Scientist, Royal Dutch Meteorological Institute (KNMI), De Bilt, The Netherlands
1987	Visiting Research Associate, Department of Applied Mathematics, University of Adelaide, Adelaide, Australia
1986	Visiting Research Fellow, School of Mathematics, University of New South Wales, Sydney, Australia
1979	Fulbright-Hays Travel Award for travel to USA
1978	Rayleigh Prize, University of Cambridge
1974	Senior Scholarship, Trinity College, Cambridge

6. INVITATIONS

- LMS Meeting on Industrial Mathematics (January 1992)
- 3rd Pan American Congress on Applied Mechanics, Sao Paulo, Brazil (January 1993)
- EUROMECH 325, "Bifurcation and Chaos in Solid and Structural Dynamics", L'Aquila, Italy (September 1994)
- 58th LMS Durham Symposium on Mathematical Models of Liquid Crystals & Related Polymeric Systems. (July 1995)
- XIth Symposium on Vibroimpact & Strongly Nonlinear Systems, Zvenigorod, Moscow (October 1995)

- International Symposium on Analysis & Synthesis of Nonlinear Systems in Mechanics, Riga, Latvia (June 1996)
- Royal Society Discussion Meeting on Vortices, Dislocations and Line Singularities in Partial Differential Equations (October 1996)
- University of Leeds Centre for Nonlinear Studies Meeting on Piecewise Linear Systems (November 1996)
- IUTAM Symposium on Applications of Nonlinear and Chaotic Dynamics in Mechanics, Cornell University, USA (July-Aug. 1997)
- Invited participation in 32nd European Study Group with Industry, Lyngby, Denmark (September 1998)
- Keynote speaker, Mathematics for Industry meeting, Bulawayo, Zimbabwe (October 1998)
- MiMI Chaos & Fractals in Medicine, Warwick (December 1998)
- Workshop on Mathematical Approaches to the Continuum Mechanics of Fluids & Solids, Germany (December 1998)
- 1 week visit (supported by INCAS) to Nizhny Novgorod State University, Russia (September 1999)
- 14th ASCE Engineering Mechanics Conference, University of Texas at Austin (May 2000)
- 2 week visit to National University of Singapore Department of Mathematics (September 2000)
- Methods of Applied Mathematics and Mechanics in an Environmental, Geophysical and Climatological Context, Conference on the Occasion of the 60th birthday of Prof. Kolumban Hutter (March 2001)
- Plenary speaker, Inaugural Conference, Loughborough University Centre for Nonlinear Mathematics and its Applications (8 February 2002)
- Invited participation in Grups d'Estudi de Matemàtica i Tecnologia, UPC, Barcelona (8-10 July 2002)
- Plenary Lecture, Opening of University of Aberdeen Centre for Applied Dynamics Research (12 March 2003)
- IUTAM Symposium on Chaotic Dynamics and Control of Systems and Processes in Mechanics, University of Rome "La Sapienza", Rome, Italy (8-13 June 2003)
- Invited Lecture, IMA Conference on Bifurcations and the Use and Control of Chaos, Southampton, England (28-30 July 2003)
- Invited Lecture, International Society for the Interaction of Mathematics with Mechanics, Symposium on Trends in Applications of Mathematics to Mechanics, Seeheim-Jugenheim, Germany (22-28 August 2004)
- Invited Tutorial Lecture, Italian Society for Chaos and Complexity Workshop on Bifurcations in Non-smooth and Hybrid Systems, Milan, Italy (21-22 October 2004)
- 2 week visit to Centre de Recerca Matemàtica (CRM), Bellaterra, Spain as part of the Programme on Control, Geometry and Engineering (March 2005)
- Invited Chair, Plenary Session IP8, SIAM Conference on Applications of Dynamical Systems (25 May 2005)
- 1 week visit to Departement de Aplicada Matematica I, Universidad Polytechnica de Cataluyna, Barcelona (July 2005)
- Invited Lecture, IMA Conference on Recent Advances in Nonlinear Mechanics, Aberdeen, Scotland (30 Aug.-1 Sept. 2005)
- 2 week visit to Department of Mathematics, School of Science, Beijing University of Aeronautics and Astronautics, Beijing, China hosted by Professor Qishao Lu (11-24 September 2005)
- 1 week visit to Departement de Aplicada Matematica I, Universidad Polytechnica de Cataluyna, Barcelona (June 2006)
- Invited Plenary Lecture, The Second International Conference on Dynamics, Vibration and Control (DVC-2006), Beijing, China (23-26 August 2006)
- IUTAM Symposium on Dynamics and Control of Nonlinear Systems with Uncertainty, Nanjing University of Aeronautics and Astronautics, China (18-22 September 2006)
- 3 month visit to Centre de Recerca Matemàtica (CRM), Bellaterra, Spain to run Programme on Complex Nonsmooth Systems (January - March 2007)
- Invited Plenary Lecture, Nolineal 2008, Barcelona, Spain (16-19 June 2008)
- Invited speaker, Sixth winter school in Dynamical Systems of the DANCE (Dinámica, Atractores y Nolinealidad: Caos y Estabilidad) Spanish network, Carmona**,** Seville, Spain (26-30 January 2009)
- Invited speaker, International Conference on Engineering and Computational Mathematics, The Hong Kong Polytechnic University (27-29 May 2009)
- Key speaker, International Workshop on Resonance Oscillations and Stability of Nonsmooth Systems, Imperial College London (16-25 June 2009)
- Invited Lecturer, 7th International Congress on Industrial & Applied Mathematics (ICIAM 2011), Vancouver, British Columbia, Canada (18-22 July 2011)

