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DATE/PLACE of BIRTH: 30 September, 1951, Ashford, Kent, England

NATIONALITY: British and German

ACADEMIC RECORD:

1972	B.A. in Mathematics, from Jesus College, Cambridge
1974	M.Sc. in Astronomy from the University of Toronto
1977	Ph.D. in Astronomy from the University of Cambridge Thesis: The Clustering of Galaxies, supervisor D. Lynden-Bell
1977-1978	Lindemann Fellow, Department of Astronomy, UC Berkeley
1978 Sept.-Dec	Visiting Research Astronomer, NRAO, Charlottesville, Virginia
1979-1980	Research Fellow, Churchill College, University of Cambridge
1980 Jan-June	Attache au CNRS, Institut d'Astrophysique de Paris
1980-1984	Senior Fellow, Space Sciences Laboratory, UC Berkeley
1981-1984	Adjunct Assistant Professor, Astronomy Department, UC Berkeley
1982	Member, Institute for Advanced Study, Princeton
1984	Member, Institute for Theoretical Physics, Santa Barbara
1984-1987	Associate Professor/Astronomer, Steward Obs., Univ. of Arizona
1987-1991	Professor/Astronomer, Steward Obs., Univ. of Arizona
1990	Member, Institute for Advanced Study, Jerusalem
1991-1994	Sheepshanks Reader in Astronomy, Univ. of Cambridge
1992-present:	Research Professor, Steward Observatory, Univ. of Arizona
1992-1994	Director, European Association for Research in Astronomy
1994-present:	Scientific Member, Max Planck Society
1994-present:	Director, Max-Planck-Institut für Astrophysik, Garching
1994-present:	Visiting Professor, University of Durham
1995-present:	Honorary Professor, Ludwig Maximilians University, Munich
1999-present:	Honorary Professor, Shanghai Astronomical Observatory
2001-present:	Honorary Professor, National Observatory, Beijing
2007	D.Sc. (honoris causa) Durham University.

RESEARCH INTERESTS:

Structure, formation, evolution and clustering of galaxies; dark matter and dark energy; gravitational dynamics, simulation of cosmic structure formation; cosmology.

HONOURS:

NSF Presidential Young Investigator, 1984-1989
Helen B. Warner Prize of the American Astronomical Society (AAS), 1986
Grubb Parsons Lecturer, University of Durham, 1996
Fellow of the Royal Society, 1997
George Darwin Lecturer of the Royal Astronomical Society, 1998
Lansdowne Lecturer, University of Victoria, B.C., 1999
Max Planck Research Prize 2000 for International Cooperation
Sackler Lecturer, Physics Dept., Princeton University 2003
Blaauw Lecturer, Groningen University 2005
Dannie Heineman Prize of the American Institute of Physics/AAS 2005
Gold Medal, Royal Astronomical Society 2005
Fellow, Leopoldina, Nationale Akademie der Wissenschaften 2005
Honorary doctorate (D.Sc.) Durham University, 2007
Foreign Associate of the U.S. National Academy of Sciences, 2007
Dirk Brouwer Award 2008 of the Dynamical Division of the AAS
Oort Professorship 2008, Leiden University
European Latsis Prize 2008, European Science Foundation
Member, Academia Europaeae 2009
Max-Born-Preis 2010, Institute of Physics and German Physical Society
Honorary Citizenship of the City of Padua 2010
Member, European Physical Society 2011
Gruber Cosmology Prize 2011
Marsilius Lecture, University of Heidelberg 2012
Foreign Member, Chinese Academy of Sciences 2015
Shaw Prize in Astronomy 2017

TEACHING EXPERIENCE:

Graduate and undergraduate courses at UC Berkeley (1982-1983), at the University of Arizona (1985-1991), at the University of Cambridge (1991-1994), and within the International Max-Planck-Research School on Astrophysics (2001-).

