Women in Science: historical perspectives

Conference programme, Tuesday 18 November 2025 at the Royal Society

9.30am	**Welcome and opening remarks** Alison Noble FRS
9.45am	**Session 1** Chaired by Patricia Fara, University of Cambridge
9.45am	**Between London and Lucca: Emilie Du Châtelet and the Royal Society** Sarah Hutton, University of York
10.00am	**'A thankless enterprise': Lady Mary Wortley Montagu, gendered authority, and communicating vaccine science** Rachel Hindmarsh, University of Oxford and Zakiya Leeming, Royal Northern College of Music
10.15am	**Wives, widows, invisible labour: the case of two Marys** Pragya Agarwal, University of Cambridge
10.30am	**Discussion**
10.45am	**Coffee and Networking**
11.15am	**Session 2** Chaired by Louisiane Ferlier, Royal Society Library
11.15am	**A seat at the table: collaborative observation in the Herschel household** Odile Lehnen, Durham University
11.30am	**Julia Herschel, Caroline Herschel and collaborative experience 100 years apart** Emily Winterburn, teacher and historian of science
11.45am	**'The admirable tact and taste of Mrs Sabine': the scientific persona of nineteenth-century women translators** Alison E Martin, Johannes Gutenberg-Universität Mainz, Germany
12.00pm	**'It would of course be an entire novelty to appoint a lady as an official eclipse observer': Annie Maunder's eclipse expeditions** Megan Briers, Max Planck Institute for the History of Science
12.15pm	**Discussion**
12.30pm	**Lunch**

1.20pm	**Session 3** Chaired by Isabelle Charmantier, Linnean Society
1.20pm	**Catherine Strickland: the woman behind dodos** Xinyi Wen, University of Cambridge
1.35pm	**Eleanor Ormerod and her networks** Sally Shuttleworth, University of Oxford
1.50pm	**Patroness of plant hunters: Ellen Ann Willmott (1858-1934) and the business of botanical exploration** John Schaefer, University of Cambridge
2.05pm	**Nora Barlow and the purchase of the Darwin Archive by Cambridge University Library, 1942** Joe Caygill, University of Leeds and Cambridge University Library
2.20pm	**Discussion**
2.35pm	**Coffee and Networking**
3.00pm	**Session 4** Chaired by Veronica van Heyningen FRS
3.00pm	**Women researchers and the Government Grant, 1897-1914** Danielle Farrier, University of St Andrews
3.15pm	**Organising beyond borders: twentieth-century images of women's transnational work in STEM** Graeme Gooday and Emily Rees, University of Leeds
3.30pm	**Women, academic mobility, and scientific lives: Indian scientists in postwar British universities** Nilakshi Das, University of Leicester and University of Warwick
3.45pm	**Motherhood and science in Britain since the 1950s** Paul Merchant, National Life Stories and Sally Horrocks, University of Leicester
4.00pm	**Discussion**
4.15pm	**Break**
4.25pm	**Keynote: introduction by Athene Donald FRS**
	Breaking the glass ceiling of science: the first eleven women to become Fellows of the Royal Society 1945-1954 Stella Butler, Librarian Emeritus at the University of Leeds
4.45pm	**Discussion and conclusions**
5.00pm	**Close**

Speaker and chair biographies

Pragya Agarwal is Visiting Professor at Loughborough University, and a Fellow at the University of Cambridge. Her books include *Sway: Unravelling Unconscious Bias* (Bloomsbury, 2020), *Wish We Knew What to Say* (Hachette, 2020), *(M)otherhood: On the Choices of Being a Woman* (Canongate, 2021), and *Hysterical: The Myth of Gendered Emotions* (Canongate, 2022). Most recently she has received fellowships from the British Library, Fulbright Commission, and Bodleian Library for her research.

Megan Briers is a PhD student at the Max Planck Institute for the History of Science. Her thesis examines how women were involved with nineteenth-century British astronomy expeditions. Trained originally in mathematics and computer science, her research interests include nineteenth-century mathematical and physical sciences, digital humanities, and gender and science.

Stella Butler is Librarian Emeritus at the University of Leeds where, between 2011 and 2020, she was University Librarian and Keeper of the Brotherton Collection. She studied history of science at the University of Manchester in the late 1970s before a career in museums and libraries. She was Honorary Research Fellow at University College London between 2021 and 2025.

