

CURRICULUM VITAE

- Name:** JOHN DAVID BARROW
- Work Address:** Dept. of Applied Mathematics & Theoretical Physics, Centre for Mathematical Sciences, Cambridge University, Wilberforce Road, Cambridge CB3 0WA.
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Email: J.D.Barrow@damtp.cam.ac.uk
- Date of Birth:** 29th November 1952
- Place of Birth:** London, England
- Degrees:** BSc (Hons), Mathematics (University of Durham) 1974: 1st Class Honours.
DPhil, Astrophysics (University of Oxford) 1977. Thesis title: 'Non-Uniform Cosmological Models'. Supervisor: Professor D W Sciama FRS.
- Honorary Degrees:** D.Sc. University of Hertfordshire, 1999
D.Sc. University of Szczecin, 2007
D.Sc. University of Durham, 2008
D.Sc. University of Sussex, 2010
D.Sc. University of S. Wales, 2014
- Honorary Professorship:** Dept. of Physics and Astronomy, University of Nanjing, China, 2005
- Honorary Fellowships:** Van Mildert College, Durham University, 2015
Gresham College, London, 2018
- Academic Career:** Ealing Grammar School 1964-71
Van Mildert College, Durham University 1971-4
Magdalen College & Dept. of Astrophysics, Oxford University
1974-7
Astronomy Dept., Univ. California Berkeley (Lindemann Fellow)
1977-8
Christ Church and Dept. of Astrophysics, Oxford (Junior Research Lecturer) 1977-80
Physics Dept., Univ. California Berkeley (Miller Fellow) 1980-1
Lecturer, Astronomy Centre, University of Sussex 1981-8
Nuffield Foundation Science Fellow, University of Sussex 1986-7
Senior Lecturer, Astronomy Centre, University of Sussex 1988-9
Reader, Astronomy Centre, University of Sussex, 1989
Professor, Astronomy Centre, University of Sussex 1989-99

Acting Director, Astronomy Centre, University of Sussex 1989-90
Royal Society Leverhulme Fellow, University of Sussex 1992-3
PPARC Senior Fellow, University of Sussex 1994-99
Director, Astronomy Centre, University of Sussex 1995-99
Professor of Mathematical Sciences, Dept. Applied Mathematics
and Theoretical Physics, University of Cambridge, 1999-
Director, Millennium Mathematics Project, University of
Cambridge, 1999-
Professorial Fellow, Clare Hall, Cambridge University, 1999-
Vice President, Clare Hall, Cambridge University, 2004-7.
Gresham Professor of Astronomy (and other Physical Sciences),
Gresham College, London 2003-7
First Eastern Visiting Cambridge Professor (China and Hong
Kong) 2005
Li Ka Shing Foundation Visiting Scholar (China and Hong Kong),
2006.
Emeritus Professor of Astronomy, Gresham College, 2007-8
Gresham Professor of Geometry, Gresham College, 2008-12
Emeritus Gresham Professor of Astronomy and Geometry, 2012-
15
President, British Science Association, Physics and Astronomy
Section, 2008-9.
President, British Science Association Mathematics Section, 2011-
12.
Fellow, Gresham College, London 2007-10 and 2012-2016, 2016-
18
Dean, Clare Hall, Cambridge University, 2017-

Awards:

Durham University Mathematical Prize 1973.
Durham University Prize 1974.
Collingwood Mathematical Prize (Durham University and London
Mathematical Society) 1974.
Johnson Memorial Prize (Oxford University) 1975.
Wallace Research Prize (Oxford University) 1977.
Lindemann Fellowship of the English Speaking Union of the
Commonwealth 1977.
Junior Research Lectureship, Christ Church, Oxford 1977.
Gravity Prize (5th), Gravity Foundation Awards 1979.
Miller Fellowship, University of California at Berkeley 1980.
Gravity Prize (3rd), Gravity Foundation Awards 1981.
Nominated for the Bhappu Prize of the International Astronomical
Union by the Council of the Royal Astronomical Society 1986/7.
Nuffield Foundation Science Fellowship 1986/87.
Samuel Locker Award in Astronomy 1989.
Gravity Prize (4th), Gravity Foundation Awards 1993

