

THE SEVENTH STS *FORUM* EUROPEAN WORKSHOP

Science and technology for future global resilience

Co-organised by: Science and Technology in Society
forum (STS *forum*), the Royal Society and Japan External
Trade Organization (JETRO)


8 April 2024




THE
ROYAL
SOCIETY



JETRO

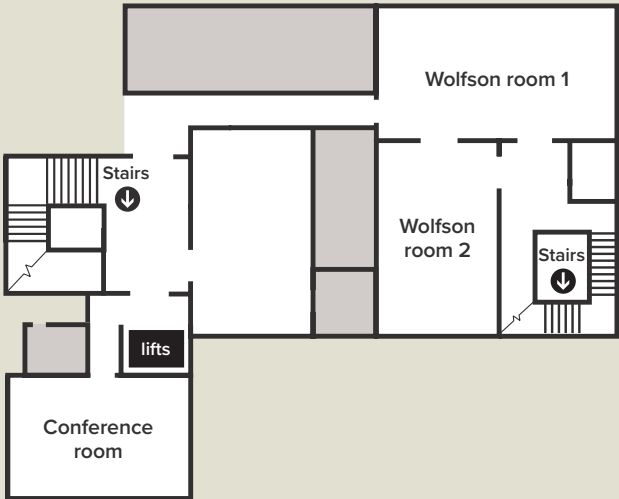
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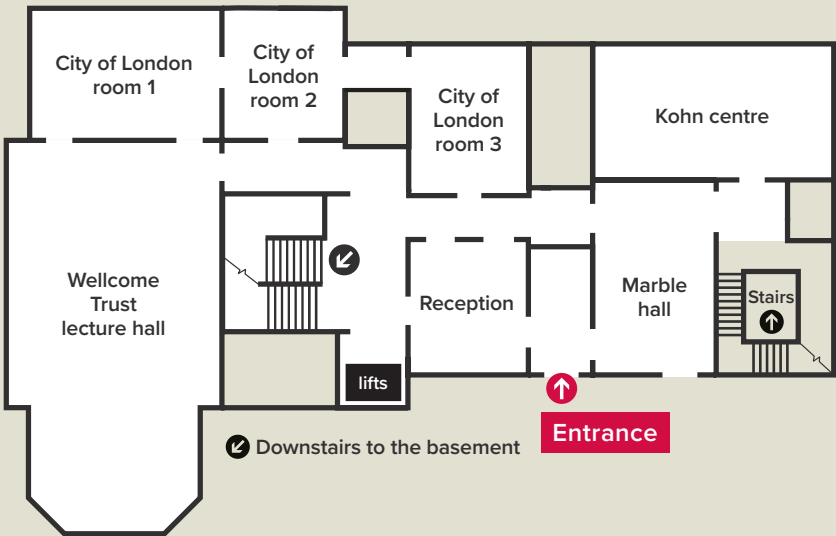
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First floor



Ground floor



Basement



Programme

15:00	<p><u>OPENING SESSION</u></p> <p>Chair: WALPORT, Mark, Foreign Secretary, The Royal Society, U.K.</p> <p>Speakers:</p> <ul style="list-style-type: none"> • H.E. HAYASHI, Hajime, Ambassador Extraordinary and Plenipotentiary of Japan to the UK, Embassy of Japan, Japan • YURA, Hideo, President, Japan External Trade Organization London Office (JETRO London), U.K. • KOMIYAMA Hiroshi, Chairman, Science and Technology in Society <i>forum</i> (STS <i>forum</i>), Japan
15:10	<p><u>PANEL 1: Healthy Ageing – Challenges and Innovations</u></p> <p>Session Description: As life expectancies are increasing around the world, what are the main health and societal challenges that we are facing? How can we increase “healthy life expectancy”?</p> <p>What are the latest findings in terms of physical, mental and neurological areas that would bring better perspectives for prevention and therapy of age-related conditions? What are the technological and social innovations (including financial solutions) that would enable further independence and dignity for the elderly, without added burden to society?</p> <p>What are the best practices that we can learn from each other?</p> <hr/> <p>Chair: WALPORT, Mark, Foreign Secretary, The Royal Society, U.K.</p> <p>Speakers:</p> <ul style="list-style-type: none"> • FENSCH, Martin, Head of Governmental Affairs & Strategic Partnerships Europe/Canada, Daiichi Sankyo Europe GmbH, Germany • MITSUISHI, Mamoru, President, Science Council of Japan, Japan • OKAMURA, Naoko, Executive Advisor to the President/Senior Director, Japan Agency for Medical Research and Development (AMED), Japan • PARTRIDGE, Linda, Biological Secretary, The Royal Society, U.K.

