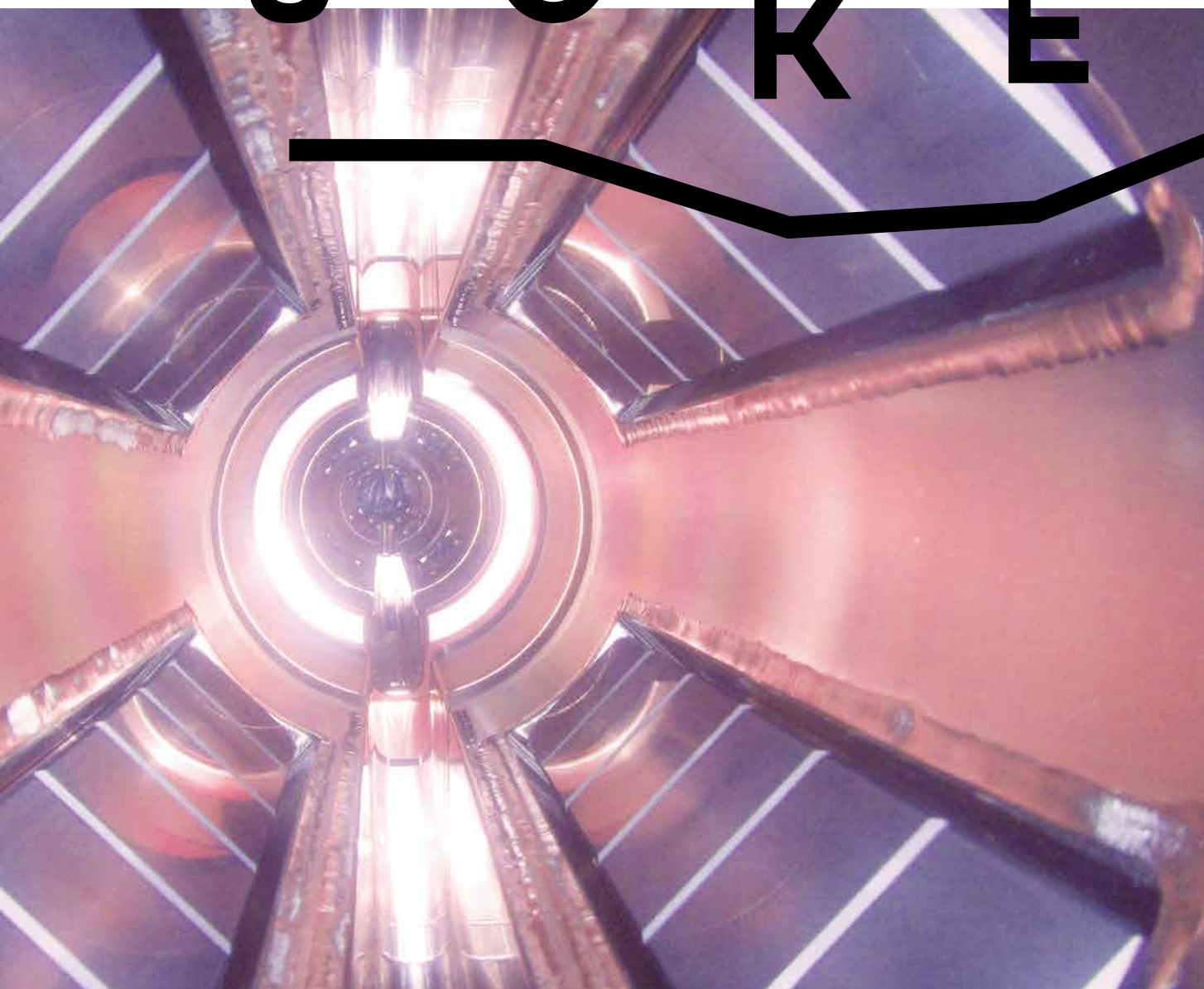


# S O K E N



**2020–2021**

**The Graduate  
University  
for Advanced  
Studies, SOKENDAI**

**Cultural and Social Studies**

Regional Studies  
Comparative Studies  
Japanese Studies  
Japanese History  
Japanese Literature

**High Energy Accelerator Science**

Accelerator Science  
Materials Structure Science  
Particle and Nuclear Physics

**Life Science**

Genetics  
Basic Biology  
Physiological Sciences

**Physical Sciences**

Structural Molecular Science  
Functional Molecular Science  
Astronomical Science  
Fusion Science  
Space and Astronautical Science

**Multidisciplinary Sciences**

Statistical Science  
Polar Science  
Informatics

**Advanced Sciences**

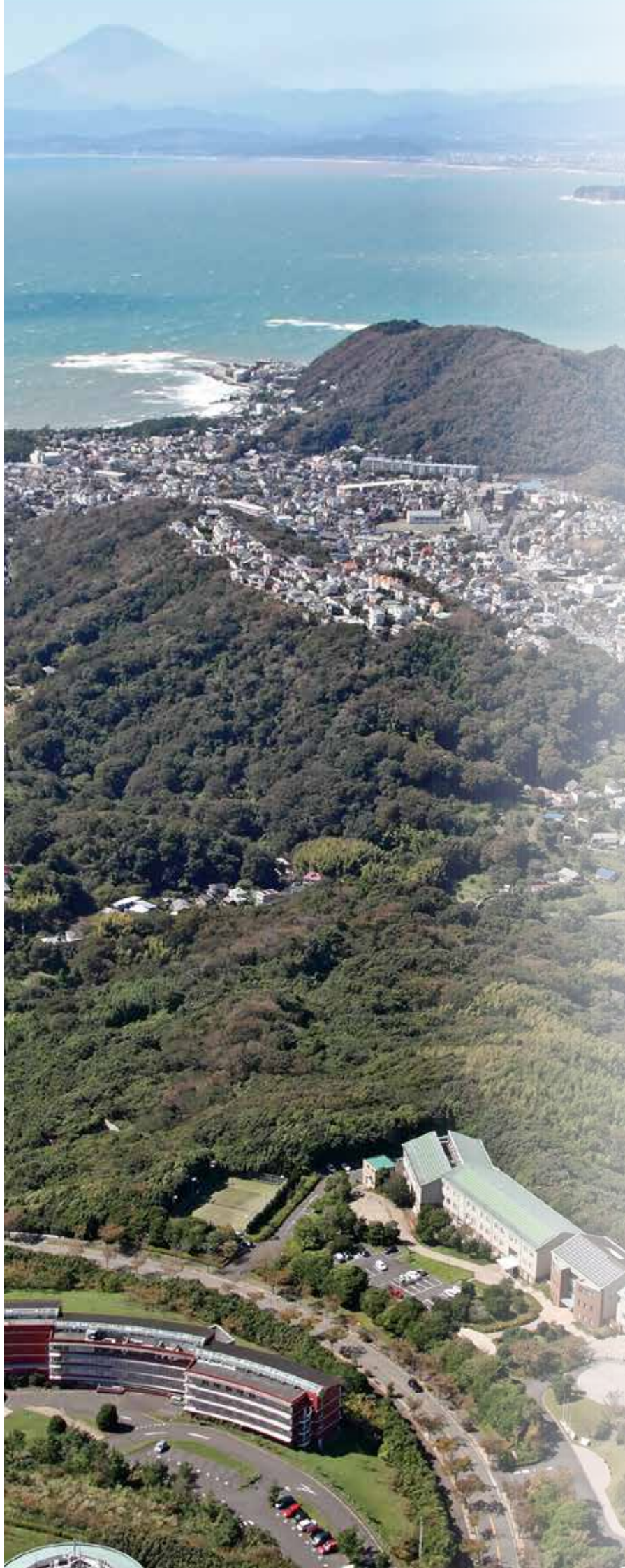
Evolutionary Studies of Biosystems

[www.soken.ac.jp](http://www.soken.ac.jp)



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# Message from the President

The Graduate University for Advanced Studies, SOKENDAI is a graduate university with no undergraduate programs that consists of departments housed in affiliated Inter-University Research Institutes and the School of Advanced Sciences attached directly to SOKENDAI. The Inter-University Research Institutes are research centers for joint use by universities throughout Japan in their various research fields. As such, these institutes serve as centers of advanced research in their respective research fields and as nodes of scholarly communication that support international joint research. The School of Advanced Sciences, which is located in Hayama and has no such parent institute, conducts advanced research into the evolution of life and the relationship between science and society.

SOKENDAI was founded in October 1988 on the internationally unprecedented idea of educating graduate students at outstanding centers of research to cultivate future generations of scholars. We are very happy to announce that we were able to successfully celebrate SOKENDAI's 30th anniversary, in 2018.

At SOKENDAI, students are educated at Japan's leading centers of research. Their lives are very different from those of students in graduate programs attached to ordinary undergraduate faculties, especially for students who enroll in our five-year programs straight from their undergraduate studies and pursue their graduate studies and research surrounded by professional researchers and scholars. Faculty outnumber students by more than two-to-one. Students have access not only to equipment and materials unavailable elsewhere but also to a community of top-ranked scholars. While this environment provides amazing opportunities for doctoral dissertation research, it may also be more stressful in some ways than an ordinary university.

This is why every department, with the full support of SOKENDAI, looks after its students and takes steps to ensure that time spent in the department is productive and enjoyable. All our students are encouraged to take full advantage of this distinctive

research environment as they pursue their doctoral dissertation research.

"Advanced specialty and expertise", "broad perspective" and "international competitiveness" have been the educational goals of SOKENDAI since its founding. As mentioned above, students are educated at centers of research, so "Advanced specialties and expertise" and "international competitiveness" are perhaps something they naturally learn. But what of a "broad perspective"? A "broad perspective" entails the ability to explain one's object of research in the broader terms of human intellectual activity in general and to envision new horizons that transcend current disciplinary boundaries. Acquiring these abilities in the course of writing a doctoral dissertation can be hard. Still, I hope students will endeavor to gain this broader perspective at every opportunity by taking full advantage of SOKENDAI's unique characteristics, including its various departments that collectively encompass a broad range of intellectual fields, from energy, materials, space and life to information, history and culture.

Universities and basic research in Japan today face challenging circumstances. Likewise, there are issues regarding SOKENDAI's future growth as an institution of higher learning that need our serious attention. Yet, whatever difficult challenges may lie ahead in this uncertain age, we will face them each and every day as first-class researchers and scholars dedicated to working in cooperation with everyone concerned to produce future generations of global professionals.

April 1, 2020



Hasegawa, Mariko, Ph. D.  
President

The Graduate University for Advanced Studies, SOKENDAI

## Profile

Dr. Hasegawa joined The Graduate University for Advanced Studies, SOKENDAI as a professor in 2006. She went on to serve as a dean of Department of Evolutionary Studies of Biosystems in 2007, as a dean of School of Advanced Sciences in 2011, and then as an Executive Director in 2014. Dr. Hasegawa became President of SOKENDAI on April 1, 2017.

She earned her Ph.D. degree in Anthropology from Graduate School of Science, University of Tokyo.

Before joining SOKENDAI, she worked at the Tanzania Wildlife Service, as an assistant at the Laboratory of Anthropology, Department of Biological Science, Graduate School of Science, University of Tokyo. She also taught as an associate professor and professor at Senshu University, as an associate professor at the Department of Anthropology at Yale University and as a professor at the School of Political Science and Economics, Waseda University.

Her research expertise includes Behavioral Ecology and Physical Anthropology, and she conducted research on wild chimpanzee, fallow deer and wild sheep in Great Britain, peafowl in Sri Lanka. Recently she is conducting research on human evolution and adaptation.

In 2008, she became President of the Human Behavior and Evolution Society of Japan and received the Hidaka Award from the Japan Ethological Society in 2012.





## Unique doctoral programs

- Education programs carried out at cutting-edge research institutes
- Tailor-made education programs
- Flexible education programs for working professionals and foreign students

## Fostering advanced specialties and expertise

- Specialized education programs in diverse fields
- Supervision by leading researchers from each field
- Top-level collection of archives, equipment and facilities provided by Inter-University Research Institutes

## Broadening perspective

- “SOKENDAI Freshman Course”, an intensive course for all first-year students
- Joint education among departments and schools
- Cross-disciplinary education through distance learning systems
- “Joint School Seminars” for interdisciplinary research exchanges among departments

## Achieving international competitiveness

- Education at the hub of international research collaborations
- International Joint Diploma Programs
- SOKENDAI Student Dispatch Program
- Courses focused on academic communication

## Creating advanced research fields

- Interdepartmental education programs
- International research collaborations coordinated by School of Advanced Sciences
- University-wide “Science and Society” education program

## Purpose of Establishment

In recent years, there has been a strong demand for the promotion of original and international research and the opening up of advanced scientific fields that transcend the boundaries of existing scientific disciplines.

The Graduate University for Advanced Studies, SOKENDAI, the first of its kind in Japan, was established to cultivate researchers capable of responding to such demands. It offers the advantage of enabling students to carry out research in the most advanced research environment of Inter-University Research Institutes, which operate under the auspices of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). These institutes conduct advanced research in a variety of fields, and play a central role in the promotion of joint research.

SOKENDAI was established to foster creative international researchers with wide-ranging vision who are capable of leading the latest trends in research. The University will promote original and international research and open up new scientific fields that transcend the boundaries of existing scientific disciplines.



## Inter-University Research Institutes

Inter-University Research Institutes house large scale, high-technical facilities, high-level laboratories, or various academic data and archives. They are accessible for any university researchers who would collaboratively interact each other, using these facilities.

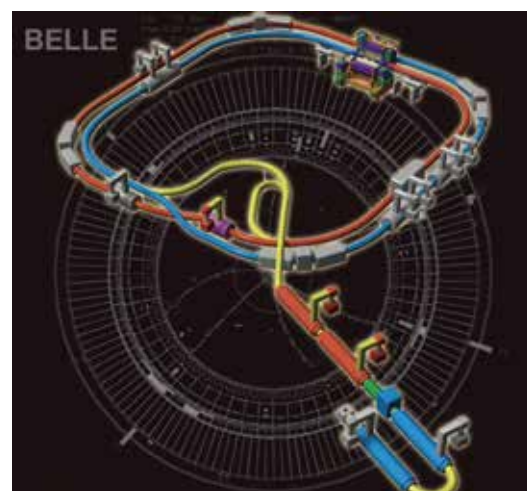
Have you ever heard, either on TV or in a newspaper, of the Subaru telescope, on the island of Hawaii, or of the observation vessel, SHIRASE, heading to the South Pole? Both of them are related to Inter-University Research Institutes, affiliated with SOKENDAI; the Subaru telescope was established by the National Astronomical Observatory, and the polar observation is carried out by the National Institute of Polar Research.

Most of the research activities involve fundamental scientific studies which demand large-scale facilities and a large budget. Inter-University Research Institutes have a great number of researchers and a large amount of research grants are made available to carry out original and advanced scientific research.



## Advanced Specialist Education in Research Facilities and General Education Cultivating Broad Views

Ph. D. programs at SOKENDAI provide an ideal education and research environment, offering direct access to large-scale or special experiment/observation facilities, as well as academic materials and data at world-class research institutes in Japan. In our Ph. D. programs, students can be in daily communication with cutting-edge researchers in Japan and abroad as one of the leading international research centers. Having 2~3 faculty members per student, SOKENDAI offers, in a custom-made manner, both advanced specialist education and general education cultivating broad views.





# Inter-University Research Institutes participating in SOKENDAI

S O K E N D A I

## SOKENDAI ①

## The Center for Educational Development The Center for Academic Information Services University Library

Department of Evolutionary Studies of  
Biosystems  
(School of Advanced Sciences)  
[Hayama campus]

Shonan Village, Hayama, Kanagawa, 240-0193  
Japan

TEL: 81-46-858-1500

FAX: 81-46-858-1542

URL: <https://www.soken.ac.jp/en/>

### [Tokyo branch]

Campus Innovation Center 4F, 3-3-6 Shibaura,  
Minato-ku, Tokyo, 108-0023

TEL: 81-3-5440-9116



## National Institutes for the Humanities National Museum of Ethnology ②

Department of Regional Studies  
Department of Comparative Studies  
(School of Cultural and Social Studies)

10-1 Senri Expo Park, Suita, Osaka, 565-8511  
Japan

TEL: 81-6-6878-8236

URL: <https://www.minpaku.ac.jp/>



## National Institutes for the Humanities International Research Center for Japanese Studies ③

Department of Japanese Studies  
(School of Cultural and Social Studies)

3-2 Deyama-cho, Goryo, Nishikyō-ku, Kyoto, 610-1192  
Japan

TEL: 81-75-335-2222

URL: <http://www.nichibun.ac.jp/en/>



## National Institutes for the Humanities National Museum of Japanese History ④

Department of Japanese History  
(School of Cultural and Social Studies)

117 Jonai-cho, Sakura-shi, Chiba, 285-8502  
Japan

TEL: 81-43-486-0123

URL: <https://www.rekihaku.ac.jp/>



## National Institutes for the Humanities National Institute of Japanese Literature ⑤

Department of Japanese Literature  
(School of Cultural and Social Studies)

10-3, Midori-cho, Tachikawa, Tokyo, 190-0014  
Japan

TEL: 81-50-5533-2900

URL: <https://www.nijl.ac.jp/en/>



## National Institutes of Natural Sciences Institute for Molecular Science ⑥

Department of Structural Molecular  
Science  
Department of Functional Molecular  
Science  
(School of Physical Sciences)

URL: <https://www.ims.ac.jp/en/>

38 Nishigonaka, Myodaijii, Okazaki, 444-8585  
Japan

TEL: 81-564-55-7000



## National Institutes of Natural Sciences National Institute for Basic Biology ⑦

Department of Basic Biology  
(School of Life Science)

URL: <https://www.nibb.ac.jp/en/>

38 Nishigonaka, Myodaijii, Okazaki, 444-8585  
Japan

TEL: 81-564-55-7000



## National Institutes of Natural Sciences National Institute for Physiological Sciences ⑧

Department of Physiological Sciences  
(School of Life Science)

