

Graduate School of Science and Faculty of Science Tohoku University Japan

Message from the Dean

Masahiro TERADA
Professor

The origin of science can be traced back to the 6th century BC, and it started with observation and classification of natural phenomena. Accordingly, natural science is the most traditional field in the various scientific fields. Natural science can simply be called "science", and thus, we feel that natural science can be used to learn the field of science.

"Science (= Natural science)" is a field of learning, the essence of which is "intellectual creation", and it is initiated from pure inquiring minds and curiosity, i.e., an appetite for knowing or interest towards objects is needed. The missions of the Faculty of Science is to understand the principles of nature, which our predecessors have clarified, to produce intellectual assets for humankind by exploring "intellectual creation" with imagination and a spirit for challenges, and to pass them along to future generations in a systematized form.

The Faculty of Science of Tohoku University, which was established over 100 years ago, is one of the largest faculties of science in Japan. It is composed of 7 departments, Mathematics, Physics, Geophysics and Astronomy, Chemistry, GeoEnvironmental Science, Earth and Planetary Materials Science, and Biology, each performing top notch research in multiple areas. The research of the Faculty of Science of Tohoku University involves a wide variety of academic fields from ways to produce new energy to "intellectual creation" through integrated research in different fields and brings about close interactions with a diverse group of people. Meeting people with diverse backgrounds will surely enriches your life and will lead you to new experiences and knowledge as well as help you recognize various cultural values and world views.

We look forward to facing new challenges towards "intellectual creation" with young people like you on the Aobayama campus in the lush greenery.



School of Science, Tohoku University

"Research First" and "Open Door"

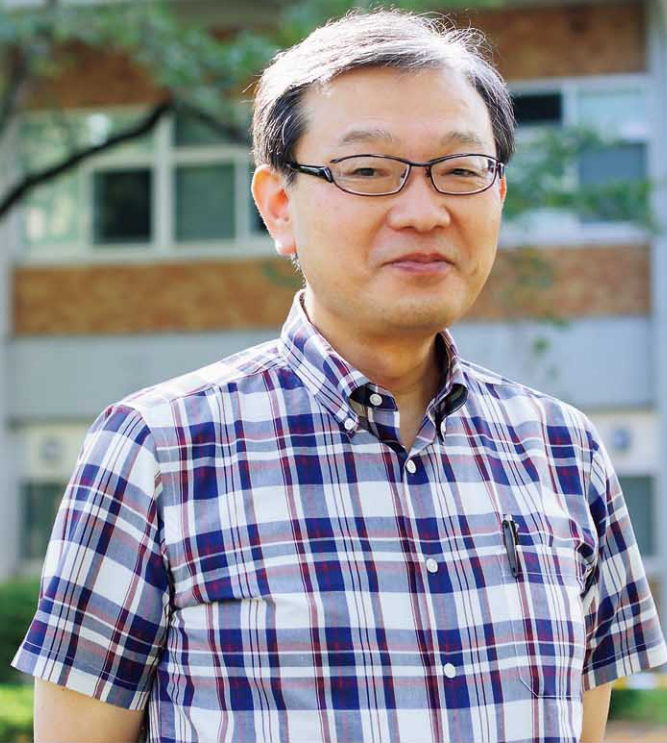
Tohoku Imperial University, College of Science (currently, the Faculty of Science) was founded in 1907 as the third Imperial University after Tokyo and Kyoto. Since then, it has made remarkable achievements in research and has provided important human resources to our society. Of special note in our history are the ideas of "Research First" and "Open Door". "Research First" is our policy of giving research our highest priority, meaning that research is our ultimate mission. We believe that it is possible to provide true education to students through research. This long-standing philosophy of creativity and originality has been proven by producing many recipients of the Order of Culture, the Japan Academy Medal, and so on. Our door is always widely open to the world. In other words, we have always operated with an "Open Door" policy. We willingly give our educational and research resources back to society, which in turn helps us to find undiscovered genius and develop it. In the early years of our history, on the bases of competence and ability without adherence to custom, we accepted female students and those who had not graduated from high schools of the old education system, such as graduates of technical institutes. The latter were called "collateral" during that era. This is an example of the "Open Door" policy, which allowed Chika KURODA, Ume TANGE, and Raku MAKITA to join us as the first three Japanese female students. Seiji KAYA, former President of the University of Tokyo, is an example of "collateral" and is a graduate from the Kuramae Institute of Technology (the former Tokyo Institute of Technology). In addition, Professors Cheng Jian Gong and Su Bu Qing, prominent people in Mathematics in China, are both graduates from our Faculty and the first two foreign people to obtain doctorate degrees in Japan. Those two philosophies are indispensable for distinguished and productive research. Some 40%–45% of our teaching staff each year are not graduates from Tohoku University, which is another example of our "Open Door."

Faculty of Science

The Faculty of Science is responsible for education and research in the basic sciences. It encompasses all disciplines of natural science. Our activities are rooted in original questions about nature and are centered around a strong appetite for learning. The outcomes of our activities contribute to the welfare of humankind after they have been applied to technology. Original and creative research done in the Faculty of Science will be extremely important in the coming age as society increasingly focuses on concerns other than economic ones, such as a sustainable global environment and an improved quality of life. Doors to great success are open wide before you.

Graduate School of Science

The Graduate School of Science provides high-quality educational and high-level research opportunities to foster professionals so that they can become proficient in specialized knowledge and research methodologies. Scholars from the Research Institutes of Tohoku University and other domestic and foreign research institutes are working jointly with us. All six of our departments adopted the "Program for Leading Graduate Schools" in 2014. We have developed an "attractive campus" and have made this university a highly advanced center of education and scientific research in the world based on the fruits of the "Program for Leading Graduate Schools". The "Program for Leading Graduate Schools" has been designed and implemented in order to guide top students in their efforts to become global leaders with a commanding and creative presence in industry, academia, and government. By bringing together first class educators and students from all over the world and with the participation of industry, academia, and government, the program supports the radical reform of doctoral degree curriculums to go beyond specialized fields in order to develop internationally recognized degree programs. Moreover, the program is designed to promote the formation of graduate schools worthy of the highest institutes of education.



