

**Science and Technology in Society *forum***  
**Inaugural Meeting**

**“Science and Technology in Society: Lights and Shadows”**

**PROGRAM**

November 14-16, 2004, Kyoto  
Kyoto International Conference Hall

## **November 14, 2004, Sunday**

**12:00 – Registration**

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**16:00 - 17:40 [100] Opening Ceremony and Inaugural Session: “Lights and Shadows”**

[Venue: **Main Hall**]

16:00 - 16:50 **[100A]**

- **Omi**, Koji, Member, House of Representatives, Japan (Session Chairman)
  - **Koizumi**, Junichiro, Prime Minister of Japan
  - **Sainsbury**, David, Minister for Science and Innovation, UK
  - **McKinnell**, Henry, Chairman and CEO, Pfizer Inc., Canada
  - **Okuda**, Hiroshi, Chairman, Toyota Motor Corporation, Japan
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16:50 - 17:40 **[100B]**

- **Yoshikawa**, Hiroyuki, President, National Institute of Advanced Industrial Science and Technology (AIST), Japan (Session Chairman)
  - **Fursenko**, Andrey, Minister of Science and Education, Russia
  - **Moratti**, Letizia, Minister of Education, Universities and Scientific Research, Italy
  - **Aho**, Esko, President, Finnish National Fund for Research and Development (Sitra), Former Prime Minister, Finland
  - **Thapparansi**, Korn, Science and Technology Minister, Thailand
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**17:40 - 18:30 [101] Cocktails**

[Venue: **Event Hall**]

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**18:30 - 20:30 [102] Official Dinner**

[Venue: **Event Hall**]

- **Watanabe**, Osamu, Chairman and CEO, Japan External Trade Organization (JETRO), Japan
- **Alberts**, Bruce, President, National Academy of Sciences, USA

## **November 15, 2004, Monday**

**08:30 - 09:45** **200** **Plenary Session: “Setting the Tone”**

[Venue: **Main Hall**]

This plenary session will be used to set the tone of the concurrent sessions with the aim of creating a framework for leaders from government, industry, and academia to discuss how these three sectors can cooperate to address the “lights and shadows” of science and technology for the betterment of humankind.

**Chaired by:** **Arima**, Akito, Chairman, Japan Science Foundation, Japan

- **Ergma**, Ene, President, Riigikogu of Estonia, EU
- **Murthy**, N. R. Narayana, Chairman of the Board and Chief Mentor, Infosys Technologies, Ltd., India
- **Velikhov**, Evgeny, President, Russian Research Center Kurchatov Institute, Russia
- **Cheng**, Jinpei, Vice Minister of Science and Technology, China
- **Gelsinger**, Patrick, Senior Vice President and CTO, Intel, USA

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**09:45 - 10:15**      **Coffee Break**

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**10:15 - 12:15 First Series of Concurrent Sessions**

**201 The Challenge of Meeting Energy Needs in Developing Countries**

[Venue: **Room D**]

Ample, dependable sources of energy are crucial to the sustained development of any economy. How should industrialized countries advise their growing neighbors as to the best practices in the efficient, clean use of energy?

**Chaired by:** **Yoshikawa**, Hiroyuki, President, National Institute of Advanced Industrial Science and Technology (AIST), Japan

**Speakers:**

- **Chan**, Kei Biu, Chairman and Managing Director, Surface Mount Technology (Holdings) Limited, HK
  - **Foss**, Michelle Michot, Executive Director, University of Houston Institute for Energy, Law and Enterprise, USA
  - **Hassan**, M.H.A., Executive Director, Third World Academy of Sciences, Sudan
  - **Gopalakrishnan**, A., former Senior Research Associate, Belfer Center for Science and International Affairs, India
  - **Zhou**, Dadi, Director General, The Energy Research Institute, National Development and Reform Commission, China
  - **Wijkman**, Anders, Member of the European Parliament, Sweden
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**202 Ethical Aspects of Reproductive and of Therapeutic Cloning**

[Venue: **Room C1**]

The use of stem cells in medical research has provided new tools for developing revolutionary therapies for human health care. How do we define ethical standards in an industry that is made up of groups that represent many different value systems?

**Chaired by:** **Colwell**, Rita, Distinguished Professor, University of Maryland, USA

**Speakers:**

- **Singer**, Peter A., Director, University of Toronto Joint Centre for Bioethics, Canada
- **Yeo**, Philip, Chairman, A\*STAR, Singapore
- **Desmarescaux**, Philippe, Chairman, Biovision, France
- **Ida**, Ryuichi, Professor, Graduate School of Law, Kyoto University, Japan
- **McLaren**, Dame Anne, Wellcome Trust/Cancer Research UK Institute, UK

- **Hayashizaki**, Yoshihide, Project Director of Genome Exploration Research Group, Genomic Sciences Center, RIKEN, Japan
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### **203** The Future of the e-Society

[Venue: **Room B2** (2F)]

The Internet and the first generation of mainstream online applications are nearing maturity. Where do we go from here?