Joe Caygill finished his Master's degree in HPS at Cambridge this year, having previously completed an undergraduate degree in History (also at Cambridge). He is now beginning a PhD at Leeds and Cambridge University Library entitled 'The Hidden Gender of Collections: Women and the Curation of Scientific Heritage'. The project will focus on the role of women in curating and managing scientific collections across Cambridge institutions (including CUL) and other museums in the East of England.

Isabelle Charmantier is Head of Collections at the Linnean Society. She holds a doctorate in history of science from the University of Sheffield and researched the writing technologies of Swedish naturalist Carl Linnaeus during a post-doc at the University of Exeter. Having retrained as an archivist, she catalogued the manuscripts of Carl Linnaeus and was for a short time Collections Manager at the Freshwater Biological Association in Windermere, before returning to the Linnean Society.

Nilakshi Das is a final-year PhD student undertaking an ESRC-funded project on South Asian scientists in post-war Britain, jointly based at the University of Leicester and the University of Warwick. The oral history interviews conducted for the project are intended to be deposited in the British Library as part of its Oral History of Science collection. Nilakshi holds an MSc in Higher Education from the University of Oxford and an MA in Sociology from the University of Manchester.

Athene Donald FRS was elected a Fellow of the Royal Society in 1999. Her research is in the general field of soft matter and physics at the interface with biology; she has published over 250 papers in these fields. She was appointed DBE in the 2010 Birthday Honours for services to physics. She was Master of Churchill College from 2014 to 2024. Her book *Not Just for the Boys: Why we need more Women in Science* was published in 2023.

Patricia Fara is an Emeritus Fellow of Clare College, Cambridge and was President of the British Society for the History of Science from 2016 to 2018. She is currently President of the Antiquarian Horological Society, a Fellow of the Royal Historical Society and the recipient of the 2022 Abraham Pais award of the American Physical Society. Her prize-winning *Science: A Four Thousand Year History* (2009) has been translated into nine languages, while her other highly acclaimed books include *A Lab of One's Own: Science and Suffrage in The First World War* (2018).

Danielle Farrier has recently completed a PhD thesis at the University of St Andrews, entitled 'Funding Scientific Research: The Royal Society of London and the Development of Grant-making, 1800-1914'. She is now working on preparing elements of the thesis for publication.

Louisiane Ferlier is the Digital Resources Manager in the Royal Society collections and oversees the digitisation of its manuscripts and printed works. She is also a historian of ideas researching the role of libraries in the circulation of books.

Graeme Gooday is Professor of History of Science & Technology at the University of Leeds. He has published on the history of physics laboratories, patents, technical education, electrification, hearing loss, and women's role in engineering, leading the AHRC project 'Electrifying Women: Understanding the Long History of Women in Engineering' (2019-20).

Rachel Hindmarsh is a Medical Humanities researcher at the University of Oxford, and Public Engagement Facilitator for Thanks for the Memories, a Wellcome-funded project led by the University of Oxford and the Royal Northern College of Music bringing together immunology, history, and music to explore the topic of immune memory.

Sally Horrocks is Associate Professor of Contemporary British History at the University of Leicester and a past President of the British Society for the History of Science. Since 2011 she has been the senior academic advisor to National Life Stories at the British Library. Her published work concentrates on the history of women in science and engineering, industrial research, and science and food manufacturing. Recent publications include (with Paul Merchant) 'Managing feeling in the academic workplace: gender, emotion and knowledge production in a Cambridge science department', in Agnes Arnold Foster and Alison Moulds eds., *Feelings and Work in Modern History: Emotional Labour and Emotions about Labour.*

Sarah Hutton is Honorary Visiting Professor at the University of York. Her publications include *Women, Science and Medicine* (1996), co-edited with Lynette Hunter, *Anne Conway, a Woman Philosopher* (2004), and many studies on women in philosophy and science, among them several articles on Emilie Du Châtelet.

Zakiya Leeming is currently Artist and Producer in Residence at the Royal Northern College of Music's Centre for Practice & Research in Science & Music. Having devised and directed a number of projects with health data scientists and doctors, she is currently working with Oxford University Sidney Truelove Professor Paul Klenerman on a collaboration exploring immune memory & music, funded by The Wellcome Trust.