Tadahiro HAYASAKA

Research Area

My major research field is atmospheric physics, particularly radiative properties of clouds and aerosols, and their effects on climate change. Now, I am promoting observational and data analysis studies on the air-sea interactions in the mid-latitude North Pacific and remote sensing of clouds and aerosols from satellite and ground-based observations.

Research Topics

- 1 Climate change
- 2 Clouds
- 3 Aerosols
- 4 Atmospheric radiation



Michihiko NAKAMURA

Research Area

My research interest is in the field of igneous petrology and volcanology. I have been studying how magmas and supercritical fluids behave in the Earth's interior through petrography and synthetic experiments. In other words, my work involves conducting microstructural and chemical analyses of natural rock samples and producing laboratory simulations of the Earth's materials at elevated pressure and temperature conditions.

Research Topics

- 1 Mechanism of volcanic eruptions
- 2 Physical properties of fluid-bearing rocks
- 3 Distribution and circulation of fluids in subduction zones

A volcanic eruption is one of the most spectacular phenomena on the Earth. Geological records tell us that there have been huge eruptions in the Earth's history that have not yet been experienced by human beings. Investigating the mechanisms of volcanic eruptions is a big challenge, but it is crucial for volcanic hazard mitigation and for improving preparedness. Along with magmas, aqueous fluids also play a central and unique role in the dynamics and evolution of the Earth. Recent advances in experimental, theoretical, and observation studies have made it possible to obtain detailed and quantitative imaging to reveal the dynamic phenomena of the active Earth. This requires interdisciplinary studies through discussion with researchers adopting different approaches by crossing national borders and research fields. Tohoku University would gladly welcome highly motivated international students with a strong passion to understand the Earth's dynamics and to use scientific outcomes for the welfare of humankind.

Master's student in Mathematics from Ireland

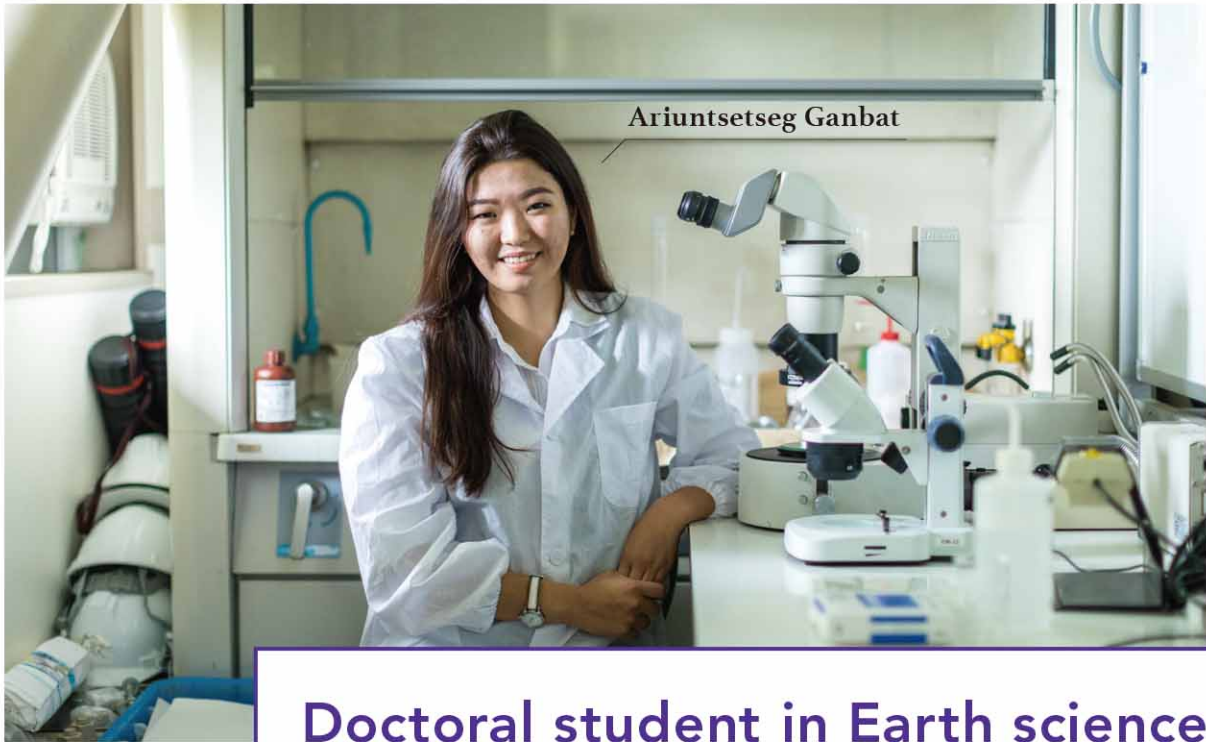
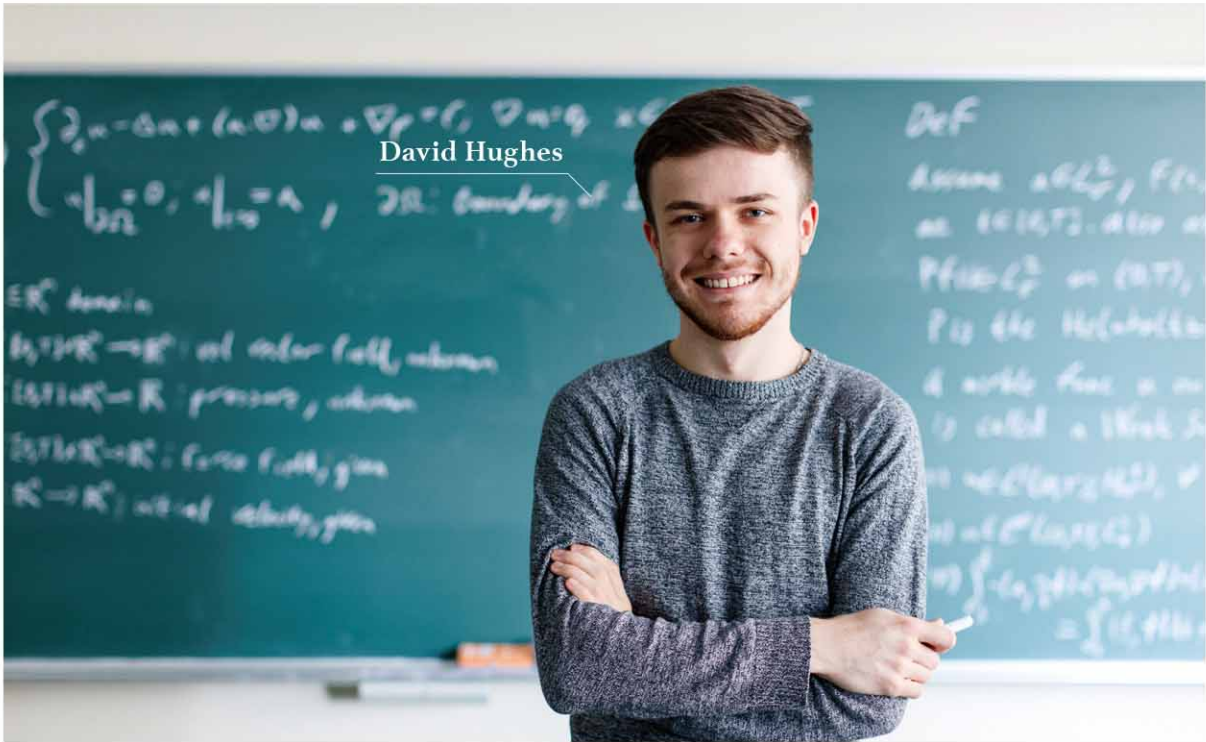
I chose Tohoku University as it was not only amongst the top universities in Japan but also had renowned professors devoted to my research topic. I am currently researching differential equations, particularly the Navier-Stokes equations, which are used as a model for fluid motion in physics. Tohoku University has provided me a supportive advisor, a research lab with a great culture of teamwork, and challenging weekly seminars. My studies have progressed faster than ever since starting here, and I feel confident in my research from here on out.