7. THIRD PARTY FUNDING

1991-92	£19000 (Medical Research Council) to work on diffusion of tracers in the brain. (H. Byrne).
1991-92	£27000 (British Coal Utilisation Research Association) to develop a mathematical theory for observed hydrodynamic and chemical behaviour in gas-fluidized beds. (G.R. Duursma).
1993-94	£46969 (SERC Visiting Fellowship) to study the fine structure of the ocean surface. (Prof. M. Stiassnie).
1994-96	£79012 (SERC PI with R. Severn) to study the nonlinear dynamics of suspension bridges under harmonic forcing. (S. Doole).
1994-96	£204828 (SERC CoI with J. Baldwin, T. Martin) to study mathematical modelling and knowledge engineering for engineering design (J. Lawry).
1994	£644 (London Mathematical Society with C. Budd) to hold one day meeting on the Mathematics of Impact.
1994-95	£450 (Avon Health Commission) to study orthopaedic care system in their area.
1995-96	£6000 (Benjamin Meaker Trustees, University of Bristol) to fund the visit of Prof. J. McKenna (University of Connecticut).
1995	£3000 (Isaac Newton Institute, Cambridge) to organise a workshop (with Dr. S. Doole) on piecewise-linear partial differential equations.
1995-97	£58907 (EPSRC PI[1] with Prof. P. Raynes, Dr. M. Towler) to study symmetry-breaking ground states in liquid crystal cells (N. Mottram).
1996-99	£25000 (EPSRC CoI with A. Champneys) to study a dynamical systems approach to modelling and countering lateral vibrations in oil-well drill strings.
1996	£1000 (Royal Society for Prof. V. Astashev (Moscow) & Prof. M. Zakrzhevsky (Riga)) to attend Loughborough BAMC.
1996	£1240 (EPSRC Visiting Fellowship for Prof. G. Stépán (Budapest)) to visit Bristol to study delay equations.
1996-99	£37500 (United Bristol Hospital Trusts to fund two postgraduate research scholarships (J. Jones & A. Horwood)
1997	£1750 (Benjamin Meaker Trustees, University of Bristol) to fund visits of Prof. B. Nagy & Dr. M. Szilvasi-Nagy (Budapest)
1997	£8000 (LMS with J. Brindley) to organise XVIII Dynamics Days Europe, ICMS, Edinburgh
1997	£1020 (EPSRC PI with J. Brindley) to organise XVIII Dynamics Days Europe, ICMS, Edinburgh
1998	£93000 (HEFCE JREI, with M. Allen) to purchase a Silicon Graphics Origin 2000 computer to perform calculations of liquid crystal dynamics.
1999	£4000 (Colston Research Society) to organise meeting on Applications of Nonlinear Mathematics, University of Bristol, 8-10 June 2001
1999-2002	£125186 (DERA PI with M. Di Bernardo) to study chaotic communications using control techniques (M. Homer).
1999-2002	£45000 (EPSRC PI with M. Di Bernardo) to fund a project studentship to study piecewise linear systems in power electronics (P. Kowalczyk)
2000	£15M (JIF award from OST/HEFCE CoI with several others) to fund BLADE (Bristol Laboratory for Advanced Dynamics Engineering)
2000	£4000 (EPSRC Connectivity Fellowship PI with S. Judd, Cranfield University) for research in mathematical modelling of swimming pool chlorination
2001-2004	£47000 (QinetiQ) to fund a project studentship to study the effect of noise on piecewise smooth systems (T. Griffin)
2002-2007	£1M (EPSRC, PI with A.R. Champneys, M. Di Bernardo, M. Homer, B. Krauskopf, H.M. Osinga, R.E. Wilson) to fund Bristol Centre for Applied Nonlinear Mathematics (J. Sieber, P. Kowalczyk, F. Schilder, R. Wieman, Y. Kyrychko)
2003	£1000 (LMS Programme Committee) to host 46th European Study Group with Industry
2003-2006	£198226 (EPSRC CoI with A.R. Champneys, M.I. Friswell, N.A.J. Lieven & J. Agarwal) to study pseudospectra, uncertainty, vulnerability and bifurcation in structural mechanics (K. Green, T. Wagenknecht)
2006	£6415 (Royal Society) to fund 6 month Royal Society KC Wong Fellowship for Professor Li Jin (Beijing University of Aeronautics and Astronautics, China)
2006	£19824 (EPSRC PI with M. Di Bernardo) to fund a Taught course on Complex Networks: Analysis, Control and Applications
2006-2014	£4M (EPSRC PI with G. Orpen and others) to fund Bristol Centre for Complexity Sciences