Odile Lehnen is a PhD student at Durham University, holding an AHRC collaborative doctoral award partnered with the Library of the Royal Society of London. She is writing a thesis entitled 'Celestial Machines: Caroline Herschel, Astronomical Notebooks and the Material Culture of Predigital Communication Systems'. Odile received an MPhil in History and Philosophy of Science and Medicine from the University of Cambridge and a BSc in Science and Society from University College London.

Alison E Martin is Professor of British Studies at the Johannes Gutenberg-Universität Mainz, Germany. She is the author of *Nature Translated: Alexander von Humboldt's Works in Nineteenth-Century Britain* (EUP 2018) and co-editor of *The Handbook of Women and Science since 1660* (Palgrave Macmillan 2022) and *Translating Science in the 18th and 19th Centuries: Interdisciplinary Perspectives* (Routledge 2025).

Paul Merchant is an oral historian and researcher at National Life Stories, The British Library. His publications are concerned with the production and use of scientific knowledge, especially in the earth and environmental sciences.

Alison Noble FRS is the Technikos Professor of Biomedical Engineering in Department of Engineering Science and a Professorial Fellow of St Hilda's College, at the University of Oxford. She was appointed a Commander of the Order of the British Empire (CBE) for services to Engineering and Biomedical Imaging in the King's Birthday Honours list in 2023. She is currently a Vice President and a Foreign Secretary of the Royal Society.

Emily Rees is the incoming AHRC Catalyst fellow in Philosophy, Religion and History of Science at the University of Leeds, working on a project on the history of the representation of women's technoscientific labour post-1945.

John Schaefer is a PhD student in History and Philosophy of Science at the University of Cambridge, in collaboration with the Royal Botanic Gardens, Kew. His doctoral project analyses the social networks of plant collectors in the long nineteenth century, using Kew Herbarium specimen data to explore the global dynamics of plant and knowledge exchange in the British Empire.

Sally Shuttleworth is Senior Research Fellow in the English Faculty, University of Oxford. She recently ran an AHRC research project, *Constructing Scientific Communities: Citizen Science in the 19th and 21st Centuries*, in partnership with the Royal Society. Her latest book, *In Quest of a Cure: Literary and Medical Cultures of the Health Resort*, is forthcoming with Oxford University Press. She was elected a Fellow of the British Academy in 2015, and was appointed Commander of the Order of the British Empire in the 2021 Birthday Honours.

Veronica van Heyningen FRS is a human geneticist identifying genes implicated in eye malformations and dissecting mechanisms of gene regulation, as Section Head at the MRC Human Genetics Unit, Edinburgh. She was appointed CBE in 2010, and chaired the Royal Society Diversity Committee 2019-2022. She served as a member of Human Genetics Commission and as President of the European Society of Human Genetics and the Genetics Society. She is now Honorary Professor at the University of Edinburgh and University College London.

Xinyi Wen completed her PhD at the University of Cambridge this summer and joined the Warburg Institute as a Frances Yates Long-Term Fellow in September. Her research examines early modern natural knowledge and its long reception in modern times, with a particular focus on the roles of women. Her work has received the Margaret Rossiter Prize from the History of Science Society for the best paper on the history of women in science, and the Best Article Award from the Society for the Study of Early Modern Women and Gender.

Emily Winterburn lives in Leeds, writing and teaching. Her biography of Caroline Herschel was published in 2017 and she is currently writing a book about John Herschel's children. She has a physics degree and a PhD in history of science, and was formerly curator of astronomy at the Royal Observatory Greenwich.

Abstracts

9.45am
Between London and Lucca: Emilie Du Châtelet and the Royal Society (Sarah Hutton)

The only direct contact between Emilie Du Châtelet and the Royal Society was with James Jurin, with whom she exchanged a brief correspondence on the subject of *vis viva.* My paper will trace the fortunes of this exchange of letters, which was sparked by Du Châtelet's critique of Jurin in her *Institutions de physique* and resulted in publication of her final reply to Jurin in Lucca.

Although incomplete, the interest of this brief correspondence is partly that it reveals Du Châtelet's links to the international networks of *savants*, extending beyond England and France to Switzerland and Italy, and also that it highlights some of the issues reverberating across the republic of scientific letters around the time of the publication of the Geneva edition of Newton's *Principia Mathematica*, and just prior to Du Châtelet's translation of Newton's *magnum opus*.