My seminar group also regularly goes out for dinner together after seminars, making it much easier to become friends with everyone, including senior students and researchers. In September, we held a special 3-day seminar in a Japanese inn in Fukushima, where all master's students needed to make a special presentation, which would be used in our final evaluation. It was an opportunity for me to present my first semester of work, studying a published paper for the first time. Understanding the paper was grueling,

and the presentation nerve-wracking, but it was a much more satisfying end to a semester than just taking a test, and after my presentation, I could enjoy the stay at the inn with everyone else.

Tohoku University has great support for international students in particular. The administration at my dorm, University House Aobayama, runs welcome parties and tours for all residents, helping everyone get to know each other and encouraging Japanese and international students to interact. I went on the University House tour to Matsushima, one of the most famous holiday spots in Japan, and was able to make friends with many of the students staying in other units with whom I hadn't had the chance to talk before. There is also a special circle, @ home, which holds great events and parties specifically to get international and Japanese students together.

I would recommend Tohoku University to any student looking to undertake serious research in Japan. You will find yourself in a top-ranked university that will push you to do your best while helping you every step of the way, surrounded by friendly students from all over the world.



Doctoral student in Earth science from Mongolia

There are many successful scientists in Mongolia who once graduated from Tohoku University and made it a dream for students. I eagerly wanted to become a scientist and work with people who unravel the mysteries and intrigues of the Earth's. After I applied twice, I finally received the good news that I was awarded a student scholarship at Tohoku University.

The staff at the Graduate School of Science is a great team of highly qualified and experienced people, although they are approachable and benevolent world-class professors, teaching staff and administrators, who are always available to provide guidance and support. They are encouraging and supportive, and they keep on captivating and broadening my horizons. I consider it is a large fortune to be able to emulate assiduous scientists in our department, who dedicated most of their passion to research. All members of the research group, which I am a part of, are very kind and helpful, meaning that I have never met serious difficulties in settling down in a new place even without any prior skills in Japanese. My supervisor, Prof. Tatsuki Tsujimori, is a unique person. He is a very efficient scientist and has several international friends and collaborators, and his interests are not limited to geology. He is interested in cooking, gardening, landscaping, musics, etc. I have had wonderful opportunities to cooperate with oversea visiting researchers hosted by my professor.

Tohoku University also provides cutting-edge scientific exchanges for its students. I had an opportunity to visit Germany via the Japanese-German Graduate Externship Program for a short course of high-pressure experimental techniques and applications

to solid Earth science. It was my first visit to Europe. In addition, there are many exciting events and programs for overseas students. In my leisure time, I enjoy cooking, and I am interested in human history. I have joined Japanese cuisine classes and participated in volunteer activities for archaeological excavations to unearth palaeolithic stone tools. These all gave me an unforgettable experience. For me, it is an excellent opportunity to study in an international environment where I get to meet very different people from all over the world and share together in an exciting learning experience.

Sendai is a delightful, safe and convenient place in which to live. This city is full of splendid greenery and flowers, not freezing in winter and not sweltering hot in summer compared to other Japanese cities. Moreover, it is close to both the Pacific Ocean and mountains, where we can enjoy breathtaking views. In addition, Sendai is not too crowded like other metro cities.