[1] EPSRC = UK Engineering & Physical Sciences Research Council, PI = Principal Investigator.

2007	€40000 for a 3 months research programme at the Centre de Recerca Matematica (CRM), Bellaterra, Spain on Complex Nonsmooth Systems (PI with M. Di Bernardo, G. Olivar and E. Fossas, T.M. Seara)
2007	£4000 (LMS Programme Committee) to host 49th British Applied Mathematics Colloquium
2007-2011	£1.8M (EPSRC PI with A.R. Champneys, M. Di Bernardo, M. Homer, B. Krauskopf, H.M. Osinga, J. Terry, R.E. Wilson) to fund Applied Nonlinear Mathematics – Making It Real (D. Avitabile, M. Jeffrey, M. Desroches, P. Thota)
2011-2017	£5M (EPSRC PI) to fund extension to Bristol Centre for Complexity Sciences

8. POSTDOCTORAL RESEARCH ASSISTANTS & POSTGRADUATE STUDENTS

Postdoctoral research assistants (PDRAs):

1991-92	H. Byrne (now Professor, University of Nottingham)
1994-96	S. Doole (now working in the City of London)
1994-96	J. Lawry (now Professor, University of Bristol)
1995-97	N. Mottram (now Professor, University of Strathclyde)
1999-2002	M. Homer (now Lecturer, University of Bristol)
2002-2007	P. Kowalczyk (now PDRA, University of Manchester)
2002-2007	R. Wieman (now Assistant Professor, Virginia State University, USA)
2002-2007	Y. Kyrychko (now Lecturer, University of Sussex)
2007-2011	M. Jeffrey (now EPSRC Career Acceleration Fellow, University of Bath)

Postgraduates:

1989-92	G. R. Duursma *Mathematical modelling of fluidization phenomena.* (now Lecturer, University of Edinburgh)
1992-95	R. Lindsay *Shear in nematic liquid crystal layers*. (now working in industry)
1992-95	N. Mottram *Boundary effects in nematic liquid crystal layers.* (then worked with me as PDRA, see above)
1995-98	M. Homer *Cellular automata model of tube bundle wear in heat exchangers.* Winner, Watson prize for best student presentation, Edinburgh BAMC 1997, Winner, Best poster prize, SIAM conference on Applications of Dynamical Systems, 2001 (then worked with me as PDRA, see above)
1996-99	J. Jones *Mathematical model of emphysema* (now working in industry)
1996-99	A. Horwood *Fractal methods applied to medical images* (now retired)
1998-2001	T. Mansfield *Dynamics of chains* (now working as a teacher)
1998-2001	R. Yau *Bifurcations and continuation in shear of nematic liquid crystals* (now working in industry)
1999-2002	G. Davis *Mathematical modelling of swimming pool chlorination* (now working in the finance industry)
1999-2002	P. Kowalczyk *Sliding bifurcations in electrical systems* (then worked with me as PDRA, see above)
2001-2004	T. Griffin *Stochastic nonsmooth systems* (now working for GCHQ, one of the three UK Intelligence Agencies – the others are MI5 & MI6)
2004-2007	J. Low *Mathematical problems in liquid crystals* (now working as PDRA in Centre de Recerca Matemàtica, Bellaterra, Spain)
2006-2009	A. Polynikis *Modelling and analysis of gene regulatory networks* (now working as a teacher in Nicosia, Cyprus)
2008-2011	S. Parkinson *Tidal power generation*
2010-2014	A. Pavlides *Matematical modelling of the basal ganglia*
2010-2014	T. Todd *Modelling of the cell cycle*

9. TEACHING

I thoroughly enjoy lecturing & it has always been highly appreciated by students. Comments from student questionnaires include "Professor Hogan must teach me for the rest of my time here", to "Professor Hogan is the best lecturer at Bristol University".

