

About me

Personal Information

Full name: Brian Foster

Married to Sabine Margot Foster, 1983.

Two children, Paul Kai, born 1989; Mark Kristian John, born 1992.

Postal Address (Business): Denys Wilkinson Building, University of Oxford,
Keble Road, OX1 3RH

Also at: ZEUS/F1, DESY, Notkestrasse 85, 22607 Hamburg, Germany.

Tel: +49 4089983201; Fax +49 4089983092;

As Chair of ECFA: CERN, Bld. 60, 4-015, Geneva, CH-1211 Geneva 23

Tel: +41 2276-72769 or -72834

e-mail b.foster@physics.ox.ac.uk

Postal Address (Home): 2, Hillview Cottage, Blackford, Nr. Wedmore, Somerset
BS28 4NL.

Born: 4th January, 1954; Crook, Co. Durham, UK.

Interests

Sport: football (long-suffering supporter of Sunderland AFC); golf (long-suffering player); squash (long suffering); cricket (I try not to miss the Edgie and Oval tests); skiing (sadly out of practice, incompetent but game for anything); climbing and walking (ice climbing in my youth, more sedate walks/scrambles in the Alps these days); snooker – indeed almost all sports.

History and politics, from all periods; biography; collecting first editions of all types of books, particularly modern novels – indeed generally accumulating enormous numbers of books of all types; philately.

Music is a consuming passion. I attend concerts as often as I can, particularly to hear violinists. I am an enthusiastic but incompetent amateur violinist, interested in trying my hand at all sorts of chamber music and desperate to join an orchestra again after a 20 year gap but congenitally unable to make more than the odd rehearsal due to an involuntary hobby - spending an inordinate amount of time in and around planes, airports and departure lounges.

Present Appointment

Professor of Experimental Physics in the University of Oxford since 2003;
Professorial Fellow of Balliol College.

Head of Subdepartment of Particle Physics 2004-

European Director of the Global Design Effort for the International Linear Collider
2005 -

Previous Appointments

Research Associate, Rutherford Appleton Laboratory, 1978 - 1982.

Research Associate, Dept. of Physics, Imperial College of Science and Technology, London, 1982- 1984.

Lecturer, Dept. of Physics, Bristol University, 1984 - 1992

PPARC Advanced Fellow, Bristol University 1991 - 1997; converted to Lecturer Fellow 1999-2000.

Reader, Dept. of Physics, Bristol University, 1992 – 1996

Professor of Experimental Physics in the University of Bristol 1996-2003 (Emeritus, 2003) & Head of particle physics group (1992-2003).

Chairman, European Committee for Future Accelerators, 2002-2005.

Academic Qualifications

Attended Wolsingham Secondary School, County Durham, 1965-1972.

Head Boy, 1972.

Awarded 9 O-levels; 3 A-levels – all with Grade A.

Undergraduate, Queen Elizabeth College, London University 1972 - 1975.

Awarded First Class Honours degree in Physics, 1975.

Postgraduate, Nuclear Physics Lab., Oxford University, 1975 - 1978.

Awarded D. Phil. degree, 1978.

Fellow, UK Institute of Physics, since 1992.

Member, Royal Institution of Great Britain, since 1979.

Member, British Association for the Advancement of Science, since 1993.

Awards&Prizes

Dillon Prize, 1974 for best performance in undergraduate second year, Queen Elizabeth College.

Andrewes Prize, 1975 for best performance in undergraduate final year, Queen Elizabeth College.

Honorary Life Member, Queen Elizabeth College Students Union, University of London, 1975.

Special European Physical Society Prize in Particle Physics for 1995 for discovery of the gluon; joint award with other members of TASSO Collaboration.

1999 Research Prize, Alexander von Humboldt Foundation.

Max Born Medal and Prize, 2003, jointly awarded by Deutsche Physikalische Gesellschaft and Institute of Physics.

Officer of the Order of the British Empire (OBE), 2003.

