



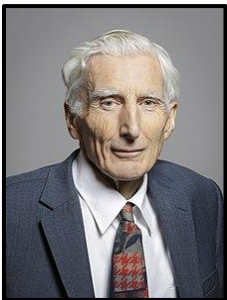
Society  
for the  
History of Astronomy

## Speakers and Presentations for the 2024 Spring Conference

Saturday, 20th April

Order of Speakers & Presentations Maybe Subject to Change.

### Special Conference Guest -



Martin John Rees, Baron Rees of Ludlow, OM, FRS, HonFREng, FMedSci, FRAS, HonFInstP is a British cosmologist and astrophysicist. He is the fifteenth Astronomer Royal, appointed in 1995, and was Master of Trinity College, Cambridge, from 2004 to 2012 and President of the Royal Society between 2005 and 2010.

After holding postdoctoral research positions in the United Kingdom and the United States, he was a professor at Sussex University, during 1972–1973. He later moved to Cambridge, where he was the Plumian Professor at the University of Cambridge until 1991, and the director of the Institute of Astronomy. He was professor of astronomy at Gresham College, London, in 1975 and became a Fellow of the Royal Society in 1979. From 1992 to 2003, he was Royal Society Research Professor, and from 2003 Professor of Cosmology and Astrophysics. He is an Honorary Fellow of Darwin College, King's College, Clare Hall, Robinson College and Jesus College, Cambridge.

Martin is the author of more than 500 research papers, and he has made contributions to the origin of cosmic microwave background radiation, as well as to galaxy clustering and formation. His studies of the distribution of quasars led to final disproof of the steady state theory. He was one of the first to propose that enormous black holes power quasars, and that superluminal astronomical observations can be explained as an optical illusion caused by an object moving partly in the direction of the observer.

Since the 1990s, Martin has worked on gamma-ray bursts, especially in collaboration with Péter Mészáros, and on how the "cosmic dark ages" ended when the first stars formed. Since the 1970s he has been interested in anthropic reasoning, and the possibility that our visible universe is part of a vaster "multiverse". He is an author of books on astronomy and science intended for the lay public and gives many public lectures and broadcasts. In 2010 he was invited to deliver the Reith Lectures for the BBC, now published as *From Here to Infinity: Scientific Horizons*. Rees thinks the search for extra-terrestrial intelligence is worthwhile and has chaired the advisory board for the "Breakthrough Listen" project, a programme of SETI investigations funded by the Russian/US investor Yuri Milner.

To mark the 300th anniversary of the Board of Longitude in 2014, he instigated a programme of new challenge prizes of £5-10m under the name 'Longitude Prize 2014', which are administered by Nesta and for which he chairs the advisory board. The themes of the first two prizes are the reduction of inappropriate antibiotic use, and enhancing the safety and independence of dementia sufferers. The Longitude Prize on Dementia was announced in 2022.

In his general writings and in the House of Lords his recent focus has been on the uses and abuses of advanced technology and on issues such as assisted dying, preservation of dark skies, and reforms to broaden the post-16 and undergraduate curricula in the UK. He is also a current member of the House of Lords Science and Technology Committee.

Due to other commitments and circumstances Martin has tentatively accepted our invitation to join us in person on the day, and may briefly address the meeting or will send a special video address to be shown during the Conference. (TBC)

\*\*\*\*\*



Dr Emily Winterburn has been associated with the SHA since its beginning. She was its first Chair and is currently honorary Vice-President. She is a former curator of astronomy from the Royal Observatory Greenwich and her first office was in one of the buildings Christie added to the observatory. Since working at the observatory, she has finished her PhD (2011) and written several books on the history of science including *The Astronomers Royal* (2003) and *The Quiet Revolution of Caroline Herschel* (2017). She is currently a primary school teacher in Leeds where she lives with her husband, two children and cat.

Presentation Title: *“Sir William Christie, the Greenwich computers and the Carte du Ciel project”*

Summary: Coming after Airy, it could have been difficult for Christie to stand out, but thankfully he did not let the reputation of his predecessor stand in his way. Christie modernised the observatory, transforming the site with the addition of several new buildings. He built links with other observatories too, taking part in one of the first international scientific projects, the Carte du Ciel. Perhaps even more revolutionary, he made the bold choice to employ women. In this talk I will give an overview of his time at the Observatory with particular focus on these two areas: the international Carte du Ciel project, and his decision to employ women computers



An SHA member since 2006, Dr Lee Macdonald is the author of *How to Observe the Sun Safely* (Second edition, Springer, 2012) and *Kew Observatory and the Evolution of Victorian Science 1840-1910* (University of Pittsburgh Press, 2018). He has recently completed a book on the Royal Observatory, Greenwich in the 1881-1939 period, the result of research carried out during a fellowship with Royal Museums Greenwich.

