

# Confidential

(Please type or print)

## 2008 (24th) JAPAN PRIZE NOMINATION FORM

FOR OFFICIAL USE ONLY	Code:
Received Date & No.:	

Name

Last:

First:

Middle:

Organization and Position

Office Address

Tel:

E-mail:

Home Address

Tel:

E-mail:

Categories:

(Please check)

☐ Information Communication Theory and Technology

☐ Medical Genomics and Genetics

Contribution: (The main theme)

(Please write from 10 words by 20 words)

Reasons for your nomination

※ We would appreciate it if you could attach a list of the candidate's achievements, publications and any other relevant information. However, please note that these materials would not be returned.

Nominator's Name

# NOMINATOR'S (YOUR) DATA

Even if you are not nominating a candidate for the 2008 (24th) Japan Prize, we would be grateful if you would complete this page only and return it to us. It will be of great value to us in keeping our list of nominators up-to-date. An envelope is provided for your reply.

## Name

Last:

First:

Middle:

## Signature

## Home Address

Tel:

E-mail:

## Organization and Position

## Office Address

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E-mail:

We would also appreciate your suggestions or comments on the Japan Prize.

Thank you for your cooperation.

# PROFILES OF JAPAN PRIZE LAUREATES

	CATEGORY and ACHIEVEMENT	NAME	COUNTRY
1985 (1st)	<b>Information and Communications</b> Outstanding achievement in the field of electronics and communications technologies	Dr. John R. Pierce	U.S.A.
	<b>Biotechnology</b> Outstanding achievement in basic theory in the field of immobilized enzymes and their practical applications	Dr. Ephraim Katchalski-Katzir	Israel
1986 (2nd)	<b>Materials Science and Technology</b> Pioneering contributions to materials science with impact on new materials technology such as amorphous solids	Dr. David Turnbull	U.S.A.
	<b>Medical Technology</b> Research and development of artificial organs and their relevant technology	Dr. Willem J. Kolff	U.S.A.
1987 (3rd)	<b>Improvement of Biological Functions</b> Development of the IR8 and IR36 strains for rice breeding strategies geared to the tropical and subtropical zones	Dr. Henry M. Beachell Dr. Gurdev S. Khush	U.S.A. India
	<b>Electro-Optics</b> Realization of the world's first laser	Dr. Theodore H. Maiman	U.S.A.
1988 (4th)	<b>Energy Technology</b> Establishment of fast breeder reactor technology	Dr. Georges Vendryes	France
	<b>Preventative Medicine</b> The eradication of Smallpox	Dr. Donald A. Henderson Dr. Isao Arita Dr. Frank Fenner	U.S.A. Japan Australia
	<b>Preventative Medicine</b> Discovery of the AIDS causing virus and development of diagnostic methods	Dr. Luc Montagnier Dr. Robert C. Gallo	France U.S.A.
1989 (5th)	<b>Environmental Science and Technology</b> Studies on the mechanisms of stratospheric ozone depletion by chlorofluorocarbons	Dr. Frank Sherwood Rowland	U.S.A.
	<b>Medicinal Science</b> Pioneering contributions to the syntheses of prostaglandins and their related compounds which are of great therapeutic value	Dr. Elias James Corey	U.S.A.
1990 (6th)	<b>Technology of Integration - Design, Production and Control Technologies</b> Establishment of an academic field named Artificial Intelligence and the proposal of fundamental theories in that field	Dr. Marvin Minsky	U.S.A.
	<b>Earth Science</b> Initiation of the theory of plate tectonics and contributions to its development	Dr. William Jason Morgan Dr. Dan Peter McKenzie Dr. Xavier Le Pichon	U.S.A. U.K. France
1991 (7th)	<b>Applied Mathematics</b> Contributions to analysis and control of distributed systems, and to promotion of applied analysis	Dr. Jacques - Louis Lions	France
	<b>Imaging Techniques in Medicine</b> Development of ultrasound imaging in medicine	Dr. John Julian Wild	U.S.A.
1992 (8th)	<b>Science and Technology of Material Interfaces</b> Contributions to the new development of the chemistry and physics of solid surfaces	Prof. Dr. Gerhard Ertl	Germany
	<b>Science and Technology for Biological Production</b> Discovery of method of the cryopreservation of semen and embryos in farm animals	Prof. Ernest John Christopher Polge	U.K.
1993 (9th)	<b>Safety Engineering and Disaster Mitigation</b> Development of modern seismology and advancement of international cooperation in disaster science	Dr. Frank Press	U.S.A.
	<b>Molecular and Cellular Technology in Medicine</b> Development of the polymerase chain reaction	Dr. Kary B. Mullis	U.S.A.
1994 (10th Anniversary)	<b>Aerospace Technologies</b> Inspirational leadership in unmanned lunar and planetary exploration, and for pioneering achievements in the development of spacecraft and deep space communications	Dr. William Hayward Pickering	U.S.A.
	<b>Psychology and Psychiatry</b> Discovery of dopamine as a neurotransmitter and clarification of its role in mental and motor functions and their disorders	Dr. Arvid Carlsson	Sweden
1995 (11th)	<b>Materials Processing Technologies</b> Outstanding contributions to research and practical applications of light emitting diodes and lasers through pioneering achievements in the understanding of physical principles and in the process technology of intermetallic compound semiconductors	Dr. Nick Holonyak, Jr.	U.S.A.
	<b>Science and Technology for Agriculture, Forestry and Fishery which conserves the Environment</b> Pioneer contributions in the development of integrated pest management by the sterile insect release method and other biological approaches	Dr. Edward F. Knippling	U.S.A.