Research Career

My research career has been in high-energy particle physics. I have used a large number of techniques to carry out my experiments, inevitably within a large collaboration, which is essential to carry out experiments at the energy frontier in particle physics. My thesis work used the bubble chamber technique to study the production properties of various meson states in hadronic interactions. After completing my thesis, I became a member of the TASSO experiment studying electron-positron annihilation at the PETRA accelerator at the DESY Laboratory in Hamburg, Germany, at the highest energies then available. It was here that I began my interest in the new quarks and leptons that had been revealed subsequent to the J/ψ discovery in 1974. This study has permeated and shaped my entire research career. In order to pursue it, I have developed new instruments and the required electronics, software and analysis techniques to utilise them optimally. I firmly believe that the discovery of important new physics comes about by the construction of both new accelerators and new detection and analysis techniques, and this conviction has been the guiding thread in my research career. It began with the development of a new form of gaseous drift chamber “vertex detector”, designed to detect heavy quarks and leptons in TASSO via their decay paths of length several hundred microns. This development opened up a new area of physics at PETRA; I led the testing, commissioning and optimisation of the new detector and the extraction of the physics from it. The resulting publications were of central importance to our growing understanding of the properties of the heavy bottom and charm quarks and the heavy tau lepton. Subsequently I led the development of the electronics and data acquisition for the central drift chamber for the ZEUS experiment at the HERA electron-proton collider at DESY. The requirements of the HERA collider, with the then unprecedented beam-crossing rate of 10MHz, required the development of completely new techniques in the speed and data acquisition capabilities of large distributed electronic systems which had repercussions beyond particle physics. The success of this project can be gauged by the completely reliable operation of the ZEUS central tracking chamber since 1994 and its central importance to *all* of the physics and discoveries that have emerged from the ZEUS experiment. I have played a leading role in several of the ZEUS studies on charm quarks, for instance the first measurement of the charm quark structure within the proton. I have also worked on the understanding of new aspects of the strong interaction, opened up by the ability of the ZEUS detector to detect electrons scattering off the proton at unprecedentedly small angles. It is widely acknowledged that the performance of the ZEUS tracking detector, for which I have been responsible for most of the operation of ZEUS, has been crucial in all of these physics results, which are among the most important results from HERA.

I played a major role in the development of the electronics for the BaBar experiment at the PEP-II electron-positron collider in Stanford. This experiment is a further stage in my research in the properties of heavy quarks, in particular concentrating on the tiny asymmetry between the bottom quark and antiquark, known as “CP violation”. Once again, the development in accelerator technology that enabled the production of the enormous number of particles containing bottom quarks that are necessary to study CP violation has required the development of new electronics and detector techniques in the experiments. The performance of this experiment and the accelerator in its first years of operation has been outstanding, and the BaBar collaboration has just published the most precise measurement to date of CP violation in the heavy quark sector.

I led the ZEUS experiment from 1999-2003, where I have had the final responsibility for the upgrading of the ZEUS detector’s capability to meet the challenges of the upgraded HERA II accelerator. For example, there have been major improvements in the ability to make precise measurements of heavy quarks via the installation of a new high-precision silicon-strip vertex detector. The difficult background conditions encountered in 2002 were a major challenge to the collaboration and although the problem is not yet completely solved, I mobilised an unprecedentedly large task force of effort that has made enormous progress in understanding the problem and proposing solutions to it. As Spokesman, I have supervised the most productive period ever of the collaboration in terms of contributions to conferences and particularly in terms of publications, culminating in a record number of publications in 2002. The collaboration’s operation has been completely overhauled and modernised, ranging from the operation of collaboration meetings to the ZEUS web site.

The following gives more detail on my research career in terms of activities carried out during my appointments, followed by a chronology of positions of responsibility and management held in my various experimental collaborations:
Research Associate, Rutherford Appleton Laboratory, 1978 - 1982.

Worked on TASSO experiment at the PETRA e^+e^- storage ring, which began data taking in 1979 at the highest available energies in the world. I worked on the commissioning and calibration of the detector and data acquisition and produced the first fast Monte Carlo simulation software, used for all subsequent physics analyses. I was involved in the work leading to the discovery of the gluon, the carrier of the strong force, in 1979. I made the first observation of the τ lepton at high energies and measurements of its properties, as well as searches for new heavy leptons and particles containing charm quarks. I co-led the design and construction of a new high-precision drift chamber (VXD) to detect the charged particles from the decays of heavy leptons and quarks and isolate their decay vertices.

Research Associate, Dept. of Physics, Imperial College of Science and Technology, London, 1982- 1984.

Responsible for the operation of the TASSO central proportional tracking detector. I also led the commissioning and operation of the VXD chamber and the optimisation of reconstruction software and its use in analysis. I used the VXD data to make high-precision measurements of the lifetimes and properties of the lepton and particles containing the heavy c and b quarks.

Lecturer, Dept. of Physics, Bristol University, 1984 – 1992. PPARC Advanced Fellow, Bristol University 1991 – 1997.