URL: <https://www.nips.ac.jp/eng/>

38 Nishigonaka, Myodaijii, Okazaki, 444-8585  
Japan

TEL: 81-564-55-7000



## National Institutes of Natural Sciences National Astronomical Observatory ⑨

Department of Astronomical Science  
(School of Physical Sciences)

2-21-1 Osawa, Mitaka, Tokyo, 181-8588 Japan

TEL: 81-422-34-3600

URL: <https://www.nao.ac.jp/>

## National Astronomical

### Observatory (Mizusawa) ⑩

2-12 Hoshigaoka, Mizusawa, Oshu, Iwate,  
023-0861 Japan

TEL: 81-197-22-7111

## National Astronomical

### Observatory (Nobeyama) ⑪

462-2 Nobeyama, Minamimakimura,  
Minamisaku, Nagano, 384-1305 Japan

TEL: 81-267-98-4300

## National Astronomical

### Observatory (Hawaii) ⑫

650 North A'ohoku Place, Hilo, Hawaii 96720  
U.S.A.

TEL: 1-808-934-7788

## National Astronomical Observatory

### (Chile) ⑬

Alonso de Cordova 3788, Office 61B Vitacura,  
Santiago, Chile

TEL: 56-2-2656-9253



## National Institutes of Natural Sciences National Institute for Fusion Science ⑭

Department of Fusion Science  
(School of Physical Sciences)

322-6, Oroshi-cho, Toki, Gifu, 509-5292 Japan

TEL: 81-572-58-2222 or 2042

URL: <https://www.nifs.ac.jp/en/>



## Japan Aerospace Exploration Agency Institute of Space and Astronautical Science ⑮

Department of Space and Astronautical  
Science  
(School of Physical Sciences)

3-1-1, Yoshinodai, Chuo-ku, Sagami-hara,  
Kanagawa, 252-5210 Japan

TEL: 81-42-759-8012

URL: <http://www.isas.jaxa.jp/en/>



## High Energy Accelerator Research Organization Tsukuba Campus ⑯

Accelerator Laboratory · Applied Research  
Laboratory

Department of Accelerator Science  
(School of High Energy Accelerator Science)

**Institute of Materials Structure Science**

Department of Materials Structure  
Science  
(School of High Energy Accelerator Science)

**Institute of Particle and Nuclear  
Studies**

Department of Particle and Nuclear  
Physics  
(School of High Energy Accelerator  
Science)

1-1 Oho, Tsukuba, Ibaraki, 305-0801 Japan

TEL: 81-29-864-1171 or 5128

URL: <http://www.kek.jp/>

## Tokai Campus ⑰

203-1 Oaza-Shirakata, Tokai-Mura, Naka-  
gun, Ibaraki, 319-1106 Japan



## Research Organization of Information and Systems The Institute of Statistical Mathematics ⑱

Department of Statistical Science  
(School of Multidisciplinary Sciences)

10-3 Midori-cho, Tachikawa, Tokyo, 190-8562  
Japan

TEL: 81-50-5533-8500

URL: [https://www.ism.ac.jp/index\\_e.html](https://www.ism.ac.jp/index_e.html)



## Research Organization of Information and Systems National Institute of Polar Research ⑲

Department of Polar Science  
(School of Multidisciplinary Sciences)

10-3 Midori-cho, Tachikawa, Tokyo, 190-8518  
Japan

TEL: 81-42-512-0608

URL: <https://www.nipr.ac.jp/>

## Syowa Station (Antarctica) ⑳

Department of Polar Science  
(School of Multidisciplinary Sciences)



## Research Organization of Information and Systems National Institute of Informatics ㉑

Department of Informatics  
(School of Multidisciplinary Sciences)

2-1-2 Hitotsubashi, Chiyoda-ku, Tokyo, 101-8430  
Japan

TEL: 81-3-4212-2110

URL: <https://www.nii.ac.jp/en/>



## Research Organization of Information and Systems National Institute of Genetics ㉒

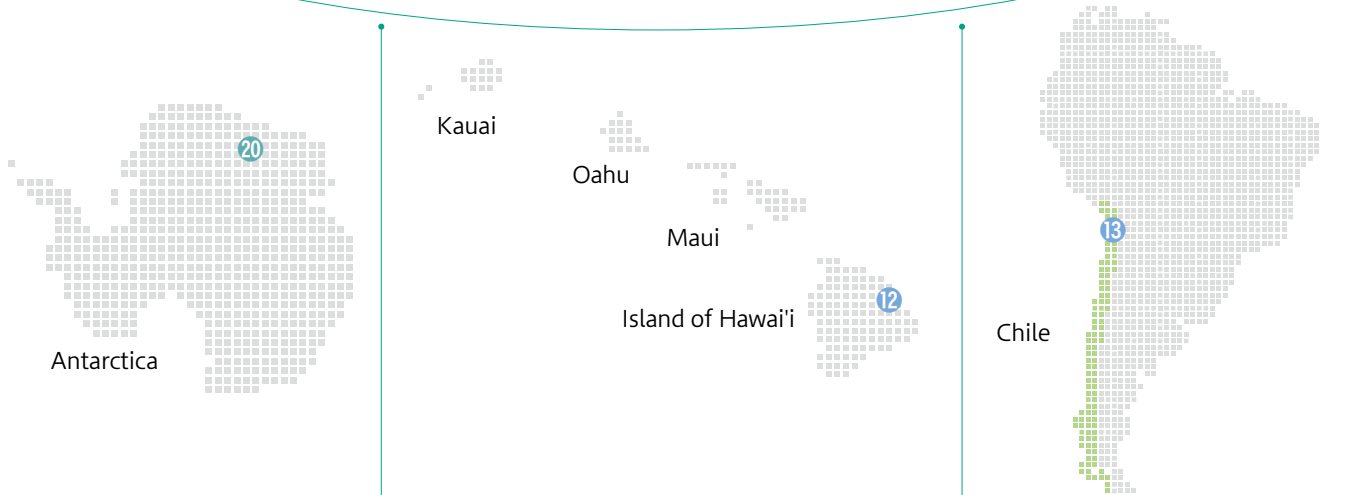
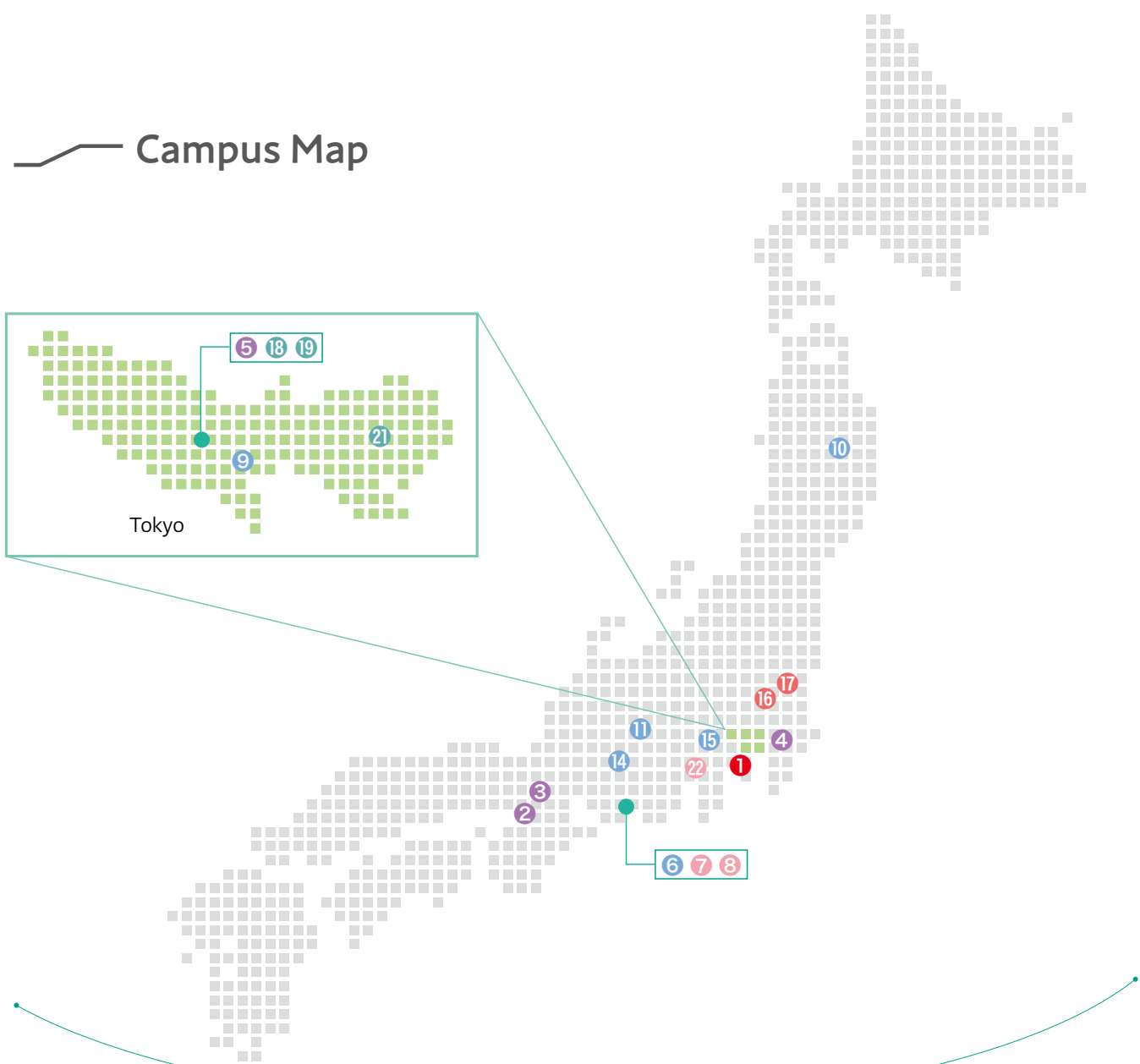
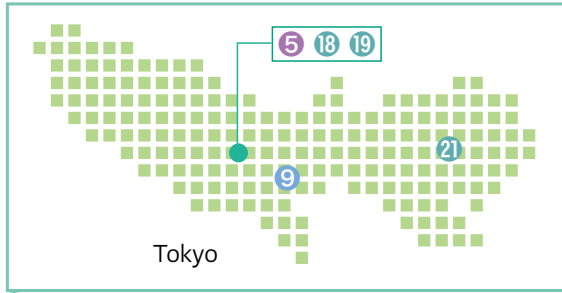
Department of Genetics  
(School of Life Science)

1111 Yata, Mishima, Shizuoka, 411-8540 Japan

TEL: 81-55-981-6720

URL: <https://www.nig.ac.jp/>

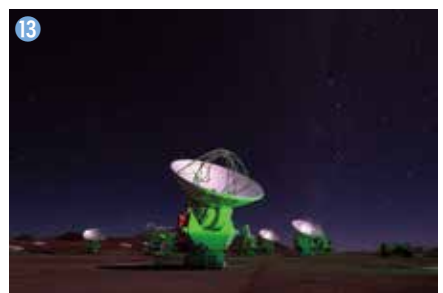
# Campus Map



(C) NIPR



(C) NAOJ



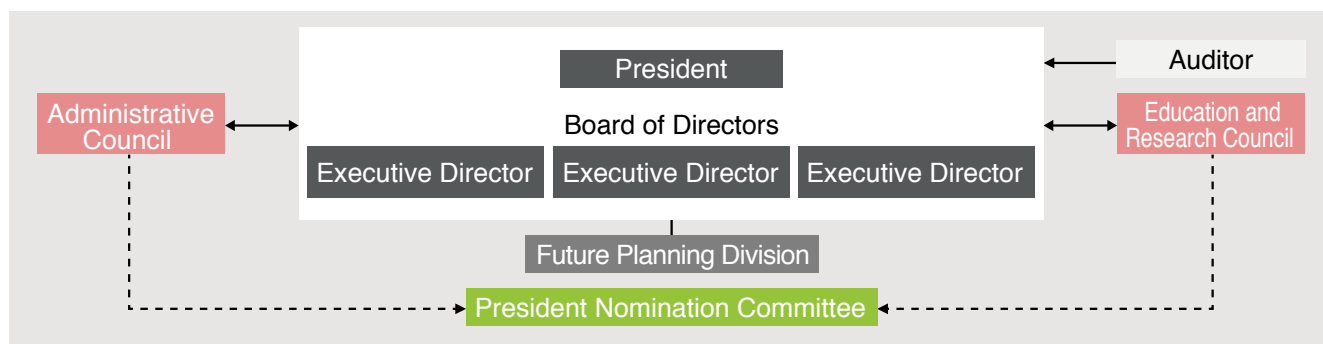
(C) NAOJ

# History

June 1982	An informal committee of the directors general of international university research institutes issues an appeal for the introduction of post-graduate courses in the institutes.	April 1999	The School of Cultural Studies changes its name to "The School of Cultural and Social Studies". The Department of Japanese History is established in the School of Cultural and Social Studies, and The Department of Particle and Nuclear Physics is established in the School of Mathematical and Physical Science; matriculation begins in both new Departments. The School of Advanced Sciences commences matriculation.												
April 1986	An informal committee of the directors general of inter-national university research institutes produces a summary of the basic concepts of a postgraduate school for advanced studies based on the results of an investigation by a working group set up to investigate issues related to postgraduate schools. An Office and Committee for the Investigation of the Preparation of the Establishment of a Postgraduate School for Advanced Studies are established at Okazaki National Research Institutes.	June 1999	Construction completed on the research building for the School of Advanced Sciences.												
March 1987	The Committee for the Investigation of the Preparation of the Establishment of a Postgraduate School for Advanced Studies produces a summary of the basic concepts of a postgraduate school for advanced studies.	April 2001	Dr. Keiichi Kodaira is appointed as the third President. Dr. Naoyuki Takahata is appointed as the third Vice President. The Department of Cyber Society and Culture (School of Cultural and Social Studies) is established; matriculation begins.												
May 1987	An Office and Committee for Preparation of the Establishment of a Postgraduate School for Advanced Studies are established at Okazaki National Research Institute.	July 2001	Construction begins on the Hayama Campus Library (1,427m <sup>2</sup> ).												
July 1987	The Committee for Preparation of the Establishment of a Postgraduate School for Advanced Studies produces an interim summary on the preparation of the establishment of a tentatively named Graduate University for Advanced Studies.	February 2002	Library construction completed.												
April 1988	An Office and Committee for Preparation of the Establishment of the Graduate University for Advanced Studies are established at Okazaki National Research Institute.	April 2002	The Department of Informatics established in the School of Mathematical and Physical Science; matriculation begins.												
May 1988	The "Law to amend part of the National School Establishment Law" (Law No. 63, 1988), which stipulates the establishment of the Graduate University for Advanced Studies, is announced and enacted.	April 2003	The Department of Japanese Literature (School of Cultural and Social Studies), and the Department of Space and Astronautical Science (School of Mathematical and Physical Science) are established; matriculation begins.												
September 1988	The Committee for Preparation of the Establishment of the Graduate University for Advanced Studies produces a summary of the preparation of the establishment of the Graduate University for Advanced Studies.	October 2003	"The National University Corporation Law (Law No. 112 of 2003)" is promulgated and enforced.												
October 1988	The Graduate University for Advanced Studies is inaugurated. The central administration office is established at the Tokyo Institute of Technology (Nagatsuda Campus).	April 2004	Reformation into the National University Corporation, Graduate University for Advanced Studies Dr. Sc. Keiichi Kodaira is reappointed as the President of the University. The School of Mathematical and Physical Science is reformed into three schools: the School of Physical Science (including the departments of Structural Molecular Science, Functional Molecular Science, Astronomical Science, Fusion Science and Space and Astronautical Science), the School of High Energy Accelerator Science (including the departments of Accelerator Science, Materials Structure Science, Particle and Nuclear Physics), and the School of Multidisciplinary Science (including the departments of Statistical Science, Polar Science and Informatics). The School of Life Science has reformed a three-year doctoral program into a five-year doctoral program.												
	<table border="1"> <thead> <tr> <th>School of Mathematical and Physical Science</th> <th>School of Life Science</th> </tr> </thead> <tbody> <tr> <td>Department of Statistical Science</td> <td>Department of Genetics</td> </tr> <tr> <td>Department of Accelerator Science</td> <td>Department of Molecular Biomechanics</td> </tr> <tr> <td>Department of Synchrotron Radiation Science</td> <td>Department of Physiological Science</td> </tr> <tr> <td>Department of Structural Molecular Science</td> <td></td> </tr> <tr> <td>Department of Functional Molecular Science</td> <td></td> </tr> </tbody> </table>	School of Mathematical and Physical Science	School of Life Science	Department of Statistical Science	Department of Genetics	Department of Accelerator Science	Department of Molecular Biomechanics	Department of Synchrotron Radiation Science	Department of Physiological Science	Department of Structural Molecular Science		Department of Functional Molecular Science		April 2005	The name of the Department of Molecular Biomechanics at the School of Life Science has changed to the Department of Basic Biology.
School of Mathematical and Physical Science	School of Life Science														
Department of Statistical Science	Department of Genetics														
Department of Accelerator Science	Department of Molecular Biomechanics														
Department of Synchrotron Radiation Science	Department of Physiological Science														
Department of Structural Molecular Science															
Department of Functional Molecular Science															
	(The university commences matriculation from April 1989.) Dr. Saburo Nagakura is appointed as the first President of the University.	April 2006	The School of Physical Sciences, the School of High Energy Accelerator Science, and the School of Multidisciplinary Sciences have implemented the five-year doctoral program system. The Schools have begun to accept students.												
April 1989	The School of Cultural and Social Studies is established with the Department of Regional Studies and Department of Comparative Studies. The University commences matriculation of students for the three schools.	April 2007	The School of Advanced Sciences is reorganized to establish the Department of Evolutionary Studies of Biosystems (providing a five-year doctoral program), in stead of its two existing departments, the Department of Biosystems Science and the Department of Photo Science (providing three-year doctoral programs), matriculation begins.												
January 1990	Dr. Eizi Hirota is appointed as the first Vice President of the University.	April 2008	Dr. Naoyuki Takahata has been appointed as the fourth President.												
April 1991	The Coordination Center for Research and Education is established.	April 2009	The Department of Cyber Society and Culture has stopped accepting new students.												
April 1992	The Department of Japanese Studies (School of Cultural and Social Studies), and the Departments of Astronomical Science and Fusion Science (School of Mathematical and Physical Science) are established; matriculation begins.	March 2010	Construction of the Center for the Promotion of Integrated Sciences(1,033m <sup>2</sup> ) begins at the Hayama Campus.												
April 1993	The Department of Polar Science (School of Mathematical and Physical Science) is established; matriculation begins.	April 2010	The name of Hayama Center for Advanced Studies has changed to the Center for the Promotion of Integrated Sciences.												
February 1994	Land in Hayama, Kanagawa (27,000m <sup>2</sup> ), is donated by Mitsui Fudosan Ltd. to allow the construction of the University's central administration office, as a result of the mediation services of the Kanagawa prefectural government.	January 2011	Construction of the Center for the Promotion of Integrated Sciences is completed.												
March 1994	Construction of the central administration office (4,205m <sup>2</sup> ) begins at the Hayama Campus.	April 2013	Information Services and Technology Center is established.												
June 1994	The Information Center for Research and Education is established.	April 2014	Dr. Yasunobu Okada has been appointed as the fifth President.												
February 1995	Administrative functions are transferred from Nagatsuda Campus to Hayama; construction is completed on the central administration building.	July 2015	The Center for Academic Information Services is established by unification of the University Library and the Information Services and Technology Center.												
April 1995	Dr. Eizi Hirota is appointed as the second President. Dr. Kazuo Moriwaki is appointed as the second Vice President.	March 2017	Department of Cyber Society and Culture abolished. (Dept. operation period from 2001.4.1 to 2017.3.31)												
April 1997	The School of Advanced Sciences, with the Department of Biosystems Science, is established at the Hayama Campus (matriculation begins in April 1999).	April 2017	Dr. Mariko Hasegawa has been appointed as the sixth President.												
April 1998	The Department of Photoscience (School of Advanced Sciences) is established (matriculation begins in April 1999). The Department of Synchrotron Radiation Science changes its name to "The Department of Materials Structure Science".	March 2018	The Center for Educational Development is established.												
September 1998	Construction of the School of Advanced Sciences building for research (3,060m <sup>2</sup> ) begins at the Hayama Campus.	April 2018	The Center for the Promotion of Integrated Sciences is abolished. SOKENDAI Tokyo Branch is established at Tokyo Institute of Technology, Campus Innovation Center (Minato-ku, Tokyo)												