1st and 2nd year courses are regarded as Introductory Level. 3rd year courses (& 4th year courses after 1997) are Advanced Level.

1976-79	Supervisions for Trinity College, Cambridge of Parts IA & IB of Mathematical Tripos (Applied Mathematics)
1979-80	Graduate course. Nonlinear water waves (*new course written by me*) California Institute of Technology.
1980-84	Supervisions for King's College, Cambridge of Parts IA, IB & II of Mathematical Tripos (Applied Mathematics & Fluid Dynamics)
1984-90	Tutorials for 1st & 2nd Year Physics students at St. Catherine's College, Oxford
1990-92	Tutorials for 1st Year Mathematics students at St. Catherine's College, Oxford
1992-93	1st Year Examples Classes 2nd Year Vector Calculus (*course completely rewritten by me*) 2nd Year Numerical Analysis (*course completely rewritten by me*) 3rd Year Nonlinear Dynamics & Chaos (*new course written by me*)
1993-94	1st Year Examples Classes 2nd Year Vector Calculus 3rd Year Nonlinear Dynamics & Chaos
1994-95	1st Year Examples Classes 2nd Year Vector Calculus 3rd Year Nonlinear Dynamics & Chaos MSc Dispersion & Solitons
1995-96	1st Year Examples Classes 2nd Year Vector Calculus 3rd Year Nonlinear Dynamics & Chaos
1996-97	3rd Year Nonlinear Dynamics & Chaos 3rd Year Tensor Calculus (*new course written by me*)
1997-98	3rd Year Nonlinear Dynamics & Chaos 3rd Year Tensor Calculus 4th Year Advanced Nonlinear Dynamics & Chaos (*new course written by me*)
1998-99	4th Year Advanced Nonlinear Dynamics & Chaos
1999-2000	4th Year Advanced Nonlinear Dynamics & Chaos
2000-2001	4th Year Advanced Nonlinear Dynamics & Chaos
2001-2002	1st Year Engineering Mathematics-Vectors & Complex Numbers (*new course written by me*) 2nd Year Complex Variable Theory (*new course written by me*)
2002-2003	1st Year Engineering Mathematics-Vectors & Complex Numbers 2nd Year Complex Variable Theory
2003-2004	1st Year Engineering Mathematics-Vectors & Complex Numbers 2nd Year Complex Variable Theory
2004-2005	*No teaching duties whilst holding University of Bristol Research Fellowship*
2005-2006	1st Year Mathematics with Maple-Complex Numbers, Vectors & Matrices 2nd Year Complex Variable Theory
2006-2007	1st Year Mathematics with Maple-Complex Numbers, Vectors & Matrices 2nd Year Complex Variable Theory
2007-2009	*No teaching duties whilst setting up Bristol Centre for Complexity Sciences*
2009-2010	3rd Year Tensor Calculus
2010-2011	1st Year Dynamics (*course completely written by me*)

10. FINAL YEAR & MASTERS STUDENTS

Final year projects:

1992-93	R. Perry & M. Saye	The magnetic pendulum
1993-94	D. Burton & R. Gati	Electronic chaos demonstrator
	R. Gray	Cellular automata in civil engineering