10.00am
'A thankless enterprise': Lady Mary Wortley Montagu, gendered authority, and communicating vaccine science (Rachel Hindmarsh and Zakiya Leeming)

In 1837, Lady Louisa Stuart lamented the heavy price her grandmother, Lady Mary Wortley Montagu, had paid for advocating for inoculation against smallpox in England after witnessing the procedure in Turkey: 'What an arduous, what a fearful, and, we may add, what a thankless enterprise it was, nobody is now in the least aware.' The Royal Society archives contain traces of Lady Mary's brave but overlooked advocacy – including a report of the inoculation of Lady Mary's daughter, the first person to receive this preventative treatment in England in 1721, which capture a compelling story of gendered knowledge and authority in eighteenth century England. If conventional historical scholarship focuses on how Lady Mary's 'Turkish method' for inoculation was undermined and substituted because she was a woman who dared to intervene in scientific debate and medical practice, this paper explores how unlikely collaborations with Royal Society members and unlikely friction with her elite, female peers reveal challenges of knowledge exchange among women in this period.

The paper also reflects on the value of Lady Mary's story for public engagement related to women in STEM subjects today, by presenting Thanks for the Memories, a Wellcome-funded project led by the University of Oxford and the Royal Northern College of Music. This project explores how uncovering the early history of inoculation can raise questions about scientific scepticism and the challenges of knowledge exchange among women today; and how Lady Mary can be a powerful figurehead for creative interdisciplinary collaboration that celebrates the contributions of female immunologists across time. This paper therefore offers an alternative narrative of Lady Mary which focuses on her challenge to communicate with women beyond the Royal Society; and a reflection on the role of historical narratives of overlooked female figures to animate and inspire the public's engagement with science.

10.15am
Wives, widows, invisible labour: the case of two Marys (Pragya Agarwal)

I am going to present my research on Mary Senex and Mary Booth, 150 years apart but both suffering the fate of being invisible for their labour and knowledge production, in contrast to their husbands, John Senex and Charles Booth who were awarded the Fellowship of the Royal Society. And in doing so, I will also present my broader research in gendered labour and status bias.

Both Mary Senex and Mary Booth advanced the field of mapmaking and contributed to our understanding of our world. As a globemaker and mapmaker, Mary Senex took over her dead husband's business and not only ran it successfully but also expanded it with innovative insights, and supplied her globes to Benjamin Franklin and Christ's Church Hospital during the 1700s. Her husband had been a Fellow of the Royal Society, but she was not granted the same honour. Almost 150 years later, we see Mary Booth on the periphery as a shadowy figure of her husband. Charles Booth is well known, often lauded as a pioneer of social cartography, the social reformist who pioneered the art of looking at spatial distribution of poverty and disease. We find through Mary's diaries how she read books for him, made notes, explained theories of socialism, positivism, trade movements and often wrote and rewrote sections in his book for him, acting as a 'critic and editor', informing many of his views on social reform and poverty maps. She was not merely a 'helper' but a key instigator and inspiration for Charles booth's ideas. It is time for these women to come out of the shadows.

11.15am
A seat at the table: collaborative observation in the Herschel household (Odile Lehnen)

A familiar depiction of the Herschel siblings' astronomical work presents William Herschel FRS at the telescope in the garden and Caroline Herschel seated at a desk, pen in hand, recording observations. In 1783, working in this manner, the Herschels embarked on a systematic campaign to observe the sky region by region and catalogue nebulae and star clusters. By the time they completed this endeavour in 1802, they had catalogued 2500 celestial objects.

Caroline's role in this collaboration is still largely perceived as that of a passive scribe. This paper challenges this prevailing perception through a close analysis of the siblings' observing process. This involves examining their observing space and coordinated actions within it. I will pay particular attention to the objects on Caroline's desk, many of which were made out of paper and functioned not merely as records but as practical observing instruments facilitating both the inscription and retrieval of information. Some examples include her observing journals, a heavily annotated star atlas, and various printed and manuscript star catalogues, including one created by Caroline and published by the Royal Society. Studying these sources as material objects reveals Caroline's skill and agency in crafting paper machines tailored to the siblings' specific observing practice.