Royal Society Leverhulme Senior Fellowship 1992/3.
PPARC Senior Fellowship (5 years) 1994-9
Templeton Award 1995.
Gravity Prize (5th), Gravity Foundation Awards 1997.
Gordon Godfrey Visiting Professor of Physics, University of New South Wales, Sydney, 1998.
Kelvin Medal, Royal Glasgow Philosophical Society, 1999
Wellcome Sci-art 2000 Award, 2000
Gordon Godfrey Visiting Professor, University of New South Wales, Sydney, December 2000.
Italian Theatre Awards, Premi Ubu 2002 Prize for best play (awarded for *Infinites*).
Elected Fellow of the International Society for Science and Religion (FISSR), 2002
Gresham Professor of Astronomy, Gresham College, 2003-7
Emeritus Gresham Professor of Astronomy, Gresham College, 2007-
Elected Fellow of the Royal Society (London), 2003
Gordon Godfrey Visiting Professor of Physics, University of New South Wales, Sydney, November 2003.
Italgas Prize for Promulgation of Science 2003, (awarded for *Infinites*).
Lacchini Prize and Medal of the Unione Astrofili Italiani 2005.
Honorary Concurrent Professor of Physics, University of Nanjing, China 2005-
Queen's Anniversary Prize 2006 (to Millennium Mathematics Project).
Templeton Prize, Templeton Foundation 2006.
Honorary Citizen, City of Louisville, Kentucky 2006.
Gresham Professor of Geometry, Gresham College 2008-12.
Michael Faraday Medal and Prize, Royal Society 2008.
Gresham Prize, Mercers Company and Corporation of London 2009 (also to Millennium Mathematics Project)
Kelvin Medal and Prize, Institute of Physics, 2009.
Elected Fellow of the Academia Europaea, 2009.
L'Academie Internationale de Philosophie des Sciences, Titular Member, elected 2009.
Premio Oriente Science (Prize), Colletti Foundation 2010.
Merck-Serono Prize for Science and Literature, Merck-Serono, Italy, 2011.
Gravity Research Foundation Research Essay 3rd Prize 2011
Christopher Zeeman Medal, London Mathematical Society and IMA, 2011
Premio Antico Pignolo (Literary Prize), Venice 2012
Emeritus Gresham Professor of Geometry, Gresham College, 2012-

Dirac Gold Medal and Prize, Institute of Physics 2015
Honorary Fellow, Van Mildert College, Durham University, 2015
Gold Medal of the Royal Astronomical Society, 2016
Physics Letters Journal: Outstanding Contribution in Reviewing
Award, 2017

Named Lectures: Centenary Gifford Lectures, Glasgow University 1989
Elizabeth Scott Memorial Lecture, European Math. Society 1989
Prime Minister's Science Seminar, 10 Downing St., 1989
Collingwood Memorial Lecture, Durham University 1990
Sigma-Tau-Laterza Lectures, University of Milan 1991
George Darwin Lecture, Royal Astronomical Society 1992
Spinoza Lecture, University of Amsterdam, Amsterdam 1993
University of London Annual Physics Lecture, Royal Holloway
College, London. 1993
Elizabeth Spreadbury Lecture, University College London 1994
BBV Science Lectures, Madrid, Bilbao & Tenerife 1994
Royal Institution Evening Discourse, 1994
Robert Boyle Memorial Lecture, Oxford 1996
Amnesty International Science Lecture, Oxford University 1997
Benedum Lecture, University of West Virginia, 1997
Kelvin Lecture, Royal Glasgow Philosophical Society, 1999
Royal Society of Arts Children's Christmas Lecture 1999
Nicki Shaw Lecture, Cambridge 2000
London Mathematical Society Popular Lectures, Leeds, Glasgow,
London, 2000
Flamsteed Lecture, University of Derby, 2000
Bologna 2000 Lecture, 2000
Tyndall Memorial Lecture, University of Bristol, 2001
Darwin Lecture, Darwin College, University of Cambridge, 2001
Whitrow Lecture, Royal Astronomical Society, 2002
Brasher Lecture, University of Kingston, 2002
Gresham Lectures, Gresham College, London 2003-7
Isaac Newton Memorial Lecture, King's School Grantham, 2004
Hubert James Lecture, Purdue University, 2004
Carl Von Weizsäcker Lectures, Hamburg University, 2004
McCrea Centenary Lecture, Sussex, 2004.
Finnish International Year of Physics, Univ. Helsinki, 2005
Wood Memorial Lecture, Newcastle University, 2005
Hamilton Lecture, Royal Dublin Society, Trinity College Dublin,
2005
Edinburgh Science Festival Address, St Giles Cathedral, 2005
Knight Lecture, Monkton College, Bath, 2006
Borderlands Lecture, Durham University, 2007
Boyle Lecture, St Mary-le-Bow, London, 2007