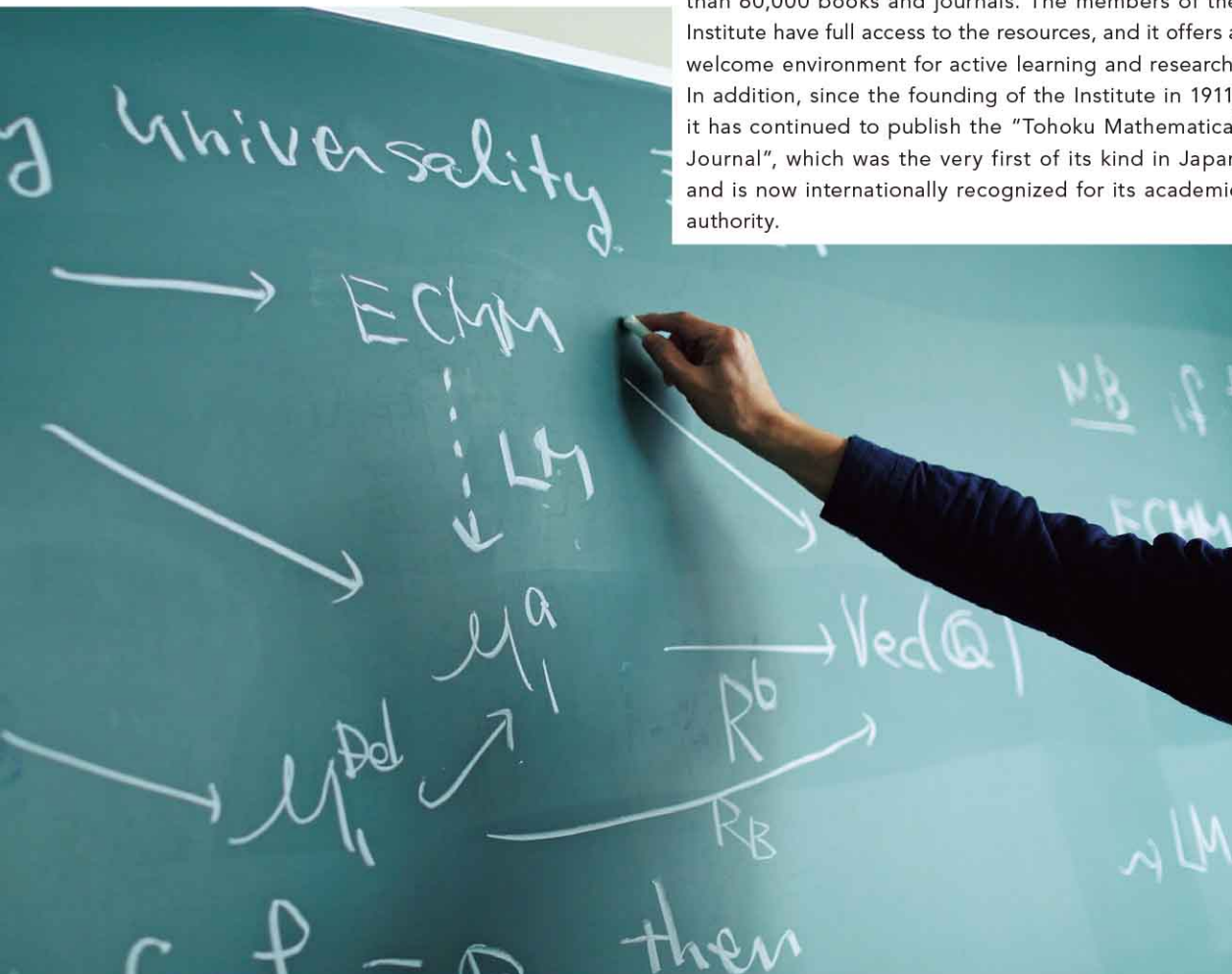
It is pleasant to live in a country which is remarkably safe and well-organized with neat and stable reliable public transportation system and customer service. Each organization is simply impeccable, and the Japanese people are always polite and gentle.

For prospective students, I would recommend try to become a part of one of the most prestigious universities not only in Japan but also worldwide. You will definitely obtain an excellent academic experience, the possibility to use up-to-date technical and analytical facilities and the chance to expand your vision and attitude through interaction with brilliant students, gaining higher skills in both your chosen profession and life.

MATHEMATICS

Algebra
Geometry
Analysis
Global Analysis
Applied Mathematics

Mathematics is the language for describing the natural world. Its progress has been directly linked to that of other scientific fields, as notably seen in the case of Einstein's formulation of general relativity, which was made possible by the timely development of Riemannian geometry. The Mathematical Institute of Tohoku University was established in 1911. Many important contributions to various fields of modern mathematics have since originated from the Institute. Among these are Tannaka's Duality Theorem by Tadao Tannaka and the concept of Sasakian Manifolds by Shigeo Sasaki, which has recently drawn renewed interest due to its connection to Superstring Theory. The Institute is currently a base of many researchers and students, both undergraduate and graduate, who are actively engaged in a wide range of research fields, which cover algebra, analysis, geometry, and logic. The Institute houses one of the best libraries in the country, which holds more than 60,000 books and journals. The members of the Institute have full access to the resources, and it offers a welcome environment for active learning and research. In addition, since the founding of the Institute in 1911, it has continued to publish the "Tohoku Mathematical Journal", which was the very first of its kind in Japan and is now internationally recognized for its academic authority.



PHYSICS

Theoretical Physics

- Particle Physics and Cosmology
- Condensed Matter Physics
- Nuclear Physics
- Statistical Physics

