NARA INSTITUTE of
SCIENCE and TECHNOLOGY

GUIDEBOOK 2009-2010

Nara Institute of Science and Technology NAIST

NAIST

A Synergy of Science and

NAIST – a technological innovator

NAIST recently marked its fifteenth anniversary. Since its foundation, NAIST has developed steadily along with the surrounding Kansai Science City. As a national university consisting solely of graduate schools that specialize in teaching and research in information, biological, and materials sciences, we have been tackling cutting-edge problems at the frontiers of science in an environment of interdisciplinary and international cooperation, and have achieved impressive results.

Since Japan's national universities became financially independent of the state, we have entered a new era. In the present climate, in which levels of competitiveness comparable to those of private companies are required of a university, our tradition of working with industry and government and our strength in intellectual property management will enhance our position in research and education.

NAIST has been selected for a series of new national projects, including the Global COE Program to create world-leading centers for research and education, and the Support Program for Improving Graduate School Education to make graduate school education more substantial, both of which are commissioned by the Ministry of Education, Culture, Sports, Science and Technology. Our reputation is rising continuously. We might even say that NAIST's time has truly come.

We will continue to carry out more and more outstanding research, to train the next generation of scientific personnel, and to benefit society as a whole.

Contents

Message from the President

Nara Institute of Science and Technology (NAIST) was established in 1991 to open up Japan's postgraduate educational system, which was then somewhat inflexible, to the winds of change, with the objective of turning Japan into a science and technology-oriented nation. Accordingly, NAIST is composed solely of graduate schools, with none of the undergraduate courses found in most universities. NAIST's education and research are concentrated in three of the four priority areas listed in the Japanese government's science and technology policy (information technology, biological sciences, and nanotechnology), and we focus particularly on the integration and interfacing of these three areas.

NAIST's teaching faculty includes specialists who have demonstrated outstanding abilities in diverse environments, ranging from Japanese and overseas universities to research centers attached to private businesses, and thanks to our solid research organization and framework, these experts have produced numerous world-leading research achievements. NAIST accepts Japanese students, overseas students, and mature students interested in pursuing research in the above-mentioned areas regardless of their undergraduate educational backgrounds, and transforms them into fully fledged researchers and highly specialized personnel who can make a significant contribution to our planet and humanity in the 21st century. The guiding principle of our efforts is the great importance we attach to well-structured and organized quality education through advanced research.

NAIST is a relatively small university, with some 200 teaching faculty members, 150 administrative staff, and 1000 postgraduate students. Since its founding, NAIST has taken full advantage of this small size, constantly striving to improve its education and research so as to establish a new model of postgraduate education and research, always in line with the objectives of its establishment. The quality of research and education presently undertaken at NAIST is highly evaluated, as attested by governmental and private-sector statistical data. This is evidenced by the fact that NAIST's systematic education/research systems have been selected for programs such as the Global COE Program and the Support Program for Improving Graduate School Education, with the acquisition of large sums of competitive governmental research funds.

This Guidebook has been prepared to present NAIST's founding objectives and concept, organizational characteristics, administrative systems, research, education, community collaboration, international exchanges, and other activities. I hope it will provide the opportunity for you to find out about NAIST, and stimulate your interest in our university.

Akira ISOGAI
President

Concept

As a national university composed solely of graduate schools, NAIST promotes advanced research and educates accomplished individuals to help in the development of society based on the advancement of science and technology.

Objectives

- To promote high-level research in advanced science and technology
- To develop international leaders in research
- To train specialists capable of contributing to national society and the economy
- To promote relationships between science and the community and the creation of a scientifically literate population

Medium-term Goals and Plans (April 2004 – March 2010)

— Overall objectives of the university —

- To perform in-depth research in the core study areas of information, biological and materials sciences, while actively engaging in interdisciplinary studies to explore and seek solutions for issues in the most advanced areas.
- To actively address issues with strong social needs to deliver international-level research results that will help to shape the next generation.
- To foster students and staff who are highly motivated to work for the advancement of science and technology and are able to play leading roles in the international community through a systematic curriculum and research activities.
- To provide education to enable the acquisition of a good sense of ethics, broader views, logical thinking, positive leadership, fair judgment and articulateness with high linguistic capabilities.
- To return the benefits of the Institute's research to society by accumulating research results as an intellectual asset for humankind and promoting industry-government-academia collaboration.

Competing with the world at the cutting edge

NAIST is aiming to be an internationally competitive university.

We are striving to create a research center with a comprehensive perspective, integrating individual research achievements with collaboration between different fields and offering a globally flexible education for scientists and technologists.

Here we introduce the ways in which NAIST is rising to meet these challenges.

■ Global COE Program

The Global COE Program is a Ministry of Education, Culture, Sports, Science and Technology (MEXT) project, launched in 2007, to improve and enhance the educational and research functions of graduate schools, with the aim of training world-leading creative personnel and creating internationally competitive universities.

The Global Program for Frontier Biosciences, run by an integrated group from the laboratories of the Graduate School of Biological Sciences and the Bioinformatics and Genomics laboratories of the Graduate School of Information Science, has been selected as one of 13 centers in the life sciences field to continue from the 21st Century COE Program: Exploiting New Frontiers in Bioscience.

■ Support Program for Improving Graduate School Education

The Graduate Schools of Information Science and Biological Sciences were selected in 2007 for this program, launched in the same year by MEXT, with the objective of making graduate school education more substantial by offering focused support for outstanding educational initiatives.

The Graduate School of Materials Science was also selected for a two-year period from 2006 for a previous program, Initiatives for Attractive Education in Graduate Schools.

■ Progressive Education Program for IT Specialist Training

This program, launched in 2007 by MEXT, aims to create educational centers for training world-recognized top-level personnel in the field of information security who will be able to achieve the world's safest IT society, by means of concentrating latent capacity across the divides between universities and between academia and industry, and by enhancing educational content and systems.

The program proposed by NAIST's Graduate School of Information Science was one of only two selected for this project nationwide.

■ *Development of the University Intellectual Property Headquarters Project*

In an evaluation of its performance within the framework of the Development of the University Intellectual Property Headquarters Project, a MEXT project aimed at supporting the development of a model for strategic creation, management and utilization of intellectual property as university and graduate school research achievements (2003–2007), NAIST ranked first in the overall assessment, gaining the top position in three out of four evaluation categories.

■ *MEXT Industry-Government-Academia Collaboration Project (Strategic Development Program)*

In 2008, MEXT launched an Industry-Government-Academia Collaboration Project to support proactive, distinctive activities by national, public and private universities and to upgrade the overall quality of inter-sector collaboration so that universities' intellectual property strategies, which provide the driving force for innovation, can be effectively and sustainably deployed. In the framework of this project, NAIST's Industry-Government-Academia Collaboration Group has been chosen as one of 17 institutions across Japan to implement a project entitled Improving the Global Industry-Government-Academia Collaboration System.

■ *Plant Science Education Promotion Project*

This project was inaugurated in 2005 with support from MEXT to promote postgraduate education in plant science. Within the framework of this project, NAIST solicits research projects each year from postgraduate students throughout Japan and provides assistance with the implementation of selected outstanding projects, mainly in the form of funding and technical guidance. NAIST aims to contribute to raising the level of plant science in Japan by offering postgraduate students and young researchers from across Japan the opportunity to gather and exchange views, facilitating the creation of a network of young plant science researchers.

Characteristics

Acceptance of a Broad Range of Students

- NAIST holds entrance examinations three times a year, selecting students by interview instead of written examination, considering students' specialties.
- The curriculum is flexible and designed to meet the needs of students from diverse fields: multiple research advisors, transferable credits, and external supervisors.

Accelerated Degree Programs

- Students who are in excellent standing may complete their program in shorter periods. The minimum periods required for a master's degree and a doctorate are one and two years, respectively.

Mobile and Diverse Faculty

- NAIST is hiring capable young researchers who have achievements in advanced research at colleges, universities, and public or private research institutes.

Promotion of International Exchange and Cooperation

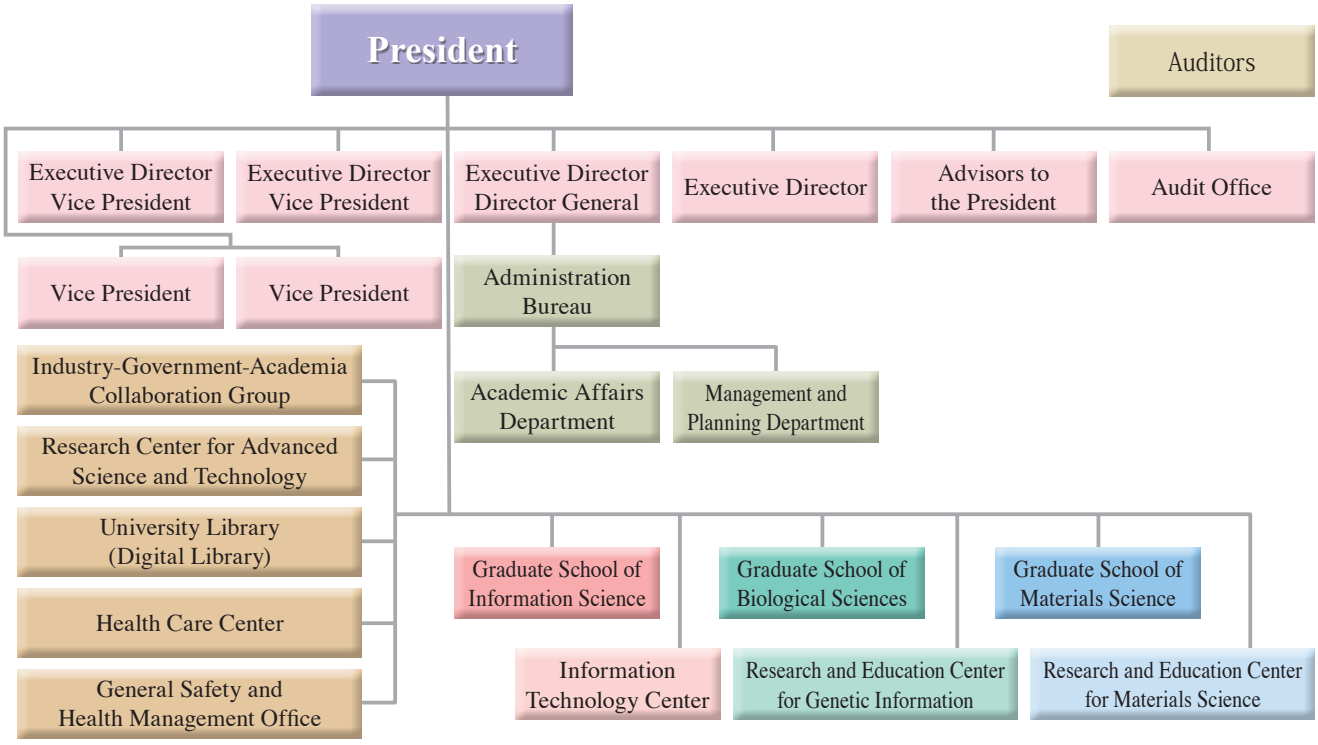
- NAIST actively promotes international exchange by organizing joint research projects with scientists from abroad and by holding international symposia. We also foster international education by accepting students from overseas.

Promotion of Industry-Government-Academia Collaboration

- To promote collaboration and sharing of intellectual resources, technology and information between universities, industry and the community, NAIST works in close cooperation with industry, government, and academic institutions. We also organize various activities to expose people in the local community to the advanced education and research we offer.

