

# STS *forum*

Science and Technology in Society *forum*

# 2017

## The 14<sup>th</sup> ANNUAL MEETING

October 1, 2 and 3, 2017 Kyoto, Japan



**Miro Cerar**  
Prime Minister  
Government of the Republic of Slovenia, SLOVENIA



**Koji Omi**  
Founder and Chairman  
STS *forum*, JAPAN



**Shinzo Abe**  
Prime Minister  
Government of Japan, JAPAN



**Reem Ebrahim Al Hashimy**  
UAE Minister of State for International Cooperation  
U.A.E.



**Arkady Dvorkovich**  
Deputy Prime Minister  
Government of the Russian Federation, RUSSIA



**Rush D. Holt, Jr.**  
CEO  
American Association for the Advancement of Science  
(AAAS), U.S.A.

# Message from the Chairman



**Koji Omi**  
Founder and Chairman  
STS *forum*

Science and Technology in Society *forum* (STS *forum*) was established in 2004 by Koji Omi, the former Minister of Finance, the former Minister of State for S&T Policy for Okinawa and Northern Territorial Affairs, and the former Minister of State of Economic Planning, for the purpose of providing a platform to world leaders in the fields of policymaking, academia and industry to gather and discuss how to deal with science and technology issues from a long term-perspective, i.e. 100 years to 500 years, for the future of the humankind.

The rapid progress of science and technology has brought economic growth and enriched our quality of life on one hand. But on the other hand, issues like global warming and privacy in ICT have arisen as a result of the development of science and technology. We call these “the lights and shadows of science and technology.” We must develop the lights and control the shadows.

Science and technology has great potential to benefit us all. STS *forum* focuses on many aspects of science and technology in society: for example, technological development of genomics, mainly in iPS cell technology; energy and environment issues, including the nuclear power option; and ICT and social changes and the related privacy and security issues.

For this purpose, it is necessary not only for professional scientists but also for policymakers, business leaders, government officials, and many other leaders from all over the world to gather and discuss how to deal with science and technology issues from a long-term perspective, say 100 to 500 years, of future of the humankind. These issues also cannot be solved by one or two countries alone, and therefore it is necessary for people from all over the world to get together and discuss the issues. We must think of them as our own problem.

STS *forum* is a unique platform where such leaders meet and work together, on an equal footing, to co-produce policies. At STS *forum*, our discussions consider science and technology and the future of the humankind, thinking of what the future should be like not just in twenty or thirty years’ time, but over 100 to 500 years ahead.

This is the fundamental idea of STS *forum* which was created in 2004 as a gathering of top leaders of many different fields. Since then, STS *forum*, with more than 1,200 people from all over the world, has met annually in October in Kyoto, Japan.

Japan’s Prime Minister Shinzo Abe, the Honorary Chairman of STS *forum*, attends every year at the Annual Meeting. In recent years, there were the Prime Ministers of France, Sri Lanka and Slovenia, the Deputy Prime Minister of Russia and more than 10 Nobel Laureates. In 2016, parallel to the Annual Meeting, sessions such as the Science Ministers’ Round Table, University Presidents’ Meeting and CTO meeting were organized inviting 15 Ministers, 29 university presidents and 33 CTOs from corporations from all over the world.

Following 2015, STS *forum* organized the “Dialogue between Future Leaders and Nobel Laureates” during the Annual Meeting, and in October 2016, 9 Nobel Laureates were welcomed by 100 Future Leaders in total participated in this precious interaction. STS *forum* will continue to contribute to fostering younger generation in various fields by inviting them to our networking opportunities in Kyoto and other places.

STS *forum* is also active in organizing outreach activities like workshops, with ASEAN, the EU and India. Also, in August 2016, STS *forum* organized its workshop as an official side event of the 6th Tokyo International Conference on African Development (TICAD) in Nairobi, Kenya.

Now in its second decade, STS *forum* has grown from a mere conference into a movement for global leaders to address science and technology-related issues for future generations. Many world leaders are expected to 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 global warming 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 a Board and a Council composed of dignitaries from around the world.

Around 1,200 participants from about 100 countries 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 a diverse group of global leaders from a range of sectors including heads of academic institutions, leading executives and top government officials. In 2016, 12 Nobel Laureates, 15 ministers, 29 university presidents, and 33 CTOs attended the STS *forum* Annual Meeting.