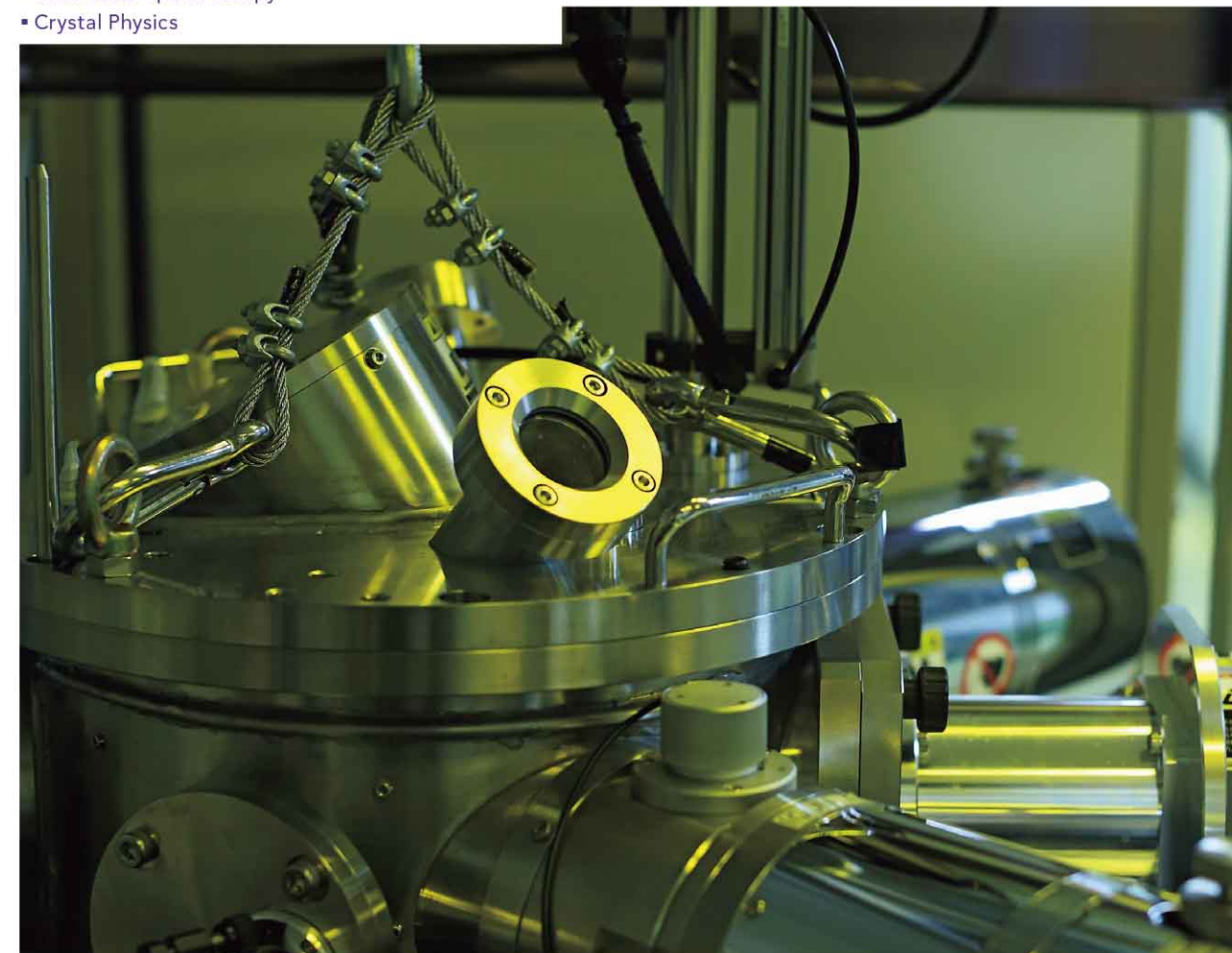
Experimental Nuclear and Particle Physics

- High Energy Physics
- Neutrino Science
- Nuclear and Hadron Physics
- Accelerator Science

Experimental Condensed Matter Physics

- Electronic Properties of Condensed Matter
- Metal Physics
- Quantum Condensed Matter Physics
- Soft Matter and Biophysics
- Solid State Spectroscopy
- Crystal Physics

The Department of Physics at Tohoku University is one of the oldest and largest in Japan, having more than a 100-year history since its foundation in 1911, and it now has a faculty of over 160 professors and about 250 students in the graduate school. Not only the faculty members but also those from research institutes and laboratories are actively involved in the school's programs. Research in our department covers all fields of physics from particle and nuclear physics to condensed-matter physics and extends even further to biophysics and industrial physics. Our graduate students are undertaking world-class research at the highest levels at the frontiers of physics under the guidance of their experienced supervisors. The advanced research facilities of our department assist in their activities.



ASTRONOMY

Cosmology
General Relativity
Galactic Astronomy
Stellar Physics
Astronomical Instrumentation

A total of 70 members in the institute, including faculty members, postdoctoral researchers, and students, are working on a wide variety of problems related to astronomical objects. The research activities cover 1) searching for planets in nearby stars, 2) understanding the physical properties of stars in our galaxy, 3) revealing the formation and evolution processes of galaxies in the distant universe, and 4) understanding the cosmological framework of the universe. These subjects are studied in two ways. The first is through theoretical research, where models are created and analyzed to understand a variety of fundamental astronomical phenomena on the basis of physics and mathematics, occasionally using computational resources, such as super-computers. The second is through observational research. Astronomical phenomena are observed with electromagnetic waves at all wavelengths, such as radio, infrared, optical, ultraviolet, X-ray, and gamma-rays, using various modern telescopes, such as the 8.2m Subaru Telescope at the summit of the 4,200-m Mauna Kea on the island of Hawaii. The data obtained with such observations are analyzed and compared with physical models of the astronomical phenomena to open even more windows into unexplored parts of the universe. Moreover, the development of new telescopes and cutting-edge instruments is a unique and important activity in the institute.



GEOPHYSICS

Solid Earth Physics
Atmospheric and Oceanic Science
Planetary and Space Physics

Affiliated Centers

- Center for Atmospheric and Oceanic Studies (CAOS)
- Planetary Plasma and Atmospheric Research Center (PPARC)
- Research Center For Prediction of Earthquakes and Volcanic Eruptions

Geophysics is a broad research field involving studies on solid Earth, oceans, atmosphere, upper atmosphere, ionosphere, and planets. Geophysicists use physical approaches to investigate various phenomena in these areas and study their structures as well as their long-term and short-term variations in order to clarify the formation and evolution processes of our mother Earth and the solar system. In recent years, as a natural science, geophysics has been developing in close relation with human society. During the last 60 years, the Department of Geophysics has made great efforts and important contributions to establishing the framework of geophysics. We treasure the history and traditions of many of our seniors in our department, and at the same time, we are working to open new frontiers of geophysics.



CHEMISTRY

Inorganic and Analytical Chemistry

Organic Chemistry

Physical Chemistry

Interdisciplinary Chemistry

Advanced Atomic and Molecular Science

Reaction Mechanism and Dynamics

Solid-State Chemistry

Biofunctional Chemistry

Affiliated Centers

- Research and Analytical Center for Giant Molecules

Chemistry is an academic field in which researchers strive to understand substances at the atomic and molecular level, serving as a basis for not only basic science but also a variety of fields, such as engineering, life science, medical science, and pharmaceutical science. Therefore, chemistry is often called "the central science".

The Department of Chemistry is proud of our academic culture wherein our researchers actively study unexplored fields and create new chemistry. In the Department of Chemistry, we aim to learn the truths of chemistry through the synthesis of new molecules, discovery of new properties, theoretical prediction and understanding of chemical phenomena, microscopic observation of atoms and molecules, development of methods for chemical analysis, and solving the mysteries of life and nature.