Administrative Structure

Organization



Responsibilities

Executive Director
- Research
- Education
- Academic Information
- Information Management
- Medium-term Goals and Plans
- Internal and External Evaluation
- Human Rights Issues/ Gender Equality

Executive Director
- Industry-Government-Academia Collaboration
- Community Collaboration
- Public Relations
- International Activities
- Environment, Safety, and Health Management

Executive Director
- Finance
- Labor Management of Faculty and Staff
- Facilities
- All-inclusive Administration

Executive Director
- Special missions from the President

Auditor

Audits practice of the Institute and submits reports to the President or the Minister of Education, Culture, Sports, Science and Technology based on audit results

General Planning Meeting

Plans long-term operations of the university corporation and the university, and conducts comprehensive regulation

Administrative Council

Discusses important issues regarding management of the university corporation

Board of Directors

Determines issues important to the university corporation and the university

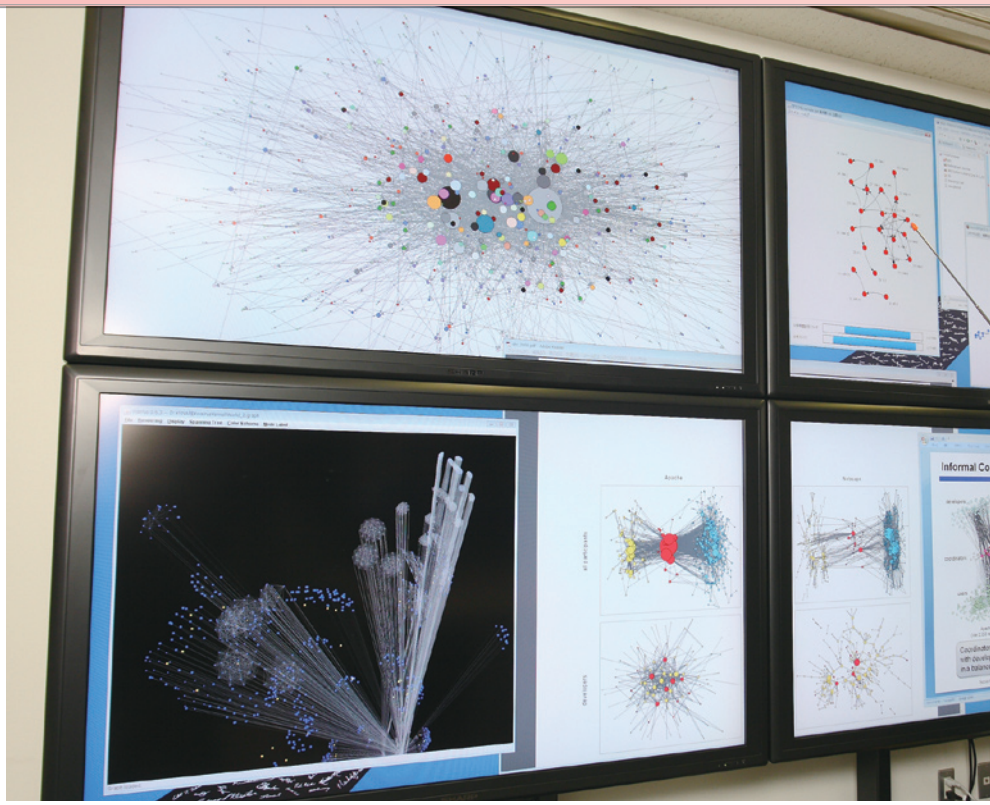
Education and Research Council

Discusses important issues regarding education and research of the university

Review Committee

Evaluates achievements of the university corporation and the university

Graduate School of Information Science



The Graduate School of Information Science undertakes high-level basic research in information science. We also systematically train students to be researchers and engineers as pioneers in the area of information, communication and life science technologies. The Departments of Information Processing, Information Systems, and Bioinformatics & Genomics, and the Information Technology Center provide educational programs that cover the majority of areas related to information science.

Since our initial selection (2002–2006) as a research and education center for the Ubiquitous Networked Media Computing 21st Century COE Program, we have been selected for numerous education and research programs, and, as we press ahead with the creation of an internationally competitive, world-leading graduate school, we are actively engaging in projects involving industry-government-academia collaboration.

Special systems designed to accept and encourage excellent students, such as entrance examination by interview, excellent student program, accelerated admission and early course completion, are implemented. Through our acknowledged curriculum and research base, we educate students who will lead the highly advanced information society.

Admission system that places high value on individuality

Interview-based admission / Cross-disciplinary admission and recruitment / Fast-track admission for outstanding students

Internationally competitive school of the highest standards

- Support Program for Improving Graduate School Education: Educational Program to Promote Creativity and International Competitiveness in Information Science
- Leading IT Specialist Training Promotion Program: IT Spiral-IT Specialist Program Initiative for Reality-based Advanced Learning / IT Keys-IT Specialist Program to Promote Key Engineers as Security Specialists
- EPEER Project: Education Program for Engineers and Enterprisers in Robotics

Open-minded, active faculty and diverse course structure

Seminars coordinated by Departments of Information Processing, Information Systems, Bioinformatics and Genomics, and Information Technology Center / Collaborative Laboratories in external institutions

Flexible research and education system

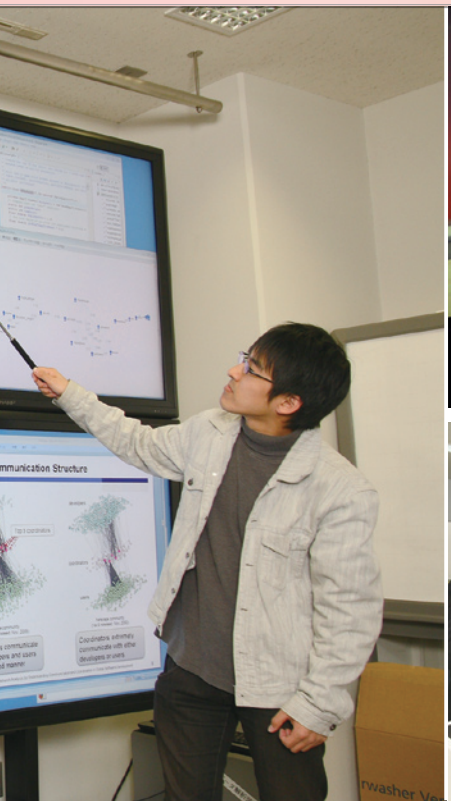
Choice of research laboratory based on student's preference / 4-term-a-year system with intensive training and varied curriculum, including archived lectures / Fast-track system for graduation / The highest grade for appraisal methods by Ministry of Economy, Trade and Industry.

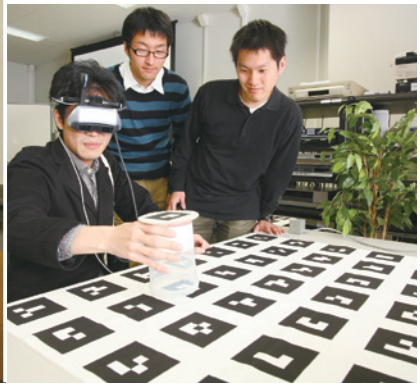
Support for outstanding students

Excellent student program / Teaching assistant (TA) and Research assistant (RA) program / Support for international exchange activities

Advanced research environment

"Mandara", integrated information processing system / Electronic library and archives / Wide range of advanced large-scale research facilities





Department of Information Processing

- Foundations of Information Science
- Foundations of Software
- Computer Design and Test
- Internet Engineering
- Computational Linguistics
- Advanced Intelligence
- Image Processing
- Speech and Acoustics Processing
- Interactive Media Design
- Applied Linguistics (Visiting Course)
- Quantum Information Processing (Visiting Course)

Department of Information Systems

- Computing Architecture
- Software Engineering
- Communications
- Vision and Media Computing
- Systems Science
- Systems and Control
- Robotics
- Software Design
- Internet Architecture and Systems
- Ambient Intelligence

Department of Bioinformatics and Genomics

- Database
- Theoretical Life-Science
- Biomedical Imaging and Informatics
- Systems Biology
- Structural Biology
- Functional Genomics
- Comparative Genomics
- Structural and Functional Bioinformatics
- Neural Computation (Visiting Course)

Collaborative Laboratories

- Communication (NTT Communication Science Laboratories)
- Neuroscience (Advanced Telecommunication Research Institute International)
- Network-Human Interaction (Panasonic Corporation, Advanced Technology Research Laboratories)
- Symbiotic Systems (NEC Corporation, Kansai Research Laboratoriesl)
- Human Interface (Fujitsu Laboratories, Ltd.)
- Multimedia Mobile Communication (NTT DoCoMo, Inc.)
- Optical and Vision Sensing (OMRON Corporation, Research and Development HQ Sensing & Control Technology Laboratory)
- Molecular Bioinformatics (National Institute of Advanced Industrial Science and Technology)
- Digital Human (National Institute of Advanced Industrial Science and Technology)
- Technology of Radiological Science (Research Institute of National Cardiovascular Center)
- Universal Communications (Keihanna Cooperation University System)

NAIST TOPICS

Kazushi IKEDA, Professor
Theoretical Life-Science Laboratory
Graduate School of Information Science

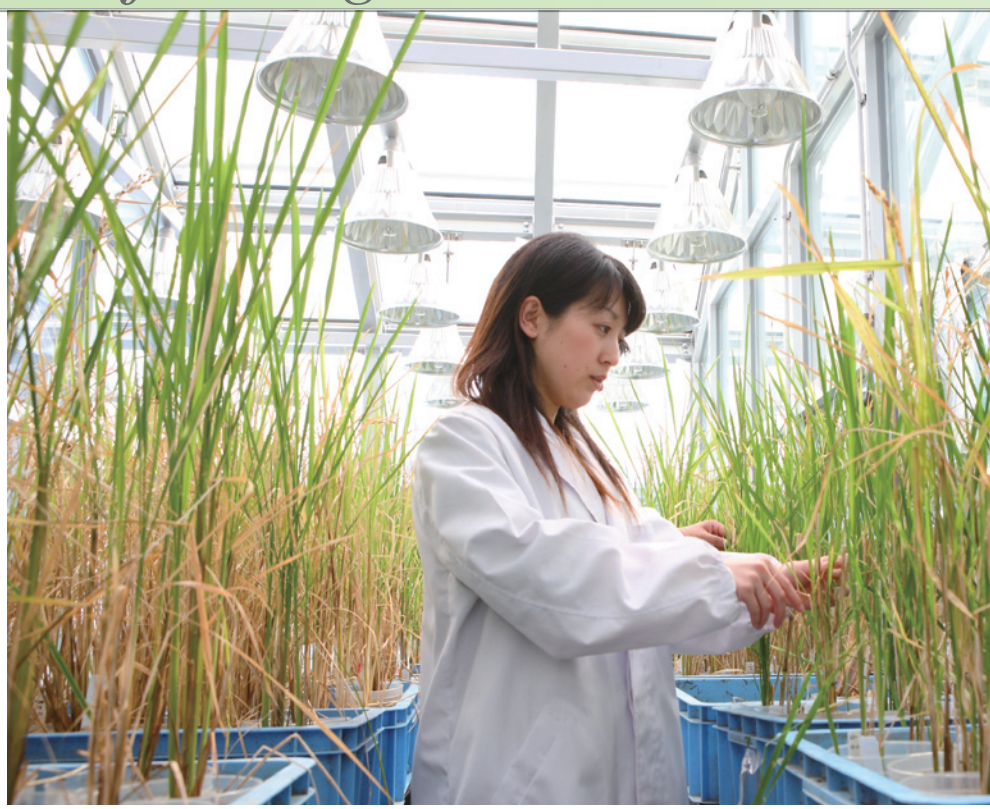
Exploring the essence of learning systems and applying them to science and engineering

The term “theoretical life” has been coined to designate learning systems in general. Both living systems and intelligent systems are learning systems that transform themselves to adapt to their surrounding environment. In our laboratory, we conduct research in an integrated discipline, attempting to elucidate the essential nature of theoretical life from a mathematical perspective and to utilize its outstanding properties in engineering applications.

Although many things in this world appear to have been designed as the result of guesswork, because of my mathematical and engineering training, I believe that things that work well do so for a reason. I want to clarify, in mathematical terms, why things work well and develop even better methods. When I finally discover the hidden essence of that “something” and express it neatly in a mathematical formula, I am as happy as a miner who has dug up a diamond. In future, I intend to expand the sphere of our research to elucidate the mechanism of neural information processing and develop robot control methods, based on the three main research pillars of machine learning, brain informatics, and adaptive systems.