Presentation Title: *‘The man who slowed down the Earth: the work of Sir Harold Spencer Jones, tenth Astronomer Royal’.*

Summary: Sir Harold Spencer Jones (1890-1960) served as Astronomer Royal from 1933 to 1955. This talk describes his life and work in the context of rapid change in the science of astronomy and in the wider world. I discuss how he transformed the Royal Observatory at Greenwich and eventually managed its removal to Herstmonceux Castle in Sussex. I also focus on Spencer Jones’s two major contributions to astronomy: his measurement of the Earth-Sun distance and the discovery of the Earth’s irregular rotation.

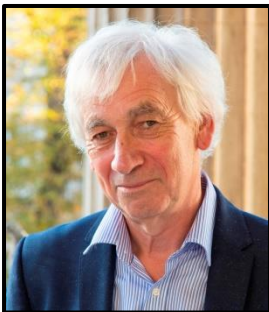


Dr Peredur Williams is an Emeritus Researcher in the University of Edinburgh Institute for Astronomy, located at the Royal Observatory Edinburgh. After first degrees at the University of Cape Town and a PhD and Fellowship at Cambridge, in 1974 he joined the group at the ROE developing and testing infrared instrumentation. From 1978, he helped commission the UK Infrared Telescope and served UKIRT as a staff astronomer resident in Hilo, Hawaii, in 1979–85. Back at the ROE, he supported operation of UKIRT, then the JCMT and, eventually, the Astronomy Division. Following the restructuring of the ROE, he took a position in the Institute for Astronomy until retirement in 2010. His research has focused on the episodes of dust formation by Wolf–Rayet stars related to their membership of colliding-wind binaries and the discovery of such systems through outbursts in their infrared emission. These systems have long periods, up to decades, and the research continues, most recently with the JWST.

**Presentation Title: *Ralph Copeland, 3rd Astronomer Royal for Scotland***

**Summary:** After an adventurous early life, Ralph Copeland studied astronomy in Göttingen and joined the 2<sup>nd</sup> German North Polar expedition to Greenland to help with the geodetic survey. After brief spells in Ireland at Lord Rosse's observatory and at Dunsink, he succeeded David Gill as director of Lord Lindsay's observatory at Dun Echt near Aberdeen. Besides his own studies, mostly spectroscopy of novae and comets, he worked to develop connections with observatories worldwide and with amateur astronomers in Britain – distributing timely news of new discoveries and responding to their queries. In 1889, he succeeded Piazzi Smyth as Astronomer Royal for Scotland. I will describe his contribution to the selection of a site for the new Royal Observatory, the design of its buildings and the transfer there of the instruments from both the old observatory and from Dun Echt, gifted by Lord Crawford, to establish the new Royal Observatory Edinburgh.

\*\*\*\*\*



Richard Ellis is Professor of Astrophysics at University College London (UCL). He is an observational astronomer who studies the distant Universe with a variety of facilities including the James Webb and Hubble Space Telescopes, the twin Keck telescopes in Hawaii and The European Southern Observatory's (ESO) Very Large Telescope.

Richard received his BSc at UCL and his PhD at Oxford University. Under Wolfendale's guidance he established a major astronomy group at Durham University and later became the Director of the Institute of Astronomy at Cambridge University. He emigrated to the United States in 1999 where he became Director of the Caltech Optical Observatories and played a leading role in developing the science case and international partnership for the Thirty Meter Telescope. After a short period as Senior Scientist at ESO Headquarters in Germany, he returned to his alma mater in 2017.

Richard's research interests include cosmology - the form and content of the Universe as a whole - and the evolution of galaxies over cosmic time. He has been influential in making many discoveries in these areas and is one of the world's most highly-cited astrophysicists.

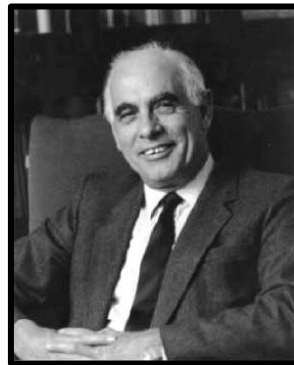
His awards include the Gruber Cosmology Prize, the Gold Medal of the Royal Astronomical Society and the Michael Faraday Gold Medal of the Institute of Physics. He is a Fellow of the Royal Society and the Australian Academy of Sciences and was awarded a CBE by Queen Elizabeth for his contributions to international science.