Since the founding of the Department of Chemistry in 1911, more than 4000 chemists, including four recipients of the National Culture Award; Riko MAJIMA, Shiro AKABORI, Tetsuo NOZOE, and Koji NAKANISHI, have left a legacy of important work in their respective fields. Currently, the Department of Chemistry with its 52 faculty members in 17 research groups is now the largest in the nation. The ratio of students to faculty members is almost 1:1, which creates a highly conducive environment for student research and study.

The role of chemistry is expected to become more and more prominent for building a sustainable society in which mankind harmonizes with the global environment.



EARTH SCIENCE

Division of GeoEnvironmental Science

Paleo-Environment Change

Paleo-Bioevents and Paleontology

Fault and Crustal Dynamics

Geomorphology

Human Geography

The Earth's integrated system of the atmosphere, hydrosphere, and biosphere is driven by the energy of solar radiation just as we are, whereas the solid Earth (lithosphere) is driven by the decay energy of the radioactive elements in the Earth. The boundary between these four spheres is called the Geosphere, and these four spheres interact through the circulation of energy and materials. A huge variety of episodes has occurred and evolved in the Geosphere during the long history of the Earth, and we human beings are the newest product of this sphere. The Department of GeoEnvironmental Science is looking at the past, present, and future in the Geosphere's environment, examining ancient rocks and sediments with a current knowledge of physics, chemistry, and biology. However, these changes cannot yet be fully understood by using today's observational techniques alone since they only produce snapshots of the evolving Geosphere. Our Department is coming to a better understanding of the Earth's environmental system in order to combat the serious problems caused by human activities.

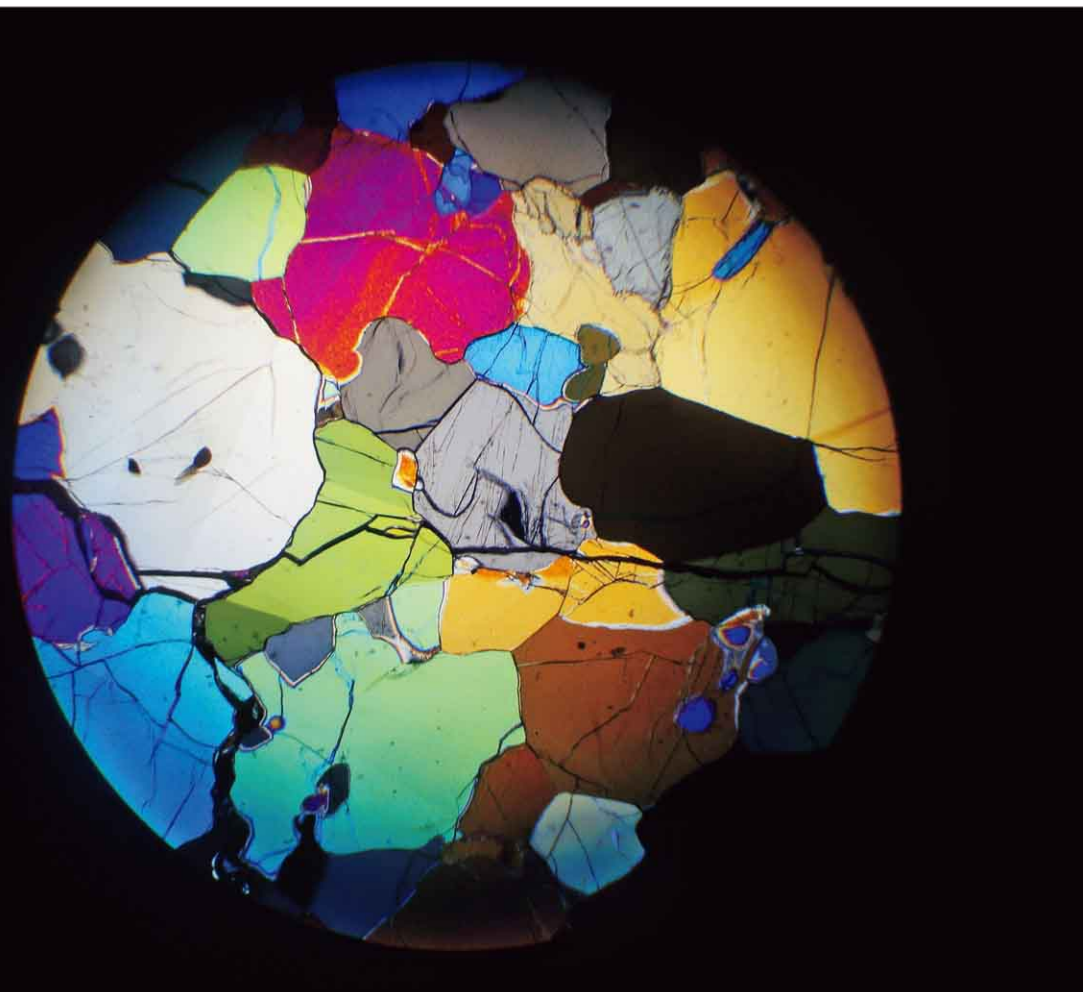


EARTH SCIENCE

Division of Earth and Planetary Materials Science

Mineral
Natural Resources and Environmental
Geochemistry
Early Solar System Evolution
Quantum-beam Earth Science and Technology
Volcanology and Geofluids
Petrotectonics Research

Research on highly advanced Earth and Planetary Science is required to address new topics and find new tools to not only understand the phenomena of the Earth but also those of space. These include studies on the ultra-high pressure of planetary minerals, the evolution of materials and life on the Earth and in space, the formation of low-gravity materials in space, and various molecular-scale materials-formation mechanisms. The Department of Earth Science has not hesitated in adopting new methods and in developing advanced techniques involving synchrotrons, microgravity, and novel in-situ observation systems for crystal growth and phase transitions.