# ► Organization



## Administrative Board

As of April 1, 2020

President	Hasegawa, Mariko
Executive Director	Watanabe, Yoshihito
Executive Director	Nagata, Takashi
Executive Director	Ogawa, Yujiro
Auditor	Okamura, Sadanori
Auditor	Nakamoto, Fuminori

Vice President	Nagata, Takashi
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### School of Cultural and Social Studies

Dean	Ikeya, Kazunobu
Chair, Department of Regional Studies	Kashinaga, Masao
Chair, Department of Comparative Studies	Suzuki, Motoi
Chair, Department of Japanese Studies	Inaga, Shigemi
Chair, Department of Japanese History	Higuchi, Takehiko
Chair, Department of Japanese Literature	Fujizane, Kumiko

### School of Physical Sciences

Dean	Namiki, Noriyuki
Deputy Dean	Aono, Shigetoshi
Chair, Department of Structural Molecular Science	Yokoyama, Toshihiko
Chair, Department of Functional Molecular Science	Kawai, Maki
Chair, Department of Astronomical Science	Tsuneta, Saku
Chair, Department of Fusion Science	Takeiri, Yasuhiko
Chair, Department of Space and Astronautical Science	Dotani, Tadayasu

### School of High Energy Accelerator Science

Dean	Iso, Satoshi
Deputy Dean	Honda, Tohru
Chair, Department of Accelerator Science	Kamitani, Takuya
Chair, Department of Materials Structure Science	Kumai, Reiji
Chair, Department of Particle and Nuclear Physics	Nishimura, Jun

### School of Multidisciplinary Sciences

Dean	Miyasato, Yoshihiko
Deputy Dean	Motoyama, Hideaki
Chair, Department of Statistical Science	Fujisawa, Hironori
Chair, Department of Polar Science	Kadokura, Akira
Chair, Department of Informatics	Sugimoto, Akihiro

### School of Life Science

Dean	Fujimori, Toshihiko
Deputy Dean	Niimi, Teruyuki
Chair, Department of Genetics	Hanaoka, Fumio
Chair, Department of Basic Biology	Agata, Kiyokazu
Chair, Department of Physiological Sciences	Nabekura, Junichi

### School of Advanced Sciences

Dean	Sasaki, Akira
Deputy Dean	Innan, Hideki
Chair, Department of Evolutionary Studies of Biosystems	Arikawa, Kentaro

### University Library

Acting Director	Watanabe, Yoshihito
Deputy Director	Yagyu, Shuji

### The Center for Educational Development

Director	Nagata, Takashi
----------	-----------------

### The Center for Academic Information Services

Acting Director	Innan, Hideki
-----------------	---------------

### Future Planning Division

Manager	Watanabe, Yoshihito
---------	---------------------

### Administration Bureau

Secretary-General	Oba, Takeshi
Manager, General Planning Division	Yamashita, Katsuhiko
Manager, General Affairs Division	Harada, Atsuko
Manager, Financial Affairs Division	Iizuka, Yasushi
Manager, Academic and Students Affairs Division	Fujiwara, Masatoshi

## Future Planning Division

In order to support management of the University by the leadership of the President, Future Planning Division was established as the core functions which carries out planning and proposals relating to education/research activities and organizational management of the entire University. We are conducting IR activities and collecting information to support formulating the future vision toward the period for the 4th Mid-term Objectives as the "SOKENDAI Future Vision Project".

- Planning and proposals relating to management of the University
- IR activities to support planning, proposals and decision making
- International cooperation activities relating to the entire University
- Public relation activities relating to the entire University
- Formulation of the policies relating to management and operations of the headquarters of the University

## Education and Research Council

As of April 1, 2020

President	Hasegawa, Mariko	Vice Chair, Department of Accelerator Science	Michizono, Shinichiro
Executive Director	Watanabe, Yoshihito	Chair, Department of Materials Structure Science	Kumai, Reiji
Executive Director (Executive Vice President)	Nagata, Takashi	Professor, Department of Particle and Nuclear Physics	Tokushuku, Katsuo
Executive Director	Ogawa, Yujiro	Chair, Department of Statistical Science	Fujisawa, Hironori
Dean, School of Cultural and Social Studies	Ikeya, Kazunobu	Chair, Department of Polar Science	Kadokura, Akira
Dean, School of Physical Sciences	Namiki, Noriyuki	Chair, Department of Informatics	Sugimoto, Akihiro
Dean, School of High Energy Accelerator Science	Iso, Satoshi	Chair, Department of Genetics	Hanaoka, Fumio
Dean, School of Multidisciplinary Sciences	Miyasato, Yoshihiko	Chair, Department of Basic Biology	Agata, Kiyokazu
Dean, School of Life Science	Fujimori, Toshihiko	Chair, Department of Physiological Sciences	Nabekura, Junichi
Dean, School of Advanced Sciences	Sasaki, Akira	Chair, Department of Evolutionary Studies of Biosystems	Arikawa, Kentaro
Chair, Department of Comparative Studies	Suzuki, Motoi	Professor, Department of Comparative Studies	Yoshida, Kenji
Chair, Department of Japanese Studies	Inaga, Shigemi	Professor, Department of Japanese History	Nishitani, Masaru
Chair, Department of Japanese History	Higuchi, Takehiko	Professor, Department of Accelerator Science	Yamaguchi, Seiya
Chair, Department of Japanese Literature	Fujizane, Kumiko	Professor, Department of Accelerator Science	Sasaki, Shinichi
Chair, Department of Functional Molecular Science	Kawai, Maki	Professor, Department of Materials Structure Science	Kosugi, Nobuhiro
Chair, Department of Astronomical Science	Tsuneta, Saku	Professor, Department of Polar Science	Nakamura, Takuji
Chair, Department of Fusion Science	Takeiri, Yasuhiko	Counselor	Inoue, Shoichi
Chair, Department of Space and Astronautical Science	Dotani, Tadayasu	Counselor	Robert Campbell
		Counselor	Tsubaki, Hiroe

## Administrative Council

As of April 1, 2020

### Internal representatives

President	Hasegawa, Mariko
Executive Director	Watanabe, Yoshihito
Executive Director (Executive Vice President)	Nagata, Takashi
Executive Director	Ogawa, Yujiro
Secretary-General	Oba, Takeshi

### External academics and specialists

Project Professor, Institute for Future Initiatives, The University of Tokyo	Arinobu, Mutsuhiro
Director, Nagoya University Asian Satellite Campuses Institute	Isoda, Fumio
Professor, Faculty of Letter, Konan University	Inose, Kumie
Director General, National Institute of Informatics,	Kitsuregawa, Masaru
Senior Corporate Adviser, Mitsubishi Estate Co., Ltd.	Kimura, Keiji
Executive Director, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency	Kuninaka, Hitoshi
President, National Institutes of Natural Sciences	Komori, Akio
Fellow, Toyota Physical and Chemical Research Institute	Nishikawa, Keiko
President, National Institutes for the Humanities	Hirakawa, Minami
President, Research Organization of Information and Systems	Fujii, Ryoichi
Director General, High Energy Accelerator Research Organization	Yamauchi, Masanori
President, Shizenkan University Graduate School of Leadership & Innovation	Monte Cassim



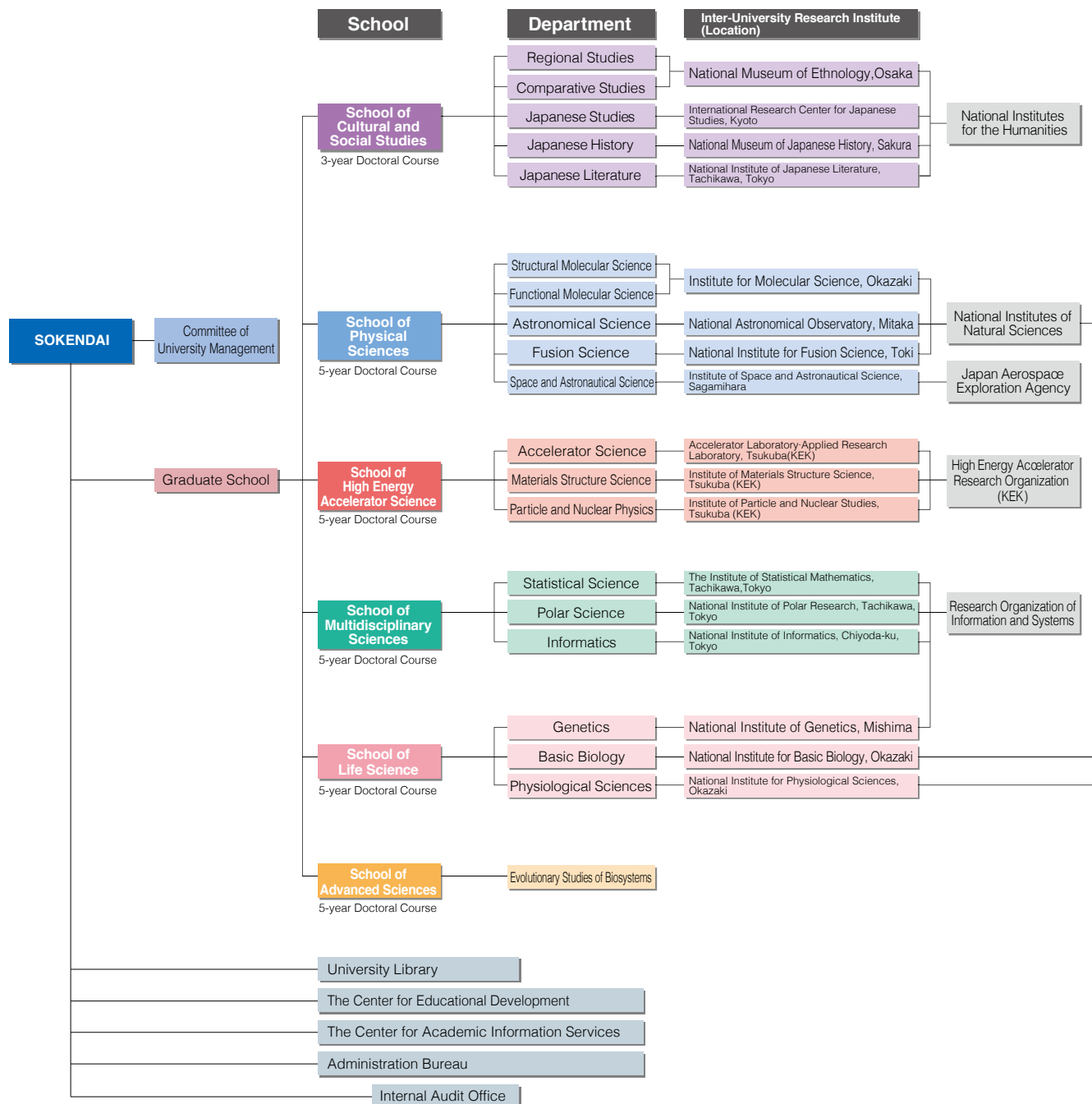
# ► Research and Education System

SOKENDAI has 6 schools and 20 departments. School of Cultural and Social Studies, School of Physical Sciences, School of High Energy Accelerator Sciences, School of Multidisciplinary Sciences and School of Life Science together hold charge of 19 departments, which are housed in 18 affiliated research institutes and operated by 4 Inter-University Research Institute Corporations and Japan Aerospace Exploration Agency. School of Advanced Sciences, which is attached directly to

SOKENDAI Headquarters and does not have a parent institute, has one department to conduct research into the evolution of life and the relationship between science and society.

In addition, the University Library, The Center for Educational Development and The Center for Academic Information Services have been established as university-wide facilities for all 6 schools.

## ■ University Organization (2020)



# School of Cultural and Social Studies

By providing comprehensive research and educational programs on the human cultural activities and the relationship among human, society, technology and nature, the School aims to encourage outstanding researchers who can compete internationally and can offer broad perspectives as well as those who can contribute to the society by using advanced research techniques in which they were trained.

## School of Cultural and Social Studies

The School of Cultural and Social Studies is the only humanities school at SOKENDAI.

The School is comprised of the following five departments affiliated with 4 research institutes: Department of Regional Studies and Department of Comparative Studies affiliated with National Museum of Ethnology, Department of Japanese Studies affiliated with International Research Center for Japanese Studies, Department of Japanese History affiliated with National Museum of Japanese History and Department of Japanese Literature affiliated with National Institute of Japanese Literature.

The School not only conducts study and research at each research institute, but also conducts collaborative activities as an entire school. The School is playing an important role of conducting cultural and social studies at SOKENDAI based on a wide variety of academic expertise, and is disseminating the study achievements through methods such as publishing the academic journal “SOKENDAI Review of Cultural and Social Studies”, holding the interdisciplinary exchange program “SOKENDAI Cultural Forum” hosted by each institute in rotation, and implementing the special education program “Academic Resource Management Course”.

In addition, the School only accepts students for the second term of a doctoral course (Doctor) while the other schools at SOKENDAI adopt a five-year system.

### Departments under the School

- Department of Regional Studies
- Department of Comparative Studies
- Department of Japanese Studies
- Department of Japanese History
- Department of Japanese Literature



▶ Dean

**Ikeya, Kazunobu**

▶ Special field

Anthropology, Geography,  
Biosophia Studies



## Department of Regional Studies

The Department, affiliated with the National Museum of Ethnology, Japan, offers opportunities to study individual societies and cultures in Asia, Europe, Africa, the Americas and Oceania. Students will develop high expertise based on intensive fieldwork. The structure, history and other characteristics of each society and culture are explored using ethnographic methodologies. Practical and theoretical problems in local areas are investigated. New approaches in anthropology and related disciplines are encouraged.



Festival for Mountain God in Amdo Tibetan area (Photo LAJIABEN)



Seminar utilizing museum collections. Students have direct access to about 340,000 artifacts.

### FIELDS

- Asian Studies
- European Studies
- African Studies
- American Studies
- Oceanian Studies

For inquiries or information:

E-mail: [souken@minpaku.ac.jp](mailto:souken@minpaku.ac.jp)

## Department of Comparative Studies

The Department, affiliated with the National Museum of Ethnology, Japan, offers opportunities for comparative studies of social systems, religion, technology, languages, art and cultural resources. Students are expected to explore similarities and differences in time and space and to explore new directions in the study of society and culture. The Department has the advantage of access to extensive collections of artifacts, audio-visual records and documentary materials. The Department nurtures researchers who can develop new research areas by combining anthropological methods with the methods and findings of related fields.



Exhibition hall at the museum. A favorable educational environment for developing new research directions.



A Kazakh community event in Mongolia (Photo YAGI Fuki) Our study abroad program provides access to diverse field places.

### FIELDS

- Social/Cultural Anthropology
- Anthropology of Religion
- Anthropology of Technology
- Linguistics
- Anthropology of Art
- Cultural Resources

For inquiries or information:

E-mail: [souken@minpaku.ac.jp](mailto:souken@minpaku.ac.jp)

## Department of Japanese Studies

The Department of Japanese Studies is organized as a single administrative unit in order to facilitate the international and interdisciplinary pursuit of Japanese studies encompassing the humanities, social sciences, as well as natural sciences. A special feature of our graduate study program is that all the faculty participate in teaching and research guidance.

The department requires graduate students to take three courses—"Theory and Methodology in Japanese Studies", "Interdisciplinary Research" and "Dissertation Writing Guidance"—which set forth the theoretical and methodological basis for conducting Japanese studies in global perspective. Through these courses and directed research, we hope to foster researchers with creative and highly specialized perspectives who are equipped to undertake comprehensive approaches of a broad interdisciplinary nature crossing the lines of multiple fields of study.