Since my arrival at NAIST, I have been pleasantly surprised by the high level of student motivation. This is probably not unrelated to the fact that NAIST is a postgraduate university, with students leaving their undergraduate universities to study here, and most being able to join their first-choice laboratory, meaning that they have a very clear idea of what they want to do here. I believe that motivation is the most important factor in research. I look forward to welcoming highly motivated, sincere students who can look at themselves honestly and endeavor to make up for areas in which they may be lacking.

Graduate School of Biological Sciences



The Graduate School of Biological Sciences undertakes advanced research to elucidate various functions of microorganisms, plants and animals at the molecular and cellular levels, and clarifies basic phenomena of life and biological diversity.

In the 21st Century COE Program we elucidated the dynamic networks of molecules that comprise cells, using information science techniques in exhaustive analyses of genome and protein structure. Based on such advanced basic research, the School provides research and development that benefits human well-being, training researchers to play active roles in the international community.

Global COE Program

The "Global Program for Frontier Biosciences: Adaptation and survival strategies in a changing global environment" was adopted in 2007 as part of the Global COE Program commissioned by MEXT. We are vigorously developing this project with the goal of creating a globally pre-eminent center for training researchers capable of actively participating in the international community, while promoting world-leading advanced research in the biological sciences.

Active and high-level faculty and staff

Professors and associate professors, who are internationally active researchers, lead energetic research activities. The School is one of the top institutes in attracting funds such as Grants-in-Aid for scientific research and the COE Program from the Japan Society for the Promotion of Science and Japanese government ministries, showing that our faculty and staff are of high repute both inside and outside Japan.

Abundant research facilities

Each department is equipped with a variety of the latest equipment. Shared equipment, among the most advanced available for biological science research in Japan, is provided at various locations in the School.

Graduate school education with a comprehensive curriculum

We provide two courses to meet students' needs for their future careers: a two-year Bio-Expert course, and a five-year Frontier Bio course. We offer a wide range of lectures covering the various fields of biological sciences.

Support of students' research and life

We have a support system for students to enable them to engage in research without worrying about their basic needs. We offer Global COE funds as well as scholarships from the Japan Student Services Organization, plus TA and RA funds for distinguished students in the doctoral program.

Support Program for Improving Graduate School Education

The program "Bioscience Personnel Training Program Using a Two-Course-System: A pioneering approach to graduate school education emphasizing career design and process management" was adopted in 2007 as part of the Support Program for Improving Graduate School Education commissioned by MEXT, with the aim of im-

proving the new system of graduate school education.

■ *Project for the Promotion of Plant Science Education*

In 2005, our School began to function as a center for the networking of leading plant scientists nationwide to promote advanced education in plant science through collaboration between postgraduate-level educators.

Department of Cell Biology

- Structural Cellular Biology
- Cell Biotechnology
- Signal Transduction
- Intercellular Communication
- Plant Cell Biology and Organogenesis
- Metabolic Regulation of Plant Cells
- Gene Regulation Research
- Molecular Neuroscience
- Plant Molecular Biology
- Molecular and Cell Genetics
- Bioinformatics
- Medical Biology (Visiting Course)

Department of Molecular Biology

- Microbial Molecular Genetics
- Plant Molecular Genetics
- Animal Molecular Genetics
- Plant Molecular and Cellular Biology
- Gene Function in Animals
- Cell Proliferation and Differentiation
- Molecular and Developmental Biology
- Plant Molecular Morphogenesis
- Biophysics
- Biodynamics and Integrative Biology
- Systems Biology (Visiting Course)
- Functional Genomics (Visiting Course)

Collaborative Laboratories

- Molecular Microbiology and Genetics (Research Institute of Innovative Technology for the Earth)
- Molecular Genetics of Human Diseases (Research Institute, Osaka Medical Center for Cancer and Cardiovascular Diseases)
- Brain Development (RIKEN)

Plant Science Education Unit

- Plant Protein Analysis

Global COE Program Special Research Groups

- Developmental Morphology Research Group
- Plant Reproductive Genetics Research Group
- Developmental Genomics Research Group

NAIST OPICS

Yoshiko TAKAHASHI, Professor
Laboratory of Molecular and Developmental Biology
Graduate School of Biological Sciences

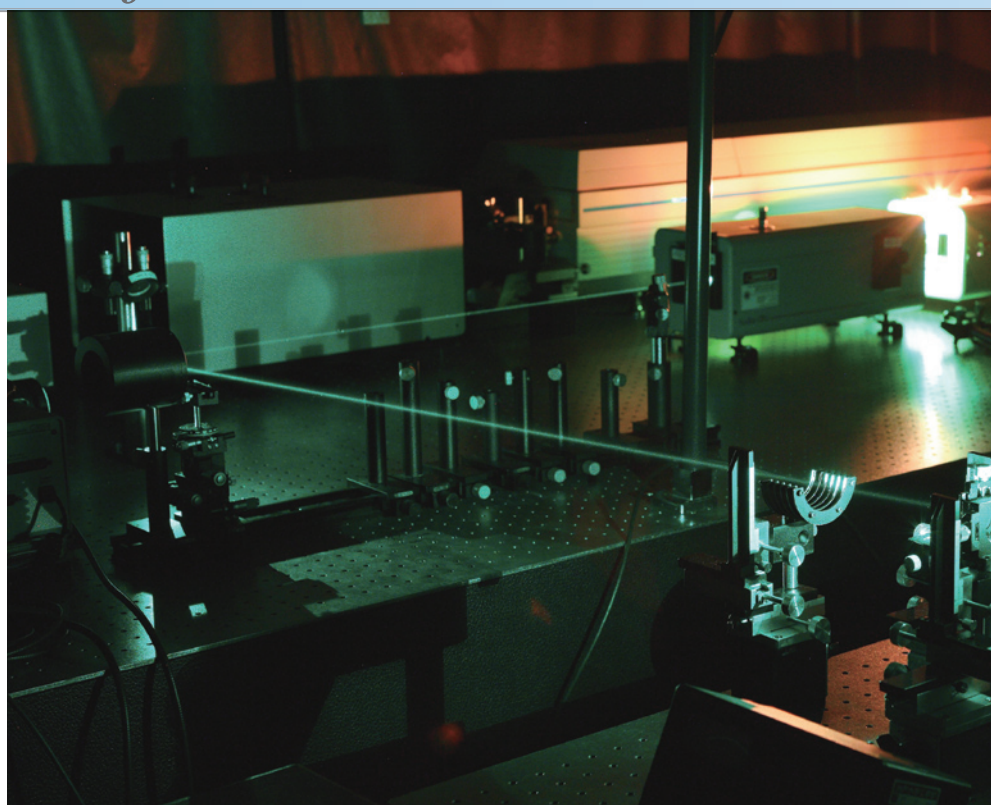
Elucidating the Dynamic Behavior of Cells in Forming the Body

When the body of a vertebrate is formed, an integrally harmonized three-dimensional structure is built through the cooperation of individual somatic cells playing their predetermined roles. We are working on the mechanisms behind the behavioral patterns of these cells. Recently, we discovered an unexpected phenomenon in which quite a limited number of cells, "selected" to form blood vessels from a form of tissue known as "somites" for muscles and bones, migrate dynamically through the body to reach predetermined sites of blood vessel formation. We have also revealed the role of the genes that enable this mysterious behavior on the part of the cells. Furthermore, it has been found that cells that form nerves are present in the vicinity of cells that form blood vessels, and the two types communicate closely with each other. If this fails, the morphogenesis of tissues and organs does not proceed well, resulting in unusual behaviors in the adult body such as those seen in cancer cells. Normally, the cells work to generate tissues and organs in an exquisite mechanism.

Our research area requires the capacity to observe the whole embryo or the whole body of a vertebrate. For example, the essential nature of a living organism cannot be understood simply by observing its blood vessels. To this end, we must always evaluate the available data from a broad range of viewpoints, a task that on the one hand represents the hardest aspect of our research but which also provides us with the greatest joy of exploring truth.

Researchers in my laboratory must be adept at communicating with each other. Another important requirement is a positive attitude to try anything that's interesting, while also enjoying leisure activities. It may only be after the students and I have exhausted every possible avenue that we finally reveal an interesting biological phenomenon. There is no substitute for that sort of pleasure.

Graduate School of Materials Science



New functional materials and new devices always play key roles in developing modern science and advanced technology. The Graduate School of Materials Science is now strongly promoting 'photonic nanoscience': by means of a broad-range photon energy covering from X-ray to microwave, novel structures, unique properties and new functionality of these new materials and devices can be elucidated at the electron, atom and molecular levels upward. We also conduct integrated engineering to understand the interaction of light with matter, to design new functional materials, and to develop new devices.

Our research output will contribute to new theory, new phenomena, new functional materials, new devices, innovative instruments, and new technologies in future. We are cooperatively educating students who are becoming excellent researchers with many talents and who are able to contribute to and lead research and development in these areas.

■ *Brilliant research accomplishments supported by an excellent environment*

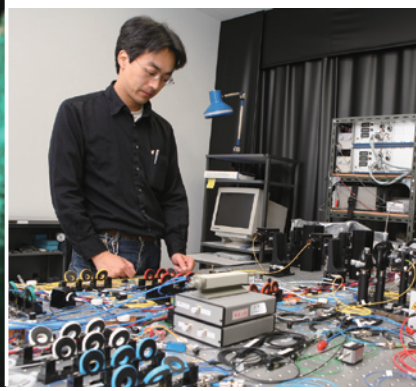
The faculty-to-student ratio in the School is extremely high. Internationally renowned and most active professors have great achievements along with many brilliant accomplishments, as evident from receiving abundant external research funds, such as Grants-in-Aid for scientific research. We can offer modern experimental facilities for all students in order to focus on research and study in a spacious environment. The School includes the Research and Education Center for Materials Science, a common education and research facility on campus to efficiently give students wholehearted support.

■ *Bidirectional industrial-academic cooperation program*

We offer fundamental courses in basic research and education in materials science, and promote collaborative laboratories to develop new materials and new devices. Students are able to have many opportunities to study practical developments. This is because researchers from external institutions including company laboratories are in charge of collaborative laboratories.

■ *Wide range of student support systems*

More than half of the students in the master's program and all students in the doctoral program are able to reside in dormitories on campus. Scholarships and research funds are also available. We cover travel expenses for all students in the doctoral program and limited students in the master's program to attend overseas international conferences. There are several sister school affiliations with academic institutions worldwide. Students have a great opportunity to study abroad.

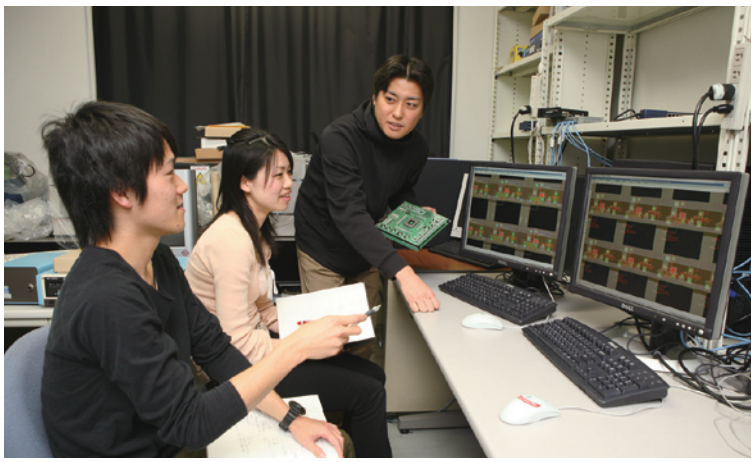


Laboratories of Materials Science

- Quantum Materials Science
- Surface and Materials Science
- Theoretical Condensed Matter Physics
- Advanced Polymer Science
- Photonic Device Science
- Information Device Science
- Microelectronic Device Science
- Synthetic Organic Chemistry
- Biomimetic Materials Science
- Bioenergetics and Biophysics
- Supramolecular Science
- Biocompatible Materials Science
- Photonic Molecular Science
- Ultrafast Photonics
- Nanostructure Magnetism
- Hamano Junichi Laboratory of Laser Bio / Nano Science

Collaborative Laboratories

- Functional Materials Science (Sanyo Electric Co., Ltd.)
- Mesoscopic Materials Science (Panasonic Corporation)
- Intelligent Materials Science (Sharp Corporation)
- Functional Polymer Science (Santen Pharmaceutical Co., Ltd.)
- Ecomaterial Science (Research Institute of Innovative Technology for the Earth)
- Sensory Materials and Devices (Shimadzu Corporation)



NAIST OPICS

Mikio KATAOKA, Professor
Laboratory of Bioenergetics and Biophysics
Graduate School of Materials Science

Exploring Protein Structures and Designing New Proteins

We are working on the structures, folding, functional expression mechanisms, dynamics and other properties of photoreceptors and other functional proteins, from a broad range of viewpoints, with the aim of understanding the design principles of proteins, the functional molecules fundamental to the life of organisms. The ultimate goal of our research is to understand the basics of life from the viewpoint of materials science, and my dream is to design and create artificial proteins that are useful in medical and other areas.