1994-95	T. Bayliss & N. Tozer	Mathematical modelling of orthopaedic care planning
1995-96	C. Cipriani & S. Haygarth	A mathematical model of an NHS outpatients clinic queuing system
1996-97	*No final year students (four year degree replaced three year degree in 1994/95).*	
1997-98	S. Goda & T. Mansfield	Chaos, the heart and Arnol'd tongues
1998-99	M. Isaacson	A mathematical model of swimming pool chlorination
	P. Treacher	Nonlinear modelling of swimming pool chlorination
1999-2000	L. Higham	Nonlinear dynamics of piecewise linear maps
	J. Shepherd	Parameter variation and chaotic control of the Cooperrider model of a railway bogie
	M. Warrilow	Analysis of cricket ball swing using experimental and classical fluid dynamics
2000-01	R. Eyres	Aeroelastic response of rigid aircraft wings
	S. Benson	Dynamics in dry friction
	T. Griffin	Periodic responses in the inverted pendulum
2002-03	M. Ekins	Higher order bifurcations in two-dimensional piecewise-smooth continuous maps
	N. Farmer	Suspension bridges
	R. Schaverien	Earthquakes and church bells
2003-04	R .Johnson	A mathematical model of the pedestrian induced lateral vibrations of the Millennium bridge
	L. Kraemer	Hysteresis in church bell responses under earthquake excitation
2004-2009	*No projects offered whilst University Research Fellow & PI of large grants*	
2010-2011	J. Weinhardt	Mathematical modelling of autoimmunity

Masters projects:

1988-89	G. R. Duursma.	Mathematical modelling of bubbles in fluidized beds
1990-91	P. Woodford.	Oscillatory shears in nematic liquid crystals (*awarded a Distinction*)
1991-92	P. Broadhurst.	A study of ocean wave interactions.
1994-95	R. Pugsley.	Internal wave signatures in radar backscatter.
1998-99	G. Davis.	Swimming pool chlorination.
2001-02	A. Jukes.	Higher order bifurcations in nonlinear physical systems

Funding for this MSc course ended in 2002

Masters students from Budapest University of Technology and Economics (who visit Bristol for their 10th semester, funded by an Socrates/Erasmus exchange – the first ever such UK-Hungary exchange under this scheme):

2001	Péter Triesz	Stability and vibrations of rotors
2002	Róbert Szalai	Nonlinear vibrations of interrupted cutting
2003	István Baksa	Transient chaotic motion of controlled machines
2004	Tamás Bodai	High-frequency vibrations of pneumatic valves
	Nándor Terkovics	Impacts in digitally controlled machines
2005	Ákos Gombos	Finite element analysis of elasto-plastic structures
	Dénes Takács	Dynamics of elastic rolling wheels
2006	Zoltán Dombóvári	Numerical estimation of self-excited vibrations of cutting processes
2008	Ádám Szöllősi	Motion control of swinging robots
2009	Botond Erdős	Parametric resonances of asymmetric shafts
2010	Bálint Szántai Vecsera	Hunting motion of railway vehicles
2011	László Bencsik	Motion planning and control of the ACROBOTER service robot

11. POSITIONS OF RESPONSIBILITY

Founder and leader of the Bristol Centre for Applied Nonlinear Mathematics (BCANM), University of Bristol (1 September 1992 – present)

- Starting with one postgraduate student in 1992, I have established BCANM as one of the leading centres of its kind in the world, developing theories of nonsmooth dynamical systems, delay equations and numerical continuation methods and helping to solve problems of direct engineering, scientific or industrial relevance.
- During 2002-2007, I was Principal Investigator (PI) of a five-year programme of research, funded by a £1M grant from EPSRC.
- I am currently PI of 'Making It Real', a £1.8M EPSRC grant (2007-2011).

- Since its inception, BCANM has won grants worth well in excess of £9M, hosted over 25 international conferences or workshops and published over 350 papers in peer-reviewed journals of the highest quality.

Head, Department of Engineering Mathematics (1 Aug 1998 – 31 July 2004). My achievements included:

- New Department structure with emphasis on freeing up time to do research, combined with top-class teaching, together with empowering colleagues, within an atmosphere of openness & transparency.
- Creation of strong team spirit, including wholesale involvement of support staff, to help steer Department to a number of significant achievements, including 23/24 in the Subject Review (November 1998), a 5*A in RAE 2001 and an excellent Departmental Review (2004).
- Following a visit to the Department in 2003, the University's Vice-Chancellor wrote to say that '*... it was uplifting to visit a Department so sure of its role…*'
- One of the University's Pro-Vice-Chancellor wrote in 2004 '*…It was a real pleasure to see such a happy and successful department - long may it continue.*' and she hoped to '*…be able to share some of the secrets of your success with other parts of the University.*'
- At the February 2005 meeting of Senate, it was recorded that '*The Department [of Engineering Mathematics] was congratulated on the high quality management and strong corporate culture which underpin its success.*' and that '*…the strength of leadership of the outgoing Head of Department, Professor John Hogan, was warmly acknowledged.*'
- As a result of my period of office as Head of Department, I gave an annual seminar to new Heads of Department in Bristol entitled *'Releasing staff potential: Focussing on ways of doing things differently & harness staff aspirations*' (2003-2006). I gave this course again in 2009 to Department Heads at the Danish Technical University, Lyngby, Denmark. In March 2005, I led an Away-day for the University of Bristol Faculty of Social Sciences and Law on *'Staff overloading: why it happens and how to stop it'*.

