

Technical Research Centre of Finland (VTT) and AIST Signed an Agreement of Research Cooperation

On February 15th, AIST and the Technical Research Centre of Finland (VTT) signed a comprehensive agreement of research cooperation. VTT conducts research and development in a wide range of fields as the largest public research institution in Northern Europe, with over 3,000 staff members. With many shared research projects with VTT, AIST has historically continued research exchange of research unit level, such as the coordination of Electrotechnical Laboratory, when AIST was still the Agency of Industrial Science and Technology, with VTT Electronics in Oulu City. In the future it is likely that several more research units will conclude agreements of research cooperation and joint research contracts. In light of this, based on discussion with VTT headquarters, the two institutions agreed to conclude a comprehensive agreement of cooperation including guidelines on handling intellectual property rights and provisions for conflict resolution procedures.

VTT President Dr. Erkki KM Leppävuori came to Japan

for the signing of the agreement of cooperation, meeting with Senior Vice-President Kodama and associates at AIST Tsukuba and visiting laboratories there. Afterward, he went to Tokyo Headquarters where he met with AIST President Yoshikawa and signed the agreement.



Vietnam-Japan Scientific Cooperation Workshop on Geo-Grid

A workshop aiming to integrate grid technologies with the geological information field was held over a two-day period commencing on March 6th in Hanoi, Vietnam. Two workshops have already been held in a mutually complementary tie-up between AIST and the Vietnamese Academy of Science and Technology (VAST), an institution with which AIST has concluded a comprehensive agreement.

This latest workshop focuses on the field-integrating project Geo-Grid. AIST called on a wide array of future users: in addition to researchers at the two institutions, researchers in fields like IT, geosciences, agriculture, and forestry gathered from the Vietnam Ministry of Natural Resources and Environment, and the Ministry of Agriculture and Rural Development, Ho Chi Minh City University of Technology, Forestry and Forest Products Research Institute in Japan, Nagoya University, Tohoku University, and the Earth Remote Sensing Data Analysis Center (ERSDAC).

Following greetings from VAST Vice President Nguyen Khoa Son, AIST Vice President Naomasa Nakajima, Dr. Nguyen Cong Thanh, Deputy Minister of the Vietnam Ministry of Natural Resources and Environment, and representatives from the Coordinating Committee for Geoscience Programs in East and Southeast Asia (CCOP), various discussions were held. Topics included making use of geological data in earth observation and environment with an eye toward expansion to Southeast Asia with remote sensing via satellite, disaster prevention technologies, resource exploration, biomass distribution, environmental protection, and CO₂ flux. The topics of the future coordination between geosciences and IT, as well as cooperation between Japan and Vietnam were also brought up.



The opening ceremony.
AIST Vice President Nakajima on stage.

AIST President Yoshikawa Visits the Chinese Academy of Sciences and Hosts Joint Symposium on Innovation

In May 2004, AIST concluded a comprehensive agreement of research cooperation with the Chinese Academy of Sciences (CAS). Then CAS President Lu Yongxiang visited Japan. In November 2005, AIST, NEDO and CAS held a general conference in Beijing and a workshop on biomass and other renewable energy sources in Guangzhou as specific actions taken in light of the agreement. These events highlighted the environmental and energy fields, areas that will benefit from mutually complementary coordination between Japan and China. This time AIST President Yoshikawa visited CAS and exchanged views with President Lu, holding a symposium on innovation (“chuangxin” in Chinese) with the academy on March 24th, 2006. President Yoshikawa's visit came directly following the National People's Congress in March 2006, matching the timing of the beginning of China's 11th 5-Year Plan in 2006, which had been officially approved at the congress.

CAS-AIST Innovation Forum 2006, featuring speeches by President Yoshikawa and CAS President Lu, filled the venue to near capacity with a total of over 300 people, including researchers and administrators from CAS, the Chinese Academy of Social Sciences, Tsinghua University, and Peking University, as well as local Japanese staff from the Japanese Embassy, NEDO, and JETRO. Lively discussion took place after the speeches, including questions from young Chinese researchers on issues such as how international cooperation should be (the outlines for the speeches are given below).