Take part in many networking meetings and smaller thematic sessions, where you will be able to engage in open and informal discussions with participants with diverse backgrounds and expertise, 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 sent to international heads of state, in the hopes of building a richer and more sustainable future.



## Plenary Sessions

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

## Concurrent Sessions

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

During each session, speakers are allotted 6 minutes to deliver presentations, followed by lively 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.



## Peer Meetings and Networking

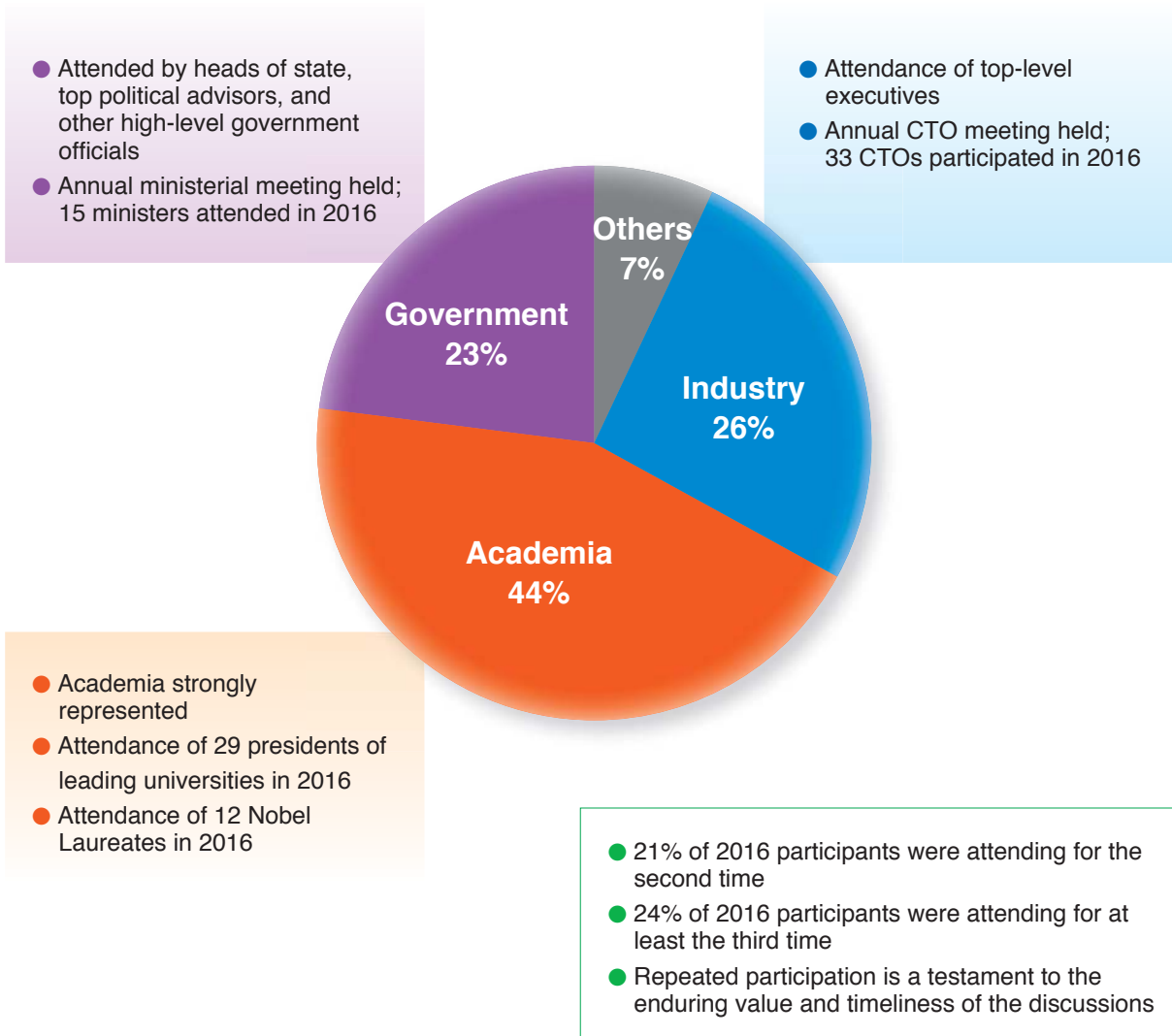
Specialized peer meetings are also held among science and technology ministers, university presidents, funding agency presidents, academy of science presidents, academy of engineering presidents, and CTOs (chief technology officers) of corporations. Additionally, the forum also invites selected young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

There are also many additional opportunities for network-building and opinion exchanges. The forum offers a welcome reception, buffet lunches, an official seated banquet and a buffet dinner at one of Kyoto's cultural heritage sites.

