2016 Honda Prize
Nomination Guide

HONDA FOUNDATION

公益財団法人 本田財団

Honda Foundation

“I reached where I am now just through technology. If we really can solve problems with technology, then I definitely want to be of some use."
(Soichiro Honda, the founder of Honda Motor Company)

Honda Foundation was established in December 1977 by donations from the founder of Honda Motor Company, Soichiro Honda, and his younger brother, Benjiro.

Funding Prospectus

- **Modern society has been achieving great prosperity**, thanks to sustained high economic growth that has been made possible through various technological innovations in production, traffic, transportation, telecommunications and other activities. **We are experiencing revolutionary changes** in our way of life, and in our changing lifestyles we have also expanded our horizons.
- **This achievement has had negative effects too**: environmental destruction, pollution, urban density, food shortages due to the population explosion, the growing consciousness gap between nations, races and religions plus a number of other deep-rooted, complex issues.
- Various research and efforts have been made to resolve these problems. Each of them, however, is a kaleidoscopic reflection of different elements of modern civilization, and thus **requires a completely new approach in the search for a resolution.**
- A makeshift resolution serves no purpose. Wisdom and effort must be pooled on an **international level**, and **through an interdisciplinary approach** to **the analysis of modern civilization**, the results can be used to promote human welfare and happiness. In this way **we must strive to create a higher level of humane society**.
- In order to provide the opportunity for scholars, researchers and specialists **from all walks of life**, irrespective of nationality, **to meet together and freely discuss** the present state and the future of our civilization, the HONDA FOUNDATION sponsors **international symposia and colloquia, and offers prizes and awards for the promotion of research, education and other such activities, and also carries on its own studies and research, making use of the achievements of modern civilization**, the FOUNDATION **was established** with such objectives in mind, and by extending its own activities to fulfill the requirements of the modern age, **it contributes towards the creation of a truly humane civilization**.