BIOLOGY

Biomolecular Sciences Developmental Biology and Neurosciences Environmental Life Sciences

The land that we stand on, the air that we breathe, the food that we eat are all products of the past 4.6 billion years of the Earth's history. We human beings too. How were we created? Where will we go? The Department of Biology was established in 1922 and has been producing a number of graduates and postgraduates active in both academic and non-academic worlds. Since the Department was founded, the priority-in-research and open-door spirits of Tohoku University have governed the Department as well. Although the Department has kept the spirit and tradition founded by the pioneers, it has promoted updated research activities in response to the ever-developing area of biological sciences. Present research activities cover a wide range of basic biology from molecular and cellular biologies through ecology and evolutionary biology. Three facilities, the Asamushi Laboratory of Marine Biology, the Mount Hakkoda Botanical Laboratory, and the Botanical Garden, contribute to the education and research activities in the department. In 2001, the whole department was reorganized to establish the Graduate School of Life Sciences. We are more than happy to welcome talented biologists and students to promote and enjoy biological sciences in Sendai.



Educational Programs

Degree Programs

[Undergraduate]

- AMC (Advanced Molecular Chemistry Course):
A four-year undergraduate chemistry course in English
- General Undergraduate Program (Taught in Japanese)

[Graduate]

- IGPAS (International Graduate Program for Advanced Science):
Master's and Doctoral program in English
- General Graduate Program

Non-degree Programs

[Exchange Programs with Partner Institutions]

- JYPE: Junior Year Program in English (Undergraduate)
- DEEP: Direct Enrollment Education Program (Undergraduate, Graduate)
- COLABS: Cooperative Laboratory Study Program (Graduate)

[Others]

- Auditing Student Program (Undergraduate)
- Research Student Program (Graduate)
- Special Visiting Trainee (Undergraduate, Graduate)

International Joint Graduate Programs

- Graduate Program in Spintronics (GP-Spin)
- International Graduate Program in Earth and Environmental Sciences (GP-EES)
- Graduate Program on Physics for the Universe (GP-PU)
- Graduate Program in Data Science (GP-DS)
- Graduate Program in Materials Science (GP-MS)

Doctoral Program for World-leading Innovative & Smart Education (WISE)

- WISE Program for AI Electronics (AIE)
- WISE Program for Sustainability in the Dynamic Earth (SyDE)

Double Degree Program

- Double Degree Program with Ecoles Centrales and INSA-Lyon, France

Financial Aid

Scholarship/Fellowship

International students may have opportunities to apply for fellowships/scholarships before or after admission. In addition, degree students are eligible to apply for admission and tuition fee waivers.

- Tohoku University President Fellowship
- Tohoku University Global Hagi Scholarship
- MEXT (Japanese Government) scholarship
- MEXT Honors Scholarship
- JSPS (Japan Society of Promotion of Science) research fellowship
- Private foundation scholarships

Affiliated Research Institutes

The Graduate School of Science has formal collaborative agreements with several affiliated research institutes. A large number of students participate in research activities in the following affiliated institutes.

Inside Tohoku University

Advanced Institute for Materials Research (AIMR)

Center for Northeast Asian Studies Tohoku University (CNEAS)

Cyclotron and Radioisotope Center (CYRIC)

Research Center for Electron Photon Science (ELPH)

Institute for Materials Research (IMR)

Institute of Multidisciplinary Research for Advanced Materials (IMRAM)

International Research Institute of Disaster Science (IRIDeS)

Research Center for Neutrino Science (RCNS)

Center for Academic Resources and Archives (Museum of Natural History)

Research and Analytical Center for Giant Molecules

Research Center for Marine Biology, Graduate School of Life Sciences

Outside Tohoku University

National Institute of Advanced Industrial Science and Technology (AIST)

NTT Basic Research Laboratories (BRL)

Institute for Molecular Science (IMS)

Japan Atomic Energy Agency (JAEA)

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

Japan Synchrotron Radiation Research Institute (JASRI)

Japan Aerospace Exploration Agency (JAXA)

High Energy Accelerator Research Organization (KEK)

National Institute of Information and Communications Technology (NICT)

National Research Institute for Earth Science and Disaster Prevention (NIED)

National Institute for Environmental Studies (NIES)

National Institute for Materials Science (NIMS)

Institute of Physical and Chemical Research (RIKEN)

Number of Students

(As of May 1, 2019)

	Undergraduate	Graduate	
		Master's Program/ Profession Degree Program	Doctoral Program
Science	1,370 [44]	598 [61]	250 [79]
Total	10,614 [202]	4,385 [841]	2,605 [706]

[] indicates the number of international students included in counts.



Academic Exchange Agreements

Department Level*1
Partner Institutions

(As of Oct. 1, 2019)

Area	Country/Region	Institution	Year
Africa	Nigeria	The University of Nigeria, Nsukka, Faculty of Physical Sciences	Feb. 26, 2016
	South Africa	Rhodes University, Faculty of Science	Sep. 9, 2013
	South Africa	University of the Witwatersrand, Johannesburg	Apr. 19, 2017
Asia	Korea	Korea Polar Research Institute	Dec.11, 2017
	Taiwan	Academia Sinica, Institute of Earth Science	Dec. 4, 2008
	Taiwan	National Taipei University of Technology, College of Engineering	May 2, 2015
Europe	Belgium	Université Catholique de Louvain, Faculty of Sciences	Aug. 29, 2007
	France	Ecole Nationale Supérieure de Chimie de Rennes ENSCR	Jan. 4, 2016
	France	Université Claude Bernard Lyon, Faculté des Sciences et Technologies	Sep. 9, 2011
	Germany	Mainz University, Faculty of Physics, Mathematics and Computer Science	May 3, 2012
	Germany	University of Bayreuth*2	Feb. 5, 2016
	Germany	Wuppertal University, Faculty of Mathematics and Natural Sciences	Jan. 23, 2012
	Italy	Centro di Ricerca Matematica Ennio De Giorgi, Scuola Normale Superiore	Jun. 25, 2013
	Italy	University of Ferrara	Jun. 27, 2012
	Italy	Sapienza University of Roma	Mar. 24, 2017
	Netherlands	University of Amsterdam, Faculty of Science	Jul. 11, 2013
	Russia	V.S. Sobolev Institute of Geology and Mineralogy, Siberian Branch of the Russian Academy of Sciences	Nov. 7, 2008
North America	United States	Carnegie Institution of Washington, Geophysical Laboratory	Dec. 1, 2008
	United States	University of Illinois at Chicago	May 1, 2000
Oceania	New Zealand	Institute of Geological and Nuclear Sciences Limited (GNS Science)	Mar. 19, 2008