On the same day, President Yoshikawa visited Tsinghua University, thanking its president, Gu Binglin, who is a member of the AIST Advisory Board, for his presence on

the board in February. They also exchanged views on such issues as innovation management and future strengthening of ties between AIST and the university. President Gu spoke about the history of Tsinghua University, its output of many key people in the Chinese government –including Chinese President Hu Jintao, its establishment of a medical school and other development of top-level research in China, its emphasis on networking with many US-based and other overseas universities and research organizations, and its reinforcement of coordination with business (including those in the West and Japan, Hong Kong, and Taiwan). President Gu also expressed his expectations for the university's coordination with AIST.

CAS – AIST Innovation Forum 2006

Date: March 24th, 2006

Place: Library of the Chinese Academy of Sciences
(Zhongguancun, Beijing)

• Contents of President Yoshikawa's speech

“National Commitment for Innovation in Japan - The Role of AIST”

Topics included: Japanese innovation, promotion of AIST as an innovation hub, AIST's second period research strategy to accommodate the Third Science and Technology Basic Plan, AIST's philosophy on Full Research with case examples, and bringing Full Research to society.

• Contents of CAS President Lu's speech

“A Future-Oriented CAS”

Topics included: The historical role of CAS, reform of the structure of research fields and priority areas, systems for human resources development, reforming structural frameworks for innovation, and international cooperation.



President Yoshikawa giving a speech at the symposium



CAS President Lu (left) and AIST President Yoshikawa

Hannover Messe 2006

Hannover Messe 2006 was held at Hannover Exhibition Grounds in Germany over a five-day period from April 24th to 28th. This event gathers a wide range of industries in the world's largest exclusively industrial-related exhibition. The exhibition is held each April in Hannover, Germany, with this past event being the 60th in its history. This year the event featured 5,175 companies from 66 countries, logging over 155,000 visitors. This particular year coincided with 2005/2006 Deutschland in Japan, a campaign to introduce a broad range of German culture, economy, and science to Japan, and at the urging of concerned parties in both countries the event saw over 800 Japanese attendees, with AIST making a more influential showing than ever before.

Among the ten fields exhibited at Hannover Messe 2006, AIST was featured in the R&D and Technology field, displaying a total of seven technological exhibitions: thermoelectric generation modules, ceramic films (Claist), ionic liquids, aerosol deposition (AD) methods, targeting drug delivery systems (DDS), ultrasonic echo probes, and Si/SiC filters. Due in part to our display of devices and prototypes this year our booth was visited by a great many business, university, and research institution representatives.

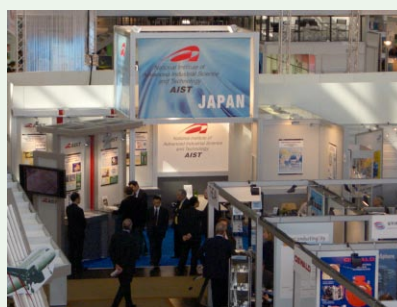
In addition to the AIST booth, this year the institute also hosted a joint seminar with Fraunhofer Gesellschaft of Germany on the third day of the event (April 26th). Four AIST researchers participated as speakers introducing AIST technologies, and we had the opportunity to exchange views

with Fraunhofer Gesellschaft.

The Japan-Germany Economic Forum, jointly hosted by the Japan External Trade Organization (JETRO) and the state of Niedersachsen, was held on the fourth day of the event April 27th. AIST Senior Vice-President Kodama delivered a keynote speech on Full Research to a many members of Japanese and German political and business circles in attendance.

In addition to all these programs, we were privileged to receive Japanese Ambassador to Germany Toshiyuki Takano at our booth on the last day of the Messe (April 28th), with whom we held enthusiastic discussions about the seven technologies we had on display.

AIST's latest showing at the Hannover Messe not only helped promote future technology transfer, but was also an event of great significance in the creation of high-level human networks and international cooperation.