Funding Prospectus

Prosperity

Negative effect

Requires a completely new approach in the search for a resolution

Creation of a truly humane civilization

Eco-Technology

Requires a completely new approach in the search for a resolution

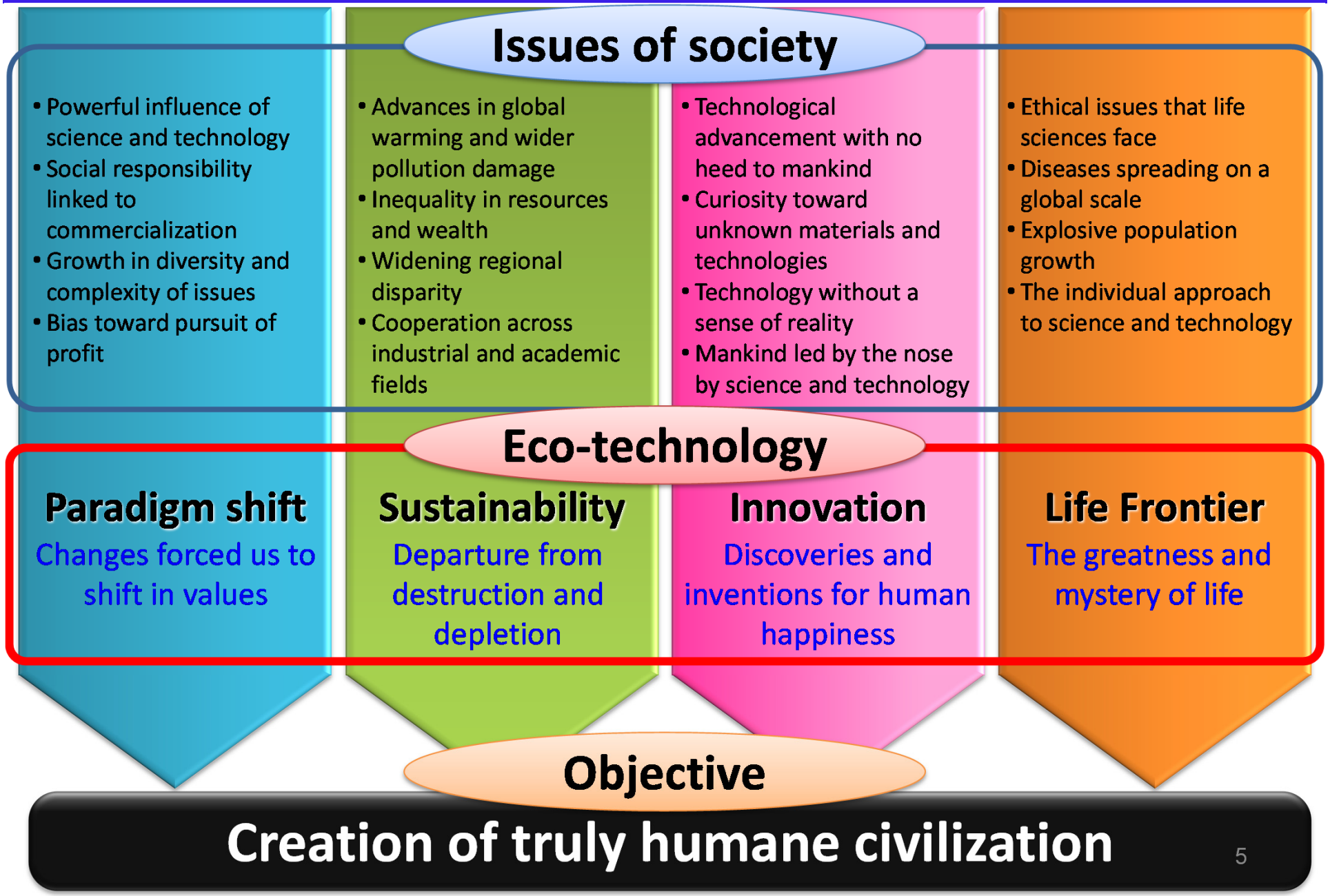
Eco-technology

Natural environment

Human environment

- **Harmonize human activities with the natural environment**
- **Develop science and technology in harmony with human environment**
- **Science and technology for the welfare of human beings**

Four Perspectives of Eco-Technology



Summary of Major Activities

Creation of Truly Humane Civilization

★**Honda Prize**

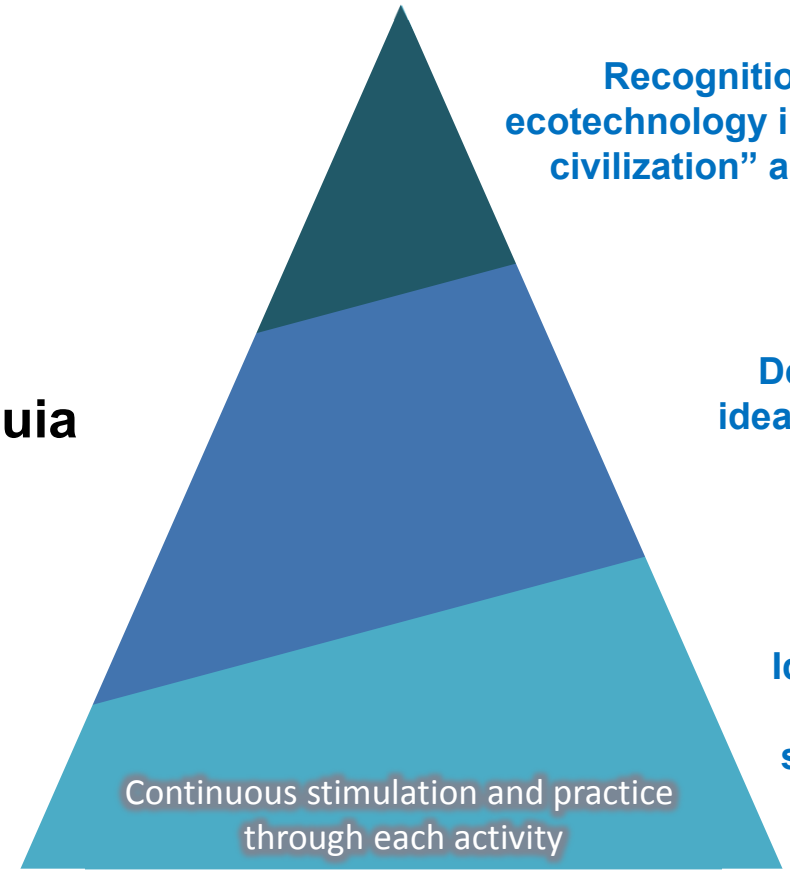
Recognition of persons practicing ecotechnology in "creation of a truly humane civilization" and support for their efforts

