

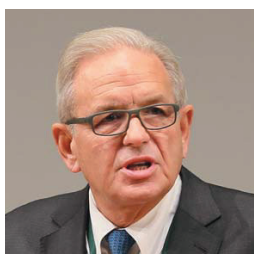
STS *forum*

Science and Technology in Society *forum*

2020

The 17th ANNUAL MEETING

October 3, 4, 5 and 6, 2020 Kyoto, Japan



Charles O. Holliday, Jr.
Chairman
Royal Dutch Shell plc
USA



Koji Omi
Founder and Chairman
STS *forum*
JAPAN



Shinzo Abe
Prime Minister
Government of Japan
JAPAN



Rita R. Colwell
Distinguished University Professor
University of Maryland College Park
USA



Maxim Akimov
Deputy Prime Minister
Government of the Russian Federation
RUSSIA



Takeshi Uchiyamada
Chairman of the Board
Toyota Motor Corporation
JAPAN

Photos as of October 2019 (16th Annual Meeting)
Note: Countries that appear after each individual's title represent either their own nationality or the headquarter location of the organization they are affiliated with.

Message from the Chairman



Koji Omi
Founder and Chairman
STS *forum*

STS *forum*, Science and Technology in Society *forum*, was founded in 2004 by Koji Omi, a former Minister of Finance and former Minister of State for Science and Technology Policy and for Okinawa and Northern Territories Affairs in the Japanese government. STS *forum* aims to provide a new mechanism for open discussions on an informal basis and to build a human network that would, in time, resolve the new challenges stemming from the application of science and technology. STS *forum* community also explores opportunities arising from science and technology and addresses how to remove barriers by using science and technology to solve the problems facing humankind.

The rapid progress of science and technology has brought economic growth and enriched the quality of our lives on the one hand. However, the advance of science and technology has raised important ethical, safety and environmental issues: possible negative applications are threatening humankind's own future. We call these "the lights and shadows of science and technology": we must develop the lights and control the shadows.

STS *forum* focuses on many aspects of science and technology in society: for example, technological development in genomics like genome engineering and iPS cell technology; energy and environmental issues including the nuclear power option; and social changes brought by ICT and related privacy and security issues.

Because the problems we face today are becoming increasingly complex, the scientific community alone cannot control these problems and also, they are beyond the control of any single country. Thus, it is essential that not only professional scientists like scholars and researchers, but also policymakers, and business leaders from all over the world gather and discuss these science and technology issues from the long-term

perspective, i.e. 100 to 500 years, for the future of the humankind.

This is the fundamental concept of STS *forum*, where global leaders meet for three days at the forum's Annual Meeting in Kyoto, starting on the first Sunday of October. Japanese Prime Minister Shinzo Abe, Honorary Chairman of STS *forum*, attends the Annual Meeting every year. Other prominent leaders attending in recent years have included the prime ministers of France, Sri Lanka, and Slovenia, and the deputy prime minister of the Russian Federation in addition to many Nobel Laureates.

In 2019, around 1,400 leaders from about 80 countries and regions, including 14 Nobel Laureates, met in Kyoto. In addition to ten plenary sessions and 24 concurrent sessions under eight themes, 11 side meetings, including the Science and Technology Ministers' Round Table, the University Presidents' Meeting, Global Summit of Research Institute Leaders, CEO and CTO Meetings were held, attended by 19 ministers, 44 university presidents, 17 research institute leaders, 21 CEOs and 35 CTOs.

The STS *forum* launched a "Dialogue between Future Leaders and Nobel Laureates" in 2015, and in 2019, 129 young leaders enjoyed stimulating discussions with 11 Nobel Laureates (currently, it is called "Dialogue between Young Leaders and Nobel Laureates"). The STS *forum* will continue to contribute to fostering younger leaders in various fields by inviting them to our networking opportunities in Kyoto and other locations.

The STS *forum* is also active in organizing outreach activities in the form of workshops. In 2019, four workshops were held: an India Workshop in Delhi, an ASEAN Workshop in Singapore, an EU Workshop in Stockholm and a TICAD (Tokyo International Conference on African Development) Workshop in Yokohama.

Now in its second decade, the STS *forum* has grown from a mere conference into a movement for global leaders to address science and technology-related issues for the future of humankind. We hope that many world leaders will join the STS *forum* Annual Meeting in Kyoto in order to "PAVE THE WAY FOR FUTURE GENERATIONS."