Proteins function by means of the donation and acceptance of protons (hydrogen). With this in mind, we demonstrated for the first time in the world that a special type of hydrogen bond known as a “low-barrier hydrogen bond” occurs in a protein, by means of high-resolution neutron protein crystallography, the best method of observing hydrogen. The finding reveals novel mechanism of photosignal transduction.

My laboratory is also responsible for promoting neutron life sciences. We are the only group in Japan engaged in protein research using neutron inelastic scattering spectrometry, which will be a major task for the Materials and Life Science Facility as part of the Japan Proton Accelerator Research Complex under construction with the sponsorship of MEXT.

Through these studies, I want to resolve the riddle of why nature selected proteins as biologically functional substances, and to reveal their essential principles by means of original ideas and independently developed technical approaches.

NAIST offers an excellent milieu for open-minded research. Discussions with researchers in other areas provide totally new insights. What I say to my incoming students every year is, “Find your own motivation for conducting research.” With the enthusiasm to make some degree of progress every day, however small, I hope that by the time they present their masters’ theses they will feel that they are no longer the same people they were when they first came to NAIST.

University Library (Digital Library)

The University Library is equipped as a digital library, permitting fast, accurate retrieval of the information and knowledge required to support educational and academic research activities related to advanced science and technology.

Books and journals are preserved in digital format. They can be accessed freely via the Mandara Network from anywhere. The library system has the integrated capability to archive not only printed media but also multimedia content, including video data such as recordings of lectures.

Characteristics

MyLibrary

Each library user can create his or her own page and design it according to their personal preference. This facilitates management of regularly browsed content, personal search histories and online content. Another feature is the capability to search and manage materials stored in the digital library and online journals in an efficient, cross-sectional manner.

Electronic archiving of internal publications

The Library collects and systematically archives the Institute's publications, including technical reports, final reports of Grants-in-Aid for scientific research and theses, as well as the texts of lectures and classes.

Archiving course units

The content of graduate school courses has been archived in a database and made internally and externally available.

Function as a media center

We accumulate academic information by digitization from printed books and journals, videos, CD-ROMs, DVDs and, through the network, processed in a convenient form for use, provide it to users.

24-hour library

Access for retrieval is available 24 hours a day at research offices and dormitories, etc., throughout the network.

High-level information retrieval

We have achieved retrieval through information in tables of contents, abstracts and keywords in the text, in addition to the former system of retrieval by means of a small number of keywords.

Real-time service

Through our network, we can obtain, provide and accumulate digitized academic information instantly.

Concurrent viewing

Digitized library materials can be viewed concurrently by multiple users.

Next-Generation Features Planned by the Digital Library Research Division

The Digital Library Research Division conducts research and development activities for core technologies for the Digital Library.

Digital Librarian (to be developed from 2009)

Using the reference and search histories in MyLibrary, the Digital Library system will suggest materials that may interest the user, offering additional efficiency in material browsing. This will be the virtual equivalent of having a personal librarian.

Knowledge-Based Center (to be developed from 2010)

We will offer the capability for systematic management and presentation of "knowledge and wisdom" based on the information (e.g., articles and documents) produced by library users during educational and research activities and on the histories of their actions. By providing for the centralized and systematic management of new knowledge and wisdom at NAIST, where leading researchers gather, this system will serve as a base for the global dissemination of knowledge.

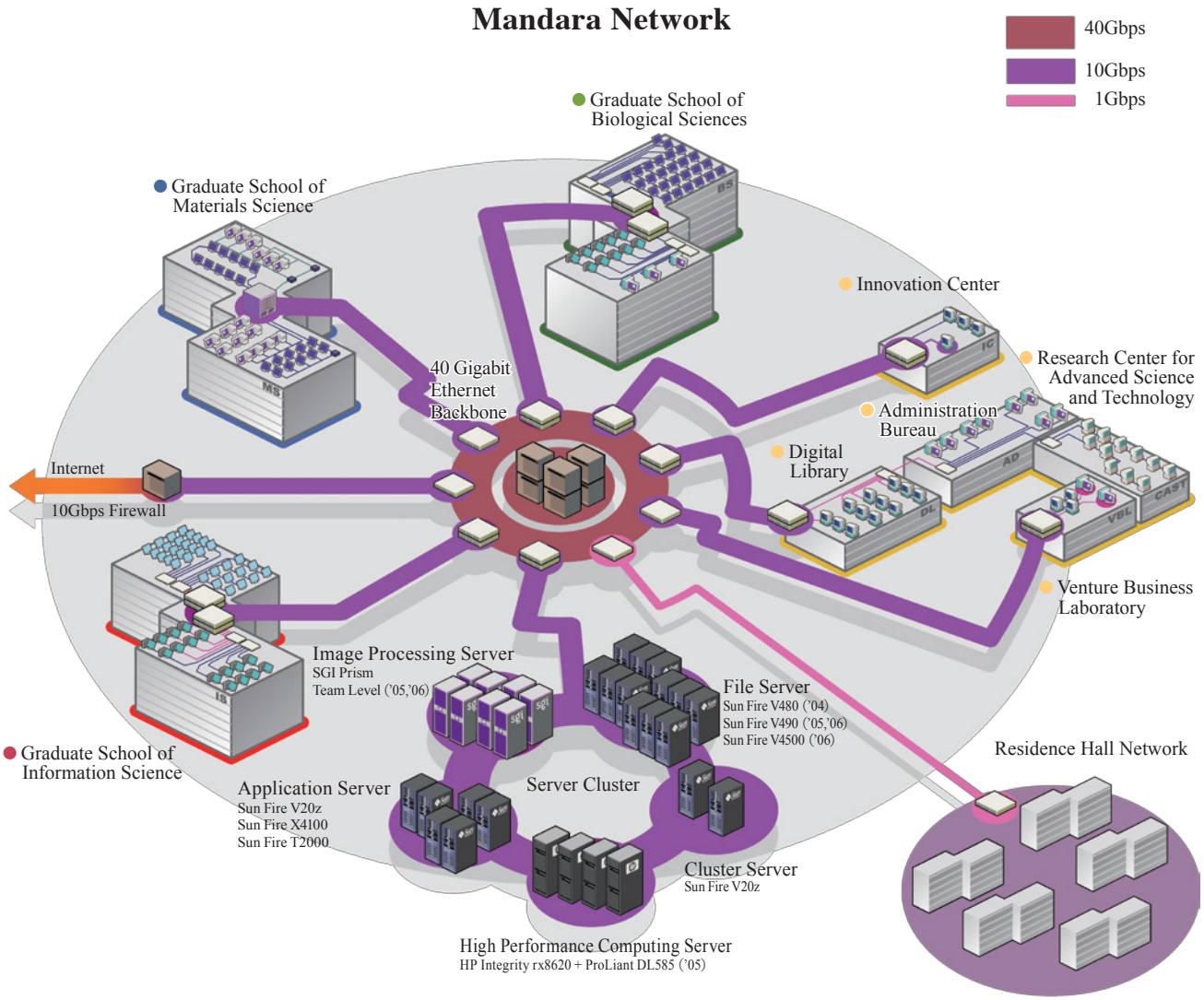
Information Technology Center

To support advanced research across the campus, we have installed a computer network system called "Mandara", which is maintained centrally and provides a campus-wide information processing environment.

Mandara has a huge storage capacity of 1 petabyte (10^{15} bytes), a group of processing servers with gigaflop speed and a superfast network system running at 40 gigabits per second. Every member of the university is allocated a workstation or a PC to use the system efficiently.

Mandara Network

The vital requirements of the network include support for the close sharing of resources for high-quality multimedia communications and grid computing. The Network has been the highest-speed campus network in the world since NAIST's foundation. It currently provides speeds of over 40 gigabits per second (backbone) and 10 gigabit per second (branches). Mandara is linked to the Internet using a dedicated fast connection of 10 gigabits per second, enabling ultra-high-speed communications with sites in Japan and throughout the world.



We manage and operate facilities for radioisotope, animal and plant experiments as Institute-wide joint education and research at the Center. The Radioisotope Facility is responsible for the safety of radioisotopes used within the Institute as well as for user training. The Animal Experimentation Facility houses small animals and provides training for users. It also creates various transgenic mice to support research. The Botanical Greenhouses comprise both open and closed greenhouses. This facility houses individual plants that are necessary for research activities, including transgenic plants. These facilities are an essential asset in advanced biological sciences. Technicians and other expert staff are employed to make sure the Center operates efficiently .

Radioisotope Facility

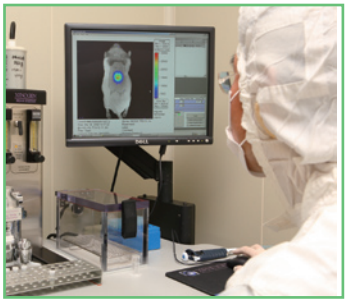
There are strict regulations on the use of radioisotopes, which are indispensable in analyses of very small amounts of substances in the biological sciences and materials chemistry. At NAIST, we use approved types and amounts of nuclide within the facility to meet national safety requirements.

Animal Experimentation Facility

The Animal Experimentation Facility keeps SPF-level (free of certain microbes) mice, rats, guinea pigs and rabbits. The Facility has farming rooms, along with operating rooms and injection rooms for creating genetically modified mice. It also preserves their frozen embryos and sperm.

Botanical Greenhouses

The Botanical Greenhouses have enclosed spaces for growing transgenic plants and open spaces for non-transgenic plants that are used as experimental materials. The enclosed spaces are air-conditioned to maintain constant temperature.



Research and Education Center for Materials Science

The Center has a number of instruments and cutting-edge facilities operated by many expert technical staff to effectively support the full characterization of new materials, evaluation of novel properties, and nanofabrications. It fully supports education, research and safety management.

In addition to analysis and evaluation of new materials, we focus on design and synthesis of new functional materials which might be essential in the areas of modern science and advanced technology, including nanotechnology, biological sciences, information technology, and the environment.

This is efficiently achieved by close collaboration between the main and collaborative laboratories at the frontiers of materials science. The Center also has a commission test scheme for non-NAIST researchers who wish to use our analytical facilities.

Graduate School of Materials Science

Facilities and Equipment

- TEM
- FIB
- FE-SEM
- SPM/AMF
- XPS / AES
- SIMS
- NMR
- XRD
- Micro-RAMAN
- ICP
- MASS
- CD
- Fluorescent lifetime
- MIP-MASS
- Maintenance
- User Training
- Safety Management
- Technical Support
- Requested Measure / Commissioned Test

Research and Education Center for Materials Science

Structure Science of Nano-Materials

Syntheses of New Function Materials

Design of Functional Materials

Students of various majors

Research Center for Advanced Science and Technology

The Research Center for Advanced Science and Technology works in diverse areas to promote (1) education regarding intellectual property, technology management and technology ventures, (2) study and research in advanced science and technology, and (3) university business ventures and incubations.