Library

We acquire basic books and periodicals published both in and outside of Japan.

### COURSES

- Japanese Studies

For inquiries or information:

E-mail: [senkou@nichibun.ac.jp](mailto:senkou@nichibun.ac.jp)

## Department of Japanese History

In the Department of Japanese History, which has the National Museum of Japanese History as its parent institute, researchers specializing in history, archaeology, folklore and allied disciplines including natural science, provide educational and research opportunities, including fieldwork, from interdisciplinary viewpoints. The most distinctive feature of the Department is that the students can use materials that are stored in the Museum, as well as various tangible and intangible information resources and advanced equipment for scientific analysis. The Department aims to foster researchers who are highly capable of comprehensive material-based analysis of Japanese history and culture and individuals who contribute to society with their broad and international perspectives.



### Lecture utilizing museum collection

About 300,000 of historical, folkloric and archaeological artifacts as well as advanced research facilities can be made of.

### COURSES

#### Japanese History

Studies of Historical Materials /  
Studies of Source Materials and  
Research on Exhibits /  
Analytical and Information Sciences /

Social History /  
Technological and Environmental  
History /  
Regional Cultures /  
International Exchange /

Intensive Lectures A-B-C-D /  
Basic Seminar I·II /  
Instruction for Doctoral Dissertation  
Making I·II

For inquiries or information:

E-mail: [soken@ml.rekihaku.ac.jp](mailto:soken@ml.rekihaku.ac.jp)

## Department of Japanese Literature

The pillars of education in the Department of Japanese Literature are to attain deep expertise on Japanese literature and related fields as well as investigative techniques and comprehensive analytical skills for related materials, while utilizing the cultural resources of the National Institute of Japanese Literature, a fundamental organization and pioneering inter-university research institute that compiles and researches vast amounts of academic information based on investigation of original materials. We offer courses from a systematic curriculum with a focus on Japanese literature and an eye to a wide range of fields while also providing research guidance under multiple faculty members in order to develop researchers with advanced expertise and human resources who can contribute to society through their research results.



### Library

About 200,000 microfilms, 20,000 Japanese rare books and other materials related to Japanese literature are stored in the institute's library.

### COURSES

#### Japanese Literature

Shared Lecture / Resource of  
Literature / Formation of Literature  
/ Environment of Literature

For inquiries or information:

E-mail: [edu-ml1@nijl.ac.jp](mailto:edu-ml1@nijl.ac.jp)



# School of Physical Sciences

Aiming to nurture world-class researchers with broad perspectives as well as individuals with advanced knowledge and skills who will contribute to society in the field of material-, space- and energy-related physics and chemistry.

## School of Physical Sciences

The School of Physical Sciences conducts education and research in physical sciences relating to material, space, energy and life. The five departments that constitute the School have been located at four Inter-University Research Institutes: the Institute for Molecular Science, the National Astronomical Observatory of Japan, the National Institute for Fusion Science and Institute of Space and Astronautical Science. These Institutes house special and large equipment impossible for general universities to accommodate, and they have implemented a great number of large-scale and internationally advanced research projects. The School is open to many foreign researchers, including visiting faculty members, postdoctoral fellows and students, and thus offers a highly international environment. In this excellent research environment, students experience the frontiers of physical science and devote themselves to study and research, striving to create the science of the future by themselves. The School provides a tutoring system in which at least two faculty members are assigned per student, allowing practical research with one-on-one guidance. In addition, a research assistant (RA) system has generously supported students financially and created an environment in which they can concentrate on their study and research. We hope that many motivated students will enroll in the School and grow into researchers who will play major roles in the future of physical science.

### Departments under the School

- Department of Structural Molecular Science
- Department of Functional Molecular Science
- Department of Astronomical Science
- Department of Fusion Science
- Department of Space and Astronautical Science



▶ Dean

**Namiki, Noriyuki**

▶ Special field

Planetary Science



## Department of Structural Molecular Science

Education and research are primarily concerned with a systematic unveiling of the static as well as dynamic properties of materials through real images of molecules and molecular assemblies deduced from detailed structural analyses. Advanced training and research are conducted in the field of structural molecular science with the use of new methods for detecting and analyzing dynamic structures, in addition to a variety of traditional spectroscopic and theoretical techniques for structural analysis.



Electronic states studied by photoelectron spectroscopy

### COURSES

- **Electronic Structure**
- **Material Chemistry**

For inquiries or information:  
E-mail: [r7139@orion.ac.jp](mailto:r7139@orion.ac.jp)

## Department of Functional Molecular Science

Education and research are primarily directed towards, firstly, unveiling the underlying mechanisms of various functions of materials at the atomic or molecular level, and secondly, the design and generation of new functional properties of molecules and molecular assemblies. Advanced training and research are conducted in the field of functional molecular science with an emphasis on the development of modern techniques for functional analysis and novel theoretical approaches.



Purification of proteins by high-performance liquid chromatography

### COURSES

- **Molecular Dynamics**
- **Excited State Dynamics**

For inquiries or information:  
E-mail: [r7139@orion.ac.jp](mailto:r7139@orion.ac.jp)

## Department of Astronomical Science

The Department carries out advanced education and research through a wide range of observational and theoretical researches using state-of-the-art facilities like Subaru Telescope in Hawai'i, the ALMA radio telescope in Chile, and supercomputers. According to the interest, students can learn the observational and theoretical astronomies and application of cutting-edge technology as well as the design, fabrication and testing of new observational instruments, development of new methods of data acquisition and analysis, and public outreach.



Subaru Telescope is located on the summit of Mauna Kea, a dormant volcano on the Big Island of Hawai'i.

### COURSES

- **Optical and Near Infrared Astronomy**  
Ground-based astronomy / Optical and infrared telescope system / Planets / Sun, stars and interstellar matter / Galaxies and cosmology
- **Radio Astronomy**  
Ground-based astronomy / Radio telescope system / Sun, stars and interstellar matter / Galaxies
- **General Astronomy and Astrophysics**  
High-precision astronomical measurement / Astronomy from space / Data analysis and numerical simulation / Earth and planets / Sun, stars and interstellar matter / Galaxies and cosmology

For inquiries or information:  
E-mail: [daigakuin@nao.ac.jp](mailto:daigakuin@nao.ac.jp)

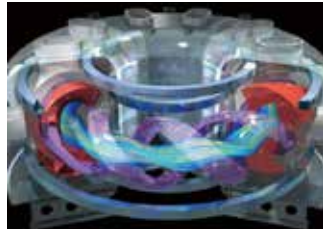
## Department of Fusion Science

To develop fusion power for a future energy source, it is necessary to research plasma physics through a complementary approach of both experimental and theoretical studies.

In this department, students learn the experimental methodology as well as engineering requirements for investigating high temperature plasma, and also learn computer simulation techniques for revealing the nature of complicated fusion plasmas.



LHD Vacuum Vessel



Microscopic instability simulation in core plasma of Large Helical Device by gyrokinetic particle code

### COURSES

#### ■ Fusion System

Device system / Research operation / Plasma heating / Diagnostics

#### ■ Fusion Simulation

Plasma simulation / Particle simulation / Magneto hydrodynamic simulation

For inquiries or information:

E-mail: daigakuin@nifs.ac.jp

## Department of Space and Astronautical Science

The Department of Space and Astronautical Science provides an opportunity for high-level education and advanced research through the theoretical study, the analysis of acquired data, and the practice of advanced R&D in Astrophysics, Solar System Sciences and Space Engineering. The main feature of each major is as follows.

- **Astrophysics** is to elucidate the origin, structure and evolution of the universe based on the observations from space.
- **Solar System Sciences** is to understand the origin and evolution of a variety of environments, including the prebiotic materials, by examining the present status and samples of past days.
- **Space Engineering** is to lead the future space development by providing innovative space technology. New space technology enables challenging missions in the above two scientific activities.

In addition, it is expected to cultivate not only depth of knowledge in Space Science but also the planning skills for space projects by touching on the most advanced and complex space projects.



Asteroid explorer "Hayabusa2"  
The spacecraft is touching down to a newly created crater.  
©Akihiro Ikeshita

### COURSES

#### ■ Space Exploration Science and Engineering

Space System / Space Exploration / Space Environment Science

#### ■ Space Observation Science

Space Astronomy / Solar System Exploration

#### ■ Space Technology

Electronic Device and telecommunication / Space Transportation Technology

For inquiries or information:

E-mail: sokendai@ml.jaxa.jp



# School of High Energy Accelerator Science

The School of High Energy Accelerator Science provides opportunities for graduate students to carry out experimental and theoretical research on elementary particles and on materials structure and functions. The School also encourages them to engage in the research and development of novel and high performance accelerators. In addition, the School aims to foster the creative researchers who will push the frontiers of science and contribute to the good of society.

## School of High Energy Accelerator Science

The School of High Energy Accelerator Science consists of three departments: the Department of Accelerator Science, the Department of Materials Structure Science, and the Department of Particle and Nuclear Physics. These departments are affiliated with the Accelerator Laboratory (and the Applied Research Laboratory), the Institute of Materials Structure Science, and the Institute of Particle and Nuclear Studies in the High Energy Accelerator Research Organization (KEK).

In the Department of Particle and Nuclear Physics, accelerator based high energy physics experiments through international collaborative projects as well as advanced theoretical research are performed in order to study and understand the origin of the cosmos and the ultimate structure of matter. In the Department of Materials Structure Science, structures of hard to soft materials and their functions are studied not only from a fundamental interest but also from an application point of view. KEK develops and operates high-energy accelerators which provide various particle beams such as protons, electrons, positrons, neutrinos, X-rays, neutrons and muons. In the Department of Accelerator Science, principles and components of the accelerator complexes are studied. The education programs are based on variety of research activities pursued by KEK, which provide wide range of graduate education for students.

### Departments under the School

- Department of Accelerator Science
- Department of Materials Structure Science
- Department of Particle and Nuclear Physics



▶ Dean

**Iso, Satoshi**

▶ Special field

Particle Physics, Theoretical Physics



## Department of Accelerator Science

High-energy particle accelerators are extremely powerful tools for exploring a wide range of building blocks and structures found in nature, from elementary particles and atomic nuclei to atoms, molecules and even complex living organisms. In addition, beyond the field of natural science, applications of particle accelerators are being actively pursued in the fields of industry and medical science.

In the Department of Accelerator Science, students can conduct both theoretical and experimental research on the principles of accelerators and their related leading edge technologies, and thereby endeavor to further advance natural science through the development of particle accelerators.

Closely related subjects, such as radiation science, computer science, superconductivity engineering, and mechanical engineering can also be studied.



Accelerator Test Facility

### COURSES

#### Accelerator Science

Beam physics / Beam Development / Design of Accelerator Projects / Accelerator Technology / Science of Magnetics / Science of Radio-Frequency Acceleration / Vacuum Science and Technologies / Computer Science / Radiation Science / Mechanical Engineering for Accelerator Development

For inquiries or information:

E-mail: [kyodo2@mail.kek.jp](mailto:kyodo2@mail.kek.jp)

## Department of Materials Structure Science

In Department of Materials Structure Science, leading edge researches on structures, functions and characteristics of hard to soft materials are pursued.

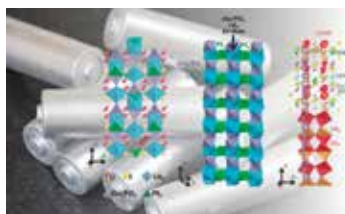
The research studies concerning physics, chemistry, biology, engineering, agriculture and medical science are performed by the use of advanced beams such as synchrotron radiation, neutrons, muons and slow positron, which are provided by state-of-the-art particle accelerators.

Developing novel technologies for beam production and its utilization to make major contributions to materials science are also included in our research fields.

We will offer education programs and experimental opportunities to our students who will aim for clarifying the Nano World.



View of a protein crystallography end-station



The crystal structure of the world-best (2011) lithium-ion-conducting material  $\text{Li}_{10}\text{GeP}_2\text{S}_{12}$  was determined by neutron diffraction and synchrotron radiation. Since then, the development of the all solid-state batteries for automobiles has been activated.

(Left to right) the crystal structure of  $\text{Li}_{10}\text{GeP}_2\text{S}_{12}$ , its framework, the conduction paths of lithium ions are shown. Zigzag conduction pathways along the c axis are indicated.

### COURSES

#### Materials Structure Science

Synchrotron Radiation Science / Materials Structure Science based on Synchrotron Radiation / Neutron and Muon Science

For inquiries or information:

E-mail: [kyodo2@mail.kek.jp](mailto:kyodo2@mail.kek.jp)

## Department of Particle and Nuclear Physics

Both particle physics and nuclear physics are among the most fundamental areas of basic science, and they are the sources of new frontiers in physical concepts and methods that are the basis of modern science; these subjects involve the pursuit of the most fundamental principles of nature and the exploration of the basic structure and building blocks of matter.

In this department, we conduct both theoretical and experimental researches in particle and nuclear physics. The theoretical investigations include not only those in particle and nuclear physics but also those in cosmology and astrophysics. The experimental investigations are conducted by means of colliding beam accelerators and various beams from high-intensity proton accelerators. In addition, related research in physics, including the R&D of new devices, methods and their applications, is pursued in a versatile manner.



Upgrade of the SuperKEKB accelerator and Belle II detector. ©KEK

### COURSES

**Theoretical Particle and Nuclear Physics**  
Superstring Theory / Particle Physics Phenomenology / Lattice Gauge Theory / Hadron and Nuclear Theory / Theoretical Cosmophysics

**Experimental Particle and Nuclear Physics**  
B Factory / Hadron Collider Energy Frontier / Lepton Collider Energy Frontier / Neutrino Physics / Kaon Rare Decay / Muon Rare Process / Muon Precision Measurement / Nuclear Physics / Physics of Short-Lived Nuclei / Neutron Fundamental Physics / Experimental Cosmophysics / Beam Dynamics / Superconductivity and Cryogenic Engineering / Particle Detection Technology

For inquiries or information:

E-mail: [kyodo2@mail.kek.jp](mailto:kyodo2@mail.kek.jp)

S O K E N D A I

# School of Multidisciplinary Sciences

The School of Multidisciplinary Sciences conducts research and education on important issues relating to changes of the Earth, environment and human society. The School strives to cultivate researchers and highly specialized professionals in the area of information and system sciences, who will play key roles in research and/or development skills that will contribute to solving these issues.

## School of Multidisciplinary Sciences

The School of Multidisciplinary Science conducts research and education on complicated natural and social phenomena, as systems that govern the occurrences, functions, and interactions of these phenomena, from the comprehensive and transdisciplinary viewpoint. Through such research and educational activities, the School aims to nurture researchers and highly specialized professionals in the area of information and systems who will take the lead in academic research and address various important issues relating to changes in human society in the 21st Century. The School, consisting of the Department of Statistical Science, the Department of Polar Science, and the Department of Informatics, has been involved in multidisciplinary research fields from the beginning. In addition, the School further strives to enhance its research and education by promoting close collaboration between the Departments by, for example, setting common subjects in curricula. The School covers diverse research subjects but studies the principles of multidisciplinary science, research approaches, and methodologies as an essential part of the School's research and education activities. The Department of Statistical Science and the Department of Informatics seek to determine the common probability or complexity among various phenomena by statistical mathematics and data analysis. The Department of Polar Science studies the geophysical and the biological complex system in the polar regions of extremes on Earth and approaches its subject from the viewpoint of multidisciplinary science. By continuing to explore new research fields, including advanced and leading research fields, and systematizing them through such activities, the School strives for further development of the multidisciplinary sciences.

### Departments under the School

- Department of Statistical Science
- Department of Polar Science
- Department of Informatics



▶ Dean

**Miyasato, Yoshihiko**

▶ Special field  
Control Theory

Outline

School of Cultural and  
Social Studies

School of  
Physical Sciences

School of High Energy  
Accelerator Science

School of  
Multidisciplinary Sciences

School of  
Life Science

School of  
Advanced Sciences

Education &  
Research Activities

DATA



## Department of Statistical Science

The Department of Statistical Science is operated by the Institute of Statistical Mathematics, which has made great achievements in statistical science, including the Akaike information criterion, and has been contributing to the development of science as a central research institute of statistical science not only in Japan but also in the world.



Supercomputer System for Statistical Science (HPE SGI 8600)

This department conducts education and research on theory and applications to extract information and knowledge from the real world based on data, and aims to develop human resources with creative research capabilities solving various important issues that are complexly intertwined.

### COURSES

■ **Statistical Science**  
Statistical Modeling / Statistical Data Science / Statistical Inference and Mathematics

For inquiries or information:

E-mail: sokendai-toukei@t.rois.ac.jp

## Department of Polar Science

The Earth is the only one aqua-planet in the Solar system. Many kinds of organism including mankind have been living on it. When we long for sustainable development on this planet, we have to better understand evolution and change of its environments. Recently, we come to realize that environmental change of the Earth, in each aspect of ionosphere, atmosphere, hydrosphere, geosphere and biosphere, appears in advance from both polar regions. The objectives of



The aurora australis  
(Photo by Hidehiko Suzuki)

Department of Polar Science are to study characteristics of the changes and their relation in the framework of the seamless Earth system. Polar Science stands strongly on the fieldwork; therefore we attach importance to educate or study together practical methodology to carry out the research.

We train "Earth scientists" who are creative and flexible in studying the past, current and future figure of the Earth.

### COURSES

■ **Polar Science**  
Polar Space and Upper Atmospheric Sciences / Polar Meteorology and Glaciology / Polar Geoscience / Polar Bioscience

For inquiries or information:

E-mail: sokendai-kyokuiki@t.rois.ac.jp

## Department of Informatics

Informatics is a new science field which extensively and synthetically deals with problems on information from various aspects. It is a multidisciplinary science covering not only traditional information science and engineering, but also artificial intelligence and data science indispensable in the recent data-driven society, and even humanity informatics and social informatics. It includes expression, collection, circulation, management, processing, understanding, and usage of information as well as the information technology to support them. The department of Informatics aims to foster researchers and highly skilled professionals with ability in broad range from foundations to practices and advanced speciality by utilizing cutting-edge research environment and cyber science infrastructure of the National Institute of Informatics in an international

atmosphere with many active researchers and students from various countries.