**Presentation Title: *Arnold Wolfendale and the development of UK observational astronomy***

**Summary:** For over 50 years Arnold Wolfendale was an international leader in the field of cosmic-ray and gamma-ray astronomy. His interest in astronomy drove him to develop a world-class activity in this area at Durham University. This achievement, in part, led him to being appointed Astronomer Royal in 1991. Wolfendale used this and other senior roles to lobby tirelessly for more governmental support for science. He was also an early advocate for improvements in the public understanding of science, leading by example. I will describe his legacy in terms of Durham’s contributions to UK’s ground-based telescopes as well as his role as a brilliant communicator and bon vivant.

.....

***The 2<sup>nd</sup> Michael Hoskin Memorial Lecture.***



***Professor Michael Hoskin (1930 – 2021)***

This is the second year our main Spring Conference lecture will be held in memory of the late Professor Michael Hoskin, who sadly left us in 2021. He became a great supporter of the SHA from when it was first established in the summer of 2002. He became the first of two Society Hon Vice-Presidents, along with Sir Patrick Moore. Michael Hoskin was a pre-eminent and world renowned historian of astronomy plus science, with notable research articles and many books on the astronomer William Herschel, his sister Caroline and the wider Herschel family.

He is will also be remembered for his work in the archaeoastronomy of the Mediterranean Megalithic Tombs. He was founder of the very successful Journal for the History of Astronomy, of which he was editor for many years. In 2001 Michael was honoured by the International Astronomical Union with the designation of an asteroid as Minor Planet Hoskin. His was a remarkable, lengthy and extraordinarily energetic career, marked by consistently lucid, able and exemplary scholarship and engaging teaching and personal encouragement.

\*\*\*\*\*

Continued/.....



**John Fisher** is an independent scholar, a founding student of the Open University graduating with first class honours, after working as an unskilled machinist for several years in Birmingham. As a newly qualified chartered librarian he read English Law, gaining an MA in Librarianship and Arts Administration at City University London. He then acquired an MSc with distinction in the History and Philosophy of Science at Imperial College London, along with the Diploma of Imperial College. His dissertation was on James Bradley's discovery of the aberration of light. His doctoral studies at Imperial College on the work of James Bradley were supervised by Professor Robert Iliffe, now Head of the Faculty of History at Oxford University. Elected as a Fellow of the Royal Astronomical Society he regularly gives talks not only about the history of astronomy but also on current topics. He taught at Imperial College and was appointed as an Associate Lecturer of the Open University. His post- doctoral studies on James Bradley have taken twenty years following his retirement.

Presentation Title: *James Bradley: The Man Who Moved the World*

Although most astronomers at the beginning of the eighteenth-century accepted that the Earth was in motion around the Sun, the observation of annual parallax confirming this proved elusive. It was necessary first for the science of positional astronomy to be laid on firm foundations. From when micrometers were applied to telescopic sights, various annual motions of the stars were regularly observed. These motions were usually ascribed as observational errors or claimed as observations of annual parallax. The sound development of the science of astrometry was a necessary prerequisite for the determination of the location of the longitude by astronomical methods.

The attempt to observe annual parallax by Samuel Molyneux, George Graham and James Bradley in 1725 led to the observation by Bradley of a counter-intuitive motion of a star that could not be reduced to annual parallax. After the failure to account for this motion Bradley was convinced he was observing a natural phenomenon. He commissioned Graham to construct another zenith sector capable of observing many more circumpolar stars. This instrument led to the discovery of the aberration of light, and after a further twenty years of observations, to the discovery of the nutation of the Earth's axis allowing astronomers to determine the precession of the equinoxes that had remained elusive for over 1,900 years.

The former discovery established the motion of the Earth around the Sun and the latter the accurate annual precession of the equinoxes. These two important discoveries laid the foundations of the high precision science of positional astronomy, enabling astronomers to accurately locate the positions of celestial objects. Bradley was appointed, in succession to his mentor Edmond Halley, as the third Astronomer Royal. He led a root and branch reform of the Royal Observatory, building the New Observatory through which the Prime Meridian passes. He completed a survey of the stars observable from Greenwich down to the ninth magnitude, reduced by Bessel in 1818, producing a catalogue of 3,222 stars of unprecedented reliability. Bradley's work is detailed in my book, *The Life and Work of James Bradley: The New Foundations of 18th Century Astronomy* published by Oxford University Press on 15 December 2023.

.....

Image Credits: With much appreciation to the Speakers for providing images, and also  
*Wikipedia Images & martinrees.uk.*