★**International Symposia/Colloquia**

Deliberations and creation of ideas to resolve various issues in modern society

★**Y-E-S Award**
Honda Young Engineer & Scientist's Award

Identification and development of young researchers and scientists to lead forthcoming generations in practicing ecotechnology



Contribute to the development of science and technology and society along the vision of "ecotechnology" through activities at various level

Honda Prize

Recognition of the efforts of an individual or group who contribute towards “the creation of a truly humane civilization” to introduce their values across the world.

- Since 1980
- Acknowledgement of the efforts of an individual or group who contributes to the development of science and technology and society along the vision of “ecotechnology”.
- Not only scientific and technological achievements, but also entire processes to bring out, apply, or share new frontiers to be considered

Award:

Diploma 

Medal 

Extra prize: ¥10 million

Honda Prize

Past laureates and their achievements

Paradigm shift

1992
Dr. Hermann Haken
(Germany)
Suggestion of
Synergetics

1994
Dr. Benoit B. Mandelbrot
(France)
Lifelong work on the
Fractal Geometry

Sustainability

1985
Dr. Carl Sagan
(U.S.A.)
Novel perception of
human civilization

2002
Dr. Barry John Cooper
(U.K.)
Development of three-
way catalyst

Innovation

2000
Dr. Shuji Nakamura
(Japan)
Development of Blue
LED

2006
Dr. Richard R. Nelson
(U.S.A.)
Evolutionary Theory of
Economic Change

Life Frontier

1991
Dr. Monkombu S.
Swaminathan (India)
Leading role in the
Green Revolution

2012
Dr. Denis Le Bihan
(France)
Water diffusion
measurement by MRI

Honda Prize Nomination Guide

1. Eligibility

- An individual or a group, irrespective of nationality, who has achieved distinguished contribution toward the development of science and technology and society along the vision of “ecotechnology”
- Achievements should be not only narrow scientific/ technological new discoveries and inventions but also be served to the improvement of people’s lives around the world from the view point of entire processes that would bring out, apply, or share solution for facing problems
- Target fields include the broad range of related scientific fields such as mechanical /electronic/space engineering, chemical, physics, bioscience, agriculture, economics and medicine. It also includes an individual / a group in interdisciplinary research areas

Note: Self-nomination cannot be accepted

2. How to Nominate

- Complete the nomination form that was mailed or e-mailed by Honda Foundation. (Refer to the sample form in next page and the list of past laureates)
  - Title of Achievements: Give a title that describes achievements briefly
  - Problems to solve: Explain what kind of facing problems a nominee tried to solve
  - Utilized ecotechnology: Mark perspectives of ecotechnology (Paradigm shift, Sustainability, Innovation, and Life frontier) introduced in page 5 which is applicable to nominee’s achievements. Multiple choice allowed
  - Details of contribution toward the development of science and technology and society along the vision of “ecotechnology” : Explain in detail what kind of contribution a nominee brought toward “Creation of truly humane civilization”
  - Contributions by each stage: Choose more than one stage from “Invention/ Discovery”, “Application / Development”, and “Prevalence at General Level” which applicable to nominee’s achievements contribute then describe how in detail.
- Do not add extra page
- Reference materials to support understanding can be accepted but should be less.