A machine learning experiment based on communication between human and robot, by using VR devices



Mixer events for students and researchers are held in the lounge area.

### COURSES

■ **Informatics**  
Foundations of Informatics / Information Infrastructure Science / Software Science / Multimedia Information Science / Intelligent Systems Science / Information Environment Science

For inquiries or information:

E-mail: daigakuin@nii.ac.jp

# School of Life Science

The School of Life Science aims to cultivate researchers who are internationally competitive and possess broad perspectives necessary for taking on leading roles in the life science research of the next generation. Students participate in research to clarify life phenomena at various levels from the molecular to the individual to the population.

## School of Life Science

The School of Life Science aims to educate researchers who are internationally extraordinary and possess creativeness and broad perspectives to explore new fields of Life Science. Professors in this school cover wide fields of Life Science from the molecular to organismal and population levels.

The School of Life Science offers graduate programs that are aimed at nurturing independent and creative researchers that expand the frontiers of life science. Three departments that constitute the School of Life Science are based on three leading research institutions — National Institute of Genetics, National Institute for Basic Biology, and National Institute for Physiological Sciences. Research activities of these institutes cover variable fields of Life Science and the School of Life Science aims to provide research environments in which students can learn interdisciplinary concepts as well as their own specialty. Housing the largest number of life science faculty in Japan, the School of Life Science offers a mentoring system by multiple faculty, and provides a superb environment for independent research by each student. The graduate course provides not only lectures by outstanding internal professors but also seminars on the latest research progress conducted by external researchers, educational programs for cross-disciplinary approaches, and courses on scientific writing and presentation. The three departments hold a joint retreat every year for scientific interactions and share lectures over the internet for further enhanced interactions. We welcome students who love and enjoy Life Science, and dream to open new windows into the field.

### Departments under the School

- Department of Genetics
- Department of Basic Biology
- Department of Physiological Sciences



▶ Dean  
**Fujimori, Toshihiko**

▶ Special field  
Developmental Biology



## Department of Genetics

The Department of Genetics offers education and research opportunities in a variety of cutting-edge disciplines with the goal of investigating biological phenomena on the basis of genetic information. Study and research fields include molecular, cellular, developmental, behavioral, population, and evolutionary genetics, as well as genome biology and bioinformatics. Students can take advantage of a wide range of databases and genetic resources hosted by the National Institute of Genetics. To nurture independent researchers, the Department of Genetics adopts an educational philosophy that the academic guidance of each individual student is carried out by the entire faculty. For example, graduate students meet with their thesis committee twice a

year to receive advice from faculty members outside their host labs. Other features of the Department include the Scientific Presentation/Writing Program and ample financial assistance opportunities such as our research assistant program.



The rich environment of the Department of Genetics allows students to fully devote themselves to their own research projects.



Lively discussions are often held in the laboratories.

### COURSES

- **Molecular and Cellular Biology**
- **Developmental Biology**
- **Evolutionary Biology**
- **Genome Biology**

For inquiries or information:

E-mail: [info-soken@nig.ac.jp](mailto:info-soken@nig.ac.jp)

## Department of Basic Biology

The Department of Basic Biology trains researchers capable of developing innovative approaches and creative ideas to understand higher order phenomena in biological science. Students take advantage of the environment and facilities of the National Institute for Basic Biology. Students conduct a PhD research project with taking a variety of advanced classes and advices from several professors with different specialities. Research fields in this department cover cell biology, developmental biology, environmental biology, neurobiology, symbiotic biology and evolutionary biology with appropriate model organisms and top-end techniques including molecular biology, bioimaging, mathematical science and omics.



Model organisms used at Department of Basic Biology

### COURSES

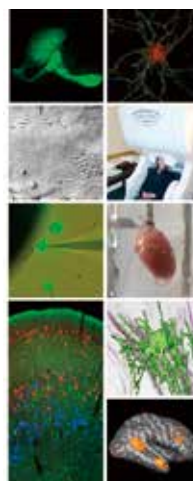
- **Cell Biology**
- **Developmental Biology**
- **Environmental Biology**
- **Neurobiology**
- **Evolution, Diversity and Genomic Biology**
- **Reproductive Biology**

For inquiries or information:

E-mail: [r7139@orion.ac.jp](mailto:r7139@orion.ac.jp)

## Department of Physiological Sciences

Physiology is to clarify the mechanisms of living bodies from both elements (cells and molecules) and systems, and therefore provides important basic knowledge necessary for understanding pathological conditions. Importance of physiology has been much increased upon clarification of genome structures. In this department, students can learn the function of intact organisms in an integrated way from molecular / cellular levels as basic units of living organisms to whole body levels, and are expected to be pioneering researchers in bioscience, neuroscience and medicine.



Cells, tissues and organs which researchers in Department of Physiological Sciences are working on using different experimental procedures

### COURSES

- **Molecular and Cellular Physiology**
- **Homeostatic Regulation**
- **Fundamental Neuroscience**
- **System Neuroscience**

For inquiries or information:

E-mail: [r7139@orion.ac.jp](mailto:r7139@orion.ac.jp)



# School of Advanced Sciences

Based on SOKENDAI's founding principles and purposes, the School aims to accomplish world-class academic research beyond the borders of conventional academic fields through interdisciplinary approaches. Additionally, we strive to develop transdisciplinary and advanced academic fields and to produce researchers who have broad perspectives and a high level of expertise that is globally competitive.

## School of Advanced Sciences

The School of Advanced Sciences is a school with just one department: the Department of Evolutionary Studies of Biosystems. Our mission is to perform research and education in the fields of evolution and science and society. The evolution section focuses on the diversity and evolutionary history of organisms, and consists of four subsections: integrative anthropology, behavioral biology, evolutionary biology and theoretical biology. The science and society section studies the roles and responsibilities of scientists within society, from the viewpoint that science is a social activity of humans. Students carry out Ph.D. research in their own field, but are also required to write a subthesis in the other one: biology students write a subthesis on science and society, and vice versa. The barriers between laboratories have been removed as far as possible, which makes for an intense, intimate educational environment for all students and faculty. We thus hope that all of our students will become competent and well-balanced researchers / professionals. We also actively promote international and domestic collaborations with other universities and research institutes, to plant the seeds for fruitful future research fields.

### Departments under the School

- Department of Evolutionary Studies of Biosystems



▶ Dean

**Sasaki, Akira**

▶ Special field

Mathematical Biology

## Department of Evolutionary Studies of Biosystems

### Vision for future through novel perspectives on life

Studying biological organisms, humans and society from broad perspectives, our department is designed to develop deeper understanding on nature through evolutionary studies of biosystems and meta-consideration of science. Our education and research program focus on the biological phenomena with evolutionary perspectives and the relationship between science, technology, and the society. We thus aim to train independent researchers who can contribute for building sustainable society with their expertise and broad perspectives.

### COURSES

#### ■ Major in Biology

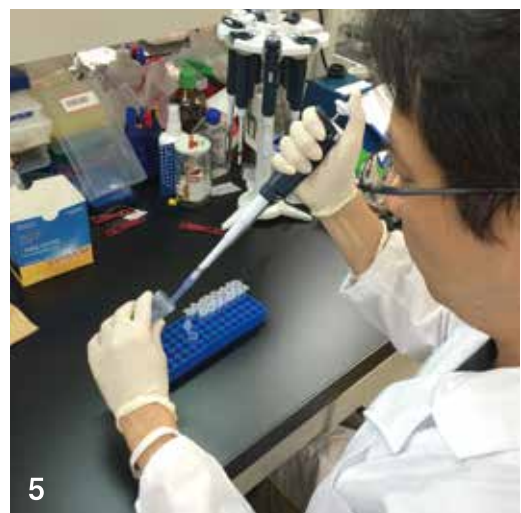
Anthropology / Evolutionary Biology  
/ Behavioral Biology / Advanced  
Theoretical Biology

#### ■ Major in Science and Society

Social Studies of Science

For inquiries or information:

E-mail: [office\\_sendou@ml.soken.ac.jp](mailto:office_sendou@ml.soken.ac.jp)



1 : Excavation of Hasankeyf Höyük (Turkey). Prepottery Neolithic period (c. 9500B.C.)

2 : Migratory butterfly, Chestnut tiger (*Parantica sita*)

3 : The Grand Prix Horse Blast Onepiece

4 : Archives of Japanese scientists who worked in Taiwan during wartime

5 : Handling DNA solutions in the wet lab.

# ▶ Educational Programs

## SOKENDAI Freshman Course

The Freshman Course is an intensive course (4 days camp) for newly-enrolled students of SOKENDAI. This course has two objectives: (1) To acquire basic knowledge and skills required for all researchers; and (2) To understand the SOKENDAI's broad range of intellectual fields, and create



a network beyond your research field. This course consists of three sections: "Exploring Diversity in Academia (EDA)", "Researchers and Society" and "Communication Skills for Researchers".

### ■ 2019 (First semester)

Date: April 9-12, 2019

Venues: SOKENDAI Hayama Campus

Participants: 74 students, 39 faculty members, Total 113

### ■ 2019 (Second semester)

Date: October 8-11, 2019

Venues: SOKENDAI Hayama Campus

Participants: 33 students, 23 faculty members, Total 56

## Course Groups

A course group is a cluster of courses categorized across a wide spectrum of specific areas that are intimately related to each other. In some course groups, a coalition of schools/departments bring along their own courses to build up the group; students can enjoy special subjects of an adjacent academic discipline to broaden their perspective, quickly

grasp a general idea of each discipline and/or get an objective overview of various disciplines.

When a SOKENDAI student travels to the other campus, for the purpose of receiving a lecture, part of the expenses (ex. transportation expenses) may be reimbursed after course.

### ■ 2020 Course Groups

#### Integrative Brain Science Course

Brain science requires a wide range of knowledge and view not only on physiology, but also on biology, technology, pharmacology, information science and social science. This course will provide lectures and practices for the purpose of integrating multidisciplinary approaches and developing a new research field.

All the lectures will be broadcasted through our remote lecture delivery system except training course.

#### Integrative Bioscience Education Course

To foster the development of young researchers who can contribute to the future of biology in connection with the recent developments of various technologies, we provide a new course that promotes interdisciplinary and integrative views of biological processes, covering not only biological but also physical, mathematical, and information sciences.

All the lectures will be provided through the remote lecture delivery system except training course.

#### Courses common to the School of Physical Sciences and the School of High Energy Accelerator Science

Utilizing research topics and themes common to both schools and their departments, the schools provide the courses mainly to students with academic background or fundamentals in Physical Sciences. The courses aim to help students cultivate the basic skills, interdisciplinary and integrated perspectives on nature essential for researchers.



## “Science and Society” Program

School of Advanced Sciences has been leading a program to develop graduate education in “science and society”. Since the university’s primary mission is to train professionals who have leading expertise as well as broader perspectives, we hope our young scientists develop abilities to grasp science as part of social activities and to think critically about social dimensions of scientific practice including

social implications and impacts of research activities and infrastructure supporting scientific research. Therefore the program designs and provides courses on “science and society”. As part of the activities, we offer a 1.5-day program, “Researchers and Society”, within the Freshman Course twice a year (in Japanese and English).

## Historical and Cultural Resource Management Education Program

The historical and cultural resource management course is led by the School of Cultural and Social Studies and aims to develop researchers with a high capability in historical and cultural resource management through learning about advanced historical and cultural resource management

such as methods for reading diverse historical and cultural resources, analysis using advanced scientific methods, recording and scientific preservation management of historical and cultural resource information, and research presentations using historical and cultural resources.

## Course-by-Course Education Program to Cultivate Researchers in Physical Science

The Program is provided jointly by the School of Physical Sciences and the School of High Energy Accelerator Science. It seeks to foster researchers in the field of physical sciences who are fully equipped with a high degree of professional qualities as well as broad perspective and international competence to meet the needs of society. In the 1st to 2nd years of the 5-year doctoral course, the Program focuses on building basic academic skills at the graduate

school level. In the 3rd to 5th years of the 5-year doctoral course students are placed according to their aptitude into one of the following four courses: Basic Course\*, Advanced Research Course, Project Research Course (available only in the School of Physical Sciences), and Development Research Course (available only in the School of Physical Sciences).  
\*For students matriculating in AY2018 or later, course completion in the “Basic Course” has been discontinued.

## Joint School Seminars

### SOKENDAI Cultural Forum / School of Cultural and Social Studies

**November 30-December 1, 2019 at National Institute of Japanese Literature**

The forum is an event for academic exchanges organized by SOKENDAI's only liberal arts department, School of Cultural and Social Studies. Centering "culture" as a common focus, it offers a forum for interdisciplinary exchanges among faculties and students of various majors from inside and outside of the university. As it provides a place to publish their research, the event functions as an educational opportunity for the students to present their research works and achievements and to learn presentation skills at the same time. Through these activities, the project also serves as a gateway for academic interactions between art and science students.

Furthermore, by involving students in the planning and organization

of the event, students can exercise their planning skills and receive advices and supports from faculties on project management through the collaboration, which in turn would facilitate students' ability as independent researchers.



### Physical Science Student Seminar / School of Physical Sciences and School of High Energy Accelerator Science

**July 12-13, 2018 at Nobeyama Radio Observatory**

School of Physical Sciences and School of High Energy Accelerator Sciences organize the multidisciplinary Physical Science Student Seminar as a part of their course curriculums.

Every two years, students and faculties from eight majors join in this overnight event to hold academic seminars.

The project authorizes students to take responsible roles in the planning and organization of the event in order to polish their planning and organizing skills and train them as highly competent researchers.



### Multidisciplinary Sciences Cross Talks / School of Multidisciplinary Sciences and School of Life Science (Department of Genetics)

**December 10-11, 2019 at Shizuoka Prefecture**

At the "Young Researchers Cross Talks" hosted by Research Organization of Information and Systems and co-sponsored by School of Multidisciplinary Sciences, members of School of Multidisciplinary Sciences and Department of Genetics, as well as faculties and students from a variety of fields in SOKENDAI, join together to hold group discussions throughout this overnight event.

Through group discussions and presentations on multidisciplinary topics with the presence of local and

international faculties and students from various fields of study, students are expected to acquire higher expertise, wider perspectives, and international competency.





## Life Science Retreat / School of Life Science & School of Advanced Sciences

### December 15-16, 2019 at Yamanashi Prefecture

Life Science Retreat invites biology faculties and students for academic interactions, through which it aims to foster talents with a broader grasp of biological science and the capacity to contribute to the development of the field.

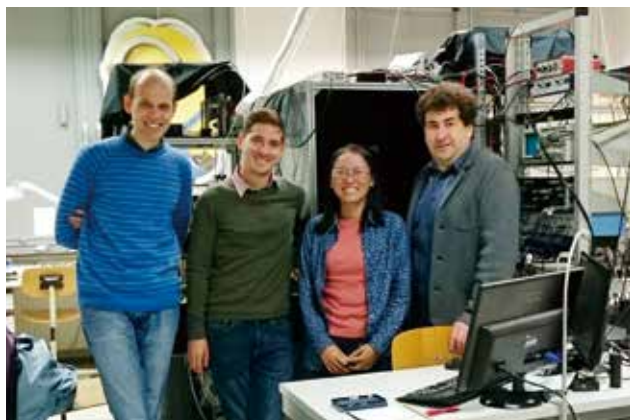
English is used throughout the conference to improve the participants' international caliber. Students plan and coordinate research presentations (oral and poster) and opinion exchanges. In the project, student organizers are expected to polish planning skills through the preparation and exercise presentations skills.



## SOKENDAI Student Dispatch Program

This program encourages SOKENDAI students to seek a short-term research opportunity abroad and/or a long-term collaborative research project in and outside Japan that may lead to their career in the future. The program follows

the educational goals of SOKENDAI, "advanced specialties and expertise", "broad perspective", and "international competitiveness", and intends to financially support such research opportunities of SOKENDAI students.



### 2019

#### Category 1 (Short-term Abroad Program)

Number of students supported: 31

#### Category 2 (Long-term Abroad Program)

Number of students supported: 19

#### Category 3 (Long-term Domestic Program)

Number of students supported: 2

Dispatched countries: USA, UK, Australia, China, Germany, France, Italy, Czechia, etc.

## SOKENDAI publication grant for research papers

The publishing cost support of the printing expenses is carried out for about the academic paper which was a result of the research activities. This support is applicable only for

the students who belong to SOKENDAI. Total 18 publications were supported in 2019.

# ▶ Society and Community Outreach Activities

## Community Programs

We communicate the outcomes of the University's educational and research activities and give back to the community, with the aim to promote and spread the arts and sciences, as well as promote excellent research findings.

April 3, 2019	<b>Shonan Village Seminar</b>	<b>Thinking of a Prosperous Life</b> Hasegawa, Mariko (SOKENDAI President) Ogawa, Yujiro (SOKENDAI Executive Director)
May 3, 2019	<b>Shonan Village Festival 2019</b>	<b>Human Evolution: Environment, Culture, and Genome</b> Satta, Yoko (Professor, Department of Evolutionary Studies of Biosystems)
July 31, 2019	<b>Science Seminar for Junior High and High School Students</b>	<b>From "Hayabusa" to "Hayabusa 2": The Mystery of the Solar System Explored from Fragments of Asteroids</b> Komatsu, Mutsumi (Assistant Professor, The Center for Educational Development)
November 20-22, 2019	<b>SOKENDAI Outreach Activities</b>	<b>Introduction to Project Management</b> Sakakibara, Satoru (Professor, Department of Fusion Science)
December 23-25, 2019	<b>SOKENDAI Outreach Activities</b>	<b>Challenges in the Exploration of the Unknown: Cutting-edge Studies Young Researchers Discuss</b> Oishi, Masatoshi (Professor, Department of Astronomical Science)
February 24, 2020	<b>SOKENDAI Seminar</b>	(※) <b>Exploration "Q": The Mysteries of the Universe Explored Through Cosmic Rays</b> Yoshioka, Mizuki (Associate Professor, Kyushu University Research Center for Advanced Particle Physics)
March 7, 2020	<b>Café Integral</b>	(※) <b>Seven Types of Monkeys on One Island: Diversification of Sulawesi Macaque Monkeys</b> Terai, Yohei (Assistant Professor, Department of Evolutionary Studies of Biosystems)
	<b>"Yokoko Academia" with Kanagawa Prefectural Yokosuka High School</b>	We supported the academic program, "Yokoko Academia" organized by Kanagawa Prefectural Yokosuka High School to contribute to local educational institutes and foster future generations. The school is designated as a Super Science High School by the Ministry of Education, Culture, Sports, Science and Technology.