	CATEGORY and ACHIEVEMENT	NAME	COUNTRY
1996 (12th)	<b>Information, Computer and Communication Systems</b> For pioneering research on wide-band, low-loss optical fiber communications	Dr. Charles K. Kao	U.S.A.
	<b>Neuroscience</b> Elucidation of the functional principles and neural mechanisms of the cerebellum	Dr. Masao Ito	Japan
1997 (13th)	<b>Biotechnology in Medicine</b> Contribution to Establishment of Fundamental Concept on Causes of Cancer	Dr. Takashi Sugimura Dr. Bruce N. Ames	Japan U.S.A.
	<b>Systems Engineering for an Artifactual Environment</b> Establishment of the Robot Industry and Creation of a Techno-Global Paradigm	Dr. Joseph F. Engelberger Dr. Hiroyuki Yoshikawa	U.S.A. Japan
1998 (14th)	<b>Generation and Design of New Materials Creating Novel Functions</b> For the creation and realization of the concept of man-made superlattice crystals which lead to generation of new materials with useful applications	Dr. Leo Esaki	Japan
	<b>Biotechnology in Agricultural Sciences</b> Establishment of the theory and method of the production of transgenic plants	Pro.Dr. Jozef S. Schell Dr. Marc C. E. Van Montagu	Belgium
1999 (15th)	<b>Information Technologies</b> Establishment of Coding Theory for Reliable Digital Communication, Broadcasting and Storage	Dr. W. Wesley Peterson	U.S.A.
	<b>Molecular Recognition and Dynamics in Bioscience</b> Elucidation of the three-dimensional structures of class I and class II human histocompatibility antigens and their bound peptides	Dr. Jack L. Strominger Dr. Don C. Wiley	U.S.A.
2000 (16th)	<b>City Planning</b> Establishment of an Ecological City Planning Process and Proposal of a Land Use Evaluation System	Prof. Ian L. McHarg	U.S.A.
	<b>Host Defense</b> Discovery of Immunoglobulin E and mechanisms of IgE-mediated allergic reactions	Dr. Kimishige Ishizaka	Japan
2001 (17th)	<b>Science and Technology of Environment Conscious Materials</b> Discovery of environmentally benign electrode materials for high energy density rechargeable lithium batteries	Dr. John B. Goodenough	U.S.A.
	<b>Marine Biology</b> Contribution to the development of Biological/Fisheries Oceanography and for conservation of fishery resources and marine environment	Dr. Timothy R. Parsons	Canada
2002 (18th)	<b>Computing and Computational Science and Engineering</b> Advancement of Civilization through Invention, Implementation and Deployment of the World Wide Web	Dr. Timothy John Berners-Lee	U.K.
	<b>Developmental Biology</b> Pioneering work on mammalian embryonic development	Dr. Anne McLaren, DBE, FRS, FRCOG Dr. Andrzej K. Tarkowski	U.K. Poland
2003 (19th)	<b>Science and Technology of Complexity</b> Creation of Universal Concepts in Complex Systems—Chaos and Fractals	Dr. Benoit B. Mandelbrot Dr. James A. Yorke	U.S.A.
	<b>Visualizing Techniques in Medicine</b> Discovery of the principle for functional magnetic resonance imaging	Dr. Seiji Ogawa	Japan
2004 (20th Anniversary)	<b>Chemical Technology for the Environment</b> Pioneering Work on Photochemical Catalysis and Its Application for the Environment	Dr. Kenichi Honda Dr. Akira Fujishima	Japan
	<b>Food Production Based on Ecosystem Concepts</b> Contributions to the Understanding of Shelf Ecosystems and Their Sustainable Utilization	Dr. Keith J. Sainsbury	New Zealand
	<b>Science and Technology for Conservation of Biodiversity</b> Observational, Experimental and Theoretical Achievements for the Scientific Understanding and Conservation of Biodiversity	Sir John H. Lawton	U.K.
2005 (21st)	<b>Information and Media Technology</b> Pioneering Contributions to Natural Language Processing and Intelligent Image Processing	Dr. Makoto Nagao	Japan
	<b>Cell Biology</b> Fundamental Contribution in Elucidating the Molecular Mechanisms of Cell Adhesion	Dr. Masatoshi Takeichi Dr. Erkki Ruoslahti	Japan U.S.A.
2006 (22nd)	<b>Global Change</b> For pioneering research on atmospheric structure and composition based on his satellite observation technology and for promotion of international assessments of climate change	Sir John Houghton CBE FRS	U.K.
	<b>The Development of Novel Therapeutic Concepts and Technologies</b> The Discovery of the Statins and their Development	Dr. Akira Endo	Japan
2007 (23rd)	<b>Innovative Devices Inspired by Basic Research</b>  <b>Science and Technology of Harmonious Co-Existence</b>	Laureates of 2007 (23rd) JAPAN PRIZE will be announced on 11 January 2007	