Research Coordinator of the Geological Survey of Japan, AIST, Takes Over as CCOP Steering Committee Chairperson

The CCOP (Coordinating Committee for Geoscience Programs in East and Southeast Asia) is an international organization acting over 11 member nations to promote geoscience information and technology as well as mediate, coordinate, and carry out various projects. Japan's representative in the CCOP is the Minister of the Japanese Embassy in Thailand, with the resident sub-representative being the counselor at the embassy, and the permanent sub-representative being Research Coordinator of the AIST Geological Survey of Japan.

In the 46th Steering Committee Meeting held in Beijing in September 2005, Japan was nominated as the next presidency holder. AIST considers the dissemination of geoscience research and achievements in Asia as an important mission. Upon Japan's acceptance of its accession to the presidency, AIST held deliberations with the Ministry of Foreign Affairs on the appointment of a chairperson. Dr. Eikichi Tsukuda,

Research Coordinator of AIST was selected to take over as chairperson, with a term of office lasting two years commencing on January 1st, 2006.

The first meeting presided over by Dr. Tsukuda was the 47th Steering Committee Meeting held in Krabi, Thailand from March 29th through 31st, 2006. With participation of representatives from the member countries of Japan, Cambodia, China, Indonesia, South Korea, Malaysia, the Philippines, and Thailand, as well as members of the CCOP secretariat and the USA acting as advisory group chair, intense discussion transpired on matters such as to what degree the CCOP could contribute to society using geosciences as well as the related structures, activities, future plans, and financial policies to bring those contributions to fruition. The next Steering Committee Meeting will be held in Daejeon, South Korea on November 4th and 5th, 2006.

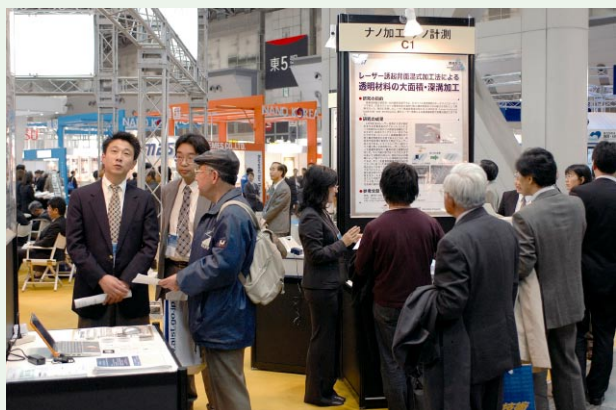
Participating in “ nano tech 2006 ”



Nanotechnologies are manufacturing technologies that dramatically improve the functionality of substances and materials and form the foundation of many technological fields, including information technology & electronics, energy & environment, and biotechnology. Nanotechnology and materials are expected to be chosen as priority areas in Japan's Third Science and Technology Basic Plan as was the case in the Second Term Plan. International interest in nanotechnology is also extremely high, with many countries actively promoting development toward industrialization of the new technologies.

The “nano tech 2006 International Nanotechnology Exhibition and Conference” (organized by the nano tech executive committee with backing by AIST and others) focuses on nanotechnology as a central theme and was held at Tokyo Big Sight over a three-day period from February 21st through 23rd, 2006. This exhibition and technology conferences have been held every year since 2002, increasing in scale each year as societal and especially industrial expectations of nanotechnology continue to grow. It has become the world's largest venue at which to talk business on cutting-edge nanotechnologies and products.

Along with the exhibition many technology conferences are held, at which the latest research and development results are displayed and announced. The event is also a place for many concerned parties with interests in nanotechnology to



promote industry through coordinated research and business partnerships, a place where business opportunities are created for venture enterprises, as well as a place for making international connections for promoting information exchange, cooperation, and other interaction. With 45,868 attendees over the three-day period (figure disclosed by the organizer), this year's “nano tech 2006” was a bigger success than ever before.