11.30am
Julia Herschel, Caroline Herschel and collaborative experience 100 years apart (Emily Winterburn)

Julia was the daughter of a Fellow of the Royal Society, the granddaughter of a Fellow, the sister of two Fellows, and her great aunt had been the first woman to have her paper published by the Royal Society. Yet, 100 years after her great aunt Caroline Herschel submitted that historic paper, Julia's opportunities for publicly contributing to science were scant. Were it not for some recently acquired papers in the Royal Society archive, showing Julia's contribution to her husband's work in oceanography, we would assume the work to have been done only by men. Even with all her

education, family support and family name in science, Julia's opportunities to work in science besides marrying and anonymously contributing to her husband's work did not exist. Why was progress so slow? And how does our story of science change when we are able to piece together this missing part of the narrative?

Julia's story is different from Caroline's in that Julia was working on a collaborative expedition. While historians have problematised the eighteenth-century single discoverer narrative, it was one that allowed Caroline to make her name. Julia, on the other hand, was working as part of a group. Does this make her invisibility more acceptable, or is this just a new convention formalising the exclusion of women? By comparing her experience to that of other women working on expeditions in the late nineteenth century, I will offer some possible conclusions.

11.45am
'The admirable tact and taste of Mrs Sabine': the scientific persona of nineteenth-century women translators (Alison E Martin)

In 1840, Ferdinand von Wrangel's account of his travels to the north-eastern Siberian coast appeared in English. The *Monthly Review* lauded the stylistic changes made by its translator, Elizabeth Sabine, whose 'admirable tact and taste' had made the German work more readable for a British audience. The wife of Edward Sabine, who had been elected to the Royal Society in 1818 and subsequently served as President (1861-71), Elizabeth was unusual in being a visible, publicly acknowledged scientific translator. Her translations ranged from the mathematician Carl Friedrich Gauss's *General Theory of Magnetism* (tr. 1841) and François Arago's *Meteorological Essays* (tr. 1855) to, significantly, Alexander von Humboldt's *Aspects of Nature* (tr. 1849) and *Cosmos* (tr. 1846-58). And as the German physicist Heinrich Wilhelm Dove wrote to her husband in 1853, he was honoured to have his work on global heat distribution, *Die Verbreitung der Wärme auf der Oberfläche der Erde* (1852), put into English by none other than Humboldt's own translator, Elizabeth Sabine.

While the emergence of recognisable knowledge-making roles in natural science – the notion of the 'scientific persona' (Daston and Sibum 2003) – has been extensively investigated, translators remain underexplored. Specialists on gender in translation have also overlooked scientific writing, because of the relative invisibility of women in this domain. This paper has two interrelated aims: to challenge prevailing feminist notions that female translators were 'silenced' as a matter of course by male authors, editors, publishers and critics; and to reveal how Elizabeth Sabine's awareness of the importance of style in scientific writing enabled her to produce critically acclaimed translations. Using a comparative analysis of Wrangel's travelogue in its German and British editions, this paper explores her linguistic interventions to reach a more integrated understanding of how women translators were involved in the transnational circulation of scientific knowledge in the nineteenth century.

12.00pm
'It would of course be an entire novelty to appoint a lady as an official eclipse observer': Annie Maunder's eclipse expeditions (Megan Briers)

During the total solar eclipse of 1898, equipped with a small camera, a new type of photographic plate and a borrowed telescope mount, Annie Maunder photographed the coronal streamers extending to a distance never previously managed. Her success, alongside observations by other members of the British Astronomical Association, raised questions about the relationships between these amateur observers and the official British expeditions. In 1894, the Royal Society (RS) and the Royal Astronomical Society (RAS) had collaborated to form the Joint Permanent Eclipse Committee (JPEC), which supported the 'official' expeditions. However, with overlapping members, methods and

motivations, the eclipse expeditions of these various bodies offer a key opportunity to analyse negotiations over authority, hierarchy and the position of women in astronomy in this period.

My paper will explore how Maunder used expeditions to try and raise the status of women in astronomy. Despite the fact she couldn't be a member of the RAS/RS, Maunder had the opportunity to present her expedition observations to these societies, in both exhibitions and publications. However, the expeditions for Maunder were mainly an opportunity to demonstrate what could still be achieved with small instruments and no institutional backing – she applied to become a JPEC observer only because of the cost of procuring spectroscopic equipment. Capitalising on the interest in expeditions, Maunder used her own experiences to promote an image of astronomy where amateurs and women were welcome and essential contributors.