Roscoe Lecture, John Moore's University, Liverpool, 2007.
 Gunnar and Gunnel Källén Memorial Lecture, Lund, 2007.
 Si-Wei Lectures, National Chengchi University, Taiwan, 2008
 Dennis Sciama Memorial Lectures, Oxford and Trieste, 2008
 David Phillips Memorial Lecture, Cardiff University, 2008.
 Faraday Prize Lecture, The Royal Society, 2009.
 Culford Scholars' Lecture, Culford School, 2009
 Presidential Lecture, BSA Physics and Astronomy Section, Univ
 Surrey, 2009
 Tizard Lecture, Westminster School, 2010
 William Herschel Lecture, University of Bath, 2010
 Van Mildert Trust Lecture, Van Mildert College, University of
 Durham, 2010
 Marcello Anile Memorial Lectures, University Catania, 2011
 Gregynog Lecture, University of Aberystwyth, 2011.
 Real Sociedad Matemática Española, Centenary Lecture,
 Paraninfo, Univ. Zaragoza, 2011.
 Zeeman Lecture, London Math. Soc and Inst. Maths. & its
 Applications, Royal Society, 2012.
 Bernard Lovell Lecture, Jodrell Bank, 2012.
 Presidential Lecture, BSA Mathematics Section, Univ. Aberdeen,
 2012.
 Biennial McCrea Astronomy Lecture, Royal Irish Academy, Cork
 University, 2013.
 Annual Correspondents Day Lecture, Isaac Newton Institute,
 Cambridge, 2014.
 IMO Celebrity Lecture, International Mathematics Olympiad, U
 Cape Town, 2014
 Enriques Lecture, Dipt. Matematico, Univ of Milan, 2014
 10-on-10 Lecture, Para Limes and Alpha-Star Institute, Nanyang
 Technological University, Singapore, 2017
 Gresham College and British Society for the History of
 Mathematics Lecture (Zero is a Hero), Museum of London, 2017

Committees:

In-House Research Panel (APS Board of SERC) 1987-8
 Voting delegate representing the Royal Society and the British
 Academy, VIII International Congress on Logic, Methodology,
 and Philosophy of Science, Moscow 1987
 Steering Committee, UK Dark Matter Experiment 1988-9
 Theory and Computation Panel (APS Board of SERC) 1988-92
 Ground-based Programme Committee (APS Board of SERC)