16:15	<p><u>PANEL 2: The future of sustainable agriculture and food security</u></p> <p>Session Description: Given the challenges posed by climate change, how can we secure sources of sustainably produced food with a background understanding of the conflicting demands on land? What are the science-based solutions that ensure safe and sustainable agriculture and sources of different nutrients needed by the world population? How do we ensure that these solutions can be equally shared by those who need them the most?</p> <hr/> <p>Chair: SERAGELDIN, Ismail, Founding Director Emeritus, The Library of Alexandria, Egypt</p> <p>Speakers:</p> <ul style="list-style-type: none"> • BAULCOMBE, David, Professor Emeritus, University of Cambridge, U.K. • KAMOUN, Sophien, Professor and Group Leader, The Sainsbury Laboratory, Norwich, U.K. • KOUNDOURI, Phoebe, Professor, Department of International & European Economic Studies, Athens University of Economics and Business & Technical University of Denmark, Greece • TOUBIA, Didier, Co-Founder and Chief Executive Officer, Aleph Farms, Israel
17:25	<p><u>CLOSING SESSION</u></p> <p>Chair: SCHÜTTE, Georg B., Secretary General, Volkswagen Foundation, Germany</p> <p>Speakers:</p> <ul style="list-style-type: none"> • CHALFIE, Martin, University Professor, Department of Biological Sciences, Columbia University, U.S.A. • *DASGUPTA, Partha, Frank Ramsey Professor Emeritus of Economics, Faculty of Economics, University of Cambridge, U.K. <i>*Unable to attend due to transport strike.</i> • WINCE-SMITH, Deborah L., President & CEO, Council on Competitiveness, U.S.A.
17:45	<p><u>Networking Cocktails</u></p>

Biographies

Mark Walport



Sir Mark Walport is Foreign Secretary and Vice President, the Royal Society. He chairs Imperial College Health Partners, Imperial College Academic Health Sciences Centre and the Kennedy Memorial Trust.

He is a non-executive board member of NHS England, and trustee of the British Museum, the Daiwa Anglo-Japanese Foundation, and Health Data Research UK.

Previous career highlights include:

- Founding Chief Executive of UK Research and Innovation (UKRI), 2017 to 2020
- Government Chief Scientific Adviser (GCSA), 2013 to 2017
- Member and latterly co-chair of the Prime Minister's Council for Science and Technology
- Director of the Wellcome Trust Professor and Head of the Division of Medicine, Imperial College London
- Founder Fellow and first Registrar of the Academy of Medical Sciences
- Member of the Advisory Board of Infrastructure UK

Hiroshi Komiyama



Hiroshi Komiyama, a prominent academic, scientist and engineer and leading authority in global sustainability, became Chairman of the Institute of Mitsubishi Research Institute, Inc. in April 2009, after completing four-year presidency as the 28th President at the University of Tokyo. He obtained a PhD in chemical engineering at the University of Tokyo. In 2010, he founded the 'Platinum Society Network' to achieve a sustainable society that solves environmental, aging, educational and economic issues. In 2017, he received the Sheikh Mohammed Bin Rashid Al Maktoum Knowledge Award (Knowledge Award) for his plan for solving social issues to create a better future for humanity and acting as a driving force behind the effort to realize this vision, which he calls "Platinum Society". He was elected as the Chairman of the STS forum in March 2021.

Hideo Yura



Hideo Yura is the Director General of the Japan External Trade Organization (JETRO) at its London office. He also manages coordination for all JETRO offices in Europe.

He has dedicated himself to promoting business relationship among entities through trade, investment, and R&D.