Led the Bristol TASSO group (1984 – 1990) and supervised postdocs and research students in further investigations of heavy quark and lepton properties. Supervised the operation of the VXD and further development of the Monte Carlo simulation for the whole experiment.

Founder member of the ZEUS experiment (1984 – date) to investigate the interactions of electrons and protons at unprecedented energies. I was responsible for all aspects of the design and construction of the electronics, trigger and data acquisition for the Central Tracking Detector (CTD). The CTD is the main device that measures the properties of charged particles and as such is essential to all ZEUS physics analyses. The 10 MHz crossing rate of the electron and proton beams posed challenges to the electronics and trigger that were beyond the current state of the art in electronics. They still represent the most challenging experimental conditions in particle physics. The system has worked exceptionally reliably since 1992 and is the heart of all ZEUS physics analysis.

Led the Bristol group working on the design of electronics, triggering and DAQ for high-precision silicon-strip detectors to be used in the identification of heavy quarks and leptons at the SDC experiment for the Superconducting Super Collider (1990 – 1993).

Reader, Dept. of Physics, Bristol University, 1992 – 1996; Head of Bristol Particle Physics Group, 1992 – date.

Responsible for the commissioning, operation and optimisation of the CTD. I led the team understanding the properties of the detector and how to best use it in the extraction of physics. I was made responsible for all ZEUS tracking detectors and their use in physics analysis in 1993. As such, all ZEUS physics studies depended directly on my work. With graduate students I led the analysis of neutral kaons, short-lived particles decaying into charged particles, and used them to investigate the processes by which quarks “fragment” to produce hadrons. I continued my studies of charm quarks, leading analyses using the high precision of the CTD to detect them via precise kinematic signatures of their decay.

Founder member of the BaBar experiment at Stanford Linear Accelerator Centre. Led the Bristol group (1994 –1999) working on the design of the electronics and triggering of the electromagnetic calorimeter. This is vital to measure many of the decay modes of the heavy b and anti-b quarks, the asymmetry between which gives clues as to the origin of the matter-antimatter asymmetry in the universe.

Professor of Experimental Physics in the University of Bristol, 1996 – date; PPARC Lecturer Fellow 1999 – 2000.

Led one of two ZEUS analyses that produced the first determination of the contribution of charmed quarks to the proton structure. Led the isolation of rare decay modes of the charm quark that have particularly small backgrounds. Continued to optimise and improve the precision of the CTD. Proponent of new high-precision silicon-strip detector to measure decays of c and b quarks, which has now been installed.

Spokesman of ZEUS Experiment, DESY, Hamburg, 1999- 2003.

Responsible for all aspects of an international collaboration of 450 physicists, the operation and improvement of the ZEUS detector and in particular for the scientific output of the experiment. Continued to work on aspects of heavy quark physics. Investigated possible gluon saturation in deep inelastic scattering at very low fractional momentum and momentum transfer. I was invited, together with A. Martin and M. Vincet, to contribute a new section on deep inelastic scattering to the Particle Data Group Review of Particle Properties 2002, which we have updated for the 2004 and 2006 editions.

Spokesman for all activities in UK related to construction and experimentation at a new electron-positron Linear Collider, 2003 –

European Director of the Global Design Effort for the International Linear Collider, 2005 -

The world particle physics community has agreed that the next major step should be the construction of a linear electron-positron collider with an energy of at least 500 GeV. As Chair of the European Committee for Future Accelerators, I am responsible for formulating and inputting the European viewpoint into the world discussions. As UK Spokesman, I am responsible for ensuring a focussed and world-leading programme in the UK on accelerator design and construction and the design of experimental apparatus.

Acting Director of the Oxford-RHUL Institute for Accelerator Science, 2004 – 2005

This institute was set up by PPARC in April 2004 as one of two institutes designed to rejuvenate the study of accelerator science in UK universities. I led the bid from Oxford-RHUL and am supervising the setting up of the Institute's research programme, the programme of postgraduate lectures and the refurbishment and planning of the Institute's accommodation until the appointment of a permanent Director.

Research Positions

Co-ordinator, Oxford group on ACNO experiment at CERN, Geneva, 1977 - 1979.

Co-ordinator for Vertex Detector upgrade to TASSO experiment at DESY, Hamburg, FRG, 1981 - 1984.

Group Leader, Bristol group on TASSO, 1984 - 1990.