1989-92

Anglo-German Gravitational Wave Panel (SERC member) 1990

Lisbon Particle Physics and Cosmology School, Organising
 Committee, 1990
 International Organising Committee, Texas Symposia on
 Relativistic Astrophysics 1990-
 Co-chair, Local Organising Committee, Texas/ESO-CERN
 Symposium on Relativistic Astrophysics, Cosmology and
 Fundamental Physics, Brighton 1991
 Statistical Challenges in Modern Astronomy, Penn State 1991,
 Programme Committee
 Brioni Conference on States of Matter in the Universe, 1991,
 Organising Committee
 International Organising Committee, Texas Symposium in
 Relativistic Astrophysics 1991-
 Gravitational Radiation Review Panel, (APS Board of SERC) 1994
 European Union & Council of Europe SEPS Science Committee
 1996-1998
 Organising Committee M. Grossmann Meeting, Jerusalem 1997
 Conference Organising Committee, The Non-sleeping Universe,
 Porto 1997
 Board of European Advisors, Templeton Foundation 1995-8,
 2000-2004, 2006-9
 Board of Trustees, Templeton Foundation, 1999-2005, 2006-12
 Board of Trustees, TWC Foundation, 2006-12
 Planning Committee, Templeton Foundation, 2005-6
 British Council Associate Advisor, 1997-8
 Nuffield Foundation Grants Panel, 1998-2000
 Awards Committee, Royal Astronomical Society, 1998-2002
 Co-organiser, Newton Institute Cambridge programme, Statistics
 and Astronomy, August 1999.
 Millennium Mathematics Project, Management Committee, 1999-
 Millennium Mathematics Committee, Executive Committee, 1999-
 Organising Committee Marcel Grossmann Meeting, Rome, 2000
 Council of the Royal Astronomical Society, 1999-2002
 THES and OUP Science Writing Prize Judge, 1999-2000, 2002-3
 Board of Governors, Cheshunt Foundation, 2000-2021
 Board of Continuing Education, Cambridge University, 2001-2
 Inst. of Continuing Education, Cambridge, Board member, 2002-4
 Finance Committee, Board of Continuing Education, Cambridge
 University, 2001-2
 Finance Committee, Inst. of Continuing Education, Cambridge
 University, 2002-4
 CARET Advisory Board, Cambridge 2002-3
 Gruber Cosmology Prize Committee, 2000-3.
 Board of Governors, Westminster College, Cambridge, 2001-12
 Chair, Audit Committee, Westminster, College, 2008, 2009
 International Advisory Committee CosPA, Taiwan, 2002-3

Forum 21, 2002-4
Chair, EPSRC Culture and Creativity Grants Panel, 2004
Advisory Committee, Einstein Centenary Meeting, Paris, 2005.
Audit Committee, Westminster College, Cambridge, 2005-10
Scientific Advisory Board, Foundation Questions in Physics and
Cosmology (FQX) Project, 2005-
Editorial Advisory Board, University of Cambridge 800th
Anniversary Volume, 2006-8
International Advisory Committee, CosPA International
Symposium on Particle Physics & Cosmology, Taipei, 2006.
Patron, Cambridge Science Festival, 2007-9
Cambridge Science Week Patrons Committee, 2007-
Trustee, Van Mildert College Trust, Durham University, 2007-
2013
Scientific Advisory Board, World Science Festival, New York,
2008.
Royal Society A-Awards Committee, 2005-8
International Advisory Committee, UNESCO Symposium for
International Year of Astronomy, Paris 2009.
Programme Committee, International Conference to
Commemorate 400 years of the Telescope, Beijing, Oct 2008.
Cosmology and Philosophy, Oxford 2009, Programme Organising
Committee
European Project SCIENAR Board Member 2009-12
British Science Association, Physics and Astronomy Section
committee, 2008-9
British Science Association, Maths Section committee, 2011-12
European Mathematics Society Committee on Public Awareness of
Mathematics, 2008-12
Cambridge University, Mathematics Depts., Senior Promotions
Committee, 2010-12
Eurasian International Advisory Board, Templeton Foundation,
2011-13
Gresham College Council, Mercers Company and Corp. of
London, 2011-12
Gresham College Academic Board, 2007-2018
OCR/UCLES Mathematics Council, 2011-2
Mathematics Advisory Group to Governor of the Bank of England,
2011-2
Scientific Organising Committee COSMO 2013, Cambridge,
2012-3
Infinites and Cosmology Conference, DAMTP, Cambridge, Chair
of Organising Committee, 2013.
Scientific Organising Committee, Texas Symposium in Relativistic
Astrophysics, Dallas 2013.

Royal Society Judging Panel, 'Picturing Science' competition, 2013
Advisory Group, New Frontiers in Astronomy and Cosmology Grant Competition and Final Conference, Franklin Inst., Univ Chicago, 2014
Editorial Board of *The Universe*, Journal of Asia Pacific Org. for Cosmology and Particle Astrophysics, Taiwan 2014
Cosmology and the Constants of Nature Conference, DAMTP, Cambridge, Chair of Organising Committee, 2014.
Cosmology and Philosophy, Tenerife, Sept 2014, Scientific Programme committee
Leverhulme Trust: Leverhulme Physics Prize Committee 2015, 2018
Clare Hall, Official Fellowship Committee, 2013-2015
Clare Hall, Buildings and Estates Committee, 2015-
Clare Hall, Finance Committee, 2016-
Maths World UK Advisory Panel, 2015-
Co-organiser, Fred Hoyle Centennial Meeting, Royal Astronomical Society, London 9 Oct 2015
Sciama Visiting Fellowship selection committee, SISSA Trieste, 2016-2018

Telescope Time:
1987.