## Request to fill in Research Field List.

Thank you for your continuing support of the Japan Prize which is sponsored by the Japan Science and Technology Fopundation.

We are endeavouring to obtain as many recommendations as possible from key figures with a view to further developing the Japan Prize.

To this end we are writing to request that you enter below your own field of research as indicated.

The information that you provide will be kept strictly confidential.

### Notes:

1. The field of research is one in which you are currently conducting research. Please place a square black bullet point within the box that applies to your field (in the Research Field bordered by bold lines) (multiple entries allowed)
2. The list of fields is not necessarily comprehensive so if you find that there is no exact match please enter the field that is the closest. Please use the sub-categories column as a reference tool.
3. Please fax or post your reply.
4. Only record your address if it differs from the address label.
5. If you send multiple pages, you only need to record your name, address and ID number on the first page.

**FAX    +81-3-5545-0554**  
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**【Comprehensive Disciplines and Combined New Disciplines】    1**

Field	Sub-Category	Field	Sub-Category
<input type="checkbox"/> 01 Informatics	Basic Informatics	<input type="checkbox"/> 11 Environmentology	Environmental Dynamic Analysis
	Software		Environmental Impact Evaluation/ Environment Policy
	Computer Systems & Networks		Radiation/ Chemical Substance Effects Science
	Media Information Science/ Databases		Environmental Technology/ Environmental Materials
	Intelligent Informatics	<input type="checkbox"/> 12 Nano/Micro Science	Nano Structural Science
	Perceptual Information Processing/ Intelligent Robotics		Nano Materials/ Nano Bioscience
	Sensitivity Informatics/ Soft Computing		Micro/Nano Devices
	Information and Library Science/ Humanistic Social Informatics		
	Cognitive Science	<input type="checkbox"/> 13 Social/Safety System Science	Social System Engineering/ Safety Systems
	Statistical Science		Natural Disaster Science
Bio and Life Informatics	<input type="checkbox"/> 14 Genome Science	Basic Genome Science	
		Applied Genome Science	
<input type="checkbox"/> 02 Neuroscience	General Neuroscience	<input type="checkbox"/> 15 Biomolecular Science	
	Neuroanatomy/ Neuropathology		
	Neurochemistry/ Neuropharmacology	<input type="checkbox"/> 16 Resource Conservation Studies	
	Nerve/Muscular Physiology		
<input type="checkbox"/> 03 Laboratory Animal Studies		<input type="checkbox"/> 17 Gender	
<input type="checkbox"/> 04 Human Medical Engineering	Biomedical Engineering/ Biomaterials Science		
	Medical Systems		
	Rehabilitation Science/ Welfare Engineering		
<input type="checkbox"/> 05 Health & Sports Science	Physical Education		
	Sports Science		
	Applied Health Science		
<input type="checkbox"/> 06 Human Life Science	General Human Life Science		
	Dietary Habits Studies		
<input type="checkbox"/> 07 Science Education/ Educational Technology	Science Education		
	Educational Technology		
<input type="checkbox"/> 08 Scientific Sociology/ History of Science & Technology			
<input type="checkbox"/> 09 Cultural Asset Studies			
<input type="checkbox"/> 10 Geography			