Group Leader, Bristol group on ZEUS experiment at DESY, 1985 -

Co-ordinator, Electronics and Data Acquisition System for ZEUS Central Tracking Detector, 1985 - 1996.

Group leader, Bristol group on SDC experiment at SSC Laboratory, Dallas, Texas, 1990 - 1993.

Co-ordinator, ZEUS Central Tracking Detector, 1991 - 1996.

Run Co-ordinator, ZEUS experiment, 1992 - 1993.

Member, Steering Committee for Electronics, Triggering and Data Acquisition, SDC experiment, 1992 - 1993.

Member, Steering Committee for Silicon Tracking Detector, SDC experiment, 1992 - 1993.

Member, Steering Committee for Intermediate Tracking Detector, SDC experiment, 1992 - 1993.

Co-ordinator, Tracking Detectors on ZEUS, 1993 - 1996.

Member, Physics Co-ordinators Committee, ZEUS, 1993 - 1996.

Group Leader, Bristol group on BaBar experiment at SLAC, Stanford, California, 1994 - 1999.

Member, BaBar experiment Committee on Publication Policy, 1994 - 1996.

Member, BaBar experiment Speakers' Selection Committee, 1996 - 1997.

Deputy Systems Manager, Electronics, Trigger and DAQ, BaBar experiment, 1995 - 1996.

Member, ZEUS Editorial Board, responsible for paper production on ZEUS, 1997 - 1999.

Spokesman, ZEUS Experiment, 1999 - 2001; re-elected for second term, 2001-2003.

Research Grants held

I have been Principal Investigator for 5 SERC and PPARC special research grants since 1990. The last such grant award in 2000 was for a total of £1.4M over two years. In addition I have been awarded research grants for a Human Capital & Mobility Fellowship of the EU in 1994-96, from the British Council and Deutscher Akademischer Austauschdienst for 1997-2000, and from Deutsches Elektronen Synchrotron in 2001-2003. I was co-investigator of the Oxford particle physics group special research grant, which will shortly be announced by PPARC.

Talks given

I have given many talks at Universities and Conferences in my career. For example, since 2000 I have given talks at Cornell University, Ohio State University, University of California Santa Cruz, Yale University, University of Malaysia, University of Bonn, Kyungpook University, Korea University, Seoul National University, University of Louvain, University of Oxford, to the Plenary Meeting of the European Committee on Future Accelerators, to the OECD Megascience Forum, at the Annual Research Symposium of the Alexander von

Humboldt Foundation, at the Royal Society Discussion Meeting “The Quark Structure of Matter”, to the Korean Physical Society, at the Deep Inelastic Scattering 2001 Workshop at Bologna, lectured at the Hellenic Summer School 2001 in Corfu, at the HERA III Workshop at Durham University, at the LHC01 Symposium in Sardinia, at the Bruno Touschek Spring School at Frascati, 2002, at Quark Nuclear Physics 2002 at Juelich, at Neutrino Factory 2002 in London, at the DESY Theory Workshop 2002 at the German Physical Society Meeting in Hanover, 2003, at the Heavy Quarks at HERA II Workshop, Weizmann Institute Israel in 2003, a DESY Colloquium in 2003, at the Workshop on High Intensity Facilities in Elba, 2004 and at the XXIX Mazurian Lakes Conference, 2005.

University Teaching

I have had extensive teaching experience in physics in the University of Bristol physics department. From 1997-1999 I was head of undergraduate teaching in Year 3.

Undergraduate teaching

Previous courses taught:

1. Electromagnetism and Waves for 2nd year joint Maths-Physics students, (1984/5 - 1985/6). Between 5 - 10 students. Contact hours were 16 lectures of 50 minutes duration. Problem sheets were drawn up together with formula sheets and background material. Assessment was by examination. I was fully responsible for all of these activities.
2. Relativity & Nuclear physics for 2nd year single and joint honours physicists (1986/7 - 1989/90). Between 90 - 110 students. Contact hours were 24 lectures of 50 minutes duration. I introduced the teaching of some concepts of particle physics to 2nd year physicists, completely remodelling the existing course which had concentrated on nuclear physics. This course is the basis for a text book which I am currently writing. Problem sheets were drawn up together with formula sheets and extensive background material written by me specifically for the course, to provide further information on items such as tensor analysis, systems of natural units, etc. Assessment was by examination. I was fully responsible for all of these activities.
3. Fields for 1st year physicists. (1992/93). Approximately 110 students. Contact hours were 10 lectures of 50 minutes duration. I made some modifications to a course drawn up by a colleague on study leave. I was not responsible for the assessment of this course.
4. Electromagnetism for 2nd year physicists (1997 - 99)
Approximately 120 students. Contact hours 18 lectures of 50 mins duration. I built on the course redesigned for the new syllabus three years previously. I extensively changed the presentation and approach to the key ideas, as well as changing the emphasis. In this course I have utilised the World Wide Web in teaching for the

first time; all course material, problem sheets etc. was available on the department's teaching server.