J. Kapetyn and Isaac Newton Telescopes, La Palma, (7 nights),
Anglo-Australian Telescope, (3 nights), April 1998.
Hubble Space Telescope, 12 primary Spacecraft Orbits in Cycle 24
General Observer time, 2016-2017

Memberships:
FInstP) 1998

Fellow of the Royal Astronomical Society (FRAS).
Fellow of the Institute of Physics and Chartered Physicist (CPhys
International Astronomical Union, Member of Commission 47
Forum Fellow, World Economic Forum, Davos, Switzerland 1999,

2000

Fellow of the Royal Society of Arts (FRSA), elected 1999.
Fellow, International Society for Science and Religion (ISSR),
elected 2002
Honorary Fellow, International Society for Science and Religion
(ISSR), elected 2017
Fellow of the Royal Society of London (FRS), elected 2003.
L'Academie Internationale de Philosophie des Sciences, Titular
Member, elected 2009.
Member of e-LISA Cosmology Working Group, 2014-

Misc:

John D. Barrow Drama Room named at Cranbrook School, Kent,
2007.

John Barrow Dissertation Prize created at Van Mildert College,
Durham University, 2007.

Royal Shakespeare Company and Royal Society Presentation and
Discussion 'A Dramatic Experiment: Science on Stage', The Royal
Society, 11 May 2015,

PUBLICATIONS: JD BARROW

1. Light Elements and the Isotropy of the Universe, 1976. *Mon. Not. Roy. astr. Soc.*, 175, 359-370.
2. The Synthesis of Light Elements in Turbulent Cosmologies, 1977. *Mon. Not. Roy. astr. Soc.*, 178, 625-650.
3. A Chaotic Cosmology, 1977. *Nature*, 267, 117-120.
4. On the Origin of Cosmic Turbulence, 1977. *Mon. Not. Roy. astr. Soc.*, 179, 47P-49P.
5. The Homogeneity and Isotropy of the Universe, 1977. *Mon. Not. Roy. astr. Soc.*, 181, 719-728 (with R A Matzner).
6. Modern Cosmological Models, 1978. *Science Progress* 65, 129-160.
7. Quiescent Cosmology, 1978. *Nature*, 272, 211-215.
8. Primordial Black Hole Formation in an Anisotropic Universe, 1978. *Mon. Not. Roy. astr. Soc.*, 182, 537-558 (with B J Carr).
9. A Cosmological Limit on the Possible Variation of G, 1978. *Mon. Not. Roy. astr. Soc.*, 184, 677-682.
10. Eternity is Unstable, 1978. *Nature*, 276, 453-459 (with F J Tipler).
11. Analysis of the Singularity Studies of Belinskii, Lifshitz and Khalatnikov, 1979. *Phys. Reports*, 56, 371-402 (with F J Tipler).
12. Pre-galactic Black Holes: A New Constraint, 1979. *Gen. Rel. Gravn.*, 11, 633-638 (with J Silk).
13. The Structure of the Early Universe, 1980. *Scientific American*, April issue, pp118-129 (with J Silk).
14. The Early Stages of the Universe, 1980. Chapter 4, Proc. of the General Meeting of the European Physical Society, Inst. of Physics, Heinemann, London.
15. Galaxy Formation: The First Million Years, 1980. *Phil. Trans. Roy. Soc. A296*, 273-288.
16. Black Holes are not the end of the World, 1979. *Phys. Bulletin*, 30, 149-150.
17. Baryon Asymmetry and Cosmological Asymmetries, 1979. *Mon. Not. Roy. astr. Soc.*, 188, 23P-29P.
18. Evolutionary Cosmological Models, 1979. In 'Problems of the Cosmos', (Einstein Centenary Volume, Enciclopedia Italiana, Rome).
19. Shear Hell-Holes and Anisotropic Universes, 1979. *Gen. Rel. Gravn.*, 11, 383-389 (with B J Carr).
20. The Size of a Bouncing Mixmaster Universe, 1980. *Phys. Rev. D* 21, 336-340 (with R A Matzner).
21. The Baryon Asymmetry of the Universe, 1980. *Surveys in High Energy Physics*, 1, 1-30.