Supervisor or co-supervisor of Ph.D. thesis projects of C.S. Frenk (Cambridge 1981), J. Negroponte (Berkeley 1982), J. Barnes (Berkeley 1984), L. Aguilar (Berkeley 1985), L.S. The and M. Cornell (Arizona 1989), D. Zaritsky and H.-W. Rix (Arizona 1991), G. Kauffmann (Cambridge 1993), H. Velasquez, I. Forcada i Miro and W. Groom (Cambridge 1998), J. Colberg (Munich 1999), V. Springel (Munich 2000), A. Helmi (Leiden 2000), N. Yoshida (Munich 2001), H. Mathis (Toulouse 2002), F. Stoehr (Munich 2003), G. De Lucia, L. Tasca and S. Zibetti (Munich 2004), S. Bertone (Torino 2004), Gao Liang and D. Croton (Munich 2005), A. Gallazzi (Munich 2006), M. Kitzbichler and A. von der Linden (Munich 2007), Wang Jie and S. Hilbert (Munich 2008), M. Baldi and Qi Guo (Munich 2009), S. Bonoli and M. Vogelsberger (Munich 2010), T. Sawala (Munich 2011), M. Aumer and S. Rau (Munich 2013); Wenting Wang (Shanghai 2013); C. Laporte (Munich 2014) and M. van Daalen (Leiden 2014), Ming Li (Beijing 2014).

OTHER PROFESSIONAL EXPERIENCE:

Invited Reviews at International Conferences:

IAU General Assembly 1976; IAU Colloquium #37, 1976; IAU Symposium #100, 1982; XIIth Texas Symposium, 1984; Fermilab Inner Space/Outer Space Symposium 1984; IAU Symposium

#117, 1985; 1st CITA Conference on Galaxy Formation, 1985; VIIth Workshop on Grand Unification/ICOBAN'86, Japan 1986; IAU Symposium #127, 1986; VIIIth Santa Cruz Workshop on Astronomy and Astrophysics, 1986; Durham Workshop on The Epoch of Galaxy Formation, 1988; Workshop on Large-Scale Motions in the Universe, Rio de Janeiro, 1989; Heidelberg Meeting on Interacting Galaxies, 1989; Hubble Centennial Symposium of the A.S.P., 1989; Second Wyoming Meeting on the Interstellar Medium in Galaxies, 1989; IAU Symposium #146, 1990; Oxford Workshop on Galaxies at High Redshift, 1990; Second Rencontre de Blois, Physical Cosmology, France, 1990; Durham Workshop on Observational Tests of Inflation, 1990; XVth Texas Symposium, 1990; 11th Moriond Astrophysics Meeting, France, 1991; Varberg Workshop on Galaxy Dynamics, Sweden 1991; Cambridge Study Institute on Galaxy Clusters, 1991; GR13, Cordoba, Argentina 1992; 8th IAU Astrophysics Meeting, France 1992; 13th Moriond Astrophysics Meeting, France 1993; Journées Relativistes '93, Belgium 1993; STScI Symposium in honor of Riccardo Giacconi, USA 1993; Kentucky Symposium on Mass Transfer-induced Activity in Galaxies, USA 1993; NATO Advanced Study Institute on Cosmological Aspects of X-ray Clusters of Galaxies, Germany 1993; Symposium on Violent Star Formation in Galaxies, Canary Islands 1993; 14th Moriond Astrophysics Meeting, France 1994; IAU Symposium #164, 1994; 5th Annual Maryland Astrophysics Meeting, 1994; IAU Symposium #173, 1995; Heron Island Workshop on Large-Scale Flows, 1995; Dahlem Conference on the Evolution of the Universe, Germany 1995; Tokyo Symposium on the Cosmological Constant, 1995; ESO Workshop on Science with Large Millimetre Arrays, Germany 1995; ESO Workshop on The VLT and the Distant Universe, Germany 1996; IAGUSP Workshop on QSO Absorption Lines, Brazil 1996; 37th Herstmonceux Meeting on HST and the Distant Universe, UK 1996; 18th Texas Symposium, USA 1996; Ringberg workshop on Gravitational Lensing, Germany 1997; Workshop on Science with the New Generation Space Telescope, USA 1997; Workshop on Cosmic Microwave Background, UK 1997; Baltimore Workshop on the Hubble Deep Field, USA 1997; Ringberg workshop on Radio cosmology, Germany 1997; TMR Network Annual Meeting on Galaxy formation and evolution, Germany 1997; Workshop on The Microwave Background, Denmark 1997; NAS/GAAC Symposium on the Frontiers of Science, Germany 1997; IAP Astrophysics Colloquium on Structure and evolution of the Intergalactic Medium from Quasar Absorption Lines, France 1997; International Workshop LTD-7 on Low Temperature Detectors, Germany 1997; Santa Cruz Workshop on Dark Halos of Galaxies, USA 1997; IAU Symposia #186 & 187, Japan 1997; International Cosmology Workshop on Large-Scale Structure Tracks and Traces, Germany 1997; International Workshop on The Young Universe, Italy 1997; Ringberg workshop on Galaxy Clusters, Germany 1997; Österreichischer Wissenschaftstag 1997, Austria 1997; Conference on The Non-Sleeping Universe, Portugal 1997; Royal Society Discussion Meeting on Large Scale Structure in the Universe, England 1998; Workshop on The Next Generation Space Telescope: Science Drivers and Technological Challenges, Belgium 1998; Xth Rencontres de Blois on The Birth of Galaxies, France, 1998; The Third Stromlo Symposium on The Galactic Halo: Bright Stars & Dark Matter, Australia 1998; ESO Workshop on Chemical Evolution from Zero to High Redshift, Germany 1998; Aspen Winter Astrophysics Meeting on The Local Group, USA 1999; VLT Opening Symposium on Science in the VLT Era and beyond, Chile 1999; Workshop on Structure and Dynamics of Galaxies, Italy 1999; The David N. Schramm Memorial Symposium on Inner Space/Outer Space II, USA 1999; Ringberg Workshop on Satellite Galaxies, Germany 1999; IAP Summer Symposium on Galaxy Dynamics: From the Early Universe to the Present, France 1999; Ringberg Workshop on Galaxies in the Young Universe, Germany 1999; ESO/MPA conference on The First Stars, Germany 1999; ESO Workshop on Black Holes in Binaries and Galactic Nuclei, Germany 1999; Dark Matter 2000, Marina Del Rey, California 2000; Santa Barbara workshop on Galaxy Formation, California 2000; Harvard-Smithsonian conference on The First Generation of Structures, USA 2000; TMR Network workshop Stellar Populations, Italy 2000; Rome meeting on Galaxy Disks and Disk Galaxies, Italy 2000; IAP Colloquium on Galaxy Clusters, France 2000; ESA