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**【Science and Technology Fields】2**

Field	Sub-Category	Field	Sub-Category	
<input type="checkbox"/> 01 Mathematics	Algebra	<input type="checkbox"/> 09 Basic Engineering	Applied physical Properties/ Crystal Engineering	
	Geometry		Thin film/Surface/Interfacial Physical Properties	
	General Mathematics (including Probability Theory and Statistical Mathematics)		Applied Optics/ Quantum Optical Engineering	
	Basic Analysis		General Applied Physics	
<input type="checkbox"/> 02 Astronomy	Global Analysis		Basic Engineering	
<input type="checkbox"/> 03 Physics	Elementary Particle/Atomic Nucleus/Cosmic Ray/Space Physics	<input type="checkbox"/> 10 Mechanical Engineering	Machine Materials/ Material Mechanics	
	Physics I		Production Engineering/ Processing Studies	
	Physics II		Design Engineering/Machine Functional Elements/Tribology	
	Mathematical Physics/ Basic Physical Properties		Fluidics	
	Atomic/Molecular/Quantum Electronics/ Plasma		Thermal Engineering	
	Biophysics/ Chemical Physics		Machine Mechanics/Control	
<input type="checkbox"/> 04 Earth and Planetary Science	Solid State Earth And Planetary Physics		Intelligent Mechanics/ Mechanical Systems	
	Meteorology/ Marine Physics/ Limnology	<input type="checkbox"/> 11 Electrical and Electronic Engineering	Electric Power Engineering/ Electrical Equipment Engineering	
	Upper Atmosphere Physics		Electronic/Electric Materials Engineering	
	Geology		Electronic Devices/ Electronic Equipment	
	Stratigraphy/ Paleontology		Communication/Network Engineering	
	Petrology/ Mineralogy/ Ore Deposit Science		Systems Engineering	
Geochemistry and Astrochemistry	Measurement Engineering			
<input type="checkbox"/> 05 Plasma Science			Control Engineering	
		<input type="checkbox"/> 12 Civil Engineering	Civil Engineering Materials/ Building/ Construction Management	
<input type="checkbox"/> 06 Basic Chemistry	Physical Chemistry		Structural Engineering/ Earthquake Engineering/ Maintenance Management Engineering	
	Organic Chemistry		Geotechnical (Soil) Engineering	
	Inorganic Chemistry		Water Control Science	
<input type="checkbox"/> 07 Complex Chemistry	Analytical Chemistry			Traffic Engineering/ Land Planning
	Synthetic Chemistry			Civil Engineering Environmental Systems
	Polymer Chemistry	<input type="checkbox"/> 13 Architectural Engineering	Architectural Structures/ Materials	
	Functional Material Chemistry		Architectural Environment/ Equipment	
	Environmental Chemistry		Town Planning/ Architectural Planning	
	Body-related Chemistry		Architectural History/Design	
<input type="checkbox"/> 08 Materials Chemistry	Functional Materials and Devices		<input type="checkbox"/> 14 Materials Engineering	Metal Physical Properties
	Organic Industrial Materials			Inorganic Materials/Physical Properties
	Inorganic Industrial Materials	Composite Materials/Physical Properties		
	Polymer/Textile Materials	Structural/Functional Materials		
			Material Processing/Treatment	
			Metallic Production Engineering	
		<input type="checkbox"/> 15 Process Engineering	Chemical Engineering Physical Properties/ Transfer Operation/ Unit Operation	
			Reaction Engineering/ Process Systems	
			Catalytic/ Resource Chemical Processes	
			Biofunction/ Bioprocess	
		<input type="checkbox"/> 16 Integrated Engineering	Aerospace Engineering	
			Ship Marine Engineering	
			Earth/Resource Systems Engineering	
			Recycling Engineering	
			Nuclear Fusion	
			Atomic Engineering	
			Energy Engineering	