※Postponed due to the spread of the COVID-19.



## Academic Lectures hosted by the School of Advanced Sciences

From various on-going studies, the School selects themes relating to "life and evolution" and organizes academic lectures that deliver findings from cutting edge research to

the general public and help to create deeper communication with people in the local communities.

### ■ November 3, 2019

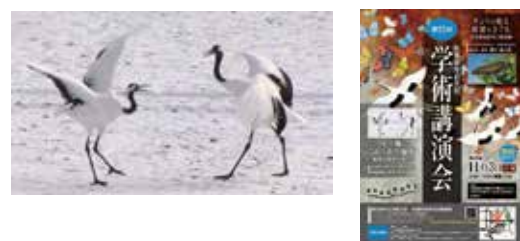
#### Lecture

Exploring the World of Butterflies: The Forefront of Research on Insects' Visual Sense  
Arikawa, Kentaro (Professor, Department of Evolutionary Studies of Biosystems)



#### Lecture

The Mystery of Dance of Cranes: An Ethological Experiment  
Takeda, Kohei (Research fellow, Department of Evolutionary Studies of Biosystems)



**For inquiries or information : Evolutionary Studies of Biosystems (ESB) Administrative Section**  
TEL : 81-46-858-1577, 1595 FAX : 81-46-858-1544 E-mail : office\_sendou@ml.soken.ac.jp



## Press Release

Research findings in 2019 published on the following papers are press released and subsequently appeared in newspapers and various media:

- Astronomers Capture First Image of a Black Hole — Japanese researchers contribute to paradigm-shifting observations of the gargantuan black hole at the heart of distant galaxy Messier 87



- Developmental effects on behavioural response for social preferences in frog tadpoles, *Rana ornativentris*.



- Genome-wide SNP analysis of Japanese Thoroughbred racehorses



- The oldest record of an astronomical phenomenon in Japan was of a fan-shaped aurora described in the Nihon-shoki.



- Inter-group aggressive interaction patterns indicate male mate defense and female cooperation across bonobo groups at Wamba, Democratic Republic of the Congo.



- A multivariate phylogenetic comparative method incorporating a flexible function between discrete and continuous traits.



- Spectral organization of the compound eye of a migrating nymphalid, the Chestnut tiger butterfly, *Parantica sita*



## JSPS Summer Program

Date : June 12 – August 21, 2019

This program, which is carried in partnership with Japan Society for the Promotion of Science (JSPS), offers opportunities to practice research at inter-university research institutes (IURI) or universities to young researchers who have undertaken or just completed doctoral programs for two months during the summer. SOKENDAI provides an orientation session during the first week of the program in Hayama. It comprises Japanese language lessons, special lectures on Japanese culture and research, and a poster session in which SOKENDAI students will also participate. The objective of this program is to inject an international element

into the education at the University and to promote academic exchange with other countries.



### SOKENDAI Students' Seminar on Skills for Poster Presentation

Lectures for the purpose of obtaining practical abilities to internationally appeal attractiveness of research are held every two years targeting the students of this university in conjunction with the orientation of the JSPS Summer Program. Students participate in a poster session held in the orientation, and practice the introduction of their research in English, after receiving guidance from English teachers.

## SOKENDAI Fund

SOKENDAI Fund has been established to support SOKENDAI Students. For the details, please visit our website. <https://www.soken.ac.jp/donation/>

## SOKENDAI Newsletter

SOKENDAI Newsletter covers ongoing activity information at the university such as various events in our campuses, research findings released to media, and awards.

You can find it online on our university website. (Japanese text only)



## ▶ The Center for Educational Development (CED)

“Advanced specialties and expertise”, “Broad perspective” and “International competitiveness” are the educational goals of SOKENDAI, and they are the essential competencies for excellent researchers. In order to achieve these goals, we believe that the university-wide education that enhances the quality as an excellent researcher is necessary, in addition to specialized education carried out in each department. The missions of the CED are: to implement and support the university-wide education programs and projects; and, to assist in evaluation and analysis of the educational activities. We contribute to develop researchers rooted in our philosophy.

### Implement and provide support for the university-wide education program and projects

- Implement "Freshman Course"
- Provide support in implement "SOKENDAI Dispatch Program"
- Provide support in developing the international joint/double degree programs
- Provide support in educational activities for students

### Provide support for students' activities

- Provide support for students' research activities, job search and networking

### Assist in evaluation and analysis of educational activities

- Conduct surveys and analyze the implementation status of the university-wide and specialized education in each department
- Conduct surveys and analyze students' research performance

## ▶ The Center for Academic Information Services

This Center was established to aims at effective management of academic information in SOKENDAI. Based on secure and resilient information infrastructure, it provides various academic information services to researchers and researchers-in-future who are both users and creators of academic information, and supports education, research and administration in SOKENDAI.

### Division of Information Services and Technology

Cooperating with the affiliated research institutes and museums, this division manages core information facilities and operates information systems located at the Hayama Campus and its branch.

### SOKENDAI Video Conferencing System

The system connects the affiliated Inter-University Research Institutes and JAXA with the university headquarters. It facilitates teleconferencing and supports university activities.

### SOKENDAI Cloud Computing System

This private cloud computing system is a basic facility lately developed to promote intra-university education, academic exchange and public relations.

**For inquiries or information : Academic Information Service Office**  
TEL : 81-46-858-1587 FAX : 81-46-858-1633 E-mail : [istc.jimu@ml.soken.ac.jp](mailto:istc.jimu@ml.soken.ac.jp)



## Hayama Library (Attached Headquarters)

Hayama Library gathers, organizes and releases various academic materials to provide high-level research and education and to pioneer advanced academic fields.

Hayama Library is open around-the-clock to the faculty and students at the Hayama Campus for reading and borrowing. It collects and makes available standard references and books that can be used in all Departments and Schools, as well as specialized books and journals related to studies in cutting-edge and/or interdisciplinary research fields. Image and video documentation materials are available through in-house facilities.

In addition, Hayama Library offers SOKENDAI Institutional Repository, which allows free online access to doctoral dissertations and book/journal publications at the University, as well as academic papers published by the faculty and students at the Hayama Campus.

### ■ Number of academic materials available at the Library

Book : (Japanese)	approx. 23,000 titles
(Non-Japanese)	approx. 24,900 titles
Journal : (Japanese)	approx. 200 titles
(Non-Japanese)	approx. 340 titles
E-book :	approx. 128,600 titles
E-journal :	approx. 5,300 titles
Institutional Repository :	approx. 4,900 titles

As of April 1, 2020

### For inquiries or information :

#### University Library

TEL : 81-46-858-1528

FAX : 81-46-858-1607

E-mail : lib@ml.soken.ac.jp

The Library also provides database services, including OPAC (Online Public Access Catalog) for books and journals held by the Library.

These books and database are also available to general public. The venue effectively functions both as a place to collect research resources and a studying space.

SOKENDAI staffs and neighborhood residents can borrow books belonging to Kanagawa Prefectural Library (KL-NET Service). Furthermore, since 2015, it has been serving as a service counter of National Diet Library to enable users to browse digital materials belonging to the National Diet Library.

### University Library

The University Library consists of the Hayama Library and IURI libraries. The University Library gathers, organizes, and accumulates electronic materials. Under close cooperation with the Hayama Library and IURI libraries, the University Library aims to promote the education / research activities by performing required activities for facilitation of the use of academic information. It offers a large number of e-journals and e-books so that faculty and students of IURIs dotted around the country can use these materials in common. In addition, the university introduces and offers the world's largest bibliographic / citation database "Scopus".

### Electronic Journals

BioOne / JSTOR / Science Direct /  
Springer-LINK / Wiley-Blackwell / GeoScienceWorld  
Scopus (Document/reference database search service)

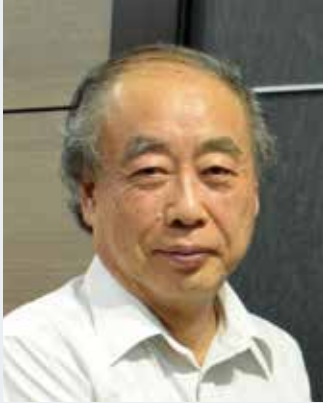
\* In addition to the above, electronic journals for internal use at the Hayama Campus are available.

<http://www.lib.soken.ac.jp>

# ▶ DATA BOOK

## Nobel Prize Laureates from SOKENDAI

### Professor Emeritus, School of High Energy Accelerator Science



#### Kobayashi, Makoto

Professor Emeritus,  
SOKENDAI / Honorary Professor  
Emeritus, High Energy Accelerator  
Research Organization(KEK)

#### The 2008

### Nobel Prize in Physics

**for the discovery of the origin of the broken symmetry which predicts the existence of at least three families of quarks in nature**

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1999.4-2004.3	Professor, School of Mathematical and Physical Science
2004.4-2006.3	Professor, School of High Energy Accelerator Science
2003.4-2004.4	Chair, Department of Particle and Nuclear Physics
2008	Order of Culture

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### Professor Emeritus, School of Life Science



#### Ohsumi, Yoshinori

Professor Emeritus,  
SOKENDAI /  
National Institute for Basic Biology

#### The 2016

### Nobel Prize in Physiology or Medicine

**for his discoveries of mechanisms for autophagy**

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1996.10-2009.3	Professor, School of life Science
2008.4-2009.3	Dean, School of Life Science
2006	Japan Academy Prize
2016	Order of Culture

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## Recipients of Award

### Orders and Medals of Honor (after 2012)

Name	Department	Prize
Kodaira, Keiichi (Professor Emeritus, Former President)	Dept. of Astronomical Science	The Order of the Sacred Treasure, Gold and Silver Star (2017)
Kawai, Maki (Professor)	Dept. of Functional Molecular Science	Medal with Purple Ribbon (2017)
Ohsumi, Yoshinori (Professor Emeritus)	Dept. of Basic Biology	Order of Culture (2016)
Ohta, Tomoko (Professor Emeritus)	Dept. of Genetics	Order of Culture (2016)
Suematsu, Yasuharu (Professor Emeritus)	Dept. of Informatics	Order of Culture (2015)
Nakanishi, Susumu (Professor Emeritus)	Dept. of Japanese Studies	Order of Culture (2013)

### Person of Cultural Merit (after 2012)

Name	Department	Research Theme
Inoki, Takenori (Professor Emeritus)	Dept. of Japanese Studies	Economy (2019)
Komatsu, Kazuhiko (Professor)	Dept. of Japanese Studies	Ethnology (2016)
Ohsumi, Yoshinori (Professor Emeritus)	Dept. of Basic Biology	Cell Biology (2015)
Morokuma, Keiji (Professor Emeritus)	Dept. of Structural Molecular Science	Theoretical Chemistry, Computational Chemistry (2012)

### Japan Academy Prize (after 2012)

Name	Department	Year	Subject
Kawai, Maki (Professor)	Dept. of Functional Molecular Science	2020	Single Molecule Spectroscopy Elucidating Chemical Reactions at Solid Surfaces
Kitsuregawa, Masaru (Professor)	Dept. of Informatics	2020	Pioneering Research in the Theory and Application of Large-Scale High-performance Database Systems
Tsuneta, Saku (Professor)	Dept. of Astronomical Science	2019	Studies of Solar Magnetohydrodynamic Phenomena through Satellite Observations
Nagamine, Kanetada (Professor Emeritus)	Dept. of Materials Structure Science	2019	Exploration of Muon Radiography and its Application to Non-destructive Studies of Large-scale Matters
Takasaki, Fumihiko (Professor Emeritus)	Dept. of Particle and Nuclear Physics	2017	Studies of CP Violation in the B-Meson System
Iye, Masanori (Professor Emeritus)	Dept. of Astronomical Science	2013	Observational Studies of the Early Universe

### Japan Academy Medal Prize (after 2012)

Name	Department	Year	Subject
Ishizaki, Akihito	Dept. of Structural Molecular Science	2020	Theoretical Development of Quantum Dissipative Dynamics and Its Application to Primary Processes of Photosynthesis
Innan, Hideki (Associate Professor)	Dept. of Evolutionary Studies of Biosystems	2014	Theoretical Elucidation of the Mechanisms of Evolution with Genomic Sequence Data
Kawarabayashi, Kenichi (Professor)	Dept. of Informatics	2013	Application of Advanced Graph Theory to Discrete Mathematics and Theoretical Computer Science

### JSPS Ikushi Prize (after 2012)

Name	Department	Year	Research Theme
Kariyazono, Shiho	Dept. of Evolutionary Studies of Biosystems	2017	The genetic basis and the biological role of fluorescent proteins in Acropora species
Kitamura, Daichi	Dept. of Informatics	2016	Multichannel blind music source separation based on nonnegative matrix factor source model
Mochizuki, Kenji	Dept. of Functional Molecular Science	2013	Theoretical Study on the Molecular Mechanism of Ice Melting and the Local Structure of Aqueous Solution
Nakahata, Yoshihisa	Dept. of Physiological Sciences	2013	Activation-Dependent Spatial Dynamics of Postsynaptic Glycine Receptors

## SOKENDAI Award

SOKENDAI Award is founded in 2018 to commend the students who have accomplished their outstanding research and have been conferred their degrees with the excellent doctoral thesis.

### The recipients of the 3rd SOKENDAI Award (September 27, 2019)

Name	Department	Doctoral thesis
Kenich, Shunto	Dept. of Japanese Studies	Humane Treatment of Animals in Postwar Japan : Social Movement of Humane Treatment (dog / cat) and Administration of Animal Protection and Management : 1947-2000
Song, Qintao	Dept. of Particle and Nuclear Physics	Structure Functions of Pion and Deuteron
Bui, Van Thach	Dept. of Informatics	Non-adaptive group testing: theory and design

### The recipients of the 4th SOKENDAI Award (March 25, 2020)

Name	Department	Doctoral thesis
Matsuno, Tadafumi	Dept. of Astronomical Science	High-Precision Abundance Study for the Milky Way Halo Stars with Kinematics and Asteroseismology
Kojima, Ryota	Dept. of Particle and Nuclear Physics	Triangulation of the Amplituhedron from Sign Flips

# Academic Staff

(As of May 1, 2020)

Category	Member of the Board	Professor	Associate Professor	Lecturer	Assistant Professor	Secretariat	Total
President	1						1
Executive Director	3						3
Auditor	2						2
Vice President	(1)						(1)
School of Cultural and Social Studies	Regional Studies		11	13			24
	Comparative Studies		13	10			23
	Japanese Studies		17	3			20
	Japanese History		16	13			29
	Japanese Literature		10	11			21
Subtotal	0	67	50	0	0	0	117
School of Physical Sciences	Structural Molecular Science		7	6		12	25
	Functional Molecular Science		8	6		20	34
	Astronomical Science		26	38		47	111
	Fusion Science		21	20		21	62
	Space and Astronautical Science		21	36		16	73
Subtotal	0	83	106	0	116	0	305
School of High Energy Accelerator Science	Accelerator Science		49	53	17	48	167
	Materials Structure Science		21	22	5	18	66
	Particle and Nuclear Physics		32	31	30	15	108
	Subtotal	0	102	106	52	81	0
School of Multidisciplinary Sciences	Statistical Science		18	20		3	41
	Polar Science		14	20		16	50
	Informatics		30	26		13	69
	Subtotal	0	62	66	0	32	0
School of Life Science	Genetics		23	8		27	58
	Basic Biology		16	15		35	66
	Physiological Sciences		13	16		32	61
	Subtotal	0	52	39	0	94	0
School of Advanced Sciences	Evolutionary Studies of Biosystems		5(1)	7	2	4	18(1)
	Subtotal	0	5(1)	7	2	4	0
The Center for Educational Development	(1)		1	2	3		6(1)
The Center for Academic Information Services		(1)				(1)	(2)
Future Planning Division	(1)					(1)	(2)
Secretariat etc.						42	42
<b>Total</b>	<b>6(3)</b>	<b>371(2)</b>	<b>375</b>	<b>56</b>	<b>330</b>	<b>42(2)</b>	<b>1180(7)</b>

※ The number of staff in parentheses indicates those who concurrently work in other section [not included in the total].