Summer School in Astrophysics, Austria 2000; Victoria meeting on Computational Cosmology, Canada 2000; Herbstschule in Hochenergiephysik, Germany 2000; ESO workshop on Wide field Surveys, Germany 2000; IAP conference on Cosmic Evolution, France 2000; 100 Years of Quantum Theory, Germany 2000; Marseille workshop on Where's the Matter? France 2001; IAU Symposium 208, Tokyo 2001; Durham conference on A New Era in Cosmology, England 2001; Oort workshop on Galaxy formation, Netherlands 2001; Princeton workshop on the Structure of Dark Halos, USA 2001; Moriond Astrophysics Meeting, France 2002; Cozumel Symposium on Galaxy Evolution, Mexico 2002; Toward an International Virtual Observatory, Germany 2002; Making Light of Gravity, Cambridge, UK 2002; TH-2002 Unesco, Paris 2002; XXI Texas Symposium, Florence 2002; Joe (Silk) @ 60, Oxford 2002; 3rd Carnegie Symposium, Clusters of Galaxies, Pasadena, USA 2003; Satellites and Tidal Streams, La Palma 2003; 2nd Annual Thinkshop, Potsdam, Germany 2003; IAU Symposium #211, Maps of the Cosmos, Sydney, Australia 2003; IAU Joint Discussion #8, Virtual Observatory, Sydney, Australia 2003; IAU Joint Discussion #10, Clusters of Galaxies, Sydney, Australia 2003; IAU Symposium #220, Dark Matter in Galaxies, Sydney, Australia 2003; Star and Structure formation, Zurich, Switzerland 2003; Multiwavelength Mapping of Galaxy Formation, Evolution, Venice 2003; Planck Consortium Meeting, Orsay 2004; IAU Symposium #225, Gravitational Lensing & Cosmology, Lausanne 2004; KITP conference on the Intergalactic Medium, Santa Barbara 2004; CISCO workshop on Extragalactic Surveys, Obergurgl 2005; IAU Colloquium 199, QSO Absorption Lines, Shanghai 2005; National Astronomy Meeting, Birmingham, UK, 2005; ICTP Workshop on Computational Cosmology, Trieste 2005; IAP Colloquium on Dark Matter Structures, Paris 2005; Mass and Mystery in the Local Group, Cambridge, UK 2005; Nearly Normal Galaxies 2005, Santa Cruz, USA 2005; MPA/ESO/MPE/USM Joint Conference on Open Questions in Cosmology, Garching, Germany 2005; MIT/Kavli workshop on dark matter substructures, Cambridge, USA 2005; Ringberg workshop on galaxy clusters, Schloss Ringberg, Germany 2005; Heinemann Prize Lecture: AAS meeting, Washington, USA 2006; Aspen Winter Workshop, Aspen, USA 2006; Workshop on Cosmic Frontiers, Durham, UK 2006; Heating versus Cooling in Galaxies, Garching, Germany 2006; Conference in honour of Cesare Chiosi on From Stars to Galaxies, Venice, Italy 2006; Massive Galaxies over Cosmic Time II, Tucson, USA 2006; Towards the European ELT, Marseille, France 2006; IUCAA Workshop, Pune, India, 2007; ESF Meeting on The Origin of Galaxies, Obergurgl, Austria 2007; Zeus Science Meeting, London 2007; The Hunt for Dark Matter, Fermilab, Batavia, USA 2007; Structure formation in the Universe, Chamonix, France 2007; IAP Colloquium #23: From Giant Arcs to CMB Lensing, Paris, France 2007; From IRAS to HERSCHEL/PLANCK, London, UK 2007; Dynamics of Galaxies, St. Petersburg, Russia 2007; Gas Accretion and Star Formation in Galaxies, Garching, Germany 2007; Spectroscopy in Cosmology and Galaxy Evolution, Granada, Spain 2007; Invited Discourse, American Astronomical Society, Austin, USA 2008; Surveys & Simulations, Berkeley, USA 2008; IPMU Opening Symposium, Tokyo 2008; Galactic Structure and the Structure of Galaxies, Ensenada, Mexico 2008; SPIE Annual Conference, Marseille, France 2008; KIAA Opening Symposium, Beijing 2008; Putting Gravity to Work, Cambridge, UK 2008; SDSS Symposium From Asteroids to Cosmology, Chicago 2008; Academia Europea Annual Meeting, Liverpool 2008; New Vision 400, Beijing 2008; Galileo Galilei Workshop on Dark Matter, Florence 2009; RAS Workshop Galaxy Luminosity Function, Liverpool 2009; European week of Astronomy and Space Science, Hatfield, UK 2009; Unveiling the Mass: Extracting and Interpreting galaxy mass, Kingston, Canada 2009; The Unity of the Universe, Portsmouth, UK 2009; IAU General Assembly, Invited Discourse and two reviews at Joint Discussions, Rio de Janeiro 2009; Dynamics from the Galactic Centre to the Milky Way Halo, Cambridge, USA 2010; CITA@25/Bond@60: The Theory of the Universe and Everything in it, Toronto 2010; GGI Conference on The Dark Matter Connection: Theory & Experiment, Florence 2010; A Universe of dwarf galaxies: Observations, theories, Simulations, Lyon 2010; CCP 2010: Conference on Computational Physics, Trondheim, Norway 2010; Dark-