**Chaired by:** **Ito**, Joichi, President and CEO, Neoteny, Japan

**Speakers:**

- **Ahtisaari**, Marko, Head of User Experience, Insight and Foresight, Nokia, Finland
- **Bishop**, Robert, Chairman and CEO, Silicon Graphics, USA
- **Gage**, John, Chief Researcher and Vice President of the Science Office, Sun Microsystems, Inc., USA
- **Lim**, H.K., Corporate CTO and President, Samsung Electronics, Korea
- **Boda**, Miklós, President, National Office of Research and Technology, Hungary
- **Huh**, Unna, President, Information and Communication University (ICU), Korea
- **Ishizuka**, Shigeki, Senior Vice President and Executive Director, Mobile Multimedia Business Promotion Department, NTT DoCoMo Kansai, Inc., Japan

**Rapporteurs:**

- **Seppä**, Heikki, Research Director, Research Professor, VTT Technical Research Centre of Finland, Finland
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### **204** The Role of Universities in Building a Global Knowledge-Based Society

[Venue: **Room B1** (2F)]

Universities worldwide are in crisis because of their inability to meet the demands placed on them in higher education, research, and the creation of knowledge-based societies. How can universities adapt to modern day realities and reevaluate their relationships with industry and society?

**Chaired by:** **Aperia**, Anita, Professor, Karolinska Institute, Sweden

**Speakers:**

- **Halliday**, Ian, Chief Executive and Deputy Chairman, Particle Physics and Astronomy Research Council, UK

- **Komiyama**, Hiroshi, Vice President, University of Tokyo, Japan
- **Yoshino**, Hiroyuki, Director and Advisor to Honda Motor Corp. Ltd., Japan
- **Nguyen**, Van Dao, Chairman, Council of Training and Research, Vietnam National University, Vietnam
- **Fronc**, Martin, Minister of Education, Slovakia
- **Lofty**, Osman, Director, Development, Research, and Technological Planning Center, Cairo University, Egypt

**Rapporteurs:**

- **Abueva**, Jose V., Founding President, Kalayaan College, Philippines
  - **Naim**, S.T.K., Consultant, The Organization of Islamic Conference Standing Committee on Scientific and Technological Cooperation (COMSTECH), Pakistan
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**205 Today's Plagues: Old and New**

[Venue: **Room C2**]

Some of the diseases that haunted the Old World have re-emerged at a time when worldwide medical resources are over-stretched with efforts to confront newer diseases like HIV and SARS. What conditions allow for this re-emergence? How can we detect and control the spread of these diseases before they gain a new foothold?

**Chaired by:** **Rubinstein**, Ellis, President, New York Academy of Sciences (NYAS), USA

**Speakers:**

- **Klausner**, Richard D., Executive Director, Global Health, Bill & Melinda Gates Foundation, USA
- **Tan**, Chris, President, Calidris R&D, Canada
- **Imura**, Hiroo, Chairman, Foundation for Biomedical Research and Innovation (FBRI), Japan
- **Ng**, V.A., President, Cameroon Academy of Sciences, Cameroon

**Rapporteurs:**

- **Ferguson**, Neil Morris, Professor, Department of Infectious Disease Epidemiology, Faculty of Medicine, Oxford Imperial College, UK
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**12:30 - 13:30** **206** **Working Lunch (over Japanese lunch box)**

[Venue: **Event Hall**]

**Panel Discussion: “The Question of Sustainability”**

**Chaired by:** **Inoguchi**, Kuniko, Professor of Political Science, Faculty of Law, Sophia University, Japan

**Speakers:**

- **Rowland**, F. Sherwood, Donald Bren Research Professor of Chemistry and Earth Systems, University of California at Irvine, Nobel Laureate [Chemistry 1995], USA
  - **Lee**, Yuan T., President, Academia Sinica, Nobel Laureate [Chemistry 1986], USA
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**14:00 - 16:00**     **Second Series of Concurrent Sessions**

**207** **The “Promise” of Clean Energy**

[Venue: **Room D**]

The world’s demand for energy is skyrocketing. Every country is challenged to find ways to produce sufficient energy while creating as little environmental impact as possible. Through international cooperation, we can find ways of meeting the energy needs of our growing economies and achieving the goal of reducing our impact on the Earth’s environment.