Director of the Bristol Centre for Complexity Sciences (BCCS), University of Bristol (1 Sept 2006 – present)

- I am PI of the successful £4M Complexity Capacity Building Initiative bid to EPSRC to fund the Bristol Centre for Complexity Sciences (2006-2014). This multidisciplinary Doctoral Training Centre involves 50 academics spread across 13 different University Departments in 4 different Faculties.
- In November 2010, I was the PI of the successful £5M BCCS extension grant, which now guarantees funding for another 30 postgraduates (2011-2017).

Editorial Work

- Editor, *Institute of Mathematics and its Applications (IMA) Journal of Applied Mathematics* (1998-2002)
- Member, Editorial Board *Dynamics and Stability of Systems* (1995-1999)
- Member, Board of Associate Referees *Journal of Engineering Mathematics* (1996-2001)

Meeting Organisation

- Secretary of the British Applied Mathematics Colloquium held in Oxford 9-12 April 1991.
- Organiser (with C. Budd) of London Mathematical Society (LMS) meeting on Mathematics of Impact, University of Bristol, 26 Sept 1994.
- Organiser (with S. Doole) of Workshop on Dynamics of Piecewise Linear Differential Equations at the Newton Institute 16-17 Nov. 1995 (as part of the programme *From finite to infinite dimensional dynamical systems*). http://www.newton.cam.ac.uk/programs/old_progs/fid-wk10.html
- Organiser (with A. Champneys, S. Doole, and G. Lord) of EPSRC Applied Nonlinear Mathematics Spring School at University of Bristol, 8-12 April 1996.
- Member, Dynamics Days Europe Committee (1997-2001).
- Organiser (with J. Brindley) of XVIII Dynamics Days Europe, ICMS, Edinburgh 28 June-1 July 1998.
- Organising Committee, XX Dynamics Days Europe, University of Surrey, 25-29 June 2000.
- Steering Committee, Russian Academy of Sciences XIIIth Symposium on Vibroimpact & Strongly Nonlinear Systems, Zvenigorod, Moscow, 13-19 May 2001 (*only non-Russian on Steering Committee).*
- Chair (with A. Champneys, B. Krauskopf, M. Di Bernardo) of 2001 Colston Research Society Meeting on Nonlinear dynamics & chaos: where do we go from here?, University of Bristol, 8-10 June 2001. http://www.enm.bris.ac.uk/anm/colston.html
- Organiser (with R.E. Wilson, C. Budd, J. Andrews, A. Hogg, and J. Rossiter) of 46th European Study Group with Industry, at Burwalls Conference Centre, University of Bristol, 31 March-4 April 2003. http://www.enm.bris.ac.uk/esgi/
- Chair (with M. Di Bernardo and M. Homer) of Workshop on Codimension-two bifurcations in non-smooth dynamical systems, University of Bristol, 25-26 July 2003. http://www.enm.bris.ac.uk/anm/workshop-b/meeting/