ness Visible: Dark Matter in astrophysics and particle physics, Cambridge, UK 2010; Kavli Prize Symposium on Astrophysics, Oslo 2010; Evolution of galaxies, their central black holes and their large-scale environment, Potsdam, Germany 2010; IAU Symposium No.277: Tracing the Ancestry of Galaxies, Ouagadougou, Burkina Faso 2010; Fine-scale structure in the dark matter distribution, Toronto, Canada 2011; 8th Sino-German Workshop, Shanghai, China 2011; Symposium on Dark Matter, Baltimore, USA, 2011; Conference on Galaxy Formation, Durham, UK 2011; International Conference on Particle Physics and Cosmology, Porto, Portugal 2011; First eRosita International Conference on Mapping the Structure of the Energetic Universe, Garmisch-Partenkirchen, Germany 2011; Conference on New Horizons in Computational Astrophysics, Davos, Switzerland 2012; MPA-IFT Spring Workshop on Large Scale Structure, Spain 2012; Conference on Dark Matter on the Threshold of Discovery, Irvine, California 2012; Conference on The Secular Evolution of Galaxies, IAU General Assembly, Beijing 2012; 47th ESLAB Symposium (the Planet Mission), Noordwijk 2013; Conference on Galaxy Halos, Garching 2013; Conference on Mind The Gap, Cambridge, UK, 2013; Cosmo13 Conference, Cambridge, UK, 2013; UV Astronomy, ESO Garching 2013; Conference on Scientific Computing: CSC2013, Paphos, Cyprus 2013; Winter Conference on Astrophysics, Aspen, USA, 2014; Conference on The Formation and Growth of Galaxies in the Young Universe, Obergurgl, Austria 2014; Symposium on History and Future of Dark Matter, Amsterdam 2014; IAU Symposium #311 on Galaxy Masses as Constraints of Formation Models, Cambridge, UK, 2014; Thinkshop on Satellites galaxies and dwarfs in the Local Group, Potsdam, Germany, 2014; 26th Solvay conference on Astrophysics and Cosmology, Brussels 2014; The Olympian Symposium on Cosmology and the Epoch of Reionization, Mount Olympus, Greece 2015; Cosmic Microwave Background Conference, Princeton 2015; IAU Symposium on Scales in the Cosmic Clustering of Dark and Baryonic Matter, Hawaii 2015; IAU Symposium on The gas content of dark halos as revealed by Planck, Hawaii 2015; Conference on The gas content of dark halos, Cambridge, UK, 2015; RAS Cluster Cosmology Meeting, London 2015; Conference on From Cosmic Strings to CMB Observations, Paris 2016; Ringberg Workshop on Computational Galaxy Formation; Conference on Galaxy Clusters: physics laboratories and cosmological probes, Cambridge, UK, 2016; Great Lakes Cosmology and Galaxies Conference, Toronto 2016; KITP Workshop on the Galaxy-Halo connection, Santa Barbara 2017; ESO/Excellence Cluster Workshop on Galactic Ecology, Garching 2017

