

THE INAMORI FOUNDATION



NEWSLETTER

No. **15**
August
2005

THE KYOTO PRIZE

ANNOUNCES LAUREATES OF THE 2005 KYOTO PRIZE

Inamori Foundation announced on June 10 the laureates of the 2005 Kyoto Prize, an international award presented to individuals who have contributed significantly to the progress of science, the advancement of civilization, and the enrichment and elevation of the human spirit.

The 2005 laureate for the Advanced Technology Category [Prize Field: Electronics] is Dr. George H. Heilmeier (U.S.A.). The laureate for the Basic Sciences Category [Prize Field: Biological Sciences (Evolution, Behavior, Ecology, Environment)] is Professor Simon Asber Levin (U.S.A.). And the laureate for the Arts and Philosophy Category [Prize Field: Music] is Mr. Nikolaus Harnoncourt (Austria).

The Kyoto Prize Presentation Ceremony will be held at the Kyoto International Conference Hall on November 10, 2005. At the Ceremony, each laureate will receive a diploma, a Kyoto Prize Medal (20K), and a prize money of 50 million yen per category.

ADVANCED TECHNOLOGY CATEGORY

Prize Field: Electronics

DEVELOPED THE WORLD'S FIRST LIQUID CRYSTAL DISPLAY

Dr. George H. Heilmeier

(U.S.A., b. 1936)

Electronics Engineer

Chairman Emeritus, Telcordia Technologies, Inc.



Pioneering contributions to the realization of flat-panel displays using liquid crystals

LIQUID CRYSTAL DISPLAYS (LCDs) have infiltrated every aspect of our lives. They are seen in TV sets, PCs, mobile phones, rice cookers and many other devices and appliances. In the 1960s, when a "wall-hung TV" was still a dream for the distant future, Dr. George H. Heilmeier had an interest in the unique properties of liquid crystals and used them to fabricate flat displays showing alphanumeric characters. He sandwiched a liquid crystal layer between two glass slides, and applied various voltages to control optical transmittance. These displays were announced in 1968 and caused a global sensation, triggering the development of LCDs and intense competition to put them to use in industrial applications. Later, LCDs were combined with large-scale integrated circuits (LSIs), which evolved at the same time, and gave rise to great innovations in the electronics industry. After these breakthroughs, social demands pushed technology to achieve further miniaturization of displays, energy savings, and high resolution. LCDs have the potential for an extremely wide range of applications, replacing CRTs that were the mainstream for TV displays. Dr. Heilmeier's pioneering contributions to the realization of LCDs triggered this recent revolutionary change in display devices. Thus his achievements have had a major impact and will be justly remembered by posterity as milestones in the history of technical progress.

THE KYOTO PRIZE

BASIC SCIENCES CATEGORY

Prize Field: Biological Sciences (Evolution, Behavior, Ecology, Environment)

COMPREHENSIVELY REVEALED THE MECHANISM OF BIODIVERSITY

Professor Simon Asher Levin

(U.S.A., b. 1941)

Ecologist

Professor, Princeton University



Establishment of the field of spatial ecology and the proposition of the biosphere as a "complex adaptive system"

THE EARTH'S BIOSPHERE is home to a huge variety of living organisms. Prof. Simon Asher Levin created the field of "Spatial Ecology" that uses mathematical models to understand comprehensively the complex patterns of the biosphere, which traditional ecology had difficulty dealing with. In his famous early study, Prof. Levin demonstrated an unexpected fact that high biodiversity in a reef ecosystem could be maintained by moderate disturbance, and that expanding space permits the coexistence of mutually exclusive species in the same ecosystem. Further, Prof. Levin's mathematical models demonstrated that analysis of a small region reveals approaches that can be applied to the analysis of phenomena in a larger region. Therefore, they serve as useful guidelines for environmental protection and are used in a wide range of environmental management situations. His book titled *Fragile Dominion* (1999) proves that biodiversity has a fragile foundation. In the book, he urges us to look more deeply into these issues and calls for courageous action given how much humans have benefited from biodiversity and what must be done if these benefits are to be preserved.