22. The Proton Half-life and the Dirac Hypothesis, 1979. *Nature*, 282, 698-9.
23. Primordial Baryon Generation by Black Holes, 1979. *Mon. Not. Roy. astr. Soc.*, 192, 427-439.
24. Cosmological Constraints on the Scale of Grand Unification, 1980. *Nucl. Phys. B*, 181, 461-487 (with G G Ross).
25. Grand Unification Theories and the Dirac Hypothesis, 1980. *Nature*, 287, 566.
26. Cosmological Baryon Annihilation, 1980. *Mon. Not. Roy. astr. Soc.*, 192, 19P-23P.
27. Coagulation with Fragmentation, 1981. *J. Phys. A*, 14, 729-733.
28. Generic Singularity Studies Revisited, 1981. *Phys. Lett. A*, 82, 441-6 (with F J Tipler).
29. Chaos in the Einstein Equations, 1981. *Phys. Rev. Lett.*, 46, 963-967.
30. Baryosynthesis and the Origin of Galaxies, 1981. *Nature*, 291, 469-472 (with M S Turner).
31. Inflation in the Universe, 1981. *Nature*, 292, 35-38 (with M S Turner).
32. The Growth of Anisotropic Structures in a Friedman Universe, 1981. *Astrophys. J.*, 250, 432-449 (with J Silk).
33. Cosmological Constraints on Elementary Particle Masses in Lemaître Cosmological Models, 1981. *Phys. Lett.*, B 107, 358-362.
34. Cosmology and High Energy Physics, 1981. Proc. Inst. of Physics Conference 'Nuclear Structure and Particle Physics', A Hilger, Bristol.
35. The Lore of Large Numbers: Some Historical Background to the Anthropic Principle, 1981. *Quart. Jl. Roy. astr. Soc.*, 22, 388-420.
36. General Relativity and Non-linear Dynamics, 1982. *Gen. Rel. Gravn.*, 14, 1523-1530.
37. Chaotic Behaviour in General Relativity, 1982. *Phys. Reports* 85, 1-49.
38. Cosmology and Particle Physics, 1982. In 'Cosmology: an Oxford Symposium', ed. A Wolfendale, Reidel, Dordrecht, pp21-38.
39. Dissipation and Unification, 1982. *Mon. Not. Roy. astr. Soc.*, 199, 45P-48P.
40. Massive Particles as a Probe of the Early Universe, 1982. *Nucl. Phys. B*, 208, 501-508.
41. Anthropic Definitions, 1983. *Quart. Jl. Roy. astr. Soc.*, 24, 146-153.
42. Natural Units before Planck, 1983. *Quart. Jl. Roy. astr. Soc.*, 24, 24-26.
43. Neutrino Proliferation, 1983. *Phys. Lett. B*, 125, 377-378.
44. Cosmology and Elementary Particles, 1983. *Fund. Cosmic Physics*, 8, 83-200.
45. Perturbations of a De Sitter Universe, 1983. In 'The Very Early Universe', ed. G Gibbons, S W Hawking and S T C Siklos, Cambridge University Press, Cambridge, pp267-272.
46. Chaos in the Mixmaster Universe, 1983. *Phys. Rev. Lett.*, 50, 134-137 (with D. Chernoff).