Note: As this is closed nomination, please do not post its information on open websites or SNS.

3. Selection Procedure and Notifications

The laureate will be determined through a series of deliberations by multidisciplinary selection committee. Announcement of the laureate will be released in September.

Note: Through the whole selection procedure, we do not contact with nominees directly but contact only the laureate after the person / group is determined.

4. Contact

If you have a question, please contact Honda Foundation:

2-6-20, Yaesu, Chuo-ku, Tokyo 104-0028 JAPAN
Tel: +81-(0)3-3274-5125 Fax: +81-(0)3-3274-5103

E-mail: h_info@hondafoundation.jp
HP: http://www.hondafoundation.jp/en/

Submit the nomination form **no later than March 15, 2016**
either via e-mail to h_info@hondafoundation.jp
or fax to +81-(0)3-3274-5103

Sample of the Nomination Form1(1991 Dr. Swaminathan)

Details of Nomination	
Achievements	
Title of Achievements	The Green Revolution movement in the Indian subcontinent
Problems to solve	Food crisis caused by rapid population growth
Utilized ecotechnology (Mark an item)	・Paradigm Shift ・Sustainability ・Innovation ・ Life Frontier
Details of contribution toward the development of science and technology and society along the vision of "ecotechnology" In the late 20th century, predictions that food production would not be able to catch up with the ever-growing global population were a major concern to the people of the world. And those concerns became fact. The world population quadrupled in the 100 years up to the 20th century. Although it took more than a million years to reach 100 million sometime around the year 1800, the world population increased to 3.8 billion by 1972, and exceeded 6.5 billion by February 2006. When the population reached 3.8 billion, India, where exceptionally rapid population growth continued, was threatened in 1975 with widespread famine. However, this did not happen—because of a national scheme under Dr. Swaminathan to increase food production along with security of employment at the same time. Dr. Swaminathan holds to the principle of "improving human life within the limits of the carrying capacity of the supporting ecosystems." That is, agriculture that does not impose a burden on the global environment and does not interrupt the natural cycles, which resulted in contribution toward "Creation of truly humane civilization"	

Details of Nomination	
Contributions by each stage	*Describes what the nominee and his/her/their achievements contribute at each phase.
	Invention/ Discovery At a meeting of the International Commission on Peace and Food held under Dr. Swaminathan's chair in Madras in October 1991, participants agreed to work to achieve the following targets. A plan was made to address increases in food production and security of employment for the growing population at the same time.
	Application / Development (a) Raise food grain by increasing per hectare yields of wheat and rice from 1.76 tons to 2.15 tons, and bringing another 2 million hectares of irrigated land under high yielding varieties of wheat and rice. It will increase employment per hectare by 50%. (b) Triple the area under irrigated cotton to raise total production from 13.3 million bales to 26 million bales. This and other measures generate employment for 11 million persons. (c) Extend the area under sugarcane by an additional 1.6 million hectares and raise average yields from 60 to 80 tons per (d) Raise fruit production by 50% and vegetable production by 100 (e) Raise inland fish production by 4.5 million tons through development of 50,000 hectares of intensive fish(f) Double mulberry silk production by establishing 500 integrated sericulture estates (g) Expand the area under irrigated oil seeds by 3 million hectares (h) Reclaim and utilize 4.5 million hectares of wastelands to meet the entire projected (i) Increase the number of milch animals by 18% in the country to generate 11.6 million additional jobs.
	Prevalence at General Level Wheat production in India increased from 12 million tons in 1964 to 55 million tons in 1990.