Education in Intellectual Property, Technology Management and Ventures

As part of our move toward an open university education, NAIST is focusing on education in intellectual property, technology management and ventures. Our educational programs include the "Intellectual Property Rights" seminar covering trends, systems and license agreements in intellectual property rights. We are developing and providing other programs such as "Technology Management", in which students study various challenges in starting a business from intellectual property (management, marketing and financing). These programs aim to create economic value from cutting-edge science and technology. The Center assists solution-providers who have broad views and knowledge as well as entrepreneurship for facing different challenges in the real world.

■ Major Achievements of NAIST Students

	Title of Award	Award Sections
2008	Campus Venture Grand-Prix Osaka (Organizer: Nikkan Kogyo Shimbun, Ltd.)	Award for Excellence Award for Encouragement
	Student New Business Grand-Prix 2008 (Organizer: New Business Conference Kansai)	Grand Prix

`Grand Prix` in Student New Business Grand-Prix 2008

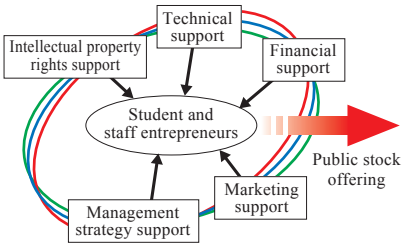
Research in Advanced Science and Technology

We perform research in collaboration with other research organizations and experts in Japan and abroad in areas of advanced science and technology, policy trends, commercialization of advanced science and technology output, intellectual property, technology management, and patent trends. The results from these activities are published in reports, books and other publications for the industry and wider audience in society. The Center is focusing on development and research within the framework of the "R&D Program for the Development of the Basic Architecture for Next-generation IT", adopted in 2007 as part of the system of industry-government-academia collaboration. The Center is also engaged in research from the perspectives of international technology licensing and technology management in continuation of the 2006 project entitled "On the Job Training for Human Resource Development in Technology Licensing."

Promotion of University Business Ventures and Incubations

■ NAIST Technology Incubation Room

The Center supports R&D ventures at the Room based on cutting-edge science and technology with potential for an Initial Public Offering. The Center also provides support for NAIST-generated ventures not only in physical "hard" aspects, such as providing research and office space, but also in indispensable "soft" aspects, including advice on management strategy, marketing, intellectual property management, financing and technology.



■ Venture Business Laboratory

The Center promotes NAIST's information science, biological sciences, materials science and relevant interdisciplinary areas at the Laboratoy, as a special facility for entrepreneurial teachers and students. The purpose of the Laboratory is to promote creative research and development activities in foundational technology fields and to support creative people with high occupational expertise.

Health Care Center

To maintain the physical and mental health of our faculty, staff and students, the Health Care Center provides health examinations as a "check" function, daily treatment as a "cure" function, and lifestyle guidance and health education as a "care" function.

The Center has an examination room, a chat and health counseling room, and a recovery room in a functional layout. A doctor of internal medicine and a nurse are on duty from Monday to Friday.

Health Care Center Services

■ Examination and Treatment

The Center has basic examination equipment and can prescribe medicine if necessary. For illnesses and conditions that the Center cannot treat, you will be referred to specialist doctors and hospitals. All treatment is strictly confidential.

■ Health Counseling

A doctor and nurses are available to discuss mental health issues. A professional counselor is also available several times a month.

■ Health Examinations

The Center periodically conducts general health examinations in spring as well as special examinations (RI, X-ray, recombinant DNA, organic solvents, specific chemical substances).

■ Health Certificates

The Center can issue health certificates for job applications and enrollment in advanced academic programs, provided you have taken all of the tests in the periodic health examination. Certificates are issued by the automatic certificate issuing system at the Student Affairs Division, or at the Health Care Center.

■ HCC News

The annual Health Care Center News provides a variety of useful information.

■ Self-Check

Automatic scales to measure height and weight, a blood pressure meter and an optometer are available at the Center.

■ Chat / Health Counseling Room

Equipped with lounge tables, a television/video player, a stereo, and a body sonic chair, the room is ideal for relaxation, conversation and watching TV or videos.

■ Rest Room

The Rest Room is available if you are feeling unwell and need to rest.

■ Fitness Room

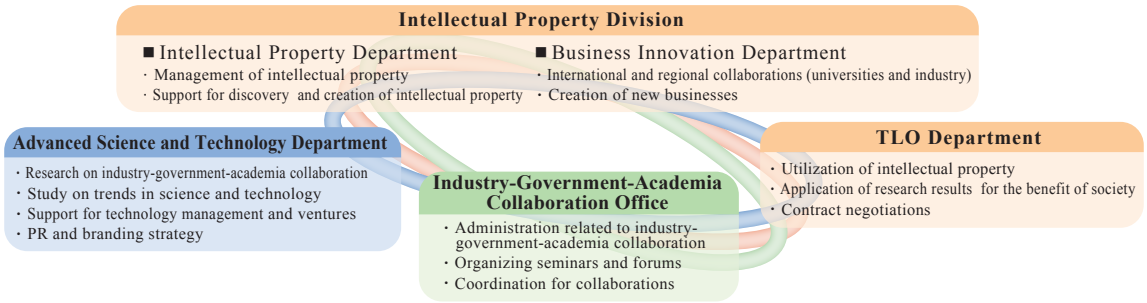
A variety of equipment, including treadmills, aerobic bicycles, weight training machines, dumbbells and electric massage machines, is available at the Guest House Sentan to enhance your health.

Industry-Government-Academia Collaboration

Upon becoming a national university corporation, NAIST established an Industry-Government-Academia Collaboration Group and has engaged in the active promotion of joint research, commissioned research, technological transfers, and other related activities. As a result, NAIST has achieved top results nationwide. We received the highest evaluation for the MEXT-sponsored "Development of University Intellectual Property Headquarters Project" (2003–2007), and NAIST's Industry-Government-Academia Collaboration Group has been chosen as a MEXT industry-government-academia collaboration development project (Strategic Development Program) starting in 2008. NAIST intends to engage in the further promotion of international industry-government-academia collaboration, with particular emphasis on the training of personnel capable of playing an active role in the international community, one of the university's founding objectives.

Industry-Government-Academia Collaboration Group

NAIST established the Industry-Government-Academia Collaboration Group to promote multilateral collaborations under the industry-government-academia collaboration policies. It has the following divisions: Intellectual Property Department, Business Innovation Department, Research Center for Advanced Science and Technology, and Industry-Government-Academia Collaboration Office, as well as the newly installed Technology Licensing Organization (TLO) Department in 2007.



Industry-Government-Academia Collaboration Policy

NAIST established an "Industry-Government-Academia Collaboration Policy" when we became a national university corporation, to clarify the purpose and importance of industry-government-academia collaboration.

■ Mission statement: Industry-government-academia collaboration along with research and education

NAIST declares that, alongside research and education, contributing to the development and advancement of industrial technology by the technological transfer of research results to industry is among our important missions.

→ Creating new industry and new employment

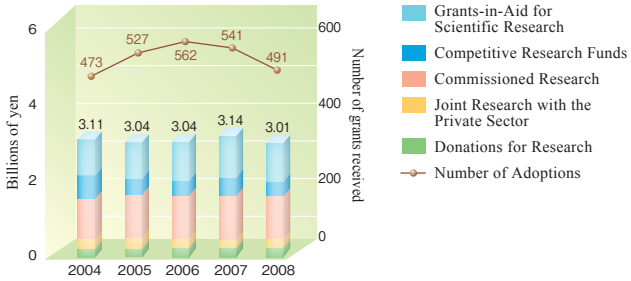
■ Purpose of industry-government-academia collaboration

With the effective promotion of the "Intellectual Creation Cycle", having industry-government-academia collaboration at its core, NAIST can expect part of the financing for our research activities to come from businesses in the forms of research funding and royalties. Feedback from the industry-government-academia collaboration experience is also expected to inspire, and hence vitalize and develop, our research and education.

→ Invigorating research and education

Highly Evaluated Outside Campus – External Funding

Our industry-government-academia collaboration has been highly evaluated outside campus. We have received a large amount of external funding: approximately 3 billion yen in 2008. This is approximately 15 million yen per faculty member, and approximately 50 million yen per laboratory, the highest among Japanese colleges and universities.



Excellent Income from Technology Transfer and Licensing

The NAIST Industry-Government-Academia Collaboration Group has created an advanced technology transfer system for our research achievements, in areas as diverse as information software technology, plant biotechnology, nanotechnology, and environmental technology. Income from sources such as the licensing of intellectual property has increased steadily. NAIST thus ranked top among Japanese colleges and universities in terms of income per faculty member, gaining the university a high evaluation from external organizations, according to a report by the Council for Science and Technology Policy.

Excellent Acquisition of Outside Funds and Research Activities

We have also been working on the acquisition of funds from external sources. According to a report by the Cabinet Office's 77th Council for Science and Technology Policy (October, 2008), NAIST ranked first across Japan in the number of Grants-in-Aid for scientific research and revenue from patent implementation; and second in revenue for research expenses, Grants-in-Aid for scientific research, and funding for joint/commissioned research projects per faculty member. In comparison with other national universities, NAIST is attaining outstanding research achievements.

■ Achievement Report from the Council for Science and Technology Policy 77th session

Ranked 1st	Number of Grants-in-Aid for scientific research Revenue from Licensing
Ranked 2nd	Research expenses Grants-in-Aid for scientific research Funding for joint/commissioned research projects Number of University Business Ventures
Ranked 3rd	External funding for research

*among 87 national universities (per faculty member)

Forums and Liaison Offices

■ Forums

NAIST has been holding forums, such as the NAIST Tokyo Forum and the NAIST Industry-Academia Collaboration Forum, to showcase our research results to the public.We also organize other forums for communicating our intellectual property activities to society.

NAIST Tokyo Forum

■ Liaison Offices

NAIST has opened liaison offices not only in Tokyo to promote effective collaboration in the Tokyo metropolitan area, but also in Higashi-Osaka and Kansai Science City to promote collaboration with local industries.


Liaison Office in Tokyo

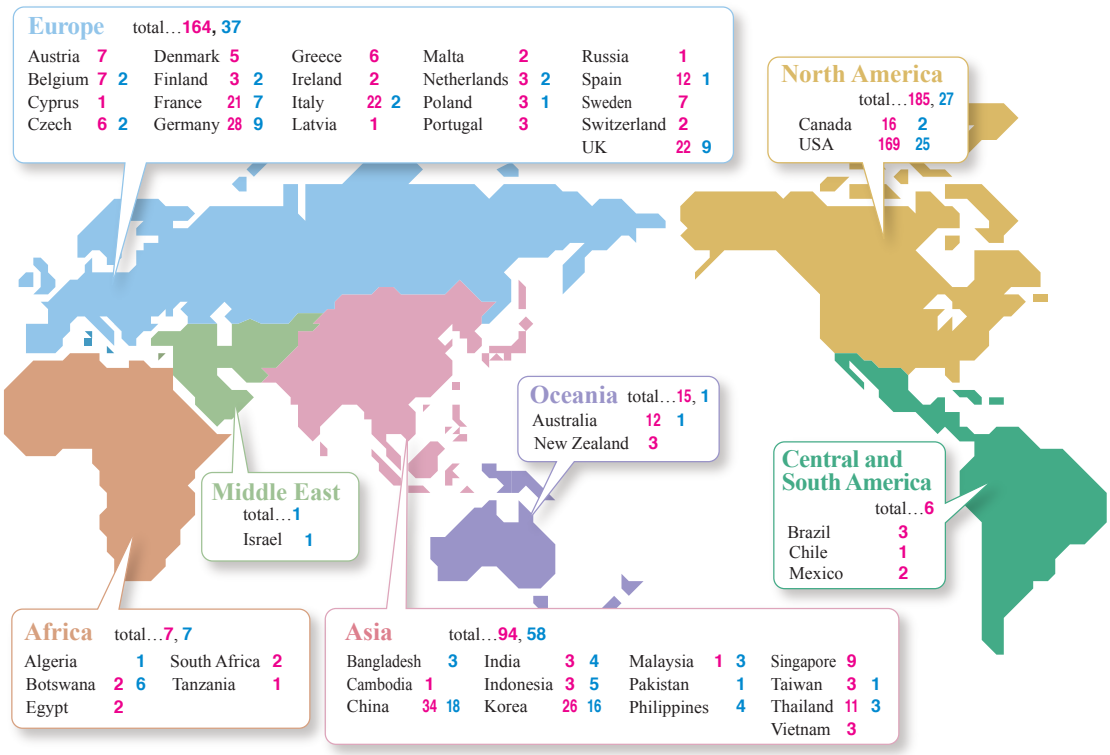
International Activities

With the aim of further enhancing our global scientific research activities, NAIST is progressively promoting academic international exchange in the field of advanced science and technology, through the exchange of researchers and by hosting international symposia. These activities are funded through government projects provided by MEXT and other quasi-government programs offered by the Japan Society for the Promotion of Science.