Observing Experience:

Optical Programs at the David Dunlap Observatory (1973),
 Las Campanas Observatory (1973),
 Wise Observatory (1974),
 Palomar Observatory (1976),
 Lick Observatory (1978),
 Steward and Multi-Mirror Telescope Observatories (1987-),
 Kitt Peak National Observatory (1992),
 La Palma Observatory (1992-1994),
 Guest Observer on Einstein (1979-1980) and ROSAT X-Ray satellites (1991), ESO, VLT/UT1,
 ISAAC (1999), VLT/UT2, FORS2 (2001)

Invited lecture series at International Summer Schools:

VII International School of Cosmology and Gravitation, Erice, Sicily 1981.
 Escola Advancade de Astrofisica, Sao Paulo, Brazil 1982.
 Saas-Fee Winter School, Switzerland 1982.
 The Early Universe, Victoria, B. C., Canada 1986.
 First Yellow Mountain Summer School of Physics and Astrophysics, China 1987.

Second Regional Reunion on Extragalactic Astronomy, Argentina 1987.
 Scottish Universities Summer School in Physics 1989.
 Enrico Fermi School on Galaxy Formation, Varenna, Italy, 1992.
 Les Houches Summer School, France, 1993.
 Canary Islands Winter School, Spain, 1993.
 Jerusalem Winter School, Israel, 1995.
 Les Houches Summer School, France, 1997.
 Jerusalem Winter School, Israel, 1998.
 Canary Islands Winter School, Spain, 1999.
 Jerusalem Winter School, Israel, 2004.
 First Chinese Summer School on Extragalactic Astronomy, Shanghai 2004.
 Astroparticle Physics, Erlangen 2004.
 German Astroparticle School, Obertrubach 2004.
 Frontiers of Astronomy, Alexandria 2006.
 LENAC-IAGUSP Research School, Foz do Iguacu, Brazil 2006.
 Cosmology at the Beach, Cabo San Lucas, Mexico 2009.
 KIAA Summer School, Beijing 2010.
 Enrico Fermi School on Gravitational Waves and Cosmology, Varenna 2017.