Sample of the Nomination Form2 (2005 Dr. Reddy)

Details of Nomination	
Achievements	
Title of Achievements	Pioneering research in robotics and computer science
Problems to solve	Resolution of differential of human response capabilities caused by various gaps between region, race, language and age
Utilized ecotechnology (Mark an item)	・Paradigm Shift ・Sustainability ・Innovation ・ Life Frontier
Details of contribution toward the development of science and technology and society along the vision of "ecotechnology" Over the past 50 years, robotics and intelligent systems have made great advancements. Once, the main purpose of robotics and intelligent system was to provide solutions to specific technological problems. But with the exponential advances in information technology, extensive systems and solutions that greatly affect our lives were developed. Dr. Raj Reddy has made great contributions to advanced technologies, such as human interface, artificial intelligence, speech and vision and other areas which particularly serves humanity. His research is based on the belief that the capabilities of robotics and intelligent systems should be shared equally regardless of nationality, language, age, gender or economic status. Integrated with evolving information technology, he has contributed to construct the humane civilization.	

Details of Nomination	
Contributions by each stage	*Describes what the nominee and his/her/their achievements contribute at each phase.
	Invention/ Discovery
	Application / Development (1) robots that can care for the elderly in aging societies all over the world, (2) rescue robots that can work in disaster situations that are too dangerous or inaccessible to humans, (3) speech and reading tutors that can support the illiterate with advanced speech recognition and synthesis technologies, (4) computer vision and intelligent cruise control to prevent traffic accidents, improve fuel efficiency and reduce driver fatigue, (5) computer systems that enable the illiterate to use voice mail and other functions, (6) digital libraries where anyone can access archived publications, and (7) artificial intelligence to resolve the rural digital divide, such as expert systems and knowledge based systems that can be used in medical diagnosis and therapy applications.
	Prevalence at General Level His achievements accelerated global researches in many fields turning into realization, which accordingly reduced burden of humanity.