Exchange of Researchers

We encourage researchers to study abroad, and we accept international researchers, with an increasing number of exchanges every year. To encourage young researchers, we also offer students research opportunities at overseas institutions.

■ Exchange of Researchers in 2007

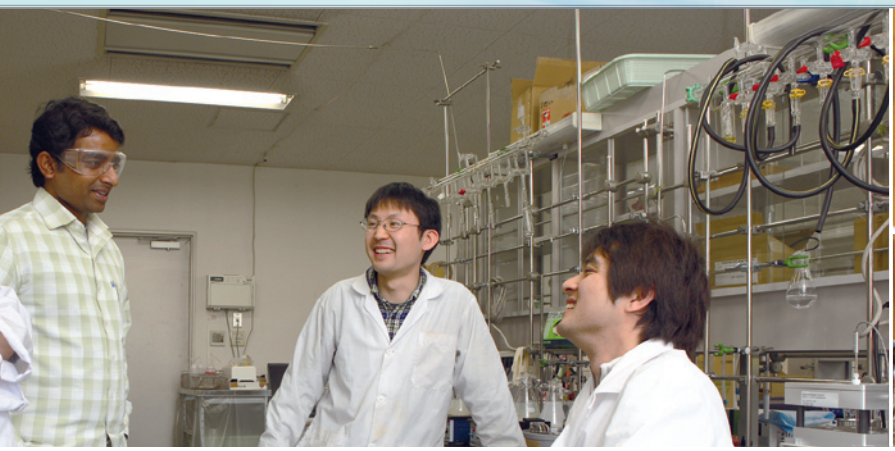


●NAIST researchers sent abroad (total:471)
●Researchers from abroad (total:131)

Diverse Researcher Exchanges from Short- to Long-term

As part of our effort to build a network of international researchers, NAIST actively sends our experts to international symposia and invites researchers from overseas. Combined with these short-term exchanges, our long-term commitments, such as dispatching and accepting academics for periods exceeding a month, serve the purpose of promoting deeper-level international research activities. We accepted 46 long-stay researchers from overseas in 2007. This reflects the high standard of our research.

NAIST researchers sent abroad		Researchers from abroad	
Short-term (less than a month)	456	Short-term (less than a month)	85
Long-term (over a month)	15	Long-term (over a month)	46
Total number	471	Total number	131



Academic Exchange Agreements

NAIST has concluded 37 exchange agreements with overseas universities (23 for institution-level agreements and 14 for school/department-level agreements) in a bid to strengthen international relationships and to encourage further academic exchanges. This includes research collaborations, symposia, guest lectures, faculty and student exchange, and sharing of scientific information and materials. We also have concluded a MIT-Japan Program agreement with Massachusetts Institute of Technology.

■ Agreements on Academic Exchange with Overseas Institutes

As of August 1, 2009

Level	Graduate School	Counterpart
Institution-level	All Schools	University of California, Davis, USA University of Maryland, College Park, USA University of Joensuu, Finland Gadjah Mada University, Indonesia Mahidol University, Thailand Ege University, Turkey Åbo Akademi University, Finland Bogor Agricultural University, Indonesia Université catholique de Louvain, Belgium University Paul Sabatier, France Korea Research Institute of Bioscience and Biotechnology, Korea Korea Advanced Institute of Science and Technology, Korea University of Poitiers, France Institute of Genetics and Developmental Biology, Chinese Academy of Science, China Ecole Polytechnique, France Tianjin University of Technology, China Ateneo de Manila University, Philippine St. Petersburg State Polytechnical University, Russia Universiti Sains Malaysia, Malaysia Chulalongkorn University, Thailand University of Malaya, Malaysia Universitas Indonesia, Indonesia Universiti Putra Malaysia, Malaysia
School / Department-level	Information Science	Department of Information Processing Science, Faculty of Science, University of Oulu, Finland College of Engineering, University of Hawaii, USA School of Computer Science and Engineering & School of Software, University of Electronic Science and Technology of China, China
	Biological Sciences	Biotechnology Institute, University of Minnesota, USA School of Life Sciences and Biotechnology, Korea University, Korea Vietnam Academy of Science and Technology, Institute of Biotechnology, Vietnam
	Materials Science	Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, Korea Faculty of Physics and Mathematics, University of Latvia, Latvia Faculty of Science, University of Zurich, Switzerland Ph.D. School in Physics, University of Debrecen, Hungary Department of Engineering, University of Applied Sciences Wiesbaden, Germany Faculty of Science, Leiden University, Netherlands College of Science, National Chiao Tung University, Taiwan College of Chemistry, Liaoning University, Chaina

International Symposia and Seminars

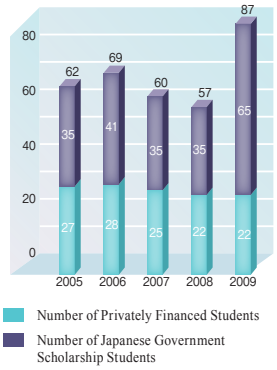
We hold international symposia and seminars to demonstrate our research worldwide and to advance research not only within our institute but also throughout Japan and overseas. In 2007 we held eleven international symposia in which nearly 900 people participated. We have active exchange programs with researchers in Europe, USA and Asian countries.

International Student Profile

As of April 1, 2009

Country / Status	Asia									Middle East		Africa			Americas					Europe						Oceania		Total
	Bangladesh	China	Indonesia	Korea	Malaysia	Mongolia	Philippines	Taiwan	Thailand	Pakistan	Saudi Arabia	Côte d'Ivoire	Egypt	Kenya	Brazil	Dominican Republic	Panama	Paraguay	U.S.A.	Albania	Belgium	Finland	France	Spain	Ukraine	New Zealand	Papua New Guinea	
Master's Program		12 (6)		3 (1)	1 (1)	1	1		1			1			3 (1)		1	1	1	1							1	28 (9)
Doctoral Program	2 (1)	7 (4)	11 (5)	2	3 (1)		3 (2)		6 (4)				1	1 (1)	1	1 (1)			1				1	2	1			43 (19)
Research Students		1	4 (2)	1	1 (1)		2 (1)	1	1	1	1										1 (1)	1				1		16 (5)
Total	2 (1)	20 (10)	15 (7)	6 (1)	5 (3)	1	6 (3)	1	8 (4)	1	1	1	1	1 (1)	4 (1)	1 (1)	1	1	2	1	1 (1)	1	1	2	1	1	1	87 (33)

Parenthesized figures indicate the number of female students



Support for International Students

Student Dormitories

All international students are eligible to live in campus dormitories. To support students' research work on a 24-hour basis, LAN access is provided from the dormitories, allowing access to university networks, including the university's Digital Library, as well as national and international scientific research institutions.

Financial Support

Support from NAIST

Admission / Tuition Fees Exemption

Excellent students who are deemed to have difficulty in paying admission or tuition fees may earn exemption from all or part of such fees.

Teaching Assistants

We actively support students by providing opportunities for them to assist in teaching and education and receive financial assistance. TAs help in areas such as preparing teaching materials, grading reports, and providing experimental assistance.

Research Assistants

The RA program was introduced by MEXT in 1996 to enable outstanding Doctoral program students to participate as RAs in research projects. NAIST was the first university nationwide to introduce an RA program, in 1995, using independent funding sources. Since 1996, support from the MEXT program has allowed us to strengthen our RA program.

Support from sources other than NAIST

Students deemed to be outstanding are eligible to receive scholarships from the Japan Student Services Organization or private organizations such as the Heiwa Nakajima Foundation and the Rotary Yoneyame Memorial Foundation.

Social Events

The university holds the following events to provide opportunities for international students to meet each other.

International student excursions

One-day-trips in the historic Nara region and its environs.

International student parties

Japanese researchers, students, and local people are also invited to parties that offer participants the chance to get to know each other.

Japanese Classes

Japanese classes for international students are offered, at no charge, by a charitable organization based in Ikoma City. These classes not only offer a helping hand to international students in learning Japanese, but also provide a valuable opportunity for getting to know local people.

Community Activities

Open Lectures

NAIST disseminates its research achievements by holding open lectures for the general public and industry, to promote better understanding of our university.

Advanced Science and Technology Experience Program

We hold the Advanced Science and Technology Experience with Ikoma City North Community Center. Young researchers, including assistant professors and students, introduce their research activities to 5th and 6th grade elementary school students through simple experiments. The researchers show children understandable experiments in high technology, and have fun at the same time.

Science Partnership Program

As one of the policies of MEXT for improving science and mathematics education for the next generation, the SPP is a collaborative program that brings together schools, universities, science museums, and other institutions with the objectives of enhancing children's interest in science, technology and mathematics and of encouraging them to develop inquiring minds. As our contribution, NAIST offers classes in advanced science and technology at junior high schools throughout Nara Prefecture.

Collaboration between Six Universities in Kansai Science City

Aimed at promoting interaction and collaboration among six universities located in Kansai Science City (NAIST, Doshisha University, Doshisha Women's College of Liberal Arts, The University of Electrocommunications, Kansai Gaidai University, Osaka International University), these joint open lectures for the public are co-hosted by the six universities.

Open Campus

We open our campus facilities to the general public every year to promote better understanding of our advanced research achievements through exhibitions and demonstrations. Every spring, for the purpose of recruiting students, we also hold open-campus orientations introducing our education and research activities to prospective applicants.

Visiting Campus

We welcome visitors from outside and open our research achievements, educational environment and campus facilities to the general public.

The Union of Universities in Nara Prefecture

NAIST is a member of the Union of Universities in Nara Prefecture, which consists of 12 universities. The objectives are to create culture and art, to promote further education and research, and to disseminate research achievements to the local community.

Member Universities http://www.univnet-nara.com

- Nara University of Education
- Nara Women's University
- Nara Prefectural University
- Nara Medical University
- Kio University
- Tezukayama University
- Tenri University
- Nara University
- Nara Sangyo University
- Osaka Shoin Women's University
- Kinki University
- NAIST

Faculty

NAIST recruits faculty by open search and employs researchers who have a wide variety of backgrounds with experience in advanced research.

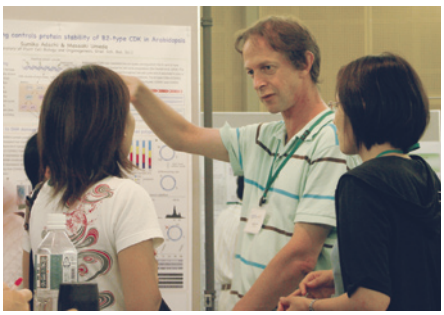
We aim to create a faculty that enables flexible and creative research while meeting the needs of society.

Faculty Members with Diverse Backgrounds

Around half of our faculty members have experience of research outside NAIST, including in corporations and research institutions.