# A Global Movement

In 2016, the number of participants at the STS *forum* 13<sup>th</sup> Annual Meeting has grown to over 1,200 from about 100 countries and regions around the world. Also the ratio between representatives of academia, industry and government has become well balanced over the years.

## 2016 PARTICIPANTS BY CONSTITUENCY



## About Participation in STS *forum*

- Participation is upon invitation only.
- Participation fee: industry/civil society organizations JPY 100,000, and academia/government JPY 50,000.
- 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 countries and of individual names within countries)

(\* Board Members / \*\* Auditor)

- ABDUL HAMID**, Zakri, Science Advisor to the Prime Minister of Malaysia, Malaysian Government, MY
- ALBERTS**, Bruce M., Professor Emeritus, Biochemistry and Biophysics Department, University of California, San Francisco (UCSF), US
- ANZAI**, Yuichiro, President, Japan Society for the Promotion of Science (JSPS), JP
- ARIMA**, Akito, Chancellor, Musashi Academy of the Nezu Foundation; former Minister of Education, Culture, Sports, Science and Technology; former President of University of Tokyo, JP
- BLANCO**, Herminio, Founder and Chief Executive Officer, Soluciones Estratégicas, MX
- CAMPBELL**, Donald W., Senior Strategy Advisor, Davis LLP, CA
- CANDEL**, Sébastien, President, French Academy of Sciences, FR
- CARTY**, Arthur J., Research Professor and Executive Director, University of Waterloo Institute for Nanotechnology, CA
- CHUBACHI**, Ryoji, President, The National Institute of Advanced Industrial Science and Technology (AIST), JP
- CHUBAYS**, Anatoly B., Chairman and Chief Executive Officer, OJSC "RUSNANO", RU
- CHUCHOTTAWORN**, Pailin, Chairperson, Board of Vidyasirimedhi Institute of Science and Technology (VISTEC); Chairperson, Kamnoetvidya Science Academy (KVIS), TH
- CLARK**, Megan, Advisory Board Member, Bank of America Merrill Lynch, AU
- COLOMBANI**, Pascal, Director and Honorary Chairman, VALEO; Vice-Chairman, French National Research Strategy Council, FR
- COLWELL**, Rita R., US Science Envoy; Distinguished University Professor, Center for Bioinformatics and Computational Biology, University of Maryland and Johns Hopkins University, US
- CONNELLY**, Jr., Thomas M., Executive Vice President and Chief Innovation Officer, DuPont, US
- DIJKGRAAF**, Robbert, Director and Leon Levy Professor, Institute for Advanced Study (IAS), Princeton, NL
- DURONGKAVEROJ**, Pichet, Minister, Ministry of Digital Economy and Society, TH
- DUSZYŃSKI**, Jerzy, President, Polish Academy of Sciences (PAS), PL
- \*FRIEDMAN**, Jerome I., Institute Professor and Professor of Physics, Emeritus, Massachusetts Institute of Technology (MIT); Nobel Laureate, US
- FUCHS**, Alain, President, French National Centre for Scientific Research (CNRS), FR
- GOLDIN**, Daniel S., Chairman and Chief Executive Officer, The Intellis Corporation; former NASA Administrator, US
- 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), DE
- GUTFREUND**, Hanoch, Executive Committee Chairperson, Israel Science Foundation, IL
- HACKER**, Jörg, President, German Academy of Sciences Leopoldina, DE
- HAMAGUCHI**, Michinari, President, Japan Science and Technology Agency (JST); former President, Nagoya University, JP
- HARA**, George, Chairman of the Board, The Alliance Forum Foundation/Cabinet Office of Japan, JP
- HASHIMOTO**, Kazuhito, President, National Institute for Materials Science (NIMS), JP
- HASSAN**, Mohamed, Executive Director a.i., The World Academy of Sciences (TWAS), SD
- HOFFMANN**, Jules Alphonse, Member, French Academy of Sciences; Nobel Laureate, FR
- \*HOLLIDAY**, Jr., Charles O., Chairman, Royal Dutch Shell plc.; Chair, Council of the National Academy of Engineering; Chairman Emeritus, Council on Competitiveness; former Chairman and Chief Executive Officer, DuPont, US
- HOLT**, Jr., Rush D., Chief Executive Officer, American Association for the Advancement of Science (AAAS); former Member of U.S. House of Representatives, US
- HÜTTL**, Reinhard, President, acatech (National Academy of Science and Engineering); Scientific Executive Director, German Research Centre for Geosciences (GFZ), DE
- \*ISHIGE**, Hiroyuki, Chairman and Chief Executive Officer, Japan External Trade Organization (JETRO), JP
- JOHNSON**, Ray O., Executive in Residence, Bessemer Venture Partners; former Senior Vice President and Chief Technology Officer, Lockheed Martin Corporation, US
- KAGERMANN**, Henning, President, acatech (National Academy of Science and Engineering), DE
- KING**, David, Special Representative for Climate Change, Foreign & Commonwealth Office, UK Government, UK
- KIRLOSKAR**, Vikram S., Vice Chairman, Toyota Kirloskar Motor Private Limited (TKM), IN
- \*KLEINER**, Matthias, President, Leibniz Association, DE
- KOANANTAKOOL**, Thaweesak, former President, National Science and Technology Development Agency (NSTDA), TH