# Students

(As of May 1, 2020)

School	Department	Quota		1st year		2nd year		3rd year		4th year		5th year		Total							
		Doctoral Course		Female	Int'l Students	Female	Int'l Students	Female	Int'l Students	Female	Int'l Students	Female	Int'l Students	Female	Int'l Students						
		5-year	3-year																		
School of Cultural and Social Studies	Regional Studies		3					3	2	0	2	2	1	12	6	6	17	10	7		
	Comparative Studies		3					2	0	1	3	2	1	10	3	3	15	5	5		
	Japanese Studies		3					3	2	0	4	1	2	14	11	5	21	14	7		
	Japanese History		3					1	1	0	2	1	0	7	2	0	10	4	0		
	Japanese Literature		3					2	1	0	2	1	0	5	3	0	9	5	0		
Subtotal		15					11	6	1	13	7	4	48	25	14	72	38	19			
School of Physical Sciences	Structural Molecular Science	2	3	2	0	0	0	0	7	2	0	4	0	0	5	0	1	18	2	1	
	Functional Molecular Science	2	3	4	1	2	3	1	0	4	0	6	2	5	6	0	2	23	4	9	
	Astronomical Science	2	3	5	1	0	5	2	0	3	0	1	5	0	0	10	4	3	28	7	4
	Fusion Science	2	3	5	0	4	1	0	0	4	1	2	4	0	1	3	0	0	17	1	7
	Space and Astronautical Science	2	3	4	2	0	2	1	0	6	2	2	9	1	4	8	0	2	29	6	8
Subtotal	10	15	20	4	6	11	4	0	24	5	5	28	3	10	32	4	8	115	20	29	
School of High Energy Accelerator Science	Accelerator Science	2	※ 2	1	0	0	2	0	0	4	0	3	5	3	5	5	0	3	17	3	11
	Materials Structure Science	3	※ 2	1	0	0	0	0	0	4	1	1	2	1	1	4	1	1	11	3	3
	Particle and Nuclear Physics	4	※ 2	6	2	1	5	0	2	6	0	1	4	0	0	13	4	1	34	6	5
	Subtotal	9	—	8	2	1	7	0	2	14	1	5	11	4	6	22	5	5	62	12	19
School of Multidisciplinary Sciences	Statistical Science	2	3	0	0	0	2	0	0	10	1	1	14	1	1	10	3	0	36	5	2
	Polar Science	2	1	1	0	0	4	1	0	3	2	1	6	2	0	6	1	0	20	6	1
	Informatics	4	6	11	4	5	8	3	5	29	5	14	17	3	9	34	5	15	99	20	48
Subtotal	8	10	12	4	5	14	4	5	42	8	16	37	6	10	50	9	15	155	31	51	
School of Life Science	Genetics	3	6	7	3	4	7	2	3	8	3	5	9	5	4	6	3	3	37	16	19
	Basic Biology	3	6	7	4	3	8	5	1	9	3	1	7	2	2	16	2	2	47	16	9
	Physiological Sciences	3	6	2	1	0	5	2	2	13	5	4	7	3	2	8	2	2	35	13	10
	Subtotal	9	18	16	8	7	20	9	6	30	11	10	23	10	8	30	7	7	119	45	38
School of Advanced Sciences	Evolutionary Studies of Biosystems	5	1	2	1	0	3	1	0	3	2	0	1	1	0	11	5	0	20	10	0
	Subtotal	5	1	2	1	0	3	1	0	3	2	0	1	1	0	11	5	0	20	10	0
<b>Total</b>		<b>41</b>	<b>59</b>	<b>58</b>	<b>19</b>	<b>19</b>	<b>55</b>	<b>18</b>	<b>13</b>	<b>124</b>	<b>33</b>	<b>37</b>	<b>113</b>	<b>31</b>	<b>38</b>	<b>193</b>	<b>55</b>	<b>49</b>	<b>543</b>	<b>156</b>	<b>156</b>

※<sup>1</sup> The number of female students and international students is included in the total.

※<sup>2</sup> The School of High Energy Accelerator Science does not have a specific quota of admission but gives examinations.



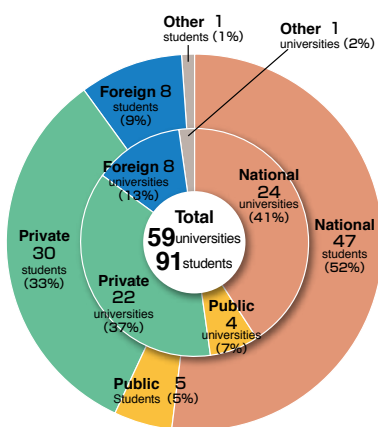
# Applicants and Enrollments

(As of April 1, 2020)

School	Department	Quota	Applicant	Passer	Admitted Students	Background			
						Gender		International Students	Jobholder
						Male	Female		
School of Cultural and Social Studies	Regional Studies	— (3)	(6)	(3)	(3)	(1)	(2)		
	Comparative Studies	— (3)	(5)	(2)	(2)	(2)		(1)	
	Japanese Studies	— (3)	(9)	(5)	(3)	(1)	(2)	(1)	(1)
	Japanese History	— (3)	(6)	(1)	(1)		(1)		(1)
	Japanese Literature	— (3)	(2)	(2)	(2)	(1)	(1)		
	Subtotal	— (15)	(28)	(13)	(11)	(5)	(6)	(2)	(2)
School of Physical Sciences	Structural Molecular Science	2(3)	4(5)	3(5)	2(3)	2(3)			
	Functional Molecular Science	2(3)	6(1)	4(1)	3(1)	3(1)		2	
	Astronomical Science	2(3)	26(2)	8(1)	5(1)	4(1)	1		
	Fusion Science	2(3)	11(1)	6(1)	4(1)	4(1)		3	(1)
	Space and Astronautical Science	2(3)	9(2)	5(2)	4(2)	2(1)	2(1)		
	Subtotal	10(15)	56(11)	25(10)	18(8)	15(7)	3(1)	5	(1)
School of High Energy Accelerator Science	Accelerator Science	2(※)	6	1	1	1			
	Materials Structure Science	3(※)	1(2)	1(2)	1(2)	1(2)			
	Particle and Nuclear Physics	4(※)	21(1)	9(1)	4(1)	3(1)	1		
	Subtotal	9	28(3)	11(3)	6(3)	5(3)	1		
School of Multidisciplinary Sciences	Statistical Science	2(3)	7(8)	(3)	(3)	(3)			(1)
	Polar Science	2(1)	4(1)	1(1)	1(1)	1(1)		(1)	
	Informatics	4(6)	13(10)	7(7)	7(7)	5(6)	2(1)	2(2)	2(3)
	Subtotal	8(10)	24(19)	8(11)	8(11)	6(10)	2(1)	2(3)	2(4)
School of Life Science	Genetics	3(6)	5(5)	4(2)	3(2)	1(2)	2		
	Basic Biology	3(6)	11(5)	7(4)	4(4)	2(3)	2(1)		
	Physiological Sciences	3(6)	3(8)	2(8)	2(8)	1(6)	1(2)		
	Subtotal	9(18)	19(18)	13(14)	9(14)	4(11)	5(3)		
School of Advanced Sciences	Evolutionary Studies of Biosystems	5(1)	5(1)	2(1)	2(1)	1	1(1)		
	Subtotal	5(1)	5(1)	2(1)	2(1)	1	1(1)		
	<b>Total</b>	<b>41(59)</b>	<b>132(80)</b>	<b>59(52)</b>	<b>43(48)</b>	<b>31(36)</b>	<b>12(12)</b>	<b>7(5)</b>	<b>2(7)</b>

( ) 3-year Doctoral Course (not included in the total) .  
 ※ A few people.

## Admission of the 2020



### Japanese National Universities

Hokkaido University	2
Asahikawa Medical University	1
Iwate University	1
Tohoku University	4
University of Tsukuba	2
The University of Tokyo	8
Tokyo University of Agriculture and Technology	3
Tokyo University of the Arts	1
Tokyo Institute of Technology	2
Shinshu University	2
The Graduate University for Advanced Studies, SOK-ENDAI	1
University of Toyama	1
Nagoya University	3
Kyoto University	4
Osaka University	1
Osaka Kyoiku University	1
Kobe University	2
Nara University of Education	1
Nara Institute of Science and Technology	1
Hiroshima University	2
Kochi University	1
Kyushu University	1
Kumamoto University	1
Kagoshima University	1

### Japanese Public Universities

Tokyo Metropolitan University	1
Kanazawa College of Art	1
Nagoya City University	1
Osaka Prefecture University	2

### Others

National Institute of Technology, Asahikawa College	1
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### Japanese Private Universities

Aichi Institute of Technology	1
Aoyama Gakuin University	1
Okayama University of Science	1
Gakushuin University	1
Kanazawa Institute of Technology	1
Kyoto Sangyo University	1
Kindai University	1
Kumamoto Health Science University	1
Keio University	1
Kogakuin University	1
Chuo University	1
Teikyo University	1
Tokai University	1
Tokyo Denki University	2
Tokyo University of Science	4
Toho University	1
Tohoku University of Art and Design	1
Toyo University	1
Doshisha University	1
Nihon University	3
Fukuoka University	2
The Open University of Japan	2

### Foreign Universities

Chiang Mai University	1
Illinois Institute of Technology	1
University of Vinna	1
Xiamen University	1
Central China Normal University	1
Tsinghua University	1
Changchun University of Science and Technology	1
National Tsing Hua University	1

## Degrees Awarded

School	Quota	Field	For the period of 1991~2014	2015	2016	2017	2018	2019	Total
School of Cultural and Social Studies	(15)	Literature	101 [25] (43)	5 [4] (1)	5 [1] (3)	4 (1)	(2)	5 (1)	120 [30] (51)
		Philosophy	68 [12] (31)	4	3 [2]	4 [1] (3)	4 (1)	2 (1)	85 [15] (36)
School of Physical Sciences	10(15)	Philosophy	58 [0] (11)	1	2 [1]	1			62 [1] (11)
		Science	366 [13] (35)	10 [3]	22 [1]	15 [1]	11 (1)	10	434 [18] (36)
		Engineering	72 [4] (16)	3	3 (1)	4	4	5 [1]	91 [5] (17)
School of High Energy Accelerator Science	9(※)	Philosophy	23 [1] (9)		2	1	1	2	29 [1] (9)
		Science	152 [3] (13)	9	2	4 (1)	8	12 (1)	187 [3] (15)
		Engineering	47 [0] (21)	1 (2)	2 1	1	2	3	56 [1] (23)
School of Multidisciplinary Sciences	8(10)	Statistical Science	27 [2] (3)	4	5	4 [1]	5 [1]	5 [1]	50 [5] (3)
		Philosophy	80 [4] (10)	1	2 [1]	1 [1]			84 [6] (10)
		Science	54 [0] (6)	2	3	2	3		64 [0] (6)
		Informatics	105 [7] (0)	14 [2]	22 [4]	7	11 [2]	14 [3]	173 [18] (0)
School of Life Science	9(18)	Philosophy	35 [1] (2)	1					36 [1] (2)
		Science	512 [27] (37)	18 [1] (1)	20 [2] (1)	20 [3]	18 [3] (1)	12 [3]	600 [39] (40)
		Medical Science	9 [0] (0)	1		1	3 [2]	1	15 [2] (0)
School of Advanced Sciences	5(1)	Philosophy	15 [5] (1)						15 [5] (1)
		Science	48 [7] (2)	4		5 [1]	5	1	63 [8] (2)
		Engineering	5 [1] (0)						5 [1] (0)
<b>Total</b>	<b>41(59)</b>		<b>1777 [112] (240)</b>	<b>78 [10] (4)</b>	<b>93 [13] (5)</b>	<b>74 [8] (5)</b>	<b>75 [8] (5)</b>	<b>72 [8] (3)</b>	<b>2169 [159] (262)</b>

※1 The quota of admission is the one in 2020. (The number in parentheses is the quota of 3-year doctoral course. The School of High Energy Accelerator Science does not have a specific quota of admission but accepts only a few students.)

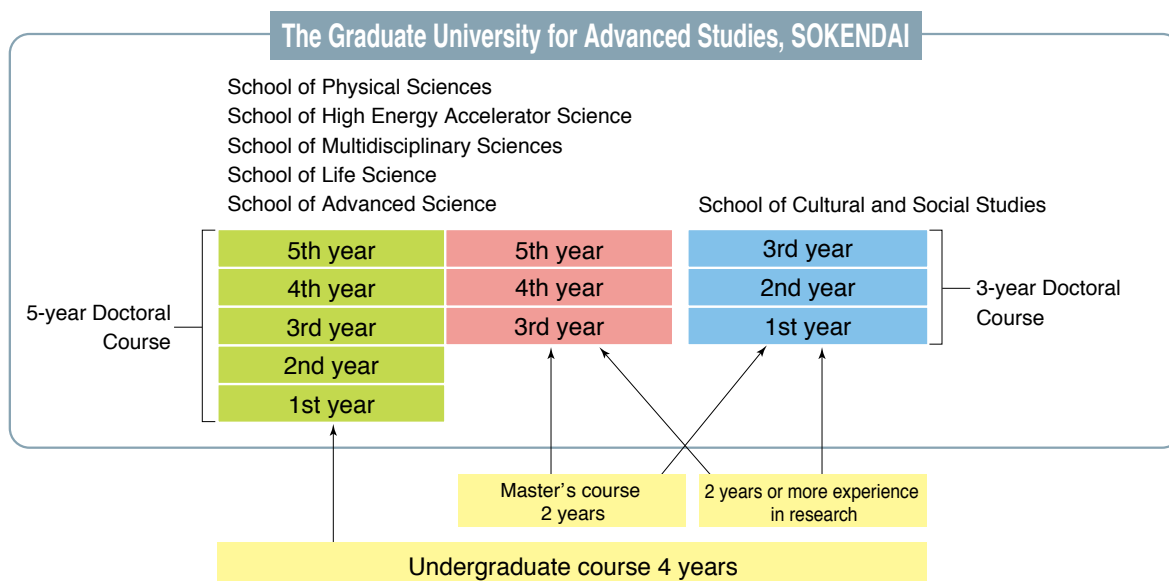
※2 ( ): The number of those who were granted the Ph.D. by way of Dissertation (not included in the total).

※3 [ ]: The number of those who were granted the Ph.D. within a specified time after leaving the university.

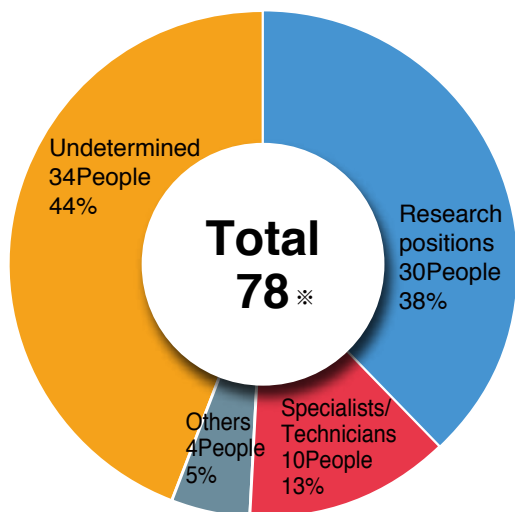
※4 The School of Physical Sciences, the School of High Energy Accelerator Science, and the School of Multidisciplinary Sciences were formed from the former School of Mathematical and Physical Science on March 31, 2004.

## Requirements for completion of the Ph.D. course

Students are required to be enrolled in SOKENDAI for more than 3 years (five-year course students are required to be enrolled for more than 5 years), earn necessary credits prescribed at each department, take necessary research guidance for a doctoral thesis, and pass an examination for a doctoral thesis. Students who are recognized to have achieved great performance, can graduate in shorter term.



## Career Tracking / Data of the 2019



Type of Occupation

※ Breakdown of the total

The number of those who completed a course and obtained a degree: 64

The number of those who left the university after obtaining the credits required for completion of a course in the relevant academic year: 14

### Universities/Research institutes,etc .....

BATAN (National Nuclear Energy Agency of Indonesia)  
 Zhengzhou University  
 National Institute for Physiological Sciences  
 National Institutes of Health  
 University of Padova  
 NEC  
 The Institute of Statistical Mathematics  
 National Institute of Informatics  
 Institute for Plasma Research  
 Institute for Molecular Science  
 University of London  
 National Institute of Genetics  
 The University of Tokyo  
 Peking University  
 High Energy Accelerator Research Organization (KEK)  
 National Taiwan University  
 National Institutes for Quantum and Radiological Science and Technology  
 NEC Laboratories Europe  
 NIPPON TELEGRAPH AND TELEPHONE CORPORATION  
 Kyoto University  
 National Institute of Advanced Industrial Science and Technology  
 University of Tsukuba  
 University of Groningen  
 Tokyo Metropolitan Police Department  
 Independent Administrative Institution National Institutes for Cultural Heritage  
 Tokyo National Research Institute for Cultural Properties

### Private companies/Public service corporation .....

Micron Memory Japan, G.K.  
 SYSTEM IN FRONTIER INC.  
 Cluster Computing Inc.  
 Janssen Pharmaceutical K.K.  
 RevComm Inc.  
 Kodan Electronics Co., Ltd.  
 Nippon Advanced Technology Co., Ltd.  
 SoftBank Corp.  
 Tecnos Data Science Engineering, Inc.  
 JAPAN PROCESS DEVELOPMENT CO., LTD.  
 Mayo clinic  
 Urban Mobility Tech Co. Ltd  
 Huawei Technologies Co., Ltd.  
 Shin-Etsu Chemical Co., Ltd.  
 Nagano Prefectural Board of Education



# International Exchange

## Number of International Students by Department

(As of May 1, 2020)

School	Department	Quota		1st year		2nd year		3rd year (1st year**)		4th year (2nd year**)		5th year (3rd year**)		Subtotal		Research Student								
		Doctoral Course 5-year	Doctoral Course 3-year	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2							
School of Cultural and Social Studies	Regional Studies		3							1	1		6	3	1	7	4	1	1	1				
	Comparative Studies		3						1		1		3	1		5	2	1						
	Japanese Studies		3								2	1	1	5	5	1	7	6	2	1				
	Japanese History		3													0	0	0						
	Japanese Literature		3													0	0	0						
	Subtotal		15						1	0	1	4	3	1	14	9	2	19	12	4	2	1	0	
School of Physical Sciences	Structural Molecular Science	2	3											1			1	0	0					
	Functional Molecular Science	2	3	2	1						5	1	2	2		1	9	2	3					
	Astronomical Science	2	3						1		1			3	2	2	4	2	3					
	Fusion Science	2	3	4		1			2	1	2	1		1			7	1	4					
	Space and Astronautical Science	2	3						2		2	4		3	2		8	0	7					
	Subtotal	10	15	6	1	1	0	0	5	1	5	10	1	6	8	2	5	29	5	17	0	0	0	
School of High Energy Accelerator Science	Accelerator Science	2	a few						3		1	5	3	1	3		3	11	3	5				
	Materials Structure Science	3	a few						1		1	1	1	1			3	1	2					
	Particle and Nuclear Physics	4	a few	1	1	1	2		1		1			1	1		5	2	3					
	Subtotal	9	-	1	1	1	2	0	1	5	0	3	6	4	2	5	1	3	19	6	10	0	0	0
School of Multidisciplinary Sciences	Statistical Science	2	3						1			1					2	0	0					
	Polar Science	2	1						1								1	0	0					
	Informatics	4	6	5	2	2	5	3	2	14	4	3	9	3	3	15	2	5	48	14	15			
	Subtotal	8	10	5	2	2	5	3	2	16	4	3	10	3	3	15	2	5	51	14	15	0	0	0
School of Life Science	Genetics	3	6	4	1	1	3	1	2	5	3	4	4	3	3	2		19	10	10				
	Basic Biology	3	6	3	2	3	1	1	1	1	1	2					1	9	4	7				
	Physiological Sciences	3	6				2	2	1	4	3	1	2	2	1	2	1	10	8	3				
	Subtotal	9	18	7	3	4	6	4	4	10	7	6	8	5	5	7	3	1	38	22	20	0	0	0
School of Advanced Sciences	Evolutionary Studies of Biosystems	5	1															0	0	0	1	1	1	
	Subtotal	5	1															0	0	0	1	1	1	
	Total	41	59	19	7	8	13	7	7	37	12	18	38	16	17	49	17	16	156	59	66	3	2	1

\*1 Female Students in Total \*2 MEXT Scholarship Students in Total \*\* The year of a 3-year doctoral course.