Our Vision

1.

Lights and Shadows

The explosive progress of science and technology has brought economic growth and enriched the quality of life, but also raised a number of challenges for society such as climate change and privacy in ICT. STS *forum* seeks to strengthen the lights and control the shadows of science and technology.

2.

Collaboration among Academia, Industry and Government

No one country or constituency alone can solve the issues of science and technology facing the humankind. STS *forum* is a platform to form collaborative networks among global leaders in academia, industry and government in order for us to build a better world together.

3.

Long-Term Perspective

STS *forum* takes a truly long-term perspective of 100 to 500 years ahead, thereby seeking to foster sustainable society for generations to come.

A Unique Forum

What is STS *forum*?

STS *forum* is a registered non-profit organization led by Koji Omi, Founder and Chairman, with Prime Minister Shinzo Abe being the Honorary Chairman. The forum is also guided by the Board and the Council composed of dignitaries from around the world.

Around 1,400 participants from about 80 countries and regions engage in lively discussions for 3 days every October at the Kyoto International Conference Center in Kyoto, Japan. Participation in STS *forum* is by invitation only.

Why Attend?

To connect with other people like you who wish to change the world for the better, and who can address the problems we face from a broad range of perspectives.

You will have the rare opportunity to network with diverse groups of global leaders including heads of academic institutions, leading corporate executives and top government officials. In 2019, 14 Nobel Laureates, 19 ministers, 44 university presidents, 17 research institute leaders, 21 CEOs, and 35 CTOs attended the STS *forum* 16th Annual Meeting.

Taking part in many networking meetings and smaller thematic sessions, where you will be able to engage in open and informal discussions with participants of diverse backgrounds and expertise, you gain fresh insights and novel perspectives on the key science and technology issues of our times, and explore innovative ideas and initiatives together.

What is The Impact?

STS *forum* has become a global movement embracing the scientific community and beyond, forming networks among leaders from around the world to share collective knowledge and realize its full potential. Recognized as an essential venue for science and technology, an official statement summarizing the forum discussions is formulated and widely distributed in the hopes of building a richer and more sustainable future.



Prime Minister Shinzo Abe of Japan gives a keynote speech at the Opening Plenary.

Concurrent Sessions

A distinctive feature of STS *forum* is the multiple concurrent sessions on several key themes affecting the humankind.

During each session, speakers are allotted 6 minutes to deliver presentations, followed by active discussions. The concurrent sessions are open to all participants, who are invited to engage in practical, face-to-face dialogue on an equal footing.

The sessions also offer opportunities to build networks across borders and disciplines, bringing together leaders from around the globe who share a common recognition of the issues we face.



"Dialogue between Young Leaders and Nobel Laureates": Prof. Jerome Isaac Friedman of Massachusetts Institute of Technology (MIT), USA [1990 Nobel Laureate in Physics]

Plenary Sessions

Plenary sessions feature panels consisting of Nobel Laureates and other world-leading scientists, policymakers and leaders of industry. Being prominent members of their respective fields, the panelists present their views on pressing issues on global society. The meeting is open to audience for a Q&A session.



Concurrent Session: Policy Making in Science and Technology based Society

Peer Meetings and Networking

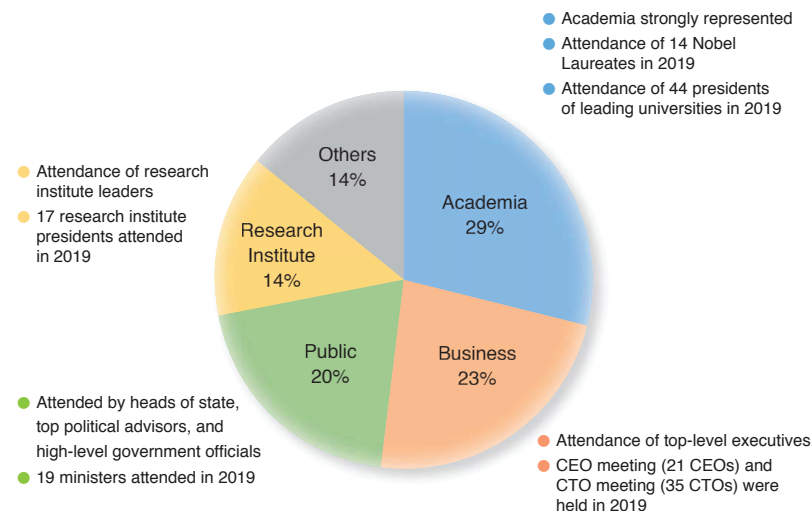
Specialized peer meetings are also held among science and technology ministers, university presidents, research institute leaders, funding agency presidents, academy of science presidents, academy of engineering presidents, CEOs (chief executive officers), and CTOs (chief technology officers) of corporations. Additionally, the forum invites selected young participants in an effort to nurture future leaders with diverse perspectives for the next generation and beyond.