1.20pm
Catherine Strickland: the woman behind dodos (Xinyi Wen)

This paper focuses on Victorian naturalist Catherine Strickland (1825-1888), daughter of ornithologist William Jardine FRS and wife of ornithologist Hugh Strickland FRS. It draws on recently acquired materials from Catherine's descendants, currently held at the Cambridge Museum of Zoology, including her artworks and drafts of illustrations for her husband Hugh Strickland's influential book, *The Dodo and Its Kindred* (1848). It argues that, despite not being credited in the final publication, her illustrations played an important role in establishing the dodo's anatomy and extinction.
In the nineteenth century, establishing the distinction of dodos demanded thorough research of historical images. This paper examines how Catherine collected and copied images of dodos from a variety of sources, from seventeenth-century oil paintings to correspondences from Mauritius, which allowed her husband to establish the course of dodos' extinction. It asks how Catherine imagined the extinct dodo and its environment through an extensive collection of maps, landscapes, natural histories and mythological icons, which she utilised to illustrate her husband's book. Drawing on the Strickland family's ties with the Mauritius colony, it demonstrates how colonial perceptions during British rule in Mauritius shaped Catherine's artwork and research. It also pays particular attention to her gendered paper technique, which involved cutting images of dodos and pasting them onto books, a practice rooted in Victorian family activities of extra-illustration and scrapbooking.

Through a close examination of the visual details, this paper argues that Catherine meticulously compared and assessed images of dodos from different eras, verifying their anatomical features and living environments through her illustrations. Her work significantly contributed to the study of dodos' extinction. By situating Catherine's work within a broader context, it shows how a female naturalist's overlooked contributions were deeply intertwined with the politics of gender, ecology, and colonialism.

1.35pm
Eleanor Ormerod and her networks (Sally Shuttleworth)

Eleanor Ormerod (1828-1901) had an unusual career for a Victorian female naturalist. Although shut out of elite scientific institutions such as the Royal Society due to her sex, she nonetheless became internationally acclaimed for her work in entomology, and is recognised as one of the founders of what was termed economic entomology (the study of the impact of insect 'pests' on crops). Her whole career was founded on the building of networks, from her early use of children and workers on her father's estate to furnish her with insect specimens, to the international networks she founded later in life, based on intense correspondence with experts across the globe, and the gathering of data which fed into her acclaimed annual reports on 'Injurious Insects'.

During her time as honorary consultant to the Royal Agricultural Society of England, Ormerod was effectively fulfilling the role of government adviser on economic entomology. There are strong connections to the Royal Society: her father, George Ormerod (1785-1873) was a member (in recognition of his antiquarian writings), and also her physician brother, Edward Latham Ormerod (1819-1873), who was author of *Natural History of British Social Wasps* (1868). As Keith Moore has noted, Eleanor Ormerod also had an influence on the work of Robert Newstead FRS. Virginia Woolf honoured Ormerod by creating an imagined version of her life in *Lives of the Obscure*, but she was anything but obscure in her own time. She created, I will argue, a form of global citizen science network.

1.50pm
Patroness of plant hunters: Ellen Ann Willmott (1858–1934) and the business of botanical exploration (John Schaefer)

This paper examines the scientific legacy of Ellen Ann Willmott (1858-1934), a formidable yet underrecognised figure in the history of British horticulture and botany. Best known as a wealthy Royal Horticultural Society plantswoman and garden designer, Willmott also played a pivotal role in financing imperial plant-hunting expeditions, most notably those led by Ernest H. Wilson (1876-1930) in China. Her patronage facilitated the transcontinental movement of plant specimens, shaping both British garden aesthetics and institutional botanical collections. Despite her election as one of the first female Fellows of the Linnean Society in 1904, her contributions have remained on the fringes in historical accounts of scientific exploration and plant mobility. Drawing on archival correspondence, herbarium specimens, and plant exchange records, this paper reconstructs the global networks in which Willmott operated – networks that bridged elite institutions like Kew Gardens with other imperial metropoles and colonial 'contact zones'.

In addition to traditional archival methods, the study employs large-scale social network analysis (SNA) using herbarium metadata from the Kew Digitisation Project. I present SNA as a key methodological intervention for revealing and contextualising the significance of women in natural history collecting. Willmott emerges as a statistically central figure within these networks; yet closer scrutiny reveals how artefacts of the digitisation process and labelling inconsistencies shape her visibility. Her case illuminates the constructed nature of scientific metadata, raising broader questions about the historiography of scientific authority and the gendered dynamics of plant collecting. This analysis shows how she navigated a botanical economy shaped by intersecting agendas of profit, prestige, politics, and social capital. By reframing Willmott as a key actor in the political and economic circuits of imperial botany, this paper highlights the role of elite female patronage in sustaining colonial plant collection, offering new perspectives on gender, authority, and scientific labour in the history of empire.

