EXECUTIVE PROGRAM OF COOPERATION IN THE FIELD OF SCIENCE AND TECHNOLOGY BETWEEN THE GOVERNMENT OF ITALY AND THE GOVERNMENT OF JAPAN FOR THE PERIOD FROM 2008 TO 2009

Within the framework of the Agreement between the Government of Italy and the Government of Japan on Cooperation in Science and Technology, signed at Tokyo, on October 7th, 1988, the delegations of Japan and Italy held the 9th Session of the Joint Committee on December 28, 2007.

The Italian delegation was led by Ambassador Mario Salvatore Bova, Ambassador of Italian Republic to Japan.

The Japanese delegation was led by Ambassador Yasuo Matsui, Ambassador Extraordinary and Plenipotentiary for Science and Technology Cooperation.

The members of the two delegations are given in **Annex 1**.

The Government of Italy and the Government of Japan share the view that cooperative activities between Italy and Japan should be promoted for the period from 2008 to 2009 in the following manner.

1. MODALITIES OF COOPERATION
   The joint Scientific and Technological activities should be performed in the following ways: (i) research projects, (ii) exchange of researchers, experts and University professors, (iii) organisation of workshops, conferences, seminars, exhibitions and advanced training courses, (iv) establishment of joint research centres, and (v) participation to multilateral activities.

2. PRIORITY AREAS
   Basic Sciences (Physics, Chemistry, Mathematics, Biology)
   Life Sciences (including Health, Biotechnology, Agriculture)
   Space
   Earth Science and Climate Change
   Energy
   Information and Communication Technology
   Robotics and Production Technologies
   Nanosciences, Advanced Materials
   Technologies Applied to Cultural Heritage.

3. NEW PROJECTS OF COLLABORATION
   3.1 New proposals were received and were subsequently evaluated by both sides.

   3.2 The projects listed in **Annex 2** are financed for the mobility of researchers.

   3.3 The projects in **Annex 4** are financed by the Government of Italy as significant bilateral research projects.

4. GENERAL and FINANCIAL PROVISIONS

The activities and initiatives foreseen in this Program are to be implemented in accordance with relevant rules, laws and regulations prevailing in each country and will be carried out within the limits of their respective budgets.
The general and financial provisions for the Government of Italy are indicated in **Annex 3**.
Italian and Japanese implementing organisations share the cost of cooperative activities within its own appropriated funds. Japanese implementing organisations may also apply for Japanese scheme to support research activities.

In addition to the bilateral projects listed in **Annex 2**, the Italian side will consider granting a unilateral financial contribution to the significant bilateral research projects listed in **Annex 4** (see paragraphs 3.2 and 3.3).

5. OTHERS

The present Program will continue for the years 2008 and 2009.

Any amendment to the text of this Program has to be carried out through diplomatic channels.

The present document, including the Annexes 1, 2, 3, 4, which are an integral part of it, has been drawn up in Tokyo on December 28, 2007, in two originals in English language.

Annex 1: Members of the delegations

Head of the Italian delegation

Mario Salvatore BOVA	Ambassador of Italian Republic to Japan.

Members

Andrea BERTOZZI	First Councellor, Italian Embassy
Angelo VOLPI	Scientific Attacchè, Italian Embassy

Head of the Japanese delegation

Yasuo MATSUI	Ambassador Extraordinary and Plenipotentiary for Science and Technology Cooperation, Ministry of Foreign Affairs

Members

Shigenobu KOBAYASHI	Principal Deputy-Director, International Science Cooperation Division, Ministry of Foreign Affairs
Naoki KURIHARA	Deputy Director, International Science Cooperation Division, Ministry of Foreign Affairs