STS *forum* offers ample opportunity for network-building and exchange of views among the participants with events such as a welcome reception, buffet lunches, an official banquet and a special buffet dinner at one of Kyoto's cultural heritage sites.

A Global Movement

In 2019, the number of participants at the STS *forum* 16th Annual Meeting has grown to around 1,400 from about 80 countries and regions around the world. Also the ratio between representatives of academia, industry and government has become well balanced over the years.

2019 PARTICIPANTS BY CONSTITUENCY



- ◇ 17% of 2019 participants were attending for the second time
- ◇ 30% of 2019 participants were attending for at least the third time
- ◇ Repeated participation is a testament to the enduring value and timeliness of the discussions

About Participation in STS *forum*

- Participation is upon invitation only.
- All sessions are conducted in English.
- Participants are requested to make their own travel arrangements to and at the venue.

STS forum Council Members

(In alphabetical order of individual names)

(* Board Members / ** Auditor)

ABDUL HAMID, Zakri, Chairman, Atri Advisory; former Science Advisor to the Prime Minister of Malaysia, MY
ADACHI, Toshiro, Advisor to the Chairman, Science and Technology in Society forum (STS forum), JP
ALBERTS, Bruce M., Chancellor's Leadership Chair in Biochemistry and Biophysics for Science and Education, University of California, San Francisco (UCSF); former President, National Academy of Sciences, US
***ANZAI, Yuichiro**, Senior Advisor, Director of Center for Science Information Analysis, Japan Society for the Promotion of Science (JSPS), JP
ARIMA, Akito, Chancellor, Musashi Academy of the Nezu Foundation; former Minister of Education, Science, Sports and Culture; former President, The University of Tokyo, JP
BLANCO MENDOZA, Herminio, President, IQOM, Inteligencia Comercial; President, IQOM Strategic Advisors, MX
CHUBACHI, Ryoji, President, The National Institute of Advanced Industrial Science and Technology (AIST), JP
CHUBAYS, Anatoly B., Chairman and Chief Executive Officer, RUSNANO Management Company LLC, RU
CHUCHOTTAWORN, Pailin, Deputy Minister of Transport, TH
COLOMBANI, Pascal, Honorary Chairman and Corporate Director, VALEO SA, FR
COLWELL, Rita R., Distinguished University Professor, Center for Bioinformatics and Computational Biology, University of Maryland; Professor, Johns Hopkins Bloomberg School of Public Health; former Director, National Science Foundation (NSF), US
CORVOL, Pierre, President, French Academy of Sciences, FR
DIJKGRAAF, Robbert, Director and Leon Levy Professor, Institute for Advanced Study (IAS), US
DUSZYNSKI, Jerzy, President, Polish Academy of Sciences (PAS), PL
***FRIEDMAN, Jerome I.**, Institute Professor and Professor of Physics Emeritus, Massachusetts Institute of Technology (MIT); Nobel Prize in Physics (1990), US
FUCHS, Alain, President, Université PSL (Paris Sciences & Lettres), FR
***FUJIKI, Kanji**, Executive Director, Science and Technology in Society forum (STS forum), JP
GARMENDIA MENDIZÁBAL, Cristina, President, COPEC, ES
GREGORIAN, Vartan, President, Carnegie Corporation of New York, US
GROS, François, Honorary Permanent Secretary, French Academy of Sciences, FR
***GRUSS, Peter**, President and CEO, Okinawa Institute of Science and Technology Graduate University (OIST); former President, Max Planck Society for the Advancement of Science, DE
GUTFREUND, Hanoach, Executive Committee Chairperson, Israel Science Foundation; Professor Emeritus, Physics, The Hebrew University of Jerusalem, IL
HACKER, Jörg, President, The German National Academy of Sciences Leopoldina, DE
HAMAGUCHI, Michinari, President, Japan Science and Technology Agency (JST), JP
HANDOKO, Laksana Tri, Chairman, Indonesian Institute of Sciences (LIPI), ID
HARA, George, Chairman, The Alliance Forum Foundation; Special Adviser, Cabinet Office of Japan, JP
HASHIMOTO, Kazuhito, President, National Institute for Materials Science (NIMS), JP
HASSAN, Mohamed Hag Ali, President, The World Academy of Sciences (TWAS); President, Sudanese National Academy of Sciences (SNAS), SD
***HOLLIDAY, Jr., Charles O.**, Chairman, Royal Dutch Shell plc.; former Chairman of the Board, Bank of America; Chairman Emeritus, Council on Competitiveness; former Chairman and Chief Executive Officer, DuPont, US
HOLT, Jr., Rush D., Chief Executive Officer Emeritus, American Association for the Advancement of Science (AAAS); former Member of U.S. House of Representatives, US
HÜTTL, Reinhard F., Chairman, Euro-CASE; Vice President, acatech - National Academy of Science and Engineering, DE
JACKSON, Keoki, former Chief Technology Officer, Corporate Engineering, Technology and Operations, Lockheed Martin Corporation, US
JOHNSON, Ray O., Executive in Residence, Bessemer Venture Partners; former Senior Vice President and Chief Technology Officer, Lockheed Martin Corporation, US
KAZAO, Yukihiko, Director General, Science and Technology in Society forum (STS forum), JP
KIRLOSKAR, Vikram S., Vice Chairman, Toyota Kirloskar Motor Private Limited (TKM); President, Confederation of Indian Industry (CII), IN
***KLEINER, Matthias**, President, Leibniz Association, DE
KOANANTAKOOL, Thaweesak, Advisor and former President, National Science and Technology Development Agency (NSTDA), TH
***KOMIYAMA, Hiroshi**, Chairman of the Institute, Mitsubishi Research Institute, Inc.; former President, The University of Tokyo, JP