Other:

Discussion Leader at the Aspen Astrophysics Workshops on Large-Scale Structure (1982, 1988),
 Globular Clusters (1983), Galaxy Formation (1991), Galaxy Clusters (1994) and Star Formation
 in Galaxies (1998)
 Scientific Coordinator for programs on Galaxy Formation (January-August 1984 with M.J. Rees
 and M.Davis) Galaxy Formation and Cosmic Radiation Backgrounds (February-July 1995, with
 J.R. Bond) and Galaxy Formation (January-April 2000, with L. Hernquist and A. Loeb) at the
 Institute for Theoretical Physics, Santa Barbara.
 Member of Space Telescope Working Group on Galaxies (1984-1985)
 Hubble Space Telescope Time Allocation Committee (1989)
 Astronomy and Astrophysics Survey Committee Panels on Policy Opportunities and on Computing
 and Data Processing (1989-1990)
 SERC Theory and Computation Panel (1991-1994) and Science Advisory Committee for the Gemini
 Project (1991-1994)
 Member of Editorial Board for Mon.Not.R.astr.Soc. (1992-)
 Member of Nomination Jury for Senior Members of the Institut Universitaire de France (1994-
 1995)
 Member of various Structural Commissions, Search Committees and Appointments Committees
 within the Max-Planck Society (1995-)
 Chairman of the Board of the European Association for Research in Astronomy (1997-2004)
 Director of Jerusalem Winter School in Theoretical Physics "Galaxy Formation" (1998)
 Member, Steering Committee, Isaac Newton Institute (1998-2002)
 Membre, Haute Comite Scientifique, Observatoire de Paris, Meudon (1998-2002)
 Member of the Visiting Committee, Institute for Astrophysics, University of Porto (1998- 2004)
 Member of the Visiting Committee, MPI for Astronomy (1998-2004)
 Member of Sectional Committee 5, Royal Society of London (1998-2001)
 Member of the Visiting Committee, Astrophysical Institute of Potsdam (1999-2005)
 Member of the PPARC Advisory Board for the Joint Infrastructure Fund (1999-2001)
 Member of the Visiting Committee, Physics Department, Ecole Normale Superieure, Paris (1999)

Elector, Oxford Chair in Astrophysics (2000)
Member of the Beirat of the Wissenschaftskolleg zu Berlin (2000)
Member, Review of Cosmology Programme of the Canadian Institute for Advanced Research (2001)
Member of the Review Committee for DAPNIA, Saclay, France (2001-2007)
Member of the Visiting Committee, Observatoire de Lyon (2002)
Member of the Board Physikalische Blätter (now Physik Journal) (2002-2006) Panel Member ESO
Observational Programme Committee (2002-2003)
Membre du Comité d'Évaluation de l'Institut d'Astrophysique de Paris (1997, 2003)
Member of Visiting Committee, Instituto de Astrofísica de Canarias (2003)
ESO Review Board for MUSE (2004)
Member of Advisory Board, Canadian Institute for Advanced Research, Cosmology and Gravity
Program (2004-2016)
Member of Visiting Committee, Physics Department, University of Bonn (2005)
Member of Advisory Committee, Gruber Cosmology Prize (2005-2007)
Member of Visiting Committee, LERMA, Paris (2009)
Panel Chair ESO Observational Programme Committee (2009-2010)
Chair, International Advisory Board, ICC, Durham University (2009-2015)
Member, Scientific Advisory Committee, Kavli Institute for Astronomy and Astrophysics, Beijing
(2009-2012)
Joint Steering Committee/Scientific Committee, Institut Lagrange de Paris (2011-2014)
Chair, ESO Public Spectroscopic Survey Panel (2011-2014)
Chair, Scientific Advisory Committee, Kavli Institute for Astronomy and Astrophysics, Beijing
(2012-)
Member, Governing Board, Kavli Institute for Astronomy and Astrophysics, Beijing (2016-)
Member of Sectional Committee 2, Royal Society of London (2011-2013)
Chair of Sectional Committee 2, Royal Society of London (2013-2015)
Member of the Academy Professorships Committee of the Royal Dutch Academy (2013-2015)
Member of Visiting Committee, Institut d'Astrophysique Spatiale, Orsay (2014)
Member of Council, Royal Society of London (2015-2018)
Member of Visiting Committee, School of Natural Sciences, Institute for Advanced Study (2017)