ARTS AND PHILOSOPHY CATEGORY

Prize Field: Music

RESTORES PRIMARY MESSAGE OF MUSIC

Mr. Nikolaus Harnoncourt

(Austria, b. 1929)

Musician



A musician of exceptional creativity who has contributed to the establishment of the historically informed performance of European early music, and who has extended his principles and interpretation to modern music

IN 1953, MR. Nikolaus Harnoncourt, well known as a leading performer of early music, organized the Concentus Musicus Wien (CMW), a specialist ensemble devoted to the performance of early music. In the 1970s, the series of operas by Monteverdi that he conducted were received with great public acclaim. His performance appearances include the Vienna and Berlin Philharmonic Orchestras, starting in the 1980s and 1990s, respectively, the Chamber Orchestra of Europe, and the Salzburg Festival. What Mr. Harnoncourt has aimed for in the European music community, which is prone to praise superficially beautiful sounds and flamboyant techniques, is the restoration of the glorious cultural position that music used to occupy before the 18th century. In this context, he sees music as a kind of living language. To achieve this lofty goal, he continues to reproduce the original sounds of early music through performance, by studying the historical context of a given piece including performing methods, the customs, and musical principles in addition to the restoration of the original instruments and the investigation of the original scores. Mr. Harnoncourt says that performers are translators who comprehend ideas of artists and express such ideas in the language of their periods. The musician constantly expands the range of music by analyzing theories, practical methods, the past and present of music in a macroscopic way.

INFORMATION

EVENTS SCHEDULE OF THE 2005 KYOTO PRIZE

- - Three days of contact with the world-class intellects

EVENTS	DATE	PLACE
Prize Presentation Ceremony (By invitation only)	November 10, 2005 (Thu.)	Kyoto International Conference Hall
Banquet (By invitation only)	November 10, 2005 (Thu.)	Kyoto Takaragaike Prince Hotel
Commemorative Lectures	November 11, 2005 (Fri.)	Kyoto International Conference Hall
Workshops	November 12, 2005 (Sat.)	Kyoto International Conference Hall

ANNOUNCEMENT OF THE PRIZE FIELD FOR THE 2006 KYOTO PRIZE

We have the pleasure to announce the specific fields for the 2006 Kyoto Prize as follows.

CATEGORY	PRIZE FIELD
Advanced Technology	Biotechnology and Medical Technology
Basic Sciences	Mathematical Sciences
Arts and Philosophy	Arts (Painting, Sculpture, Craft, Architecture, Design)

MEETING THE LAUREATES

Representing the Inamori Foundation, Senior Managing Director Toyomi Inamori and Managing Director Mikio Okuno went to visit this year's Kyoto Prize laureates. The following is a brief summary of those meetings.

DR. GEORGE H. Heilmeier, born in Philadelphia, Pennsylvania, U.S.A., is the Chairman Emeritus of Telcordia Technologies, Inc. and an engineering development advisor to the U.S. Department of Defense. As a youth, Dr. Heilmeier received a national scholarship to attend the University of Pennsylvania. To repay the debt he felt he owed the nation, he later joined the Department of Defense to take part in engineering research and development. He currently has a strong interest in educational issues, and is concerned about declining ethical standards in the area of individual responsibility and work in the U.S.A. He emphasized that we must press for children to be taught that nothing can be achieved without discipline and diligence. Dr. Heilmeier has come to Japan several times, but this is his first visit to Kyoto.



Dr. Heilmeier in Washington D.C.

Dr. George H. Heilmeier



Prof. Levin in his seminar

PROF. SIMON ASHER Levin, born in Baltimore, Maryland, U.S.A., skipped two grades in elementary school, graduated from university at the age of 20, and obtained a Ph.D. in Mathematics when he was just 23. As a graduate student, he intended to help improve society through the application of his beloved mathematics, and also took up the study of Biology on his own. He shifted his major to Ecology because he believed that issues of space and scale, to which ecologist did not pay attention those days, could be dealt with in a mathematical manner. Currently, he is interested in the mechanism of marine biodiversity, competition of viruses and antibiotics, and evolution of social collaboration and norms. He says that we have a responsibility to future generations, and a larger number of people should be aware of issues confronting ecosystems and morals so that they can be responsible for their behavior. He is a Japanophile, who has already been to Kyoto seven or eight times.