At “nano tech 2006”, AIST introduced selected research achievements from research units in various fields, with emphasis on those belonging to the nanotechnology, materials, and manufacturing fields. AIST introduced these achievements not only at the AIST booth, but also at the NEDO booth and the joint symposium. The following is a brief report:

The AIST Booth

This year, as before, AIST set up an exhibition booth and displayed selected research achievements pioneered by the institute. The institute announced and exhibited a total of 23 research achievements in the public eye: three related to energy, one related to nano-optics, eight related to nano-engineering and nano-measurement, two related to nano-biotechnology, and nine related to nanomaterials. This year AIST paid particular attention to creating business opportunities, making efforts to display the new technologies in more prototyped form than it had in past.



In addition to the presentation of these achievements, the large number of participants involved in venture enterprises at this year's event prompted AIST to introduce its venture development strategy as well. The institute also gave a taste of its research achievements concerning the relationship between nanotechnology and society, which is likely to become a major issue for the nanotechnology industry in the near future.

Besides exhibiting research achievements, the AIST booth also had a screen with about 20 seats for viewing small technology presentations, which were held in the booth in the afternoons throughout the course of the event. We conducted seven or eight presentations a day for a total of 23 in all, but certain presentations ran out of time as we fielded enthusiastic questions from visitors. On one hand it was unfortunate that the presentations were cut short, but on the other hand we were very happy with the high level of interest in our research.

The AIST booth received a very large number of visitors, partly owing to its placement very near to the nano tech 2006 Main Theater. It seems that these visitors were surely able to

see AIST's achievements up to now in technology research as well as our future directions. Having also received many enquiries from people in business relating to setting up joint research projects and obtaining intellectual property rights, we felt this was a very worthwhile exhibition.

While we prepared 5,000 pamphlets (with English translations) summarizing the achievements exhibited at our booth, these ran out on the afternoon of the final day of the event. We offer our apologies for inconveniencing those who visited thereafter. Please feel free to view the pamphlet, available in both English and Japanese, at the web address below.

http://www.aist.go.jp/aist_j/event/ev2006/ev20060221/list.html

The NEDO Booth

AIST actively participates in and works to advance technology-related governmental projects promoted by government ministries like the Ministry of Economy, Trade and Industry (METI) and the Ministry of Education, Culture, Sports, Science and Technology. Achievements coming out of projects promoted by METI were introduced at the NEDO booth, and in addition to these, AIST also presented 17 other research achievements in areas such as nanotechnology research, measurement standards research, and advanced manufacturing research.

An overview of AIST-related research achievements presented at the NEDO booth may be viewed at the web address below.

http://www.aist.go.jp/aist_j/event/ev2006/ev20060221/nedo.html

nano week 2006

The period from February 20th to 23rd has been billed as "nano week 2006," and during this period 16 symposiums, workshops, and other events were held concurrently with the International Nanotechnology Exhibition at the same venue, in Tokyo Big Sight.

On the 21st, the Workshop on International Nanotechnologies Standardization was hosted by AIST and the Japanese National Nanotechnology Standardization Committee. With the aim of promoting industrialization and appropriate

risk assessment of nanotechnology, the workshop saw introductions from those involved in nanotech standardization on trends in international standardization as well as nanotech standardization efforts in Japan and other Asian countries amid expectations of rapid expansion of standards creation efforts. Future orientation on nanotech standards was also set forth.

On the 22nd, AIST hosted the AIST Symposium: Japan Nanotech Venture Leadership Forum 2006. The symposium featured presentations and panel discussions by frontline analysts who are involved in nanotech ventures from various angles and who act as leaders in venture development. The idea came out of the recognition that industrialization of nanotechnology would require value systems and behavior models on a different dimension to any that have been used in the past, and was to illuminate the possibilities and potential issues in nanotech ventures in Japan.

In the Business Plan Contest that was part of Nanotechnology Business Forum 2006, held on the 23rd, a paper by Dr. Norio Murase, (at the time on loan as Director for Research and Development Survey, METI, from Photonics Research Institute, AIST) entitled "Fabrication and Sale of Biomarkers and Luminous Elements that Make Use of Glass-Coated Semiconductor Nanoparticles" received the special Entrepreneur Award.

http://www.ics-inc.co.jp/nanotech/nanoweek2006/nanoweek_06bj.html