2.05pm
Nora Barlow and the purchase of the Darwin Archive by Cambridge University Library, 1942 (Joe Caygill)

Emma 'Nora' Barlow (née Darwin) (1885-1989) was a geneticist, historian and, crucially to her own identity, granddaughter of Charles Darwin (1809-1882). Though not a Fellow of the Royal Society herself, Nora had familial, institutional and social connections with many Fellows and published on Erasmus Darwin in the Society's *Notes and Records*. As will be explored in my essay, she also had an intriguing but indirect connection to the Royal Society via the Pilgrim Trust, which facilitated the Society's purchase of Newton's house, Woolsthorpe Manor, in the same year they helped Cambridge University Library (CUL) purchase Darwin's archive.

This essay builds on my Master's dissertation on the memorialisation of Down House by the BAAS and members of the Darwin family. The project concerned memory practices and the boundary between scientific heritage and history of science. Here, I focus on a specific question which opens a broader analysis: what was Nora's role in the sale of the Darwin archive to CUL in 1942? The Darwin family, including Nora, have been recognised in the history of Darwin's archive, but historians have not addressed this question.

The thrust of this essay is to suggest that the choice of CUL as the archive's destination was not inevitable (as is often suggested in the literature). By focusing on Nora as a central figure in a collaborative network, studying correspondence in her archive, official CUL papers and Pilgrim Trust material, I address key themes in the historiography of archives and scientific dynasties in this period. Placing Nora's movements across the public-private boundary within the context of institutional and familial relationships reveals what it meant to make an archive accessible to the public. It also shows how family identity and philanthropy mediated the connection between scientific heritage and the history of science. This yields a fuller – gendered – picture of the process of knowledge production in the history of science at mid-century.

3.00pm
Women researchers and the Government Grant, 1897-1914 (Danielle Farrier)

In 1850, the Royal Society began administering the 'Government Grant', the first state-funded research grant scheme for UK science. Between 1850 and 1914 more than 2,800 research grants were awarded from Government Grant funds, amounting to over £184,000. Despite women grantees appearing on every published list of awards between 1897 and 1914, discussions of the Grant have neglected to acknowledge the presence of women grantees. During this period, thirty-five women benefitted from over seventy grants amounting to more than £2,000. An analysis of women recipients of Government Grant assistance is therefore long overdue.

This paper sheds light on the women recipients of Government Grant assistance in the years between 1897 and 1914 and explores how grants were able to assist female researchers in undertaking a range of individual research objectives. Further, it considers what the existence of women grantees reveals about the motivations of the Royal Society in its distribution of financial assistance and examines the place of women within the scientific community.

3.15pm
Organising beyond borders: twentieth-century images of women's transnational work in STEM (Graeme Gooday and Emily Rees)

Histories of women's participation in twentieth-century science – broadly construed – have typically focused on four forms: familial collaborations; overlooked historical figures; technical support teams; and women's national organisations. But only recently has historians' attention turned to the rise of women-led *transnational* networks in STEM. These have typically operated outside the remit of more established bodies, such as the Royal Society, and thus require fresh methodologies and evidential entry points to study.

Our paper highlights a major global network founded during the Cold War that followed gendered norms in peaceful promotion of humanitarian knowledge. The International Conference of Women Engineers and Scientists (ICWES) met first in 1964, bringing together post-war women's STEM organisations in the USA, UK, Italy, Japan, and France. Initially it was hosted in the USA in implicit

response to the Soviet Union's 1957 success in launching Sputnik – with the support of a huge Soviet female workforce. ICWES's multi-national agenda soon shifted, however, to cross-cultural sharing of expertise in infrastructures of food, water supply, healthcare and transportation. It has since convened every 3-4 years not just in Europe and North America but also in Asia and Africa.