As of April 1, 2009

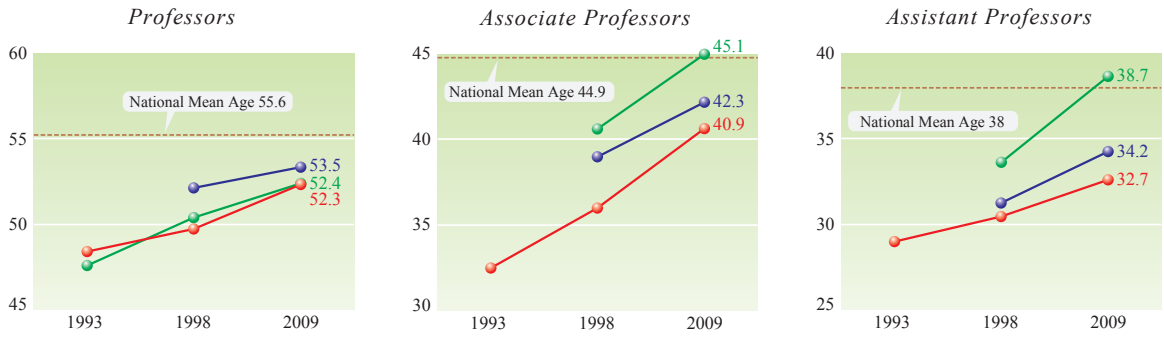
	Professors	Associate Professors	Assistant Professors	Total
Number of faculty	57	45	113	215
Number of faculty who have worked in other institutions	28	28	51	107



Young and Mobile Faculty Members

Mean age of faculty members increases if they stay in the same institute. At NAIST, mean ages of the professors, associate professors, and assistant professors show no marked increase, and are one to five years lower than the mean in the rest of Japan.

■ NAIST Mean Age



※National mean age is cited from "Report of School Teachers Statistics in 2007"

Students

NAIST accepts students from various fields who are enthusiastic to learn and conduct research, and researchers/engineers who are active contributors to society. Our flexible open merit system enables distinguished students to receive a Ph.D. degree before they have completed a full schedule of courses. Our graduates, who have experienced an environment of open and high-level research and education, are outstanding researchers in industry, able to seek out and play active roles in society.

Admission Capacity, Course Capacity and Actual Number of Students

As of April, 2009

Graduate School	Admission Capacity		Course Capacity		Actual Number of Students							Total
					Master's Program			Doctoral Program				
	Master's Program	Doctoral Program	Master's Program	Doctoral Program	1st	2nd	Total	1st	2nd	3rd	Total	
Information Science	146	43	292	129	148 (14)	161 (20)	309 (34)	39 (4)	36 (3)	58 (10)	133 (17)	442 (51)
Biological Sciences	114	34	228	102	122 (45)	116 (48)	238 (93)	42 (15)	19 (5)	45 (13)	106 (33)	334 (126)
Materials Science	90	30	180	90	99 (10)	99 (17)	198 (27)	25 (6)	17 (3)	19 (3)	61 (12)	259 (39)
Total	350	107	700	321	369 (69)	376 (85)	745 (154)	106 (25)	72 (11)	122 (26)	300 (62)	1,045 (216)

※ Parenthesized figures indicate the number of female students　　※ Figures include students admitted in October

Accelerated Degree Programs

At NAIST, the standard period for completion of a master's program is two years, and of a doctoral program, three years. Students judged to be of sufficient ability may finish the master's program in one year and then proceed to the doctoral program; and students with exceptionally high research achievements may finish the doctoral program in one year. However, students who complete the master's program in one year must subsequently spend a minimum of two years studying in the doctoral program.

■ Number of students who completed their programs early in 2008

Master's Program	Doctoral Program	Total
8 of 353	20 of 78	28 of 431

Conferment of Academic Degrees (2008)

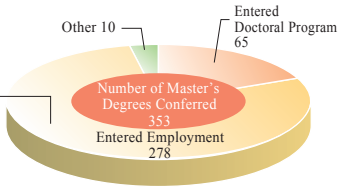
Graduate School	Master's Degree			Doctoral Degree		
	Engineering	Science	Bioscience	Engineering	Science	Bioscience
Information Science	147 (6)	7 (1)		30 (8)	3	
Biological Sciences			104			21
Materials Science	81 (1)	14		14 (8)	10 (4)	
Total	228 (7)	21 (1)	104	44 (16)	13 (4)	21

※ (　) indicates the number of students who completed their programs early

After Completion of Master's Program (2008)

NAIST produces a large number of excellent researchers and high-level researchers for industry.

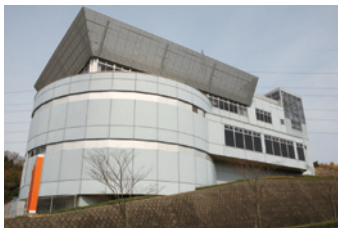
Ajinomoto Co., Ltd., Canon Inc., Hitachi, Ltd., IBM Japan, Ltd., Kobayashi Pharmaceutical Co., Ltd., Mitsubishi Electric Corporation, NEC Corporation, Nippon Telegraph and Telephone Corporation, Nisshin Food Products, Panasonic Corporation, SANYO Electric Co., Ltd., Sharp Corporation, Shimadzu Corporation, Sony Corporation, Suntory, Ltd., TDK Corporation, Toray Industries, Inc., Toshiba Corporation, Toyota Motor Corporation, others



As of March, 2009

Campus Map

NAIST is located in Ikoma City, at the north-western edge of Nara prefecture, sharing a border with Osaka and Kyoto prefectures. In Takayama Science Town, part of the Kansai Science City, facilities for advanced education and research are being planned, harmonizing with the beautiful natural environment of the Takayama area.



1 Innovation Center

2 Research Center for Advanced Science and Technology

3 Venture Business Laboratory

4 Administration Bureau

5 University Library (Digital Library)

6 Millennium Hall

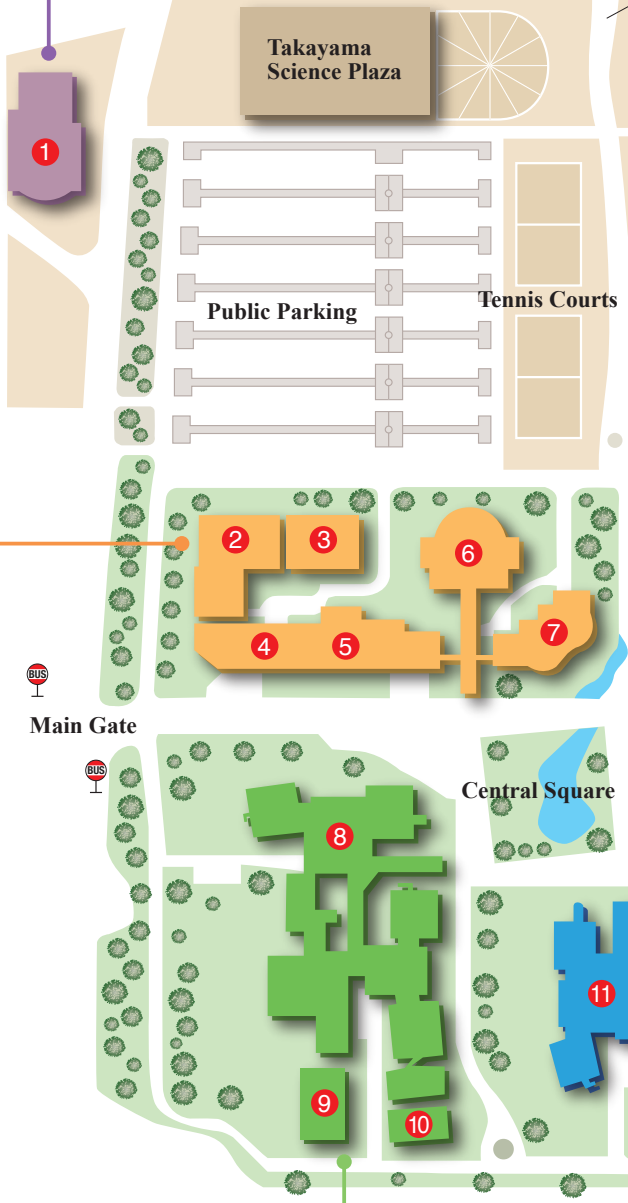
7 University Union / Health Care Center

■ University Union

The University Union contains a restaurant, a cafeteria, and a store that sells stationery, books, food and drinks.

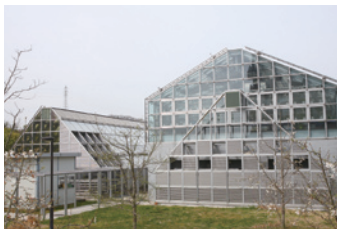
■ Health Care Center

The Health Care Center supports and provides medical assistance to people at NAIST.

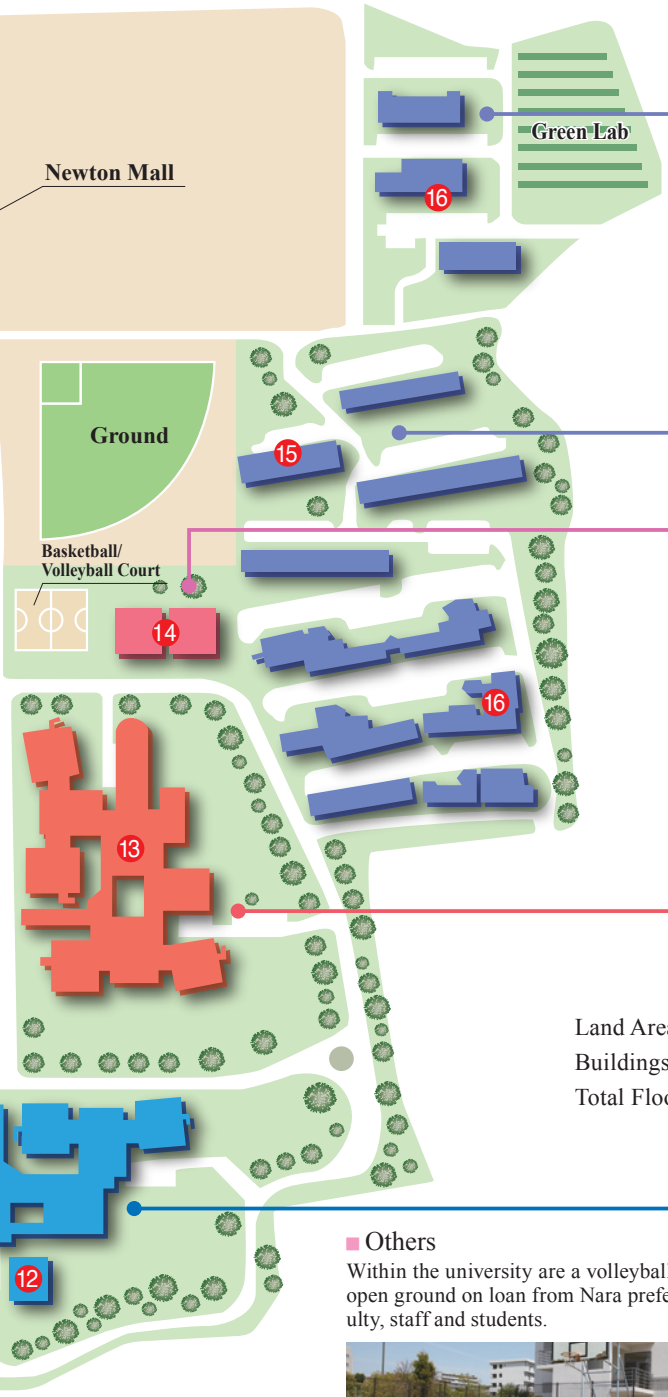


8 Graduate School of Biological Sciences

9 Animal Experiment Facility



10 Greenhouses



15 16 Student Dormitories / Staff Residences

14 Guesthouse Sentan

The Guesthouse Sentan is a welfare facility for faculty, staff and students, as well as visiting researchers. Accommodation fees are reasonable. The facility has a meeting room and a fitness room for guest researchers, and exchange among researchers is encouraged in a comfortable atmosphere.

13 Graduate School of Information Science / Information Technology Center

Land Area / 131,267 m²
Buildings Area / 26,525 m²
Total Floor Area / 95,760 m²

11 Graduate School of Materials Science / Research and Education Center for Materials Science

12 Bio Nano Process Laboratory

Others

Within the university are a volleyball / basketball court, two tennis courts and open ground on loan from Nara prefecture. These facilities are open to all faculty, staff and students.