**Chaired by:** **Orbach**, Raymond L., Director, Office of Science, Department of Energy, USA

**Speakers:**

- **Hennicke**, Peter, President, Wuppertal Institute for Climate, Environment and Energy, Germany
- **Goldemberg**, Jose J., Secretary for the Environment, State of São Paulo, Brazil
- **Kaya**, Yoichi, Director General, Research Institute of Innovative Technology for the Earth (RITE), Japan
- **Jacometti**, Jack, Vice President, Global GTL Development, Shell Gas and Power, UK
- **Sasaki**, Mikio, Chairman, Mitsubishi Corp., Japan

**Rapporteurs:**

- **Mohri**, Mamoru, Executive Director, National Museum of Emerging Science and Innovation, Japan
  - **Duca**, Gheorghe, President, Academy of Sciences of Moldova, Moldova
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## **208 Ethical Aspects of GM Crops for Developing Countries**

[Venue: **Room C1**]

Genetically modified (GM) crops have enhanced abilities to endure environmental stresses such as drought, pests, and poor soil. These enhancements produce crops with much higher yields and consequently the ability to feed more people. However, the long-term health effects of consuming GM crops are not well understood. What are the ethical ramifications of feeding the world's hungry people GM crops that have not been fully tested for long-term health effects?

**Chaired by:** **May**, Robert, President, The Royal Society, UK

**Speakers:**

- **El-Beltagy**, Adel, Director-General, International Center for Agricultural Research in the Dry Areas (ICARDA), Egypt
  - **Wambugu**, Florence, CEO, A Harvest Biotech Foundation Int'l (AHBFI), Kenya
  - **Guillou**, Marion, President, Institut National de la Recherche Agronomique (INRA), France
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## **209 The "e-Developing" World**

[Venue: **Room B2 (2F)**]

Can "e-technologies" help developing countries leapfrog ahead and develop faster than traditional societies have been able to do in the past? With the use of digital technologies, will developing countries be able to overcome obstacles to development more quickly? What are the needs of developing countries in terms of e-technologies?

**Chaired by:** **Newton**, Richard, Dean of the College of Engineering and the Roy W. Carlson Professor of Engineering, University of California, Berkeley, Australia

**Speakers:**

- **Lu**, Hong Liang, Chairman, CEO and President, UTStarcom, USA
  - **Kalil**, Thomas, Special Assistant to the Chancellor for Science and Technology, University of California, Berkeley, USA
  - **Gannes**, Stuart, Executive Director, Media X, Reuters Digital Vision Fellowship Program, Stanford University, USA
  - **Gelsinger**, Patrick, Senior Vice President and CTO, Intel, USA
  - **Freeman**, Peter, Assistant Director, National Science Foundation (NSF), USA
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## **210** From Brain Drain to Brain Gain

[Venue: **Room B1** (2F)]

The wealthiest and most open economies have always attracted the best talent. What actions can be undertaken by both industrialized countries and developing countries to accept the inevitability of this movement and turn brain drain into brain gain?

**Chaired by:** **Serageldin**, Ismail, Director, Library of Alexandria, Egypt

### **Speakers:**

- **Allende**, Jorge, Member of Academic Chilena de Ciencias, Instituto de Ciencias Biomedicas (ICBM), Chile
  - **Bismuth**, Pierre, Vice President of Global Personnel Practices, Schlumberger Limited, France
  - **Gago**, Jose-Mariano, President, Laboratorio de Instrumentacao e Fisica Experimental de Particulas (LIP), Portugal
  - **Zakri**, A.H., Director, United Nations University / IAS, Malaysia
  - **Goldin**, Daniel S., NASA Administrator 1992-2001, USA
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## **211** Science for a Safe and Secure Society

(Against the Intentional Spread of Infectious Diseases)

[Venue: **Room C2**]

Governments warn that the threat of bioterrorism exists and is growing. How can the international community cooperate to contain this threat?

**Chaired by:** **Plate**, Nikolay, Vice President, Russian Academy of Sciences, Russia

### **Speakers:**

- **Atlas**, Ronald M., Dean of the Graduate School, University of Louisville, USA
  - **Branscomb**, Lewis M., Professor Emeritus, Public Policy and Corporate Management, John F. Kennedy School of Government, Harvard University, USA
  - **Falaschi**, Arturo, Director General, The International Centre for Genetic Engineering and Biotechnology (ICGEB), Italy
  - **Sharma**, Manju, former Secretary to the Government of India and former Advisor to the Ministry of Science and Technology, India
  - **Han**, Seung-soo, President, The 56th Session of the United Nations General Assembly, Korea
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**16:00 - 16:30      Coffee Break**

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**16:30 - 18:00      Concurrent Plenary Sessions**

**212 “Nanotechnology: Promises, Promises”**

[Venue: **Sakura**]

After witnessing many over-hyped new technologies, the public has understandably greeted nanotechnology with a bit of well earned skepticism. How can the scientific community educate the public so they can appreciate the wondrous new directions in which this technology will take us?