He and JETRO offices are providing occasions for start-up and scale-up companies to grasp their potential customers and supporters.

Before coming to London in 2023, he oversaw, for a total of seven years, the recovery effort following the Fukushima Daiichi Nuclear Powerplant accident of 2011.

He joined the Ministry of Economy, Trade and Industry of the Japanese government from 1989 and worked for policy planning and implementation. He also worked in science & technology and national defense ministries and joined in programs to develop new technologies and businesses.

Hajime Hayashi



Ambassador HAYASHI Hajime was assigned as Ambassador Extraordinary and Plenipotentiary of Japan to the United Kingdom of Great Britain and Northern Ireland in December 2020.

Before coming to the UK, Ambassador HAYASHI served as Assistant Chief Cabinet Secretary and Deputy Secretary-General of the National Security Secretariat in the Cabinet Secretariat of Japan. There he was engaged in navigating Japan's external and security policies between October 2019 and December 2020.

His academic achievements include the award of an LLB degree by the Faculty of Law, University of Tokyo and his service as a lecturer on Japan's foreign policy at Chuo University in Tokyo. He has also been a fellow at the Weatherhead Center for International Affairs of Harvard University, USA.

Ambassador HAYASHI is a classical music enthusiast. He also likes to visit galleries and museums to indulge his appreciation of fine arts and crafts. Having taken up his appointment in the United Kingdom, he now lives in London with his wife, Haruko.

Martin Fensch



Dr. Martin Fensch leads Governmental Affairs & Strategic Partnerships Europe/Canada at Daiichi-Sankyo, a pharmaceutical company headquartered in Japan. The company specializes in innovative medicines for Oncology and Cardiovascular diseases. With roots in journalism and over 18 years of experience in the pharmaceutical industry, Dr. Fensch's focus is on building teams and external relationships while fostering a culture of diversity and trust. Prior to joining Daiichi-Sankyo in 2022, he held various national and international leadership roles at Pfizer - in the areas of Policy, Communications, and Business. He served as Managing Director in the German Pfizer organization for 10 years and holds a doctorate in philosophy. In 2022, he published the book "News and Fake News on Vaccination" and periodically teaches Public Relations at the ESCP Business School. Dr. Fensch is an active member of the "Stiftung Überleben" and "Vision Zero in Oncology" advisory boards.

Mamoru Mitsuishi



Prof. Mamoru Mitsuishi is the executive director and vice president of the University of Tokyo from 2017. He was previously the Dean of the School of Engineering. He graduated from the University of Tokyo in 1979 with a bachelor of science in physics. Following this, he earned a second bachelor's degree in mechanical engineering in 1981. He received his Master's and doctorate degrees in 1983 and 1986, respectively from the University of Tokyo. He became a professor in 1999. His areas of interest are biomedical robotics, and manufacturing systems. He is a member of various internationally renowned societies, such as the International Academy for Production Engineering (CIRP), where he is a vice president elect and fellow, and the IEEE Robotics and Automation Society.

Naoko Okamura



Naoko Okamura has served as Executive Advisor to the President / Senior Director of the Japan Agency for Medical Research and Development (AMED) since 2023.

She began her career at the Science and Technology Agency (currently the Ministry of Education, Culture, Sports, Science and Technology (MEXT)) in 1990, and since then has been consistently involved in science and technology administration in a wide variety of areas.

Previous career highlights include:

- Assistant Minister / Director-General for International Affairs of MEXT, in charge of organizing the G7 Education Ministerial Meeting as its top administrative officer, 2022-2023.
- Director-General for International Cooperation, National Space Policy Secretariat, Cabinet Office, 2020-2022.
- Deputy Director-General of the Research and Development Bureau, 2018-2020.
- Counsellor at the Mission of Japan to the EU, 2008-2011.

Linda Partridge



Linda Partridge works on the biology of ageing. Her research is directed to understanding the mechanisms by which health during ageing can be increased in laboratory model organisms and humans. Her work has focussed in particular on the role of nutrient-sensing pathways and diet, and her primary interest is in geroprotective drugs. She is the recipient of numerous awards, was honoured with a DBE for Services to Science in 2009 and is a Fellow of the Royal Society. She is the founding director of the Max Planck Institute for Biology of Ageing and the Biological Secretary of the Royal Society.