The success of the above courses as measured by questionnaire and personal responses was good. Particularly successful was the second year Relativity and Nuclear Physics course. In addition to the above lecture courses I have given many tutorials in all three years covering the whole range of physics taught in Bristol, as well as problem classes on specific courses. I demonstrated for many years in the 2nd year experimental laboratory and supervised many final year experimental projects on subjects ranging from the determination of the dielectric constants of ice to triggering at high energy proton-proton colliders. I have acted as a project assessor on 2 occasions and chaired examination vetting panels. I have served on committees charged with teaching and curriculum development, in particular on the development of practical laboratory work and on electronics teaching in the department. I was a member of the Departmental Teaching Committee from 1997-99. I chaired an extensive review and development of the Third Year B.Sc. Syllabus in 1999.

Postgraduate teaching

I was a tutor at the UK Summer School for Postgraduate Students in Experimental High Energy Physics, 1985 - 1987, Cosener's House, Abingdon. I chaired a working group which developed new postgraduate teaching in particle physics in 1992. I have lectured in and co-ordinated this course in the period 1992/93 - 1995/96. The unit developed is modular, of ~54 lectures of 50 minutes duration together with directed reading and problems sheets and classes. The unit runs in the second and third terms of the postgraduates' first academic year. It follows a course on relativistic quantum mechanics and covers all the main areas of particle physics both theory and experiment. It also contains a unit in which students have to give a brief seminar on a topical development in particle physics. The delivery of the course is split among the academic staff of the particle physics group. Until 1999, I gave the first 5 lectures summarising the current state of experimental and theoretical particle physics.

External Examiner for B.Sc. & Masters Degrees

I was External Examiner for Physics degree programmes for the University of Malaysia, Kuala Lumpur, 1999-2005 and External Assessor for Appointments to Physics Chairs since 2002 .

Postgraduate supervision

A.J. Martin, 1985 - 1988

T.L. Short, 1988 - 1992

A. Cassidy, 1991 - 1996

A.R. Duell, 1992 - 1994

S. Campbell-Robson, 1993 - 1997
D. Piccioni, 1994 - 1998
R. Hall-Wilton, 1995 - 1998
J. Andress, 1996 - 2000
D. Wallom, 1997 - 2001
S. Robins, 1999 - 2002
B. Jeffery, 2004 -

External Examiner for Ph.D.

I have been External Examiner for Ph.D. at Imperial College of Science, Technology and Medicine, Queen Mary Westfield College & Royal Holloway and Bedford New College, University of London, University of Cambridge and University of Oxford.

Other teaching and public understanding of science activities

I have given many educational and schools lectures over the years, including lectures at the Science Festival of the British Association for the Advancement of Science, the Science Museum, London and United World College of the Atlantic, Wales, as well as many secondary schools.

I gave an evening course for the Workers Educational Association in 1986 on aspects of elementary particle physics.

I am deeply committed to all aspects of the public understanding of science. In particular I was for three years Recorder of the Physics section of the British Association for the Advancement of Science, and as such was responsible for the whole programme of lectures and activities in physics in the BA. I was awarded a Small Award from PPARC jointly with Dr J. McFall in 1998 to develop a “BaBar cube”, rather similar to the Rubik Cube, thousands of which were made and distributed world-wide. In 2004 I was awarded a PPARC Small Award to fund a lecture for World Year of Physics entitled “Superstrings”, which integrates violin music with an exposition of Einstein’s universe and the latest ideas in particle physics. The lecture is given with the British violin virtuoso Jack Liebeck and has toured with great success all round the world. A total of 30 performances are being given in 2005.

Academic & Scientific Administration & Policy

Member, Bristol University Physics Department Steering Committee, 1987 - 1988, 1992-

Member, Bristol University Physics Department Executive Committee, 2001 -

Chairman, Ad-Hoc “Life after Kendrew” Group of UK Particle Physics Community 1984 - 1987.