- \*KOMIYAMA**, Hiroshi, Chairman of the Institute, Mitsubishi Research Institute, Inc.; President Emeritus, The University of Tokyo, JP
- \*KUMAR**, Ashwani, Senior Advocate Supreme Court; former Union Minister of Law & Justice & Member of Parliament, Rajya Sabha (India), IN
- KUROKAWA**, Kiyoshi, Adjunct Professor, National Graduate Institute for Policy Studies (GRIPS); Chairman, Health and Global Policy Institute, JP
- \*LEE**, Yuan Tseh, former President, International Council for Science (ICSU); President Emeritus; Distinguished Research Fellow, Institute of Atomic and Molecular Sciences, Academia Sinica; Nobel Laureate, Taiwan
- \*LIM**, Chuan Poh, Chairman, Agency for Science, Technology and Research (A\*STAR), SG
- LIU**, Peng, Managing Director, Sinocity Investment Limited, CN
- MATSUMOTO**, Hiroshi, President, RIKEN, JP
- MAZUR**, Eric, Area Dean of Applied Physics; Balkanski Professor of Physics, Harvard University, US
- McBEAN**, Gordon, President, International Council for Science (ICSU); Professor Emeritus, University of Western Ontario, CA
- \*McKINNELL**, Henry A., Chairman, Moody's Corporation; Chairman, Emmaus Life Sciences, US
- \*McNUTT**, Marcia, President, National Academy of Sciences, US
- \*MUROMACHI**, Masashi, Executive Advisor, Toshiba Corporation, JP
- MURRAY**, Cherry A., Professor of Technology and Public Policy; Professor of Physics, Harvard University; former Director, Office of Science, DOE, US [TBC]
- \*NAKANISHI**, Hiroaki, Chairman and Chief Executive Officer, Hitachi Ltd., JP
- NOYORI**, Ryoji, Director-General, Center for Research and Development Strategy (CRDS), Japan Science and Technology Agency (JST); Nobel Laureate, JP
- \*NURSE**, Paul, Director and Chief Executive, The Francis Crick Institute; former President, The Royal Society; Nobel Laureate, UK
- \*\*OKIMURA**, Kazuki, Chairman, Japan Foundation of Public Communication on Science and Technology (PCOST), JP
- \*OMI**, Koji, Founder and Chairman, Science and Technology in Society *forum* (STS *forum*), JP
- ONISHI**, Takashi, President, Science Council of Japan (SCJ), JP
- PALIS**, Jr., Jacob, President, Brazilian Academy of Sciences (ABC), BR
- PANDOR**, Grace Naledi Mandisa, Minister of Science and Technology, ZA [TBC]
- PRIYANTO**, Unggul, Chairman, Agency for the Assessment and Application of Technology (BPPT), ID
- RAMAKRISHNAN**, Venkatraman, President, Royal Society; Nobel Laureate, UK
- RIETSCHER**, Ernst Th., European Affairs Representative, acatech (National Academy of Science and Engineering), DE
- ROBERTS**, Richard J., Chief Scientific Officer, New England Biolabs Incorporated; Nobel Laureate, UK
- RUBBIA**, Carlo, Scientific Director, Institute for Advanced Sustainability Studies e.V. (IASS); Nobel Laureate, IT
- RÜBIG**, Paul, Chairman, Science and Technology Options Assessment (STOA) of European Parliament; Member, European Parliament, AT
- RUBINSTEIN**, Ellis, President and Chief Executive Officer, The New York Academy of Sciences (NYAS), US
- \*SAKAKIBARA**, Sadayuki, Chairman, Keidanren (Japan Business Federation); Chief Senior Advisor, Chief Senior Counselor, Toray Industries, Inc., JP
- \*SERAGELDIN**, Ismail, Director, Library of Alexandria; Advisor to the Prime Minister for Cultural, Scientific and Museum Affairs, EG
- SIRILERTWORAKUL**, Narong, President, National Science and Technology Development Agency (NSTDA), TH
- TANAKA**, Satoshi, Science and Technology in Society *forum* (STS *forum*); former President, TSUKUBA EXPO'85 MEMORIAL FOUNDATION, JP
- TANIGUCHI**, Tomihiro, Senior Adviser, Science and Technology in Society *forum* (STS *forum*), JP
- \*UCHIYAMADA**, Takeshi, Chairman of the Board, Toyota Motor Corporation, JP
- \*WALLBERG**, Harriet, Director General, Ministry of Health; Professor of Physiology, former-President, Karolinska Institutet, SE
- WALPORT**, Mark, UK Government Chief Scientific Adviser, Government Office for Science, UK
- WAMBUGU**, Florence M., Chief Executive Officer, Africa Harvest Biotech Foundation International (AHBF), KE
- WINCE-SMITH**, Deborah L., President and Chief Executive Officer, Council on Competitiveness, US
- YAMANAKA**, Shinya, Director and Professor, Center for iPS Cell Research and Application, Kyoto University, JP
- YEO**, Philip, Chairman, Economic Development Innovations Singapore (EDIS); Chairman, SPRING Singapore, SG
- YONEKURA**, Hiromasa, Counselor, Sumitomo Chemical Co., Ltd. JP
- \*YOSHIKAWA**, Hiroyuki, Special Counselor to the President, Japan Science and Technology Agency (JST), JP
- ZEHNDER**, Alexander J.B., President and Founder, Triple Z Ltd.; former President of the ETH Board, Swiss Federal Institute of Technology (ETH), CH
- ZERHOUNI**, Elias A., U.S. Science Envoy; President of Global Research & Development, Sanofi SA, US
- ZULKARNAIN**, Iskandar, Chairman, Indonesian Institute of Sciences (LIPI), ID