KRISHNAMOORTHY, Shankar, Executive Vice President in charge of Strategy & Innovation, Industrial Development, Research & Technology, and Procurement, ENGIE, IN
***KUMAR, Ashwani**, Senior Advocate Supreme Court; former Union Minister of Law & Justice; former Member of Parliament (Rajya Sabha), IN
KUROKAWA, Kiyoshi, Chairman, Health and Global Policy Institute; Professor Emeritus, National Graduate Institute for Policy Studies (GRIPS), JP
***LEE, Yuan Tseh**, President Emeritus, Academia Sinica; former President, International Council for Science (ICSU); Nobel Prize in Chemistry (1986), TW
***LIM, Chuan Poh**, Chairman of the Board, Singapore Food Agency (SFA); former Chairman, Agency for Science, Technology and Research (A*STAR), SG
LIU, Peng, Managing Director, Sinoity Investment Limited, CN
MAESINCEE, Suvit, Minister, Ministry of Higher Education, Science, Research and Innovation (MHESI), TH
MATSUMOTO, Hiroshi, President, RIKEN; former President, Kyoto University, JP
MAZUR, Eric, Balkanski Professor of Physics and Applied Physics and Dean of Applied Physics, Harvard University; Past President, The Optical Society, US
***McKINNEL, Henry A.**, Chairman Emeritus, Pfizer Inc., US
***McNUTT, Marcia**, President, National Academy of Sciences, US
***MUROMACHI, Masashi**, Executive Adviser, Toshiba Corporation, JP
MURRAY, Cherry A., Director of Biosphere2 Institute and Professor of Physics, University of Arizona; Benjamin Peirce Professor of Technology and Public Policy and Professor of Physics, Emerita, Harvard University, US
***NAKANISHI, Hiroaki**, Chairman, Kaidanren (Japan Business Federation); Chairman of the Board, Executive Officer, Hitachi, Ltd., JP
NOYORI, Ryoji, Director-General, Center for Research and Development Strategy (CRDS), Japan Science and Technology Agency (JST); Nobel Prize in Chemistry (2001), JP
***NURSE, Paul**, Director and Chief Executive, The Francis Crick Institute; former President, The Royal Society; Nobel Prize in Physiology or Medicine (2001), UK
****OKIMURA, Kazuki**, President, Japan Research Community for Science and Technology (JAREC); Principal Fellow, China Research and Sakura Science Center (CRSC), Japan Science and Technology Agency (JST), JP
***OMI, Koji**, Founder and Chairman, Science and Technology in Society forum (STS forum); former Minister of Finance, JP
PETIT, Antoine, Chairman and CEO, National Center for Scientific Research (CNRS), FR
***RAMAKRISHNAN, Venki**, President, The Royal Society; Nobel Prize in Chemistry (2009), UK
RIETSCHER, Ernst Th., European Affairs Representative, acatech - National Academy of Science and Engineering, DE
RIZA, M. Sc., Hammam, Chairman, Agency for the Assessment and Application of Technology (BPPT), ID
ROBERTS, Richard J., Chief Scientific Officer, New England Biolabs; Nobel Prize in Physiology or Medicine (1993), UK
RUBBIA, Carlo, former Director General, CERN; Professor, Gran Sasso Science Institute (GSSI); Nobel Prize in Physics (1984), IT
RUBINSTEIN, Ellis, President Emeritus, The New York Academy of Sciences (NYAS), US
***SASAKI, Nobuhiko**, Chairman and CEO, Japan External Trade Organization (JETRO), JP
SATOMI, Susumu, President, Japan Society for the Promotion of Science (JSPS), JP
***SERAGELDIN, Ismail**, Founding Director Emeritus, Library of Alexandria, EG
SIRILERTWORAKUL, Narong, President, National Science and Technology Development Agency (NSTDA), TH
THOMPSON, Herbert Hugh, former Chief Technology Officer, Symantec Corporation, US
***UCHIYAMADA, Takeshi**, Chairman of the Board, Toyota Motor Corporation, JP
***WALLBERG, Harriet**, Director General, Ministry of Health and Social Affairs; Professor of Physiology and former President, Karolinska Institutet, SE
WALPORT, Mark, Chief Executive, UK Research and Innovation (UKRI), UK
WINCE-SMITH, Deborah L., President & Chief Executive Officer, Council on Competitiveness, US
YAMAGIWA, Juichi, President, Kyoto University; President, Science Council of Japan (SCJ), JP
***YAMANAKA, Shinya**, Director and Professor, Center for iPS Cell Research and Application (CiRA), Kyoto University; Nobel Prize in Physiology or Medicine (2012), JP
***YOSHIKAWA, Hiroyuki**, Senior Fellow, Japan Science and Technology Agency (JST); former President, The University of Tokyo; former President, National Institute of Advanced Industrial Science and Technology (AIST), JP
ZEHNDRER, Alexander J.B., President and Founder, Triple Z Ltd.; Member, Board of Trustees, Nanyang Technology University; former President of the ETH Board, Swiss Federal Institute of Technology (ETH), CH
ZERHOUNI, Elias A., former President of Global Research & Development, Sanofi SA; former Director, National Institutes of Health (NIH), US