- Co-organiser IMA Conference on Bifurcations and the Use and Control of Chaos, Southampton, England, 28-30 July 2003
- Chair (with M. Di Bernardo, A. Champneys and M. Homer) of Workshop on Piecewise smooth dynamical systems: analysis, numerics and applications, University of Bristol, 13-16 September 2004. http://www.enm.bris.ac.uk/anm/workshop-b/
- Organiser (with M. Di Bernardo (Chair), A. Champneys and M. Homer) of SICONOS (Modelling, Simulation and Control of Non-Smooth Systems) 3rd annual meeting, University of Bristol, 15-17 September 2004. http://www.enm.bris.ac.uk/anm/workshop-b/siconos/
- Organiser (with A. Champneys and R.E. Wilson) of Workshop on Successes and Failures of Continuous Models for Discrete Systems, University of Bristol, 5-8 September 2005. http://www.enm.bris.ac.uk/anm/workshop-d/
- Organiser (with M. Di Bernardo) of EPSRC Summer school on Complex Networks: Analysis, Control and Applications, University of Bristol, 3-7 July 2006. http://www.enm.bris.ac.uk/anm/summerschools/complexity/
- Member, European Nonlinear Oscillations Conference Committee (2006-2011)
- Co-Chair, The Second International Conference on Dynamics, Vibration and Control (DVC-2006), Beijing, China, 23-26 August 2006
- Chair, 49th British Applied Mathematics Colloquium, University of Bristol, 17-19 April 2007
- Organiser (with J. Terry) of Workshop 'Applied Nonlinear Mathematics: Making It Real', University of Bristol, 10-14 September 2007. http://www.enm.bris.ac.uk/anm/workshop-z/
- Organiser (with M. Di Bernardo and M. Jeffrey) of Workshop on Problems in Nonsmooth Dynamical Systems, University of Bristol, 28-29 November 2008. http://www.enm.bris.ac.uk/anm/meetings/nonsmooth08/
- Organiser (with M. Di Bernardo, N. Cristianini, R.E. Wilson and C. Colijn) of International Workshop on Complex Systems and Networks, University of Bristol, 20 – 22 July 2009. http://www.enm.bris.ac.uk/anm/iwcsn09/
- Member, International Scientific Committee, 2nd International Conference, Vibro-Impact Systems, 6-9 January 2010, Sanya, Hainan Island, PR China
- Co-Chair & Member, Conference Scientific Committee, International Conference on Dynamics, Vibration and Control (ICDVC), Hangzhou, China, 12-14 May 2010
- Chair, XXX Dynamics Days Europe 2010, University of Bristol, 6-10 September 2010

Research Council duties

- SERC Mathematics Committee Earmarked and CASE Panel 1992-94
- EPSRC Applied Nonlinear Mathematics Panel Chairman 1995-1997
- EPSRC Mathematics Programme Ad Hoc Studentship Mechanism Panel 1995
- EPSRC Mathematics Programme Evaluation Panel, 1997-98
- BBSRC Engineering & Biological Systems Network Group 1997-1999
- EPSRC Nonlinear Mathematics Evaluation Panel 1999-2000
- EPSRC Physics/Engineering Cooperation Steering Committee 2000-2001
- EPSRC Mathematics Pool Panel 2000
- EPSRC Panel on Doctoral Training Accounts in Mathematics 2000
- EPSRC Peer Review College Member 2000-2005, 2010-2015
- EPSRC Cross Disciplinary Interfaces Strategic Advisory Team 2008-2011
- EPSRC Transformative Research Advisory Group 2008-2010

Refereeing

- Journals: Acta Mechanica, ASCE Journal of Engineering Mechanics, ASME Journal of Applied Mechanics, Applied Mathematics Letters, Applied Science Research, Dynamics & Stability of Systems, Earthquake Engineering & Structure Dynamics, European J. Mechanics A/Solids, European J. Mechanics B/Fluids, Journal de Physique, Journal of Engineering Mathematics, Journal of Fluid Mechanics, Journal of Physical Oceanography, Journal of Physics A, Journal of Physics D, Journal of Sound and Vibration, Liquid Crystals, Math. Proceedings of the Cambridge Philosophical Society, Meccanica, Nature, Nonlinearity, Physics of Fluids, Philosophical Transactions of the Royal Society, Powder Technology, Proceedings of the Royal Irish Academy, Proceedings of the Royal Society.
- Research Councils: EPSRC/SERC (Mathematics and several Engineering Committees), BBSRC, Australian Research Council, NSERC (Canadian Research Council), European Research Council (Remote Referee), Netherlands Organization for Scientific Research (NWO), South African National Research Foundation.
- Publishers: Cambridge University Press, Wiley, Oxford University Press, Longman
- Other: University of Exeter, University of Oxford, University of Strathclyde, Royal Society Wolfson Research Merit Awards.