(As of April 3, 2017)

# STS forum 2016, the 13th Annual Meeting From the Participants...



Sadayuki Sakakibara  
(KEIDANREN (Japan Business Federation), JAPAN)



Donna J. Nelson  
(American Chemical Society, U.S.A.)



Luxsamee Plangsangmas  
(Thailand Institute of Scientific and Technological Research (TISTR), THAILAND)



Charles O. Holliday, Jr.  
(Royal Dutch Shell, plc, U.S.A.)



Turki bin Saud bin Mohammed Al-Saud,  
(King Abdulaziz City for Science and Technology (KACST), SAUDI ARABIA)



Melanie Welham  
(Biotechnology and Biological Science Research Council (BBSRC), U.K.)



Pichet Durongkaveroj  
(Minister of Science and Technology, THAILAND)



Yoshimitsu Kobayashi  
(Japan Association of Corporate Executives, JAPAN)



Edward Screven  
(Oracle Corporation, U.S.A.)



Baldwin Siphon Ngubane  
(ESKOM Holdings SOC Ltd., SOUTH AFRICA)



Jörg Reinhardt  
(Novartis A.G., SWITZERLAND)



Shinya Yamanaka  
(Center for iPS Cell Research and Application, Kyoto University, JAPAN)  
[2012 Nobel Laureate]



Jerome Isaac Friedman  
(Massachusetts Institute of Technology (MIT), U.S.A.)  
[1990 Nobel Laureate]



Martin Chalfie  
(Columbia University, U.S.A.)  
[2008 Nobel Laureate]



Jack William Szostak  
(Harvard Medical School, U.S.A.)  
[2009 Nobel Laureate]



Margaret Leinen  
(Scripps Institution of Oceanography, University of California, San Diego (UCSD), U.S.A.)



Tolu Oni  
(University of Cape Town, SOUTH AFRICA)



Henry A. McKinnell  
(Moody's Corporation, U.S.A.)

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