Ismail Serageldin



Ismail Serageldin is the Emeritus Librarian of Alexandria, and was the Founding Director of the Bibliotheca Alexandrina, the New Library of Alexandria in Egypt (2001-2017). Before that he was the Vice-President of the World Bank (1993-2000). He has received many awards including the Order of the Rising Sun of Japan. He is a knight of the French Legion d'Honneur and a Commander of Arts and Letters of the French Republic. He has lectured widely, published more than 100 books and 500 articles. He graduated in engineering at the University in Cairo, finished his masters and PhD studies at Harvard University and has received over 39 honorary doctorates from all over the world.

David Baulcombe



David Baulcombe is a bioscientist with a diverse interest in plant biology. David is credited with the discovery and characterisation of an RNA silencing system that protects plants against viruses. This system also affects the patterns of plant gene expression. In some instances, these changes in gene expression can be passed on from one generation of plants to the next without having changed the DNA sequence. This type of change is referred to as 'epigenetic' and protects the genome against selfish DNA, helps plants adapt to a changing environment and may explain why hybrid plants are not like their parental plants in all respects. David's current research includes projects on hybrid tomatoes and on evolution in an alga. He is also genetically engineering maize to resist a lethal disease that is a problem in Kenya and nearby regions of Africa. As a sporadic contributor to [Twitter](#), David disseminates information about his team's work and his views on world events as diverse as genetically modified crops, Ebola and the benefits of exercise.

Professional position:

- Regius Professor of Botany Emeritus, Department of Plant Sciences, University of Cambridge

Subject groups:

- Biochemistry and molecular cell biology - Molecular microbiology
- Organismal biology, evolution and ecology - Plant sciences / botany
- Microbiology, immunology and developmental biology - Genetics (excluding population genetics)

Awards include:

Balzan Prize (for epigenetics), Wolf Prize for Agriculture, Lasker Award for Basic Biomedical Science, Humphry Davy and Claude Bernard Lectures, Royal Medals (for his profoundly significant recent discoveries for not only plants but for all of biology and for medicine).

Sophien Kamoun



Sophien Kamoun grew up in Tunisia where he developed a passion and curiosity about nature. He studied genetics in Paris and Davis, California, before working in Wageningen, Ohio and Norwich, where he is currently a Senior Scientist at The Sainsbury Laboratory and Professor of Biology at The University of East Anglia. He is known for his seminal contributions to our understanding of plant diseases and plant immunity.

Professor Kamoun pioneered genomics and molecular biology methods to reveal fundamental insights into the biology and evolution of eukaryotic plant pathogens. He discovered virulence effector families from pathogenic oomycetes and fungi, and showed how they can modulate plant immunity. He demonstrated how antagonistic coevolution with host plants has impacted the architecture of pathogen genomes, accelerated the evolution of effector genes, and drove the emergence of immune receptors networks. His inventive work in plant pathology has resulted in new approaches to mitigate some of the world's most serious crop diseases.

Professor Kamoun has received many awards and recognitions, notably the Kuwait Prize and The Linnean Medal.

Phoebe Koundouri



Phoebe Koundouri is Professor at the School of Economics and Director of Research laboratory on Socio-Economic and Environmental Sustainability – ReSEES at the Athens University of Economics and Business, Professor at the Department of Technology, Management and Economics at Denmark Technical University, Director of the Sustainable Development Unit (SDU) at ATHENA Research Center, President of the European Scientific Association of Environmental and Natural Resource Economists (EAERE), Member of the World Academy of Arts and Sciences (WAAS), Member of the Academia Europae, Member of the Nominating Committee for the Nobel Prize in Economics Sciences. She is also Chair of the UN SDSN Global Climate Hub, co-chair of SDSN Europe & SDSN Greece.