Prof. Simon Asher Levin

MR. NIKOLAUS HARNONCOURT, born in Berlin, Germany, began to play the cello at the age of five. When he was young, he was also interested in becoming a stage actor or wood carver. One day when he was ill in bed, the 17-year-old Nikolaus was astonished by one of Beethoven's symphonies that was being played on the radio, and decided to become a musician. He says that great pieces of music always communicate their messages, and that they are capable of conveying feelings and perceptions that cannot be expressed in words. He also says that he wants his audience to feel that they have obtained something or become aware of something of which they were previously unaware. He gave an encouraging message to young people with the words: "Do music, and love music."



Mr. Harnoncourt with his wife, Alice

Mr. Nikolaus Harnoncourt

TOPIC

INAMORI INTERNATIONAL FELLOWS COMPLETE THEIR FIRST TERM

MR. KENZO FUJISUE and Mr. Junya Ogawa, who are the Inamori International Fellows for 2005, joined the first term training course at the Abshire-Inamori Leadership Academy in the Center for Strategic & International Studies (CSIS), Washington D.C., U.S.A. from May 16 to May 20. The Academy aims to promote creativity and build the character of future leaders so that they can act as true leaders capable of contributing to the peace and prosperity of human society. Warmly welcomed by Dr. John J. Hamre, CSIS president & CEO, Mr. Fujisue, Mr. Ogawa, and the other five fellows from overseas organizations participated in a training program under the first-term theme, *Leadership, Character, and Ethics*. The training program fully explored the art of leadership and the ethical dilemmas that arise at time of decision making. The program consisted primarily of discussion sessions incorporating case studies, role play, etc. The two Inamori International Fellows will work on their assignments in Japan, based on this training, and prepare for the second-term training course that will be held in October. We

hope that these training programs will bring Mr. Fujisue and Mr. Ogawa to the forefront in their future careers.



President Hamre (center) and the two Inamori International Fellows (both ends) with other participants

MEMBERS OF THE 2005 KYOTO PRIZE SELECTION ORGANIZATION

The laureates of the Kyoto Prize are selected by the Kyoto Prize Selection Organization, which in each category, comprises of the Kyoto Prize Selection Committee and the Kyoto Prize Committee with the final stage being the Kyoto Prize Executive Committee. The selected candidates are then approved by the Board of Directors and the Board of Councilors of the Inamori Foundation. The members of the 2005 Kyoto Prize Selection Organization are as listed below. Position titles are as of June 10, 2005

KYOTO PRIZE EXECUTIVE COMMITTEE

Amari, Shun-ichi (Chairman) Director, Brain Science Institute, RIKEN
 Hidaka, Toshitaka Director, General, Research Institute for Humanity and Nature
 Hironaka, Heisuke Professor Emeritus, Kyoto University
 Miyoshi, Akira Composer
 Nakanishi, Shigetada Director, Osaka Bioscience Institute
 Noyori, Ryoji President, RIKEN
 Sakaki, Hiroyuki Professor, Institute of Industrial Science, The University of Tokyo
 Sengen, Ryuichiro President, Institute of Industrial Property Laws
 Takashina, Shuji Director, International Research Center for Comparative Art Studies, Kyoto University of Art and Design

KYOTO PRIZE COMMITTEE IN ADVANCED TECHNOLOGY

Sakaki, Hiroyuki (Chairman) Professor, Institute of Industrial Science, The University of Tokyo
 Iga, Kenichi Executive Director, Japan Society for the Promotion of Science
 Ikegami, Tetsuhiko President, The University of Aizu
 Maruyama, Eiichi Director, Center for Intellectual Property Strategies, RIKEN
 Matsunami, Hiroyuki Director, Innovation Plaza Kyoto, Japan Science and Technology Agency
 Nakamura, Michiharu Executive Vice President & Executive Officer, President, Research and Development Group, Hitachi, Ltd.
 Ohmi, Tadahiro Professor, New Industry Creation Hatchery Center, Tohoku University
 Saito, Tadao Professor Emeritus, The University of Tokyo

KYOTO PRIZE SELECTION COMMITTEE IN ADVANCED TECHNOLOGY

Iga, Kenichi (Chairman) Executive Director, Japan Society for the Promotion of Science
 Esashi, Masayoshi Professor, New Industry Creation Hatchery Center, Tohoku University
 Hirose, Masataka Director General, Advanced Semiconductor Research Center, National Institute of Advanced Industrial Science and Technology
 Izawa, Tatsuo Retired President and CEO, NTT Electronics Corporation
 Kyuma, Kazuo Group Vice President, General Manager, Advanced Technology R&D Center, Mitsubishi Electric Corporation
 Matsushige, Kazumi Vice President, Kyoto University
 Tsubouchi, Kazuo Professor, Research Institute of Electrical Communication, Tohoku University
 Watanabe, Hisatsune President, NEC Patent Service, Ltd.