47. The Stability of General Relativistic Cosmological Theory, 1983. *J. Phys. A*, 16, 2757-2776 (with A. C. Ottewill).
48. Limits on the Neutrino Number and Baryon Density of a Realistic Universe, 1983. *Mon. Not. Roy. astr. Soc.*, 203, 393-401 (with J Morgan).
49. Monopoles in the Milky Way, 1983. *Phys. Lett. B*, 122, 31-32 (with J Stein Schabes).
50. The Isotropy of the Universe, 1982. *Quart. Jl. Roy. astr. Soc.*, 23, 344-357.
51. Structure of the Cosmic Microwave Background, 1983. *Nature*, 305, 397-402 (with R Juszkiewicz and D H Sonoda).
52. Dimensionality, 1983. *Phil. Trans. Roy. Soc. A*, 310, 337-346.
53. Cosmology, Elementary Particles, and the Regularity of the Universe. In 'Relativistic Astrophysics and Cosmology', 1984. eds. X Fustero and E Verdaguer, World Publ. Singapore pp137-199.
54. Non-linear Gravitational Clustering, 1984. *Mon. Not. Roy. astr. Soc.*, 209, 19-144 (with R Juszkiewicz and D H Sonoda).
55. Percolation Analyses of Observed and Simulated Galaxy Clustering, 1983. *Mon. Not. Roy. astr. Soc.*, 205, 61P-66P (with S P Bhavsar).
56. Inhomogeneous Cosmologies with Cosmological Constant, 1984. *Phys. Lett. A*, 103, 315-318 (with J Stein Schabes).
57. Percolation Studies of Galaxy Clustering, 1984. In 'Clusters and Groups of Galaxies', eds. M Mardirossian, G Giuricin, and M Mezetti, Reidel, Dordrecht (with S P Bhavsar), pp 415-421.
58. New Light on Heavy Light, 1984. *Nature*, 307, 14-15 (with R Burman).
59. Microwave Sky Patterns and the Density of the Universe, 1984. In Proc. 1st ESO-CERN Symposium, ed. G Setti and L van Hove, CERN, Geneva (with R Juszkiewicz and D H Sonoda) pp170-176.
60. Chaotic Behaviour and the Einstein Equations, 1984. In 'Classical General Relativity', eds. W Bonnor, J Islam and M A H MacCallum, CUP, Cambridge pp 25-41.
61. A Bootstrap Resampling Analysis of Galaxy Clustering, 1984. *Mon. Not. Roy. astr. Soc.*, 210, 19P-23P, (with S P Bhavsar and D H Sonoda).
62. The Invisible Universe, 1984. *New Scientist*, August 30, p 28-31 (with J Silk).
63. From Quark to Cosmos, 1984. *Nature*, 308, 13-14 (with J Silk).
64. The Stability of Certain Spatially Homogeneous Cosmological Models, 1985. *Gen. Rel. Gravn.*, 17, 409-416 (with D H Sonoda).
65. Helium Formation in Cosmologies with Anisotropic Curvature, 1984. *Mon. Not. Roy. astr. Soc.*, 211, 221-227.
66. Cosmology, the Existence of Observers and Ensembles of Possible Universes, 1985. In 'Les Voies de la Connaissance', ed. M Cazenave, A Michel, Paris.

67. First-Ranked Galaxies in Groups and Clusters, 1985. *Mon. Not. Roy. astr. Soc.*, 213, 857-869 (with S P Bhavsar).
68. Universal Rotation: How Large Can it be?, 1985. *Mon. Not. Roy. astr. Soc.*, 213, 917-943 (with R Juszkiewicz and D H Sonoda).
69. Closed Universes: Their Evolution and Final State, 1985. *Mon. Not. Roy. astr. Soc.*, 216, 395-402 (with F J Tipler).
70. Microwave Background Spottiness, 1985. *Nature*, 316, 48 (with R Juszkiewicz and D H Sonoda).
71. The Asymptotic Behaviour of Bianchi Universes, 1986. *Phys. Reports*, 139, 1-49 (with D H Sonoda).
72. The Limits of Observational Cosmology, 1985. *Observatory*, 105, 120.
73. Minimal Spanning Trees, Filaments and Galaxy Clustering, 1985. *Mon. Not. Roy. astr. Soc.*, 216, 17-35 (with S P Bhavsar and D H Sonoda).
74. Kaluza-Klein Mixmaster Universes, 1985. *Phys. Rev. D*32, 1595-8 (with J Stein-Schabes).
75. The Stability of Kaluza-Klein Cosmologies, 1986. *Phys. Lett. B*, 167, 173-177 (with J Stein-Schabes).
76. General Relativistic Cosmological Models and the Cosmic Microwave Background, 1986. *Canadian J. Phys.*, 64, 152-159.
77. Alignments of Clustered Quasars, 1985. *Mon. Not. Roy. astr. Soc.*, 218, 587-592 (with K Subramanian).
78. The Left Hand of Creation: the origin and evolution of the expanding universe, (with J Silk), Basic Books, New York, pp 256.
79. Three-Dimensional Classical Space-Times, 1985. *Classical & Quantum Gravity*, 3, 551- 567 (with A Burd and D Lancaster).
80. The Inflationary Universe -- Birth, Death, and Transfiguration, 1982. *Nature* 298, 801-5 (with M S Turner)
81. Observational Limits on the Time-Evolution of Extra Spatial Dimensions, 1987. *Phys. Rev. D*, 35, 1805-1810.
82. Filaments: What the Astronomer's Eye Tells the Astronomer's Brain, 1987. *Quart. Jl. Roy. Astr. Soc.*, 28, 109-128 (with S P Bhavsar).
83. Chaotic Space-times, 1987. In 'The Physics of Phase Space', Proc. 1st International Conference on Phase Space, pp 18-21, eds. A Zachary & S Kim, Springer LNP Series no. 278, Springer, NY.
84. The Closed-Universe Recollapse Conjecture, 1986. *Mon. Not. Roy. astr. Soc.*, 223, 835- 844 (with G J Galloway & F J Tipler).
85. Uncertainties in the Cluster-Cluster Correlation Function, 1986. *Mon. Not. Roy. astr. Soc.*, 223, P21-P27 (with E N Ling & C Frenk).