Didier Toubia



Didier Toubia is the CEO and Co-Founder of Aleph Farms, a cellular agriculture company focused on cultivating high-quality products from cow cells. Headquartered in Israel, Aleph grows cultivated beef steaks, offering unique culinary experiences while enhancing sustainability, food security and animal welfare. In December 2023, the company received regulatory approval from Israel's Ministry of Health for its cultivated Petit Steak, marketed under the product brand, Aleph Cuts. Established in 2017, Aleph plays a pivotal role in the bioeconomy by diversifying the supply and decentralizing the production of quality animal proteins and fats as a complement to sustainable livestock farming. The company unveiled the world's first cultivated thin-cut beef steak in 2018, the world's first cultivated ribeye steak in 2021, and cultivated collagen in 2022. For its contributions to climate leadership, including a net zero commitment made in 2020, Aleph Farms has received top accolades from the World Economic Forum and the United Nations. It is backed by top corporate partners and financial institutions, as well as state-backed sovereign funds in the Middle East and Southeast Asia. Prior to Aleph Farms, Didier co-founded and led IceCure, which went public in 2010, and served as the CEO of NLT Spine, which was acquired by SeaSpine in 2016. Didier was trained as a Food Engineer and Biologist at AgroSup Dijon, gained a specialized master's degree from ESCP Business school, and holds a joint executive MBA from Kellogg and Recanati. Didier holds over 40 patents. He is also Co-Founder of BlueTree and Yeap.

Georg B. Schütte



Since 1 January 2020 Dr. Georg Schütte has been Secretary General of the Volkswagen Foundation. Prior to this, he served as State Secretary in the German Federal Ministry of Education and Research for ten years. Dr. Schütte holds a doctoral degree in media and communication research from the Technical University of Dortmund, Germany, as well as a Masters Degree of the City University of New York, USA. He conducted research at Harvard University and at the University of Siegen. Before he entered government service, Georg Schütte was Secretary General of the Alexander von Humboldt Foundation. He has worked in research and foundation management for more than 30 years.

Martin Chalfie



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Martin Chalfie, a University Professor in the Department of Biological Sciences at Columbia University, shared the 2008 Nobel Prize in Chemistry for his introduction of Green Fluorescent Protein (GFP) as a biological marker. Born in Chicago, Illinois, Dr. Chalfie obtained his A.B. and Ph.D. from Harvard University and did postdoctoral research with Sydney Brenner in Cambridge, England. His research addresses how nerve cells acquire and maintain their unique characteristics and how sensory cells respond to mechanical signals. Dr. Chalfie is a member of the National Academy of Sciences and the National Academy of Medicine and chairs their Committee on Human Rights. He is a past president of the Society for Developmental Biology and of the American Society for Cell Biology.

Partha Dasgupta



Professor Dasgupta taught at the London School of Economics (Lecturer 1971–1975; Reader 1975–1978; Professor of Economics 1978–1984). He moved to the University of Cambridge in January 1985 as Professor of Economics, serving as Chairman of the Faculty of Economics in 1997-2001. In 2002, Professor Dasgupta was named Knight Bachelor by the Queen for services to economics. Professor Dasgupta's research interests have covered welfare and development economics, the economics of technological change, population, environmental and resource economics, the theory of games, the economics of undernutrition, and the economics of social capital. He is the author of the independent report, "The Economics of Biodiversity: The Dasgupta Review", which was submitted to the UK Treasury in February 2021.

Deborah L. Wince-Smith



Deborah Wince-Smith is the President & CEO of the Council on Competitiveness, the Nation's premiere competitiveness leadership organization, representing U.S. CEOs, university presidents, and labor leaders. She leads national & international initiatives that assess competitiveness challenges, convene leaders who can envision and implement solutions, and organize action to enhance U.S. competitiveness. For most of her career, she has worked on a wide range of science, technology, innovation, & competitiveness issues advising top-level government policy-makers & business leaders. She serves on the boards of several public & private organizations. She is the President of the Global Federation of Competitiveness Councils, and a member of Japan's Science and Technology in Society forum Council.

Cover image

Botanical study of *prunus padus*, common name bird cherry. This plant is native to northern Europe and northern Asia. Painting 32 from MS/109, a collection of botanical paintings by Jacob van Huysum (1682-1745), Dutch botanical painter and William Sartorius.