Annex 2: List of the Selected Projects

No	Sector	Title	Italian Coordinator	Japanese Coordinator
1	BS	Optical Properties of Solid Oxiders at High Pressure	Prof. Paolo CALVANI, *Dept. of Physics University of Roma "La Sapienza"*	Prof. Takao NANBA, *Kobe University*
2	BS	Terahertz radiation emitter based on htcs materials	Dr. Carlo CAMERLINGO, *Institute of Cybernetics "E. Caianiello" CNR-National Research Council*	Prof. Masayoshi TONOUCHI, *Institute for Solid State Physics, Osaka University*
3	BS	Quantum confinement and transport in ultrathin films	Dr. Carlo CARBONE, *ISM- Institute of Structure of Matter, CNR-National Research Council*	Prof. Iwao MATSUDA, *Institute for Solid State Physics, The University of Tokyo*
4	BS	Superconductivity in cuprates: electron-phonon interaction and strong electron correlations effects	Dr. Vittorio CATAUDELLA, *INFM- National Institute for the Physics of Matter, CNR- National Research Council*	Prof. Naoto NAGAOSA, *Dept. of Applied Physics, The University of Tokyo*
5	BS	Stimuli-responsive gels: characterization of their mechanical properties by experiment, modeling, and numerical simulation	Prof. Antonio DE SIMONE, *SISSA-International School for Advanced Studies, Trieste*	Prof. Kenji URAYAMA, *Dept. of Materials Chemistry, Kyoto University*
6	BS	Local thermal expansion at phase transitions in magnetic materials studied by non-standard analysis of EXAFS	Prof. Paolo FORNASINI, *Dept. of Physics, University of Trento*	Prof. Takafumi MIYANAGA, *Dept of Advanced Physics, Hirosaki University, Amori*
7	BS	Study of laser pulse guiding conditions for laser-plasma acceleration	Dr. Luca LABATE, *Institute for Chemical and Physical Processes, CNR-National Research Council*	Dr. Hideyuki KOTAKI, *Japan Atomic Energy Agency*
8	BS	Heterohelicenes as chiral inducers or catalysis	Prof. Stefano MAIORANA, *Dept. of Chemistry, University of Milan*	Prof. Kenso SOAI, *Tokyo University of Science*
9	BS	Measurement of cosmic rays and luminous phenomena from space	Prof. Piergiorgio PICOZZA, *Dept. of Phisics, University of Rome "Tor Vergata"*	Prof. Fumiyoshi KAJINO, *Dept. of Phisics, Konan University, Kobe*
10	BS	Superconducting heterostructures for photon detection	Prof. Giovanni Piero PEPE, *INFM-National Institute for the*	Prof. Hiroaki MYOREN, *Graduate School of Science and*

			Physics of Matter, CNR-National Research Council	*Engineering, Saitama University*
11	BS	Design of superactive palladium-based catalysts for CO/olefin copolymerizati on reactions for the synthesis of new polymeric materials	Prof. Ennio ZANGRANDO, *Dept. of Chemical Sciences, University of Trieste*	Prof. Fabio PICHIERRI, *Tohoku University*
12	LS	PESo: developing innovative multicompartment vectors for the intracellular drug delivery	Prof. Federico BORDI, *Dept. of Physics, University of Roma "La Sapienza"*	Prof. Koji ASAMI, *Institute for Chemical Research, Kyoto University*
13	LS	Role of molecular oxygen binding and activation in human tyrosinase	Prof. Luigi BUBACCO, *Dept. of Biology, University of Padova*	Prof. Shun HIROTA, *Graduate School of Materials Science, Nara Institute of Science and Technology*
14	LS	Development of fermented grape marc (FGM) as a functional food for prevention of metabolic syndrome, allergy and autoimmune diseases	Prof. Emilio JIRILLO, *Faculty of Medicine, University of Bari*	Prof. Yoshio KUMAZAWA, *School of Science Kitasato University*
15	LS	New technologies and materials for the fractures and lengthening of Upper Extremities: clinical applications	Prof. Giorgio PAJARDI, *Institute of Plastic Surgery, University of Milan*	Prof. Hiroyasu IKEGAMI, *Dept. of Orthopaedic Surgery, Keio University*
16	LS	Pilot Study of the Correlation Between the Findings of Atypical/Malign ant Cells in Sputum and Fluorescence Bronchoscopy in Patients at High Risk (asbestos exposure) for Lung Cancer. Detection of genetic markers of lung cancer initiation and progression. Clinical Surveillance and loco-regional treatment by Photodynamic Therapy. Evaluation for chemoprevention therapy	Dr. Bruno PASQUOTTI, *IRCCs - Oncological Center, Aviano (Pordenone)*	Prof. Harubumi KATO, *Dept. of Surgery, Tokyo Medical University*
17	LS	Functional genomics of plant development in response to environment	Prof. Pierdomenico PERATA, *Scuola Superiore "Sant'Anna", Pisa*	Prof. Jinji YAMAGUCHI, *Faculty of Advanced Life Science, Hokkaido University*
18	LS	Identification of novel biomarker for the therapy of Ewing's sarcoma	Prof. Piero PUCCI, *Lab. on Oncologic Research, Orthopedical Institute "Rizzoli", Bologna*	Dr. Fumihiko NAKATANI M.D. *National Cancer Center Hospital, Tokyo*
19	ES.CC	CO-EM Combined observations for environmental monitoring of earthquakes, tsunamis, heat-flow, em signals from seafloor, ground and satellite	Dr. Angelo De SANTIS and Dr. Paolo FAVALI, *INGV- National Institute of Geophysics and*	Prof. Yoshiyuki KANEDA, *JAMSTEC and University of Toyama*