*1: University Level & other faculties' partner institutions >>> Ref: <http://ie.bureau.tohoku.ac.jp/partners?lang=en>

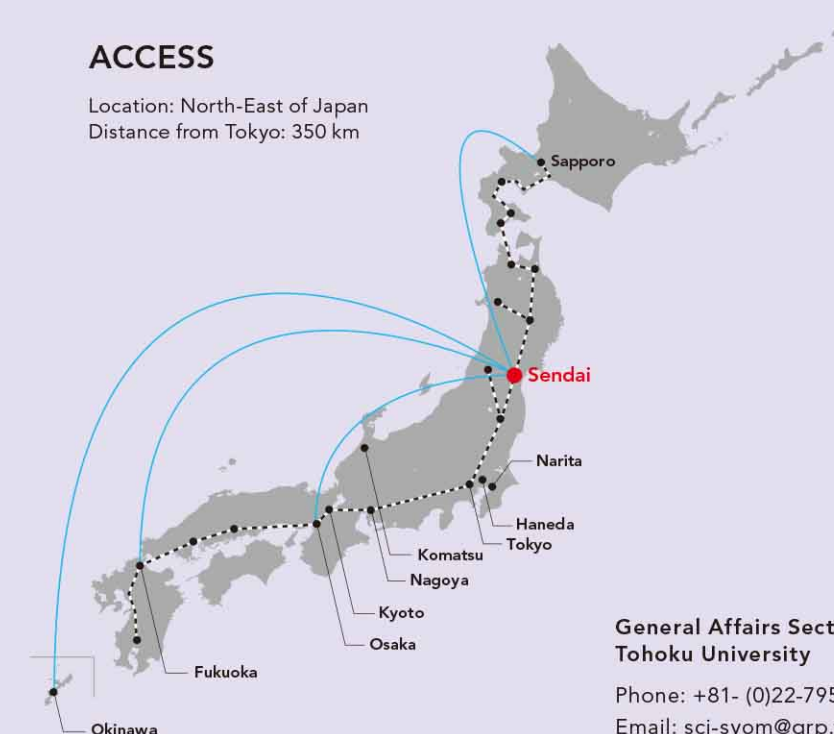
*2: Institutions with Jointly Supervised Degree Agreement

Sendai City

Sendai with a population of more than one million is a political and economic center of the Tohoku (northeast) Region in Japan. It is a large city, and it is known throughout Japan as a modern city in harmony with nature. The city possesses beautiful scenery, such as the Hirose River, which runs the center of the city, and lush Zelkova trees throughout the city. Greenery is especially abundant in the center of the city, which has tree-lined streets and parks. As a result, Sendai is called the "City of Trees." In summer, Sendai's Tanabata Festival, in which decorations are displayed on long upright bamboo poles throughout the downtown and surrounding areas. In December, the trees are decorated with thousands of lights for the Pageant of Starlight.

ACCESS

Location: North-East of Japan
Distance from Tokyo: 350 km



By Air (duration)

Beijing	5 hr 50 min
Shanghai	2 hr 50 min
Taipei	3 hr 10 min
Seoul	2 hr 10 min
Guam	4 hr 15 min

Sapporo	1 hr 10 min
Narita	1 hr
Komatsu	1 hr
Osaka	1 hr 15 min
Nagoya	1 hr 10 min
Fukuoka	1 hr 45 min
Okinawa	2 hr 35 min

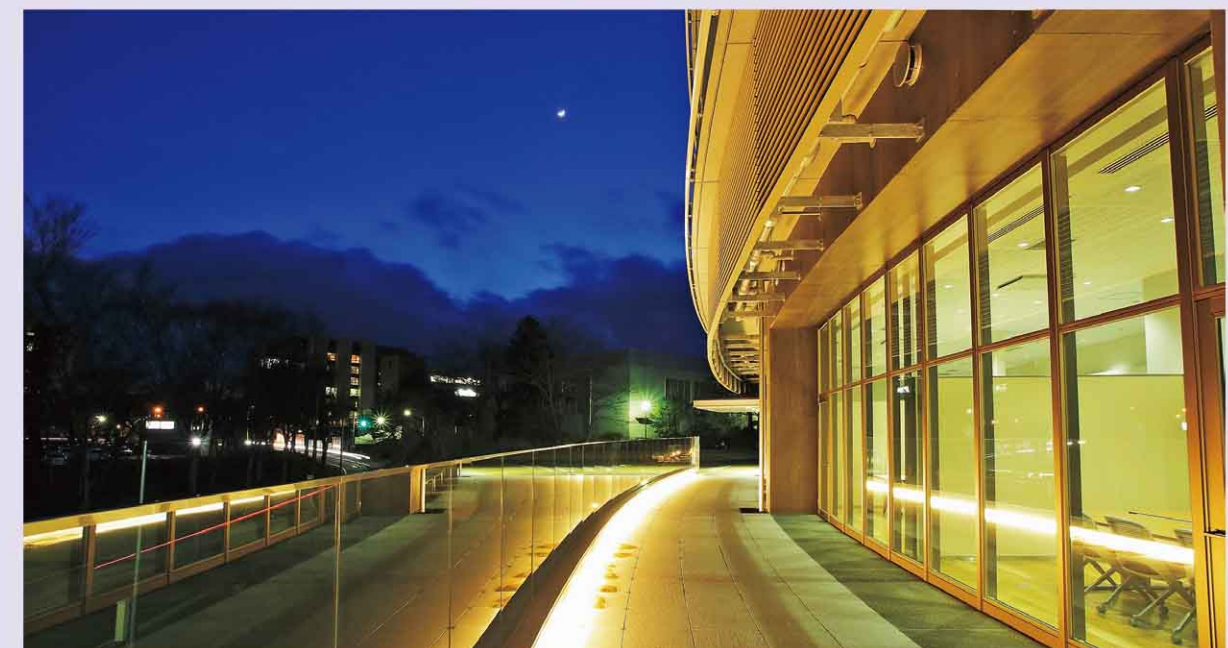
By Shinkansen

Tokyo	1 hr 40 min
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Graduate School of
Science and Faculty of Science
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