Basketball Court

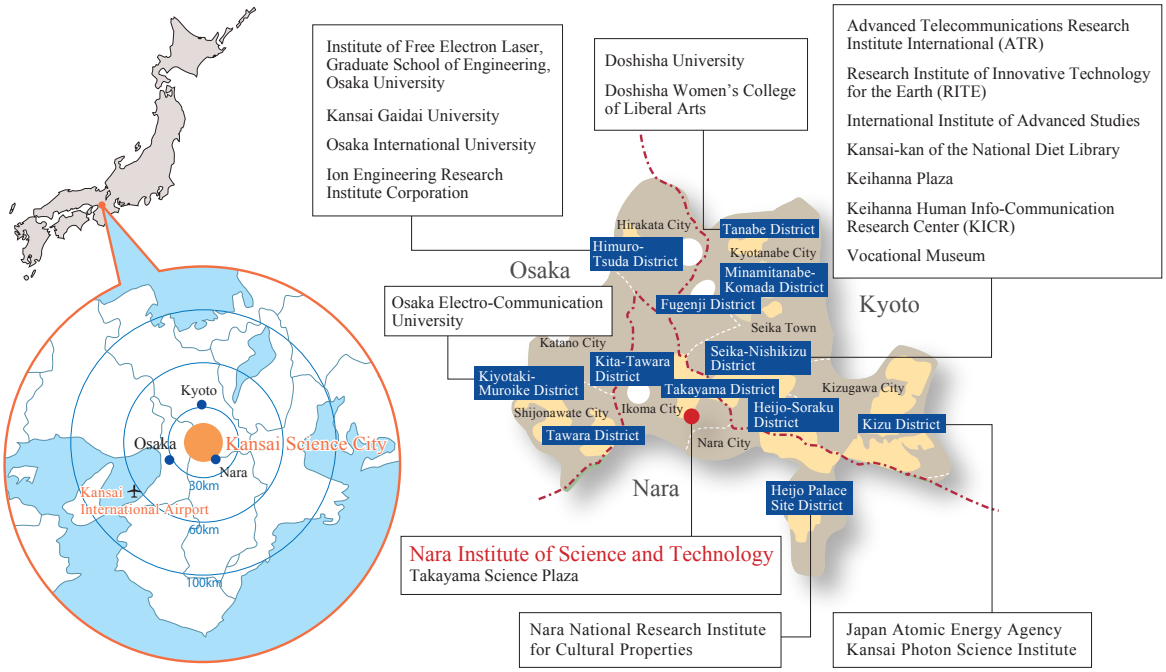
Tennis Court

Ground

Green Lab

Kansai Science City

Kansai Science City consists of 12 Culture Research Districts in Keihanna Hills. It aims to become a new base of creative, international, interdisciplinary and inter-industrial academic research under close cooperation with industry-government-academia.



Foundation for Nara Institute of Science and Technology

■ Purposes of the Foundation

The Foundation was created in 1991 to support NAIST's education and research and take full advantage of its particular characteristics and functions. The purposes of the Foundation are: to promote exchanges with industry and local public bodies; to promote researchers and engineers who will play a major role in research/development of advanced science and technology; to strengthen basic science and technology; and to contribute to evolving science and technology in Japan.

■ Description of support

■ Support for NAIST

- Support for education and research at NAIST
- Support for international exchange at NAIST
- Support for propagation of academic research achievements at NAIST
- Support for NAIST in other areas

■ Promoting advanced science and technology and exchange programs

- Industry-government-academia collaboration
- Community activities

■ Management

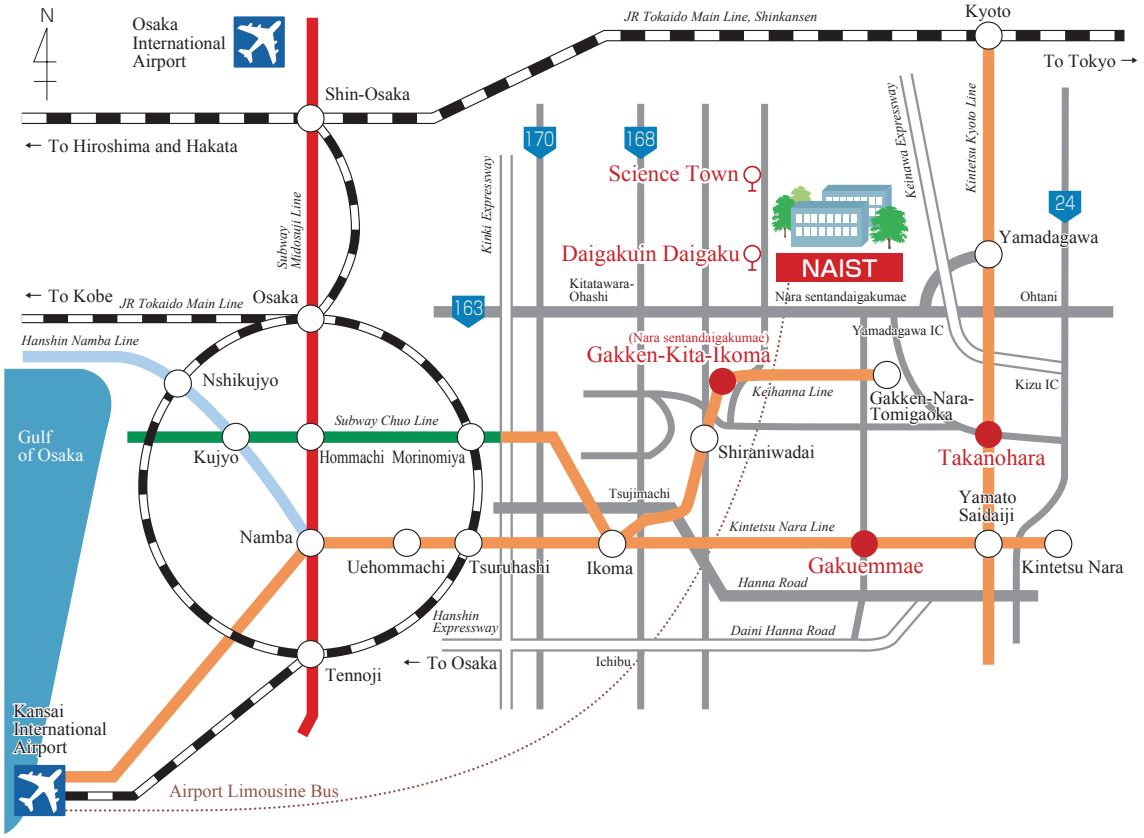
- Management of Takayama Science Plaza
- Management of Takayama Science Town parking

Takayama Science Plaza

Takayama Science Plaza adjoins our Institute and is operated by the Foundation for NAIST. The Plaza has conference rooms for rent, classrooms, open gallery, restaurant, book store, and ATM (Nanto Bank). There are rentable spaces for companies and accommodation for Japanese and foreign visitors who participate in research at NAIST.

Access

Access Map



Transportation

From Airport

Osaka International Airport	Airport Limousine Bus 30 min.	Uehommachi St.	Kintetsu Nara Line Express 17 min.	Ikoma	Keihanna Line 6 min.	Gakken-Kita-Ikoma St.	Nara-kotsu Bus To Science Town 8 min.
Kansai International Airport	Nankai Line Limited Express Rapid α 32 min.	Namba St.	Kintetsu Nara Line Express 20 min.				
	JR Limited Express Haruka 60 min.	Tsuruhashi St.	Kintetsu Nara Line Express 15 min.				
	Airport Limousine Bus 51 min.	Uehommachi St.	Kintetsu Nara Line Express 17 min.				
	Airport Limousine Bus 1 hour 50 min.	Takayama Science Plaza	Walk 3 min.				

By Train

Shin-Osaka	Midosuji Line (Subway) 11 min.	Hommachi St.	Chuo Line (Subway)+Keihanna Line 35 min.	Gakken-Kita-Ikoma St.	Nara-kotsu Bus To Science Town 8 min.
Kyoto	Kintetsu Kyoto Line Express 39 min.	Takanohara St.	Taxi 20 min.		
			Nara-kotsu Bus To Science Town 20 min.		

* From the NARA direction: Nara-kotsu Buses run from Gakuemmae St. to Daigakuin Daigaku.

By Car

from Osaka	Hanna Road	Tsujimachi	168	Kitatawara-Ohashi	163
	Daini Hanna Road	Ichibu			
from Kyoto	Keinawa Expressway	Yamadagawa IC	163		Narasentandaigakumae
	24	Ohtani	163		

Nara Institute of Science and Technology

Chronology

October 1991	Establishment of NAIST Establishment of the University Library (Digital Library) and Graduate School of Information Science
April 1992	Establishment of the Graduate School of Biological Sciences and the Information Technology Center
April 1993	Accepting Master's Students in the Graduate School of Information Science Establishment of the Research and Education Center for Genetic Information
Apri 1994	Accepting Master's Students in the Graduate School of Biological Sciences
June 1994	Establishment of the Research Center for Advanced Science and Technology
April 1995	Accepting Doctoral Students in the Graduate School of Information Science
April 1996	Accepting Doctoral Students in the Graduate School of Biological Sciences
May 1996	Establishment of the Graduate School of Materials Science
April 1998	Accepting Master's Students in the Graduate School of Materials Science
April 2000	Accepting Doctoral Students in the Graduate School of Materials Science
April 2002	Establishment of the Department of Bioinformatics and Genomics of the Graduate School of Information Science Accepting Master's Students in the Department of Bioinformatics and Genomics of the Graduate School of Information Science
April 2004	Establishment of the National University Corporation NAIST

Presidents

First President	Hiroshi SAKURAI	October 1991 to March 1997
Second President	Yasuyuki YAMADA	April 1997 to March 2001
Third President	Koji TORII	April 2001 to March 2005
Fourth President	Kunio YASUDA	April 2005 to March 2009
Current President	Akira ISOGAI	April 2009 to present

Logotype / Logo Mark

Logotype NAIST®

Logo Mark

Institute Flag

The three triangles in the center represent the three mountains of Yamato (Kaguyama, Unebiyama and Miminashiyama) which were revered by the classical Manyo poets. They also symbolize NAIST's three research areas (information science, biological sciences and materials science), the mainstay of today's advanced science and technology.

The background represents the sky. The design symbolizes NAIST's mission to deliver messages of advanced science and technology from historical Nara to all over the world, capturing people's hope that NAIST will make a great leap in the international arena.

Institute Flag original designer:
Tsuyoshi FUJIWARA

Master designer:
Osamu FURUMURA

Academic Calendar 2009 - 2010

Graduate School of Information Science

April 1 - 3	Spring Vacation
April 6	Entrance Ceremony
April 7 - June 4	First Term
June 5 - August 3	Second Term
June 25 / September 25	Graduation Ceremonies
August 4 - September 30	Summer Vacation
October 1	Foundation Day
October 2	Entrance Ceremony for Autumn Enrollment
October 5 - December 1	Third Term
December 2 - February 8	Fourth Term
December 22 / March 24	Graduation Ceremonies
December 24 - January 4	Winter Vacation
March 25 - 31	Spring Vacation

Graduate Schools of Biological Sciences / Materials Science

April 1 - 3	Spring Vacation
April 6	Entrance Ceremony
April 7 - September 30	Spring Term
June 25 / September 25	Graduation Ceremonies
August 3 - 31	Summer Vacation
October 1	Foundation Day
October 2	Entrance Ceremony for Autumn Enrollment
October 2 - February 26	Autumn Term
December 22 / March 24	Graduation Ceremonies
December 24 - January 4	Winter Vacation
March 25 - 31	Spring Vacation

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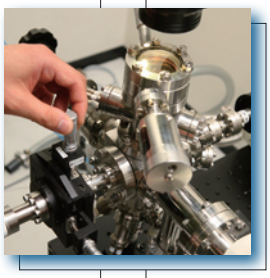
Graduate School of Information Science
情報科学研究科

Graduate School of Biological Sciences
バイオサイエンス研究科



Graduate School of Materials Science
物質創成科学研究科

http://www.naist.jp