			Volcanology	
20	ES, CC	Evaluation of Volcanic activity based on continuous volcanic gas monitoring	Dr. Sergio GUERRIERI, *INGV-National Institute of Geophysics and Volcanology*	Dr. Hiroshi SHINOHARA, *AIST, Tsukuba*
21	ES, CC	Landslide hazard assessment and mitigation	Dr. Alessandro PASUTO, *IRPI-Institute for research on Hydrogeological Protection (Padova), CNR- National Research Council,*	Dr. Nobutomo OSANAI, *NILIM- National Institute for Land and Infrastructure Management, MLIT- Ministry of Land, Infrastructure and Transport*
22	ES, CC	Modelling and analysis of long-period ground motions for earthquake hazard mitigation	Dr. Alessandro VUAN, *National Institute for Experimental Oceanography and Geophysics (Sgonico)*	Prof. Hiroe MIYAKE, *Earthquake research Institute, The university of Tokyo*
23	EN	Distributed power generation from biomass and waste through integrated rotary kiln Pyrolysis and fuel cell and battery micro plants	Prof. Francesco FANTOZZI, *Dept. of Industrial Engineering, University of Perugia*	Dr. Claudio CAPIGLIA, *HITEC Co., Ltd., Osaka*
24	EN	Virtual design laboratory for innovative nuclear energy	Prof. Fabio INZOLI, *Dept. of Energetics, Polytechnics of Milano*	Prof. Hisashi NINOTAKA, *Research lab for Nuclear Reactors, Tokyo Institute of Technology*
25	ICT	Optimizing Data Transport over Next Generation Wireless Networks: Architectures and Solutions	Prof. Fabrizio GRANELLI, *University of Trento*	Prof. Toshinori TSUBOI, *Tokyo University of Technology*
26	ICT	Semiconductor-based photonic circuits operation for optical packet switching (SCOOPS)	Dr. Luca POTI', *CNIT- Inter-University Consortium for Telecommunication*	Dr. Naoya WADA, *NICT- National Institute of Information and Communication Technology*
27	ICT	A comparative study on gesture between Italian and Japanese children	Dr. Virginia VOLTERRA, *Institute of Cognitive Science and Technology, CNR-National Research Council*	Dr. Kazuki SEKINE *Shirayuri College, Chofu-shi, Tokyo*
28	R, PT	Design and Experimental Validation of Mechanisms for Robots	Prof. Giuseppe CARBONE, *LARM- Lab on Robotics and Mechatronics, University of Cassino*	Prof. Atsuo TAKANISHI, *Humanoid Robotics Institute Waseda University*
29	R, PT	Development of a joint telerobotics platform for remote haptiic exploration	Prof. Roberto OBOE, *Dept. of Mechanical Structural*	Prof. Kouhei OHNISHI, *Dept. of System*