86. Topics in Relativistic Cosmology, 1987. Cargèse Lectures in Physics, pp 239-292, eds. B Carter & J Hartle, Plenum, NY.
87. Relativistic Cosmology, 1987. Vancouver Lectures. In 'The Early Universe', pp125-202, eds. W Unruh & G Semenov, Plenum, NY.
88. The Deflationary Universe: An Instability of the De Sitter Universe, 1986. *Phys. Lett. B*, 180, 335-339.
89. The Homogenisation and Isotropisation of an Inflationary Cosmological Model, 1986. *Phys. Lett. B*, 182, 25-27 (with O Gron).
90. Deflationary Universes with Quadratic Lagrangians, 1987. *Phys. Lett. B*, 183, 285-289.
91. Filaments and Cells -- Reality of Illusions?. *Bull. Amer. Astronomical Soc.* Abstracts of 169th Meeting (with S P Bhavsar). 1987
92. The Inflationary Universe: Modern Developments, 1988. *Quart. Jl. Roy. astr. Soc.*, 29, 101-117.
93. Inflation and No-hair Theorems, 1987. Proc. Paris-Meudon Colloquium -- String Theory, Quantum Cosmology and Quantum Gravity, pp 42-53, eds. H de Vega & N Sanchez, World Scientific, Singapore.
94. Cosmic No-hair Theorems and Inflation, 1987. *Phys. Lett. B*, 187, 12-16.
95. Non-gaussian Statistics and the Microwave Background Radiation, 1987. *Mon. Not. Roy. astr. Soc.*, 228, 407-426 (with P Coles).
96. Life, the Universe and the Anthropic Principle, 1987. *The World and I*, 2, 179-187.
97. The Premature Recollapse Problem in Closed Inflationary Universes, 1988. *Nucl. Phys. B*, 296, 697-709.
98. The Confrontation of No-scale Supergravity with Cosmology, 1988. *Nucl. Phys. B*, 298, 733-747 (with N Deruelle).
99. Chairman's Introduction to Royal Society Discussion meeting on the Material Content of the Universe, 1986. *Phil. Trans. Roy. Soc. A*, 320, 433-34.
100. Introduction to Relativistic Cosmology, 1987. In 'Proc. of the 1st CERN-ESO School on Astroparticle Physics, Erice, pp 487-571, ed. A De Rujula, World Scientific, Singapore.
101. The Inflationary Universe, 1988. In 'Interactions and Structures in Nuclei', pp 135-150, eds. R Blin Stoye & W D Hamilton, Adam Hilger, Bristol.
102. Action in the Universe, 1988. *Nature*, 331, 31-34 (with F J Tipler).
103. Lensing of Supernova Neutrinos?, 1987. *Nature*, 327, 375 (with K Subramanian).
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REVIEWS

I have also written a large number reviews of books or other pieces of journalism for newspapers, magazines and journals in many languages. These are not listed here. Some were collected and published as the book (B11 above) *Between Inner Space and Outer Space*, 1999. Oxford U.P., Pp. 274.