We show how ICWES's multifaceted archival materials – conference proceedings, correspondence and photographic images – are a key resource for exploring of women's transnational involvement in technoscience. ICWES meeting records reveal visual evidence of how women's diverse nationally specific research practices, policies and priorities, were brought into broad conversation. Hundreds of images of women at ICWES meetings, both collective and individual, bring to the foreground aspects of women's involvement in science that are often invisible in textual records, whether in the Royal Society or elsewhere.

Our paper focuses particularly on the cases of the following women with transnational careers in science: Ira Rischowski (Germany/UK), Letitia Obeng (Ghana), and Ebun Adegbohungbe Oni (Nigeria).

3.30pm
Women, academic mobility, and scientific lives: Indian scientists in postwar British universities (Nilakshi Das)

This paper will be based on the findings from my PhD thesis, *Becoming a Scientist: South Asian Students in British Universities and the Making of Postcolonial Scientific Lives, 1950-2000*. It will explore the experiences and contributions of Indian women scientists who pursued doctoral training in British universities between 1950 and 2000. Drawing on life history interviews, it will discuss how women navigated the postcolonial dynamics of academic mobility, gendered expectations, and professional recognition in transnational scientific spaces. It will challenge the diffusionist models that frame knowledge as flowing unidirectionally from the West to the Global South, and argue that scientific knowledge was co-produced, translated, and reoriented across transnational settings, particularly through the work of returning scientists engaged in state-building and national development.

The presentation will highlight how women's scientific knowledge and labour were often co-produced and reshaped across national contexts, yet remained under-recognised within institutional histories and international networks. It will address how factors such as familial responsibilities and geopolitical events influenced women's educational paths, decisions about return migration, and their roles in nation-building through participation in national science.

By centring women's narratives, the paper will contribute to broader discussions on gendered hierarchies in science and the complexities of scientific identity formation in postcolonial contexts. It will reveal how South Asian women scientists negotiated the intersecting challenges of global scientific engagement and local social obligations, reshaping both scientific practice and the history of science itself.

3.45pm
Motherhood and science in Britain since the 1950s (Paul Merchant and Sally Horrocks)

When Dorothy Crowfoot Hodgkin FRS won the Nobel Prize for Chemistry in 1964, a profile in *The Times*, entitled 'Calm Genius of Laboratory and Home'. emphasised her scientific achievements and her role as wife, mother and grandmother. She was described as having an 'astonishing capacity to combine the dual responsibilities of family and research', drawing attention to the rarity with which women of her generation had been able to mix scientific careers with motherhood.

In this paper we draw on extensive life story oral history interviews carried out since 2009 to explore more broadly the experience of motherhood for women working in British science since the 1950s and how this changed over time. These extended interviews allow us to examine the choices women made, their motivations for doing so and the emotions that accompanied them. We consider first how women scientists experienced prevailing cultural expectations that successful scientific careers and motherhood were incompatible and how this shaped their decisions about if and when to have children.

We then examine the organisational strategies adopted by those who chose to combine motherhood and paid employment in science. We examine first those women who managed to sustain more or less continuous research careers before considering those who adopted a variety of different approaches to using their knowledge and expertise while reorienting their careers away from a primary research focus. We argue that the ability to maintain a research career depended on continuous engagement with epistemic networks and that this was something that was often contingent on very specific organisational and personal factors. It remained a persistent challenge for women into the twenty-first century, long after significant legislative change had removed some of the earlier structural barriers.

4.25pm
Breaking the glass ceiling of science: the first eleven women to become Fellows of the Royal Society 1945-1954 (Stella Butler)

It is 80 years since the crystallographer Kathleen Lonsdale and the biochemist Marjory Stephenson became the first women Fellows of the Royal Society. A further nine women joined them as FRSs up to 1954. This presentation outlines a new book to be published by the History Press in November 2025 which, through a series of individual pen portraits, tells the stories of these 11 exceptional women: two crystallographers, one mathematician, three biochemists, two zoologists, a botanist, a cell biologist and a pharmacologist.

After outlining events leading up to the 1945 fellowship election, the spotlight is turned on the paths these 11 women took to joining the UK's scientific elite. Each made significant scientific discoveries often through exhausting hours at the laboratory bench; they also enjoyed foreign adventures and suffered political persecution. Each of these women made sacrifices and faced obstacles as they established professional careers between the two world wars. Each, in different ways were pioneers, opening doors for later generations to work in areas traditionally dominated by men. The presentation and the book not only pay tribute to their achievements but also asks why most have slipped from our memories.