			Engineering, University of Trento	*Design Engineering, Keio University*
30	R,PT	SKETCH-2D, Sensorimotor knowledge Embodiement in eye-hand Trajectories for the Creation of Human-like 2d Drawing	Prof. Bruno SICILIANO, *Dept. of Informatics, University of Napoli" Federico II" and University of Salerno*	Prof. Katsushi IKEUCHI, *Computer Vision Lab, The University of Tokyo*
31	NS,AM	Near-field polarization contrast for nano-optics applications	Prof. Maria ALLEGRINI, *Dept. of Physics, University of Pisa*	Dr. Ruggero MICHELETTO, *Optical Materials Lab, University of Kyoto*
32	NS, AM	Magnetic properties and spin dynamics in molecular nanomagnets	Prof. Ferdinando BORSA, *Dept. of Physics, University of Pavia*	Prof. Yuji FURUKAWA, *Dept. of Physics, Hokkaido University*
33	NS, AM	Advanced applications of X-ray absorbtion spectroscopy with synchrotron radiation to material science and biostructures	Prof. Federico BOSCHERINI, *Dept. of Physics, University of Bologna*	Dr. Paul FONS, *AIST, Tsukuba*
34	NS, AM	Wideband microwave absorption with magnetic nanopowder and nanostructured materials	Dr. Massimo PASQUALE, *INRIM-National Institute for Research on Metrology*	Prof. Masahiro YAMAGUCHI, *ECEI Dept., Tohoku University*
35	NS, AM	Droplet epitaxy quantum dots for next generation optoelectronics	Prof. Stefano SANGUINETTI, *Dept. of Material Science, University of Milano "Bicocca"*	Dr. Kazuaki SAKODA, *NIMS- National Institute of Materials Science, Tsukuba*
36	TCH	Virtual Noh-Gallery Project	Prof. Massimo BERGAMASCO, *"Scuola Superiore Sant'Anna", Pisa*	Prof. Hisato KOBAYASHI, *Hosei University*

Annex 3: Financial support for the approved projects

The projects to be financed within the present Program are listed in the Annex 2.

Financial support means that the implementing institutions responsible for the management of the cooperation in science and technology between the two Countries will cover the costs of the exchange of scientists, i.e. travel costs in accordance with the following provisions:

In accordance with the relevant rules of Italy, the travel costs of the Italian researchers to Japan shall be covered by the Italian side.

JOURNEY OF ITALIAN RESEARCHERS TRAVELLING TO JAPAN

Italian researchers willing to travel to Japan for stays at the local Institutions, must present, two months in advance the departure date, a formal application to the Italian Ministry of Foreign Affairs, Direzione Generale per la Promozione e la Cooperazione Culturale, Ufficio V, Piazzale della Farnesina 1, 00194 – Roma.

The Italian side will pay travelling expenses in economic class only.

The application is to be completed with:

Name and address of the hosting Institution;

Foreseen dates of departure and arrival;

Title of the research project;

Letter of invitation by the hosting Institution;

Declaration of Italian researcher with the engagement: to pay the due penalties in case of travel cancellation, to deliver travel documents (air tickets and boarding cards) within 15 days after returning and to write final report on the activities carried out within 30 days after return;

Declaration of the project's co-ordinator concerning the participation of the researcher to the project (only in case the researcher is not the project's responsible).

All the described rules are available at the internet address: www.esteri.it under Home > Politica Estera > Cultura > Cooperazione Scientifica e Tecnologica > Programmi Esecutivi > Mobilità dei ricercatori > **Mobilità dei ricercatori italiani.**