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Appendix

List of Past Laureates of Honda Prize

Year	Name	Title At That Time	Reason of Receiving the Award	Realization of Ecotechnology
1980	**Dr. Gunnar Hambraeus (Sweden)**	Chairman, Royal Swedish Academy of Engineering Sciences	Awarded for his leadership in the promotion of interactions among engineering societies across continents as the head of Royal Swedish Academy of Engineering Sciences.	Paradigm Shift
1981	**Dr. Harold Chestnut (U.S.A.)**	SWIIS Foundation, Inc	Awarded for his achievements of the promotion of humanitarian use of technology as a leader in systems engineering for electrical instrumentation and automatic control.	Paradigm Shift
1982	**Dr. John F. Coales (U.K.)**	Professor Emeritus,Unversity of Cambridge	Awarded for his achievements associated with the theorization of automatic control technology and its technological transfer to developing countries.	Paradigm Shift
1983	**Dr. Ilya Prigogine (Belgium)**	Professor, Free University of Brussels	Awarded for his contributions to international fight against environment issues by applying his unique Dissipative Structure Theory primarily constructed in chemistry and physics.	Paradigm Shift
1984	**Dr. Umberto Colombo (Italy)**	Chairman, The Italian National Commission for Nuclear and Alternative Energy Sources	Awarded for his vision and policy recommendations with regard to braking wasteful use of food, energy, and natural resources by developing sustainable technologies to secure them.	Sustaibanility
1985	**Dr. Carl E. Sagan (U.S.A.)**	Professor, Cornell University	Awarded for his contributions with the introduction of novel perception of civilization by viewing the earth from a cosmic perspective, featuring the Nuclear Winter in caveat.	Sustaibanility
1986	**Dr. Junichi Nishizawa (Japan)**	Professor, Tohoku University	Awarded for his achievements in the invention of pin diode and static induction transistor; and for his pioneering efforts in the application of optical communications technology.	Innovation
1987	**Dr. Jean Dausset (France)**	Professor, Collge de France	Awarded for his discovery of the major histocompatibility that opened a new way for organ transplantation complex. His longstanding educational roles are also substantial.	Life Froniter
1988	**Dr. Paolo Maria Fasella (Italy)**	Professor, Commission of the European Communities	Awarded for his expertise in medicine and biology with vigorously engaged in the promotion of joint efforts in technology toward a more harmonious development of human civilization.	Life Froniter
1989	**Dr. Lotfi Asker Zadeh (U.S.A.)**	Professor, University of California, Barkeley	Awarded for his construction of the Fuzzy Theory. He made the future of information society a more humane civilization through a broad range of applications in he advocated.	Innovation
1990	**Dr. Frei Otto (Germany)**	Professor, University of Stuttgart	Awarded for his conceptualization and embodiment of lightweight architectural designs with membrane structures to make the human environment more harmonious with nature.	Sustaibanility
1991	**Dr. Monkombu S. Swaminathan (India)**	President, International Society for Mangrove Ecosystems	Awarded for his leading role in the Green Revolution movement, saved the Indian subcontinent from a serious food crisis for environment protection.	Life Froniter
1992	**Dr. Hermann Haken (Germany)**	Professor, University of Stuttgart	Awarded for his initiation of Synergetics. He suggested this discipline could be one of basic principles to achieve equilibrium between ecosystem and human civilization.	Paradigm Shift
1993	**Dr. Koki Horikoshi (Japan)**	Professor, Toyo University	Awarded for his lifelong work on Alkaliphilic Micro-organisms, based on which he developed clean industrial technologies such as decontamination of polluted seawater.	Life Froniter
1994	**Dr. Benoit B. Mandelbrot (France)**	Professor, Yale University	Awarded for his lifelong work on the Fractal Geometry. Its implications resulted in many forms of fusion between natural science and other areas such as social science and fine art.	Paradigm Shift
1995	**Dr. Ake E. Andersson (Sweden)**	Managing Director, Swedish Institute for Futures Studies	Awarded for his vision of C-Society(Creativity, Culture, Communication) should become key elements that help regional or local economies grow in accordance with the environment.	Paradigm Shift
1996	**Dr. Bruce N. Ames (U.S.A.)**	Professor, University of California, Barkeley	Awarded for his development of the Ames test and associated efforts to legislate it. The test is widely used to detect carcinogens as mutagens in the Salmonella/microsome test.	Life Froniter
1997	**Dr. Gunter E. Petzow (Germany)**	Director emeritus, the Max-Planck-Institute for Metals Research/Hon. Professor, University of Stuttgart	Awarded for his expertise in particle technology and powder metallurgy technique, which led to commercialized fineceramic materials for use such as high-temperature turbine blade.	Innovation
1998	**Dr. Hubert Curien (France)**	Professor of University Pierre et Marie Curie, Paris 6	Awarded for his leadership in the development of the first French earth observation satellite system, with which he improved the way to monitor and manage the earth environment.	Sustaibanility