Hon. Secretary and Treasurer, Institute of Physics High Energy Particle Physics Group, 1985 -1989.

Member, Institute of Physics Nuclear Physics Subcommittee 1985 - 1989.

Member, Science and Engineering Research Council (SERC) Nuclear Physics Board Committee to review the future of Rutherford Appleton Laboratory Particle Physics Theory Group, 1988.

Chairman, Institute of Physics Nuclear and Particle Physics Division, 1989 - 1993.

Member, IoP Meetings Committee, 1989 - 1991.

Member, IoP Publishing Books Editorial Advisory Committee, 1991- 1993.

Member, SERC Particle Physics Committee, 1986 -1990.

Member, SERC Particle Physics Committee, “Strategy Group for Particle Physics in 1990s”, 1989 - 1991.

Member, SERC Particle Physics Experiments Selection Panel, Co-opted 1989, 1991, 1995.

Member, Management Committee, Durham High Energy Physics Database Project, 1991 - 1999.

Member, European Committee for Future Accelerators, 1992 - 1996.

Member, CERN LEP Programme Committee, 1993 - 1996.

Recorder, Physics Section, British Association for the Advancement of Science, 1994 - 1997.

Member, OST “Technology Foresight” Regional Panel on IT, Communications & Electronics, 1994 - 1996.

Member, Particle Physics and Astronomy Research Council Particle Physics Committee Review of Daresbury Rutherford Appleton Laboratory, 1994 - 1995.

Member, PPARC Particle Physics Committee 1995 - 1999, and Chairman, 1996 - 1999.

Co-Chairman, PPARC Science Committee, 1996 - 1999.

Member, *ex-officio*, PPARC Chief Executive Advisory Committee, United Kingdom Committee on CERN.

Advisor to Delegates to CERN Council and Committee of Council, 1996 - 1999.

Member, CERN Large Hadron Collider Committee, 1996 - 1999.

Delegate to CERN Council, *vice* K. Pounds, 1997.

Member, Scientific Council, Deutsches Elektronen Synchrotron, Hamburg, Germany, 1999 -

Member, PPARC Joint Infrastructure Fund Strategy Group, 1999 - 2001

Chairman, PPARC Institute of Particle Physics Phenomenology Review Panel, 1999 - 2000.

Chair, Organisation of Spokespeople of Large Experiments in Particle Physics, (SOLEP), 2000 - 2002

Member, European Committee for Future Accelerators Panel on the Future of European Particle Physics, 2000 - 2001

Member, Particle Physics and Astronomy Research Council, 2001 –

Member, PPARC Science Committee, 2001 –

Chairman, European Committee for Future Accelerators, 2002 – and *ex officio* member of EPS HEP Divisional Committee, CERN Council, Finance Committee, Scientific Policy Committee etc.

Member, Science Council of the Federal German Government Evaluation Commission 2001 -

Referee for research proposals in particle physics, FOM, Netherlands, 1989.

Referee for European Community CODEST Proposals, 1991.

Referee for European Community INTAS Proposals, 2000 –

Referee for Research Awards, Royal Swedish Academy of Sciences, 2001.

Referee for Physical Review Letters and Physical Review D.

Consultant Editor for particle physics, Institute of Physics Publishing 1991 -

Secretary, Organising Committee for International Conference to celebrate the 40th Anniversary of the Discovery of the Pi Meson, 1986 - 1987.

Member of International Advisory Committees: Physics in Collision, 1996 - , (Chair 1996-97); European Physical Society HEP Conference, Tampere, 1999; NuFact '02, London 2002; “Four Seas Conference”, Thessaloniki, 2002; Frontier Science 2002, Frascati, Italy; Hadron Collider Physics 2002, Karlsruhe, Germany; European Physical Society HEP Conference, Aachen, 2003; NuFact '03, Columbia; NuFact '04, Japan; Four Seas Conference, Istanbul, 2004; European Physical Society HEP Conference, Lisbon, 2005; High-Intensity Frontier Workshop, 2005, etc.

Advisor to Dr L. Moonie, M.P., Opposition Spokesman on Science and Technology, 1993 - 1994.

Advisor to Dr L. Moonie, M.P., Opposition Spokesman on Technology within DTI, 1994 - 1995.

Advisor to J. Battle, M.P., Opposition Spokesman on Science and Technology 1994 - 1995.

Advisor to A. Ingram, M.P., Opposition Spokesman on Science and Technology 1995 - 1997.