Other Administration

- Member of University of Bristol Senate (1992-1994, 1998-2004).
- Member of Science Faculty Promotions Committee (1993-94).
- President, Mathematics Section, British Association (1994-95).
- Member of Joint Council/Senate Committee for Chair in Civil Engineering (1994).
- Member of Search Committee for Chair in Pure Mathematics (1995).
- Author of Department contribution to 1996 RAE submission (we obtained a grade 5, the highest).
- Member of LMS Research Meetings Committee (1996-2001).
- Member of Joint Council/Senate Committee for Chair in Applied Mathematics (1998).
- Member IMA Council (1998-2002).
- Organiser (joint) of M.Sc. in Industrial & Environmental Modelling, University of Bristol (1998-2002).
- Vice-President, IMA (2000-2002).
- Member (IMA nominee) of London Mathematical Society International Affairs Committee (2000-2007) – this committee serves as the UK "Committee for Mathematics" as required by Statute 5 of the IMU. For further information see http://www.lms.ac.uk/activities/iac_com/index.html
- Author of Department contribution to 2001 RAE submission (we obtained a grade 5*A, the highest).
- External Member, Selection Committee, Professorship in Applied Mathematics, University College, Cork, Ireland (2001)
- Advisor to Department for Education and Science (DfES) on Mechanics A-level grades, following disastrous results in the new AS-levels (2001).
- Co-Organiser, Work Package 1 (WP1) of SICONOS (Modelling, Simulation and Control of Non-Smooth Systems), a €2M Project funded by the Commission of the European Communities (2002-2006)
- Member, Academic Advisory Board, Institute for Advanced Studies, University of Bristol (2002-2006)
- Member, International Advisory Board, University of Aberdeen Centre for Applied Dynamics Research (2003-present)
- Member External Panel, Interdisciplinary Programme for Cellular Regulation (IPCR), University of Warwick (2003-2008)
- Member, Advisory Board, Loughborough University Centre for Nonlinear Mathematics and its Applications (2003-present)
- Trustee, Colston Research Society and Chair, Colston Research Society Planning Committee (2004-present)
- Vice-President, UKIE SIAM section (2005-2007)
- Member of the IMA-LMS David Crighton Medal Committee (2006)
- Member, Isaac Newton Institute for Mathematical Sciences Scientific Steering Committee (May 2006)
- External Member, Selection Committee, Professorship in Applied Mathematics, National University of Ireland, Galway (2008 & 2009)
- Reviewer for Royal Irish Academy membership (2008)
- Member, International Review Panel, Danish Technical University Mathematics Department (2008)

12. OTHER ACTIVITIES

1979 Fellow of the Cambridge Philosophical Society (Life Member)
1989 Chartered Mathematician & Fellow of the Institute of Mathematics and its Applications
1991 Member, London Mathematical Society
1991 Member, Society for Industrial and Applied Mathematics (USA)
1992 Member, Engineering Professors Conference
1992 Member, National Conference of University Professors
1993 Member, Save British Science
1994 Member, EUROMECH
1994 Member of Bristol Liquid Crystal Society

Consultant for AG für Industrielle Elektronik (AGIE), Switzerland 1984, for Oxford Computing Services 1989-1994 and for Proshare 1992-1994.

External Examiner, M.Sc. in Nonlinear Dynamics and Chaos, University College London 1994 -96
External Examiner, M.Sc. in Engineering Mathematics, University of Newcastle 1996-2002
External Examiner, School of Mathematics & Statistics, University of Birmingham 1998-2000
External Examiner, M.Sc. in Mathematics of Nonlinear Models, Heriot-Watt/Edinburgh Universities 2000-2002
Extern Examiner, Department of Applied Mathematics, University College, Cork, Ireland 2000-2003
External Examiner (Mathematics for Engineers), Department of Mathematics, Imperial College, London 2003-2006

Ph.D. Examining:

1987 M. A. D. Madurasinghe (University of Adelaide)
1989 N. Popat (University of Bristol)
1990 A. Skeldon (University of Oxford)
1991 M. Vynnycky (University of Oxford)
1991 T. Price (University of Oxford)
1992 S. Acomb (University of Oxford)
1993 F. Dux (University of Bristol)
1993 S. Foale (University College London)
1994 J. Pitt-Francis (University of Oxford)
1994 J. Owen (University of Bristol)
1997 C. Williams (University of Bristol)
1999 M. Di Bernardo (University of Bristol)
2001 S.M. Killen (University of Newcastle)
2004 F. Angulo (UPC, Barcelona)
2006 N. Suarez de la Torre (UPC, Barcelona)
2007 E. Mo (NTNU, Norway)
2008 A. Colombo (Milan)
2008 J. Mason (Bristol)
2010 M. Guardia (UPC, Barcelona)

Other Lectures

- Culham Summer School on Plasma Physics (June 1993)
- Opening Address to 2nd Annual Meeting of National Association for Numeracy and Mathematics in Colleges, (June 1994)
- British Association Meeting, Loughborough (September 1994)
- Presidential Address, British Association Meeting, Newcastle (September 1995)
- University of Bristol, Annual Lecture to Convocation (July 1996)
- University College London, Institute of Physics Popular Lecture (March 2000)
- IMA Maths@Work Roadshow, Bristol (May 2000)