As of March 12, 2020

Highlights from the 16th Annual Meeting, STS forum 2019



Matilda Emkrans
Ministry of Education and Research,
Government Offices of Sweden, Sweden



Peter Gruss
Okinawa Institute of Science and
Technology Graduate University (OIST),
Japan



Henry A. McKinnell
Moody's Corporation, USA



Michael Arthur
University College London (UCL), UK



Ada E. Yonath
Weizmann Institute of Science, Israel
[2009 Nobel Laureate in Chemistry]



Mohamed Hag Ali Hassan
The World Academy of Sciences (TWAS),
Sudan



Keith E. Williams
UL Inc., USA



Rajesh Gopinathan
Tata Consultancy Services Limited (TCS),
India



Helle Kristoffersen
Total S.A., France



Shinya Yamanaka
Kyoto University, Japan
[2012 Nobel Laureate in Physiology
or Medicine]



David W. Oxtoby
American Academy of Arts and Sciences,
USA



Brian P. Schmidt
The Australian National University,
Australia
[2011 Nobel Laureate in Physics]



Cherry A. Murray
University of Arizona, USA



Subra Suresh
Nanyang Technological University (NTU),
Singapore



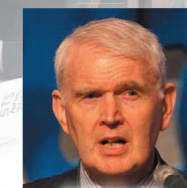
Ahmad O. Al-Khawalter
Saudi Arabian Oil Company, Saudi Arabia



Lai Fung Chan
Agency for Science, Technology and
Research (A*STAR), Singapore



Karen Maex
University of Amsterdam, Netherlands



Richard O'Kennedy
Qatar Foundation, Qatar

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