Annex 4: Significant bilateral projects

No	Sector	Title	Italian Coordinator	Japanese Coordinator
1	BS	High luminosity e+ e- colliders studies	Dr. Michail ZOBOV *INFN- National Institute of Nuclear Physics*	Dr. Katsunobu OIDE *KEK, Tsukuba*
2	LS	Tissue engineering technologies for heart mending	Prof. Paolo DI NARDO *Universita' di Roma "Tor Vergata"*	Prof. Teruo OKANO *Tokyo Women Medical University*
3	LS	The comparison of genetic and clinical features of PBC between Italy and Japan	Prof. Mauro PODDA *University of Milano*	Prof. Atsushi TANAKA *Teikyo University, Tokyo*
4	LS	Preparation of in vitro and in vivo models for characterization and testing of novel antidepressant compound	Prof. Maurizio POPOLI *Dept. of Pharmacology, University of Milano*	Dr. Jiro KASAHARA *Dept. of Pharmacology, Tohoku University*
5	LS	Fine mapping of interaction surfaces within components of the ubiquitin-mediated protein degradation pathway	Prof. Giovanna SERINO *University of Roma "La Sapienza"*	Prof. Tomohiko TSUGE *Kyoto University*
6	Sp	Joint Japanese and Italian laboratory for the dynamic characterization of cavitatioing rocket propellant turbopumps	Prof. Luca D'AGOSTINO *Alta S.p.A. and University of Pisa*	Prof. Yoshinobu TSUJIMOTO *Dept. of Engineering Science, Osaka University*
7	Sp	High resolution X-ray spectroscopy in space	Dr. Luigi PIRO *INAF-National Institute for Astrophysics*	Prof. Takaya OHASHI *Tokyo Metropolitan University*
8	Sp	The JEM-EUSO Project: observing cosmic rays and neutrinos from the International Space Station	Prof. Piero GALEOTTI *University of Torino*	Dr. Toshikazu EBISUZAKI *Computational Astrophysics Lab., RIKEN, Wako*
9	Es, CC	Direct and indirect aerosol radiative effect: a joint laboratory to improve knowledge of processes and measurement techniques	Prof. Franco PRODI *Institute of Atmospheric Science and Climate, CNR-National Research Council*	Prof. Teruyuki NAKAJIMA *Center for Climate System Research, The University of Tokyo*
10	ICT	Quantum information, computation and communication	Prof. Saverio PASCAZIO, *Dept. of Physics, University of Bari*	Prof. Ichiro OHBA *Dept. of Physics Waseda University*
11	ICT	MobEyes: Italy-Japan Lab on mobile video sensing for safety and entertainment	Prof. Rodolfo ZICH *Istituto Superiore "Mario Boella", Torino*	Prof. Tsuyoshi YAMAMOTO *Graduate School of Information Science and Technology, Hokkaido University*
12	R, PT	Joint Laboratory on biorobotics science and engineering	Prof. Paolo DARIO *Scuola Superiore "Sant'Anna", Pisa*	Prof. Shuji HASHIMOTO, *Waseda University*

13	R, PT	Load-related design of coating for semi-dry and dry forming processes	Prof. Andrea GHIOTTI *University of Padova*	Prof. Matsumoto RYO *Osaka University*
14	NS, AM	Control and manipulation of spin states in nano-scale quantum devices	Dr. Guido GOLDONI *National Institute for Physics of Matter, CNR-National Research Council*	Prof. Seigo TARUCHA,Applied *Physics Dept., The University of Tokyo*
15	NS, AM	Nanocharacterization of nanowires, nanomagnets and laser diodes for sensors, optoelectronics and data storage	Dr. Giancarlo SALVIATI, *IMEM- Institute of Materials for Electronics and Magnetism, CNR*	Dr. Takashi SEKIGUCHI, *Nanomaterials Lab, NIMS- National Institute of Material Science*
16	NS, AM	Italy-Japan Joint Lab on Nanostructured Materials for Sustainable Energy Production (NaMaSEP)	Prof. Enrico TRAVERSA *Universita' di Roma "Tor Vergata"*	Prof. Masaru MIYAYAMA *IIS- Institute of Industrial Science, The University of Tokyo*
17	TCH	Joint Research Project on Digital Image Systems	Prof. Vito CAPPELLINI *MICC- Media Integration and Communication Center, University of Firenze*	Dr. Mitsuo YAMAGUCHI *Hitachi, Ltd*
18	TCH	THz-ARTE, Terahertz Advanced Research TEchniques for non-invasive analysis in art conservation	Dr. Gian Piero GALLERANO *Dept. Physical Technologies and New Materials, ENEA-Italian National Agency for New Technologies, Energy and Environment*	Dr. Kaori FUKUNAGA *NICT- National Institute of Information and Communication Technology*