1999	**Dr. Aleksandra Kornhauser (Slovenia)**	Professor, University of Ljubljana and Director, International Center for Chemical Studies-ICCS	Awarded for her contribution to the implementation of environment-friendly product development/manufacturing processes through the use of information system monitoring.	Sustaibanility
2000	**Dr. Shuji Nakamura (Japan)**	Professor, University of California, Santa Barbara	Awarded for his development of the first practical Blue LED, a power-saving diode with semi permanent life. That is substantially expanding LED applications in the real world.	Innovation
2001	**Dr. Donald Mackay (Canada)**	Professor, Trent University	Awarded for his achievements of the development of the Mackay Model, a method to measure environment pollution by predicting behaviors of chemical substances.	Sustaibanility
2002	**Dr. Barry John Cooper (U.K.)**	Vice-President of Johnson Matthey Inc. Catalytic Systems Div	Awarded for his achievements of the development of the three-way catalyst, an environment-friendly device, for exhaust gas treatment/ cleans emissions for automobiles.	Sustaibanility
2003	**Dr. Kenichi Mori (Japan)**	Adviser to the Board of Toshiba Tec Corporation	Awarded for his achievements of the development of the first Japanese word processing engine. This was applied, and adopted as a basis, later for a number of multibyte languages.	Innovation
2004	**Dr. Walter C. Willett (U.S.A.)**	Professor of Epidemiology and Nutrition, Harvard School of Public Health	Awarded for his achievements associated with the widely-accepted finding as a result of his efforts in large-scale cohort study that diet has the key role in chronic diseases prevention.	Life Froniter
2005	**Dr. Raj Reddy (U.S.A.)**	Professor of Computer Science and Robotics Carnegie Mellon University	Awarded for his pioneering role in robotics and computer science used in the future for a broad range of applications including education, medicine, healthcare, and disaster relief.	Innovation
2006	**Dr. Richard R. Nelson (U.S.A.)**	George Blumenthal Professor of International and Public Affairs, Business, and Law, Emeritus, Columbia University	Awarded for his achievements of the Evolutionary Theory of Economic Change viewing innovation as a key factor to impact subsequent growth or deterioration of a given industry.	Innovation
2007	**Dr. Philippe Mouret (France)**	M.D., General Surgery	Awarded for his performance of the first Laparoscopic Cholecystectomy, marked the beginning of rapid spread of Endoscopic Surgery and its related technologic innovations.	Life Froniter
2008	**Dr. Maximilian Haider(Austria), Dr. Harald Rose(Germany) and Dr. Knut Urban(Germany)**	Managing Director, CEOS GmbH, Heidelberg Research Fellow, Advanced Light Source, L. Berkeley National Lab. President and Vice-president, German Physical Society	Awarded for their development of the world's first transmission electron microscope capable of atomic-level imaging using aberration correction technology.	Innovation
2009	**Dr. Ian Frazer(Australia)**	Director, Diamantina Institute for Cancer, Immunology and Metabolic Medicine The University of Queensland Princess Alexandra Hospital, Australia	Awarded for the development of the world-first cervical cancer vaccines. His achievement said to be the first case of a cancer being prevented through human intervention.	Life Froniter
2010	**Dr. Antonio Damasio(U.S.A. / Portugal)**	David Dornsife Professor of Neuroscience Director, Brain and Creativity Institute University of Southern California	Awarded for his contributions in the world of neuroscience by focusing emotions and feelings in human behavior, including consciousness and decision-making with his influential Somatic Marker Hypothesis.	Life Froniter
2011	**Dr. Gabor A. Somorjai (U.S.A.)**	Professor of Chemistry, the University of California, Berkeley, U.S.A.	Awarded for his innovative achievement in catalysis of surface science, materials, physics and engineering, which contributed to the development of "Green Chemistry"	Sustaibanility
2012	**Dr. Denis Le Bihan (France)**	Director of NeuroSpin, CEA Saclay, France	Awarded for development of theorization of water diffusion measurement by MRI and its application in clinical practice. It spared many patients suffering acute stroke and other neurological disorders.	Life Froniter
2013	**Dr. J. Tinsley Oden (U.S.A.)**	Director of the Institute for Computational Engineering and Sciences (ICES) at The University of Texas at Austin	Awarded for his contribution to establishment and development of "Computational Mechanics," a new discipline which has enabled the development of computer simulation technology used across industry and research today.	Innovation
2014	**Dr. Helmut Clemens (Austria)**	Head of the Department of Physical Metallurgy and Materials Testing at the Montanuniversität Leoben	Awarded for his outstanding contributions and eminent achievements in the development of light-weight structural intermetallic titanium aluminides, so-called γ-TiAl based alloys which are presently seen as key structural materials for high-temperature application in advanced jet and automotive engines of the next generation.	Innovation
2015	**Dr. Russell H. Taylor (U.S.A.)**	John C. Malone Professor at Johns Hopkins University	Awarded for his contributions in the development of surgical medical robots and systems and technological evolution in the field. He is one of the pioneers who established the field of robot research in the 1970's and has become widely known as the "father of medical robotics."	Life Froniter