KYOTO PRIZE COMMITTEE IN BASIC SCIENCES

Hidaka, Toshitaka (Chairman) Director, General, Research Institute for Humanity and Nature
 Aoki, Kiyoshi Professor Emeritus, Sophia University
 Iwasa, Yoh Professor, Faculty of Sciences, Kyusyu University
 Kawanabe, Hiroya Director General, Lake Biwa Museum
 Oshima, Yasuyuki Director, Japan Wildlife Research Center
 Sugiyama, Yukimaru Professor Emeritus, Kyoto University

Wada, Eitaro Director of Ecosystem Change Research Program, Frontier Research Center for Global Change
 Yamagishi, Satoshi Director General, Yamashina Institute for Ornithology

KYOTO PRIZE SELECTION COMMITTEE IN BASIC SCIENCES

Iwasa, Yoh (Chairman) Professor, Faculty of Sciences, Kyusyu University
 Hasegawa, Mariko Professor, School of Political Sciences and Economics, Waseda University
 Hoshi, Motonori Professor, Department of Biosciences and Informatics, Keio University
 Matsumoto, Tadao Professor, The University of the Air
 Nakamura, Hiroshi Professor, Faculty of Education, Shinshu University
 Setoguchi, Takeshi Professor, Graduate School of Science, Kyoto University
 Washitani, Izumi Professor, Department of Ecosystem Studies, Graduate School of Agricultural and Life Sciences, The University of Tokyo
 Yumoto, Takakazu Professor, Research Institute for Humanity and Nature

KYOTO PRIZE COMMITTEE IN ARTS AND PHILOSOPHY

Miyoshi, Akira (Chairman) Composer
 Edo, Kyoko President, Arion-Edo Foundation
 Funayama, Takashi Professor, Faculty of Music, Tokyo National University of Fine Arts and Music
 Ichiyanagi, Toshi Artistic Director, Kanagawa Arts Foundation
 Sano, Koji Professor, Toho Gakuen School of Music
 Takashina, Shuji Director, International Research Center for Comparative Art Studies, Kyoto University of Art and Design
 Wakasugi, Hiroshi Professor Emeritus, Tokyo National University of Fine Arts and Music
 Member of The Japan Art Academy
 Yuasa, Joji Professor Emeritus, University of California, San Diego

KYOTO PRIZE SELECTION COMMITTEE IN ARTS AND PHILOSOPHY

Funayama, Takashi (Chairman) Professor, Faculty of Music, Tokyo National University of Fine Arts and Music
 Choki, Seiji Associate Professor, Graduate School of Arts and Science, The University of Tokyo
 Ishida, Kazushi Music Critic
 Ito, Nobuhiro Associate Professor, Graduate School of Letters, Osaka University
 Kondo, Jo Professor, Department of Music, Ochanomizu University
 Nishimura, Akira Professor of Composition, Tokyo College of Music
 Nodaira, Ichiro Composer, Pianist
 Shiraishi, Miyuki Professor of Music, Musashino Art University

TOPIC

OBITUARY

Prof. Paul Ricœur (France), the 2000 Kyoto Prize laureate in Arts and Philosophy, passed away on May 20 at the age of 92. Prof. Morris Cohen (U.S.A.), the 1987 Kyoto Prize laureate in Advanced Technology, passed away on May 27 at the age of 93. Dr. Jack St. Clair Kilby, the 1993 Kyoto Prize laureate in Advanced Technology, passed away on June 20 at the age of 81. May their souls rest in peace.



Prof. Paul Ricœur



Prof. Morris Cohen



Dr. Jack St. Clair Kilby