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**【Biosystems】 3**

Field	Sub-Category	Field	Sub-Category
<input type="checkbox"/> 01 Basic Biology	Heredity/ Genome Dynamics	<input type="checkbox"/> 12 Pharmacy	Chemical Pharmacy
	Living organisms/ Environment		Physical Pharmacy
	Plant Physiology/ Molecules		Biological Pharmacy
	Form/ Structure		Drug Development Chemistry
	Animal Physiology/ Behaviour		Environmental Agriculture
	Biodiversity/ Classification		Medical Pharmacy
<input type="checkbox"/> 02 Biological Science	Structural Biochemistry	<input type="checkbox"/> 13 Basic Medicine	General Pharmacy (including Histology and Embryology)
	Functional Biochemistry		General Physiology
	Biophysics		Environmental Physiology (Including Sports Medicine and Nutritional Physiology)
	Molecular Biology		General Pharmacology
	Cell Biology		General Medical Chemistry
	Developmental Biology		Pathological Medical Chemistry
<input type="checkbox"/> 03 Anthropology	Evolutionary Biology		Human Genetics
	Anthropology		Human Pathology
<input type="checkbox"/> 04 Agriculture	Physiological Anthropology		Experimental Pathology
	Breeding Studies		Parasitology (including Sanitary Zoology)
	Agronomy/ Weed Science	Bacteriology (including mycology)	
	Horticulture/ Landscaping	Virology	
<input type="checkbox"/> 05 Agricultural Chemistry	Plant Pathology	Immunology	
	Applied Entomology	<input type="checkbox"/> 14 Boundary Medicine	Medical Sociology
	Plant Nutrition Science/ Soil Science	Applied Pharmacology	
	Applied Microbiology	Pathological Examination Studies	
<input type="checkbox"/> 06 Forestry	Applied Biochemistry	<input type="checkbox"/> 15 Social Medicine	Hygienics
	Bio-production Chemistry/ Bio-organic Chemistry		Public Health/ Health Science
	Food Science		Forensic Medicine
<input type="checkbox"/> 07 Fisheries Science	Forestry/ Forest Engineering	<input type="checkbox"/> 16 Clinical Internal Medicine	General Internal Medicine (including Psychosomatic Medicine)
	Timber Production Science/ Wood Engineering		Internal Medicine-Digestive Organs
<input type="checkbox"/> 08 Agronomy	General Fisheries Science		Internal Medicine-Circulatory Organs
	Fisheries Chemistry		Internal Medicine-Respiratory Organs
<input type="checkbox"/> 09 Agricultural Engineering			Renal Internal Medicine
	Agricultural Civil Engineering/ Farm & Village Planning		Internal Medicine-Neurology
	Agricultural Environmental Engineering		Metabolic Science /Metabolomics
<input type="checkbox"/> 10 Animal Husbandry and Veterinary Science	Agricultural Information Engineering		Endocrinology
	Animal Studies/ Grassland Studies		Hematology
	Applied Animal Science		Collagen Disease/ Allergies/ Infectious Disease Medicine
	Basic Veterinary Science/ Basic Animal Husbandry	Pediatrics	
	Applied Veterinary Science	Embryonic/Neonatal Medicine	
<input type="checkbox"/> 11 Boundary Agriculture	Clinical Veterinary Science	Dermatology	
		Psychoneurosis Science	
			Radiation Science



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**【Biosystems】 3**

Field	Sub-Category
<input type="checkbox"/> Clinical Surgery 17	General Surgery
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	Digestive Organ Surgery
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	Thoracic Surgery
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	Neurosurgery
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	Orthopedic Surgery
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	Anesthesiology/ Resuscitation Studies
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Urology	
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Obstetrics and Gynecology	
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Otorhinolaryngology	
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Ophthalmology	
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Pediatric Surgery	
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Plastic Surgery	
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Emergency Medicine	
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<input type="checkbox"/> Dentistry 18	Morphological Basic Dentistry
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	Functional Basic Dentistry
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	Pathological Dentistry/ Odontological Radiology
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	Conservative Dentistry
	-----
	Prosthetic Dentistry
-----	
Surgical Dentistry	
-----	
Orthodontic/Pediatric Dentistry	
-----	
Periodontal Dentistry	
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Social Dentistry	
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<input type="checkbox"/> Nursing Science 19	Basic Nursing Science
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	Clinical Nursing Science
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	Community/Aged Nursing Science
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