## Number of International Students

(As of May 1, 2020)

Country or Region	1st year		2nd year		3rd year (1st year**)		4th year (2nd year**)		5th year (3rd year**)		Subtotal		Research Student								
	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2	*1	*2							
Asia	15	5	6	11	7	6	29	11	11	34	16	15	44	15	13	133	54	51	3	2	1
India	3	2	1	2		1	3	2	3	2		2	3		1	13	4	8			
Indonesia				2	1	1				1	1	1				3	2	2			
Thailand	1		1				3	2	1	4	2	2	3		1	11	4	5			
Pakistan									4	3	4	2		1		6	3	5			
Bangladesh				1	1	1			1	1			1		1	3	2	2			
Philippines				1	1	1									1	1	1				
Viet Nam	2	1	2	2	1	2	7	4	4	5	2	3	6	3	2	22	11	13			
Malaysia	1	1	1						1				2	1	1	4	2	2			
Korea	1						3	1	1	1			2	1		7	2	1			
China	7	1	1	3	3		11	2	2	14	7	3	21	9	6	56	22	12	3	2	1
Taiwan							2			1			4	1		7	1				
Africa	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	2	0	1	0		0
Ghana				1												1					
South Africa									1		1					1		1			
Europe	3	2	2	1	0	1	7	1	6	3	0	1	3	1	2	17	4	12	0	0	0
Italia							1		1							1		1			
Austria							1		1							1		1			
Kazakhstan	2	1	1				1	1	1							3	2	2			
Spain							1		1	1			1			2		2			
Serbia	1	1	1													1	1	1			
Czech							1		1							1		1			
Hungary													1		1	1		1			
Finland							1									1		1			
France							1		1	2			2	1	1	5	1	2			
Poland				1		1										1		1			
Middle East	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0		0
Turkey													1		1	1	1	1			
North America	1	0	0	0	0	0	1	0	1	0	0	0	1	1	0	3	1	1	0	0	0
USA													1	1		1	1				
Mexico	1						1		1							2		1			
Total	19	7	8	13	7	7	37	12	18	38	16	17	49	17	16	156	59	66	3	2	1

\*1 Female Students in Total \*2 MEXT Scholarship Students in Total \*\* The year of a 3-year doctoral course.

Outline School of Cultural and Social Studies School of Physical Sciences School of High Energy Accelerator Science School of Multidisciplinary Sciences School of Life Science School of Advanced Sciences Education & Research Activities DATA

# Academic Exchange and Collaboration Agreements

SOKENDAI is promoting academic exchange and collaboration with other domestic and foreign universities through mutual agreements.

## Academic Agreement with Foreign Universities

Country of Region	University/Institute	Corresponding Department	Date of Agreement
China	Lanzhou University	All Schools	November 12, 2019
Republic of Korea	The University of Science and Technology	All Schools	May 25, 2005
France	École Centrale de Nantes	All Schools	November 8, 2019
France	Université Paris-Saclay	All Schools	February 28, 2020
Russia	Novosibirsk State University	All Schools	March 12, 2020
Norway	UiT The Arctic University of Norway	All Schools	November 7, 2019
Taiwan	National Taiwan University College of Bioresources and Agriculture	Advanced Sciences	December 28, 2017
Republic of Korea	Korea University College of Medicine	Life Science	November 18, 2019
Thailand	Chulalongkorn University Faculty of Science	Physical Sciences	April 1, 2010
Thailand	Kasetsart University Faculty of Science	Physical Sciences	March 29, 2011
Thailand	Vidyasirimedhi Institute of Science and Technology	Physical Sciences	September 5, 2018
Malaysia	University of Malaya Faculty of Science	Physical Sciences	March 24, 2019
Indonesia	Universitas Gadjah Mada Fakultas Ilmu Budaya	Cultural and Social Studies	December 27, 2019
Viet Nam	Vietnam National University of Science Faculty of Biology	Advanced Sciences	February 8, 2017
Viet Nam	Vietnam National University of Agriculture Faculty of Animal Science	Advanced Sciences	February 15, 2017
Viet Nam	Vietnam Academy of Social Sciences Institute of Archaeology	Advanced Sciences	February 20, 2017
Bangladesh	Jahangirnagar University Faculty of Biological Sciences	Advanced Sciences	October 9, 2018
India	Indian Institute of Science Education and Research Pune	Life Science	April 18, 2011
India	Indian Institute of Science Education and Research Thiruvananthapuram	Advanced Sciences	March 27, 2020
USA	University of Hawaii at Manoa	Cultural and Social Studies	February 28, 2018
Russia	Peter the Great St. Petersburg Polytechnic University	Physical Sciences	January 23, 2019
Georgia	Georgian Technical University	High Energy Accelerator Science	February 13, 2018
Slovenia	University of Ljubljana Biotechnical Faculty	Advanced Sciences	August 28, 2018

## Academic Agreement with Domestic Universities

University / Institute	Corresponding Department	Date of Agreement
Tokyo Institute of Technology All Schools	All Schools	April 3, 1995
Ochanomizu University All Schools	All Schools	April 3, 1995
Nagoya University Graduate School of Medicine	Department of Physiological Sciences of School of Life Science	April 3, 1995
Nagoya University Graduate School of Engineering	School of Physical Sciences	April 1, 2010
University of Tokyo Graduate School of Science	School of Physical Sciences / High Energy Accelerator Sciences / Multidisciplinary Sciences	March 27, 1998
University of Tokyo Graduate School of Information Science and Technology	School of Physical Sciences / High Energy Accelerator Sciences / Multidisciplinary Sciences / Life Science / Advanced Sciences	March 27, 1998
International Christian University Graduate School of Arts and Science	All Schools	March 24, 2000
Kyoto University Graduate School of Asian and African Area Studies	Department of Regional Studies / Comparative Studies of School of Cultural and Social Studies	April 1, 2005
Osaka University Graduate School of Human Sciences	Department of Regional Studies / Comparative Studies of School of Cultural and Social Studies	April 1, 2005
Kobe University Graduate School of Intercultural Studies / Human Development and Environment	Department of Regional Studies / Comparative Studies of School of Cultural and Social Studies	April 1, 2005
Chiba University Graduate School of Humanities and Studies of Public Affairs	School of Cultural and Social Studies	April 1, 2005
Japan Advanced Institute of Science and Technology Graduate School of Advanced Science and Technology	Department of Informatics of School of Multidisciplinary Sciences	April 1, 2009
Chiba University Graduate School of Science and Engineering	School of Physical Sciences	April 1, 2010
Tsuda College Graduate Program in Mathematics and Computer Science	School of Multidisciplinary Science	April 1, 2015
Waseda University School of Fundamental Science and Engineering	School of Multidisciplinary Science	April 1, 2015
Kyushu University Graduate School of Pharmaceutical Sciences	School of Life Science	April 1, 2017
Hosei University Graduate School of Sciences and Engineering	School of Physical Sciences	April 1, 2018
Nagoya University Graduate School of Science/ Graduate School of Bioagricultural Sciences/ Graduate School of Pharmaceutical Sciences	School of Life Science	October 1, 2019
Osaka University Graduate School of Engineering	School of Physical Sciences	June 1, 2019
Doshisha University Graduate School of Science and Engineering	School of Physical Sciences	November 1, 2019
Kumamoto University Graduate School of Medical Sciences	School of Advanced Sciences	November 29, 2019
The University of Shiga Prefecture Graduate School of Human Cultures	School of Cultural and Social Studies	April 1, 2020

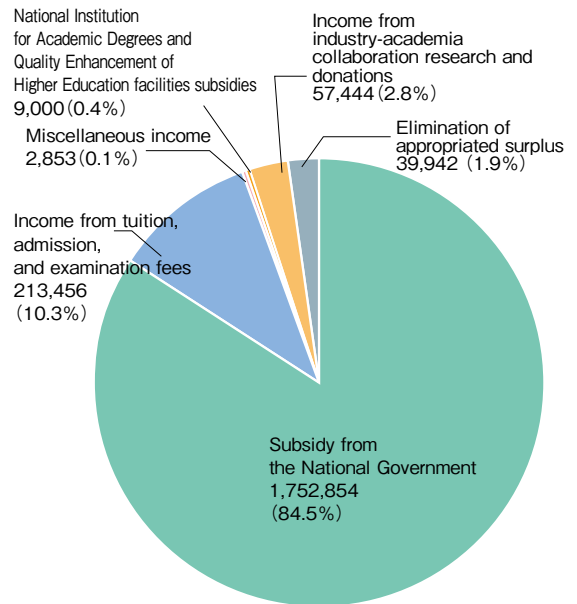
## Academic Agreement with Universities in Kanagawa

Universities/Institutes	Corresponding Department	Date of Agreement
Azabu University	Graduate School of Veterinary Science	January 10, 2001
	Graduate School of Environmental Health	
Kanagawa University	Graduate School of Law	January 10, 2001
	Graduate School of Economics	
	Graduate School of Business Administration	
	Graduate School of Foreign Languages	
	Graduate School of Science	
	Graduate School of Engineering	
Kanagawa Institute of Technology	Graduate School of Engineering	January 10, 2001
	Graduate School of Humanities	
	Graduate School of Economics	
	Graduate School of Law	
Kanto Gakuin University	Graduate School of Engineering	January 10, 2001
	Graduate School of Law	
	Graduate School of Engineering	
	Graduate School of Science	
Kitasato University	Graduate School of Medical Sciences	January 10, 2001
	Graduate School of Nursing	
	Graduate School of Pharmacy	
	Graduate School of Veterinary Medicine	
	Graduate School of Marine Biosciences	
	Graduate School of Infection Control Sciences	
Shonan Institute of Technology	Graduate School of Engineering	January 10, 2001
Senshu University	Graduate School of Economics	January 10, 2001
	Graduate School of Law	
	Graduate School of Humanities	
	Graduate School of Business Administration	
Tsurumi University	Graduate School of Commerce	January 10, 2001
	Graduate School of Literature	
Toin University of Yokohama	Graduate School of Law	January 10, 2001
Tokai University	Graduate School of Engineering	All Schools
	Graduate School of Letters	
	Graduate School of Political Science	
	Graduate School of Economics	
	Graduate School of Law	
	Graduate School of Arts	
	Graduate School of Physical Education	
	Graduate School of Science	
	Graduate School of Engineering	
	Graduate School of Marine Science and Technology	
Graduate School of Health Science		
Tokyo Polytechnic University	Graduate School of Engineering	All Schools
Nihon University	Graduate School of Bioresource Sciences	All Schools
	Graduate School of Veterinary Medicine	
Japan Women's University	Graduate School of Human Science and Design	All Schools
	Graduate School of Humanities	
	Graduate School of Human Life Science	
	Graduate School of Integrated Arts and Social Science	
Yokohama City University	Graduate School of Science	All Schools
	Graduate School of Medicine	
Yokohama National University	Graduate School of Urban Social and Cultural Studies	March 20, 2020
	Graduate School of Nanobioscience	
	Graduate School of Engineering	
	Graduate School of Environment and Information Sciences	
Tokyo Institute of Technology	Graduate School of Education	March 20, 2020
	Graduate School of International Social Sciences	
	Graduate School of Urban Innovation	
Meiji University	Graduate School of Bioscience and Biotechnology	April 1, 2004
	Graduate School of Agriculture	
Ferris University	Division of Humanities	April 1, 2004
	Division of Global and Inter-cultural Studies	
INSTITUTE of INFORMATION SECURITY	Division of Music	April 1, 2005
	Graduate School of Information Security	
Tokyo City University	Graduate School of Environmental and Information Studies	April 1, 2007
Sagami Women's University	Graduate School of Nutritional Sciences	April 1, 2009
Shoin University	Graduate School of Business Administration	April 1, 2009
Aoyama Gakuin University	Graduate School of Science and Engineering	April 1, 2010
Bunkyo University	Graduate School of Information and Communications	April 1, 2013
	Graduate School of International Cooperation	
Kanagawa Dental University	Graduate School of Dental Sociology	April 1, 2014
Kamakura Women's University	Graduate School of Child Studies	April 1, 2015
St. Marianna University School of Medicine	Graduate School of Medicine	April 1, 2015
Showa University	Graduate School of Health Sciences	April 1, 2016
Joshin University of Art and Design	Graduate School of Art and Design	April 1, 2016
Den-En Chofu University	Graduate School of Human Science	April 1, 2018
Yokohama Soei University	Graduate School of Nursing	April 1, 2019

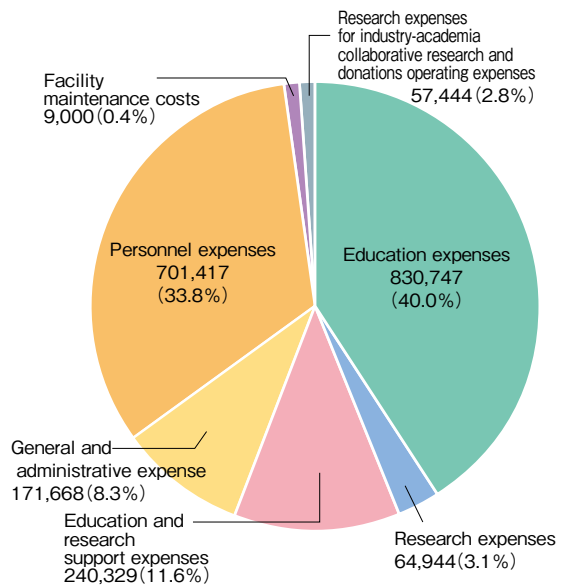
## FY2020 Income and Expenditures Budget

(Yen, Thousand)

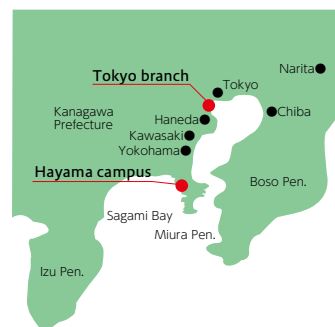
### ■ Total budget income 2,075,549



### ■ Total Expenditures Budget 2,075,549



## Access



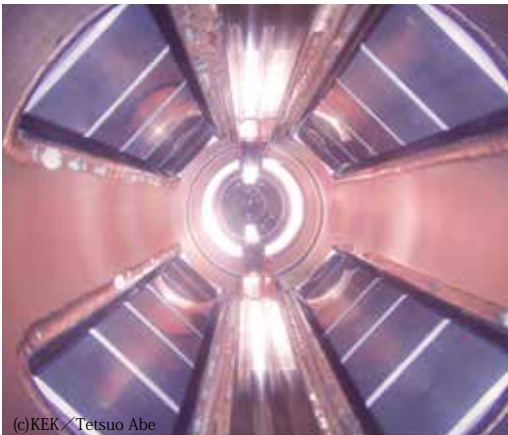
[Hayama campus]  
Shonan Village, Hayama, Kanagawa, 240-0193 Japan  
TEL: 81-46-858-1500  
FAX: 81-46-858-1542  
URL: <https://www.soken.ac.jp>

[Tokyo branch]  
Campus Innovation Center 4F, 3-3-6 Shibaura, Minato-ku, Tokyo, 108-0023  
TEL: 81-3-5440-9116





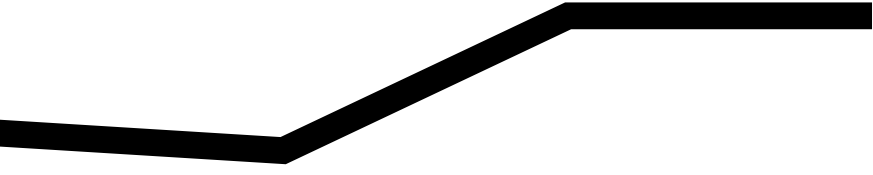
SOKENDAI renewed our logo as we celebrate the 30th anniversary of the university's foundation in 2018. SOKENDAI represents a unique educational structure that provides intellectual knowledge at the highest standards. The ethos of the brand is mirrored through the visualization of a line 'Intelligence Connector' which symbolizes a platform for the multiple numbers of research centers across the world that form the diverse educational platform of SOKENDAI.



(c)KEK / Tetsuo Abe

**Cover image : Beam pipe with microwave absorbers**  
For the purpose of low-emittance positron-beam injection to the main ring of the SuperKEKB accelerator, the positron damping ring started its operation in February 2018. Positron beams travel through the center of this photograph of the inside of the beam pipe attached to the RF accelerating cavity used for the positron damping ring. The tile-shaped objects seen in this photograph are microwave absorbers to remove harmful microwave generated by positron beams passing through the inside of the accelerator, achieving stable accelerator operation.

I D A I



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