**Chaired by:** **Kishi**, Teruo, President, National Institute for Materials Science, Japan

**Speakers:**

- **Bai**, Chunli, Vice President, Chinese Academy of Sciences, China
  - **Nakamura**, Michiharu, Executive Vice President and Executive Officer, Hitachi Ltd., Japan
  - **Roco**, Mihail, U.S. Nanoscale Science, Engineering and Technology, and Senior Advisor, National Science Foundation (NSF), USA
  - **Tokura**, Yoshinori, Professor, University of Tokyo, Japan
  - **Braach-Maksvytis**, Vijoleta, Director, Commonwealth Scientific and Industrial Research Organization (CSIRO), Australia
  - **Connolly**, Mark S., Vice President, R&D, DuPont Performance Coatings, USA
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**213 “Science and Technology: The Central Role in National Strategies”**

[Venue: **Main Hall**]

This session will invite speakers to report on their country’s science and technology strategies for the 21<sup>st</sup> century. The main questions to consider are:

1. What is your country’s strategy to promote science and technology?
2. What are the ground rules to consider with regards to international cooperation?

**Chaired by:** **Leshner**, Alan, CEO, American Association for the Advancement of Science (AAAS), USA

**Speakers:**

- **Tanahashi**, Yasufumi, Minister for Science and Technology Policy, Japan
- **Kleiber**, Michal, Minister of Science, Poland
- **Taha**, El-Zubeir Bashir, Minister of Science and Technology, Sudan

- **Park**, Ky-Young, Advisor to the President for Information, Science, and Technology, Korea
  - **Yakushiji**, Taizo, Member, Council for Science and Technology, Japan
  - **McSweeney**, Barry, Chief Science Adviser to the Government, Head of Delegation of the Government of the Republic of Ireland, Ireland
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**18:00 – on      Transfer by bus from the International Conference Hall  
to Daikakuji Temple**

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**19:00 - 21:00 214 Special Buffet Dinner: “Experience Kyoto”**

- **Master of Ceremony: Kuroda**, Reiko, Professor, Department of Life Sciences, Graduate School of Arts and Sciences, University of Tokyo, Japan
- **Yamada**, Keiji, Governor of Kyoto Prefecture, Japan
- **Masumoto**, Yorikane, Kyoto City Mayor, Japan

**Special Entertainment**

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**19:30 – 22:00    Transfer by bus from Daikakuji Temple to Hotels**

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## **November 16, 2004, Tuesday**

### **08:30 - 09:30 300 Plenary Session: Summaries from Concurrent Sessions**

Overall theme rapporteurs will report the results of discussions from both the morning and afternoon concurrent sessions.

**Chaired by:** Kurokawa, Kiyoshi, President, Science Council of Japan, Japan

#### **Session Rapporteurs:**

- **Oxburgh**, Ronald, Non-Executive Chairman, The “Shell” Transport and Trading Company p.l.c., Member of the House of Lords, UK
- **May**, Robert, President, The Royal Society, UK
- **Campbell**, Philip, Editor-in-Chief, Nature, UK
- **Branscomb**, Lewis M., Professor Emeritus, Public Policy and Corporate Management, John F. Kennedy School of Government, Harvard University, USA

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### **09:30 - 10:30 301 Plenary Session: “Science and Society”**

This plenary session will discuss the relationship between science and society with regard to the responsibility the science community bears in maintaining the public’s trust.

**Chaired by:**

#### **Speakers:**

- **Noyori**, Ryoji, President, RIKEN, Nobel Laureate [Chemistry 2001], Japan
- **Laughlin**, Robert B., President, The Korea Advanced Institute of Science and Technology (KAIST), Nobel Laureate [Physics 1998], USA
- **Gros**, François, Honorary Permanent Secretary, Academie des Sciences, France

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### **10:30 - 11:00 Coffee Break**

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**11:00 - 12:00 302 Closing Plenary Session**

Toward global cooperation between governments, academia, and industry in order to attain the best of what science can offer humankind.

**Chaired by: Friedman**, Jerome I., Professor, MIT, Nobel Laureate [Physics 1990], USA

**Speakers:**

- **D'Aubert**, François, Minister Delegate for Research and New Technologies, France
  - **Salama**, Amr Ezzat, Minister of Higher Education and Minister of State for Scientific Research, Egypt
  - **Nishimuro**, Taizo, Chairman, Toshiba Corp., Japan
  - **Omi**, Koji, Member, House of Representatives, Japan
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**12:00 - 13:00 303 Farewell Buffet Lunch**

[Venue: **Garden** – Kyoto International Conference Hall]