



GRADUATE  
SCHOOL OF  
FACULTY OF

# SCIENCE

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KYOTO UNIVERSITY

## Summary

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## DEAN'S WELCOME

The Graduate School of Science (GSS) at Kyoto University consists of five divisions: Mathematics and Mathematical Sciences, Physics and Astronomy, Earth and Planetary Sciences, Chemistry, and Biological Sciences. In its 120-year history, the school has produced outstanding achievements in a range of research fields and numerous winners of major international awards such as the Nobel Prize and Fields Medal. The school also has contributed significantly toward science education in Japan, developing a wide variety of human resources with a focus on science and technology. More recently, the GSS strives for a new research and education in science including the development of interdisciplinary area with the launch of the “MAtematics-based Creation of Science Program (MACS Educational Program)”. The “Center for Science Adventure and Collaborative Research Advancement (SACRA)” was established in 2019 to serve an important function for such endeavor.



Our science aims to search for truth of natural phenomena and to reveal the truth in a reasonable manner with free-minded and bold thinking. Most of the scientific discoveries that have had huge impacts on the world have come out of scientists' pure curiosity to understand the principles of natural phenomena. Revealing facts is the mutual passion of all GSS faculty members. Our diverse faculty members who have a great deal of curiosity and uniqueness is a source of pride for the GSS.

There seems to be a strong tendency in Japan these days to require scientific research beneficial to society under the name of innovation. Needless to say, we truly hope that our research benefits society and it is important to achieve accountability and transmit our scientific research result to the world, on which taxpayers' money is spent.

Meanwhile, however, such a short-term point of view focused on specific outcomes does not always lead to a major discovery that brings a substantial change to society. Looking back at history, most of research and inventions that led to big breakthroughs came from an inquisitive mind to seek the essence of things with a profound insight and drastic change in thinking. A sense of self-composure and a playful spirit for such an attempt is also essential. The GSS will continue to be a good place for faculty and students to make an effort to find out the essence of things by cooperating with each other, facing natural phenomena and truth with an open mind.



Hiroshi Kokubu, PhD  
Dean and Professor  
Faculty and Graduate School of Science  
Kyoto University



## MISSION & OBJECTIVES

Science comprises disciplines that explore the principles and laws governing natural phenomena. Through the products of scientific endeavor, these disciplines have contributed enormously to cultural advancements as intellectual assets and to universal improvements in human well-being and living standards across the globe.

**Achievements to date:** Since its inception over 100 years ago, Kyoto University's Faculty and Graduate School of Science has made major discoveries in the fields of mathematics, physics, astronomy, earth and planetary sciences, chemistry and biological sciences, while also creating such new fields of study as primatology.



By doing so the school has garnered a stellar reputation worldwide, which is exemplified by its alumni as well as current and former faculty of the highest caliber, including **six Nobel laureates** and **two Fields Medal winners**.

**Mission:** We have the mission of enabling all enrolled students to elucidate the fundamental mechanisms of the natural sciences and, with that foundation, develop their abilities to pursue original research, create new intellectual value through pooled knowledge, and excel in independent career roles as researchers or responsible professionals.

To this end, we strive to be a place where academic freedom are preserved and promoted, and that is open to the public, students and academics at home and abroad.

**Objectives:** We value our students and faculty's autonomy and intellectual passion; commit ourselves to advancing fundamental and exploratory sciences; and seek to push back the frontiers of inter- and multi-disciplinary areas of study.

We also engage in teaching and research in the fields ranging from bio-sciences to nano-technology to environmental and energy sciences, so as to address global issues pertaining to these areas.



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## DIVISION OF MATHEMATICS & MATHEMATICAL SCIENCES

### Department of Mathematics

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Mathematics is an academic field revealing abstract relations between numbers, shapes, and other quantities. Although in its long history mathematics has established solid and lasting logical methodologies, countless new problems keep arising not only from within mathematics itself but also through the influence of other fields, such as physics, biology and economics, among others. New mathematical theories are being actively created one after another in order to deal with these new problems. In addition, owing to its power of abstraction and universal nature, mathematics finds many unexpected applications in various fields, including information science, economics, as well as the natural sciences.



Numerous highly recognized mathematicians including two distinguished Fields Medalists, Dr. Heisuke Hironaka and Dr. Shigefumi Mori, are graduates of our department. Building on these precious assets in the spirit of "academic freedom" fostered by Kyoto University, the department of Mathematics has always been at the forefront of mathematical research worldwide.

In our graduate course, the education of young world-leading mathematicians successfully thrives on its rich traditions. After graduating from our program, graduates either pursue mathematical research, or play another active role in our society. In order to provide such graduate students with advanced expertise in mathematics, we created, amongst others, a cooperative course of Actuarial Mathematics. It is also our mission to train excellent junior and senior high school teachers of mathematics.

The research fields covered at the department of Mathematics are listed below.

**Research Fields:** Algebraic Geometry / Number Theory / Differential Geometry / Differential Topology / Algebraic Topology / Representation Theory / Complex Geometry / Complex Analysis / Theory of Differential Equations / Operator Algebra / Functional Analysis / Probability Theory / Dynamical Systems / Algebraic Analysis and Mathematical Physics / Applied Mathematics / Computer Science / Actuarial Mathematics

The Division of Mathematics & Mathematical Sciences consists of two courses; on the one hand it is the program in mathematics offered by the faculty of the Department of Mathematics at the Graduate School of Science, and on the other hand it is the program in mathematical sciences provided by the faculty of the Research Institute for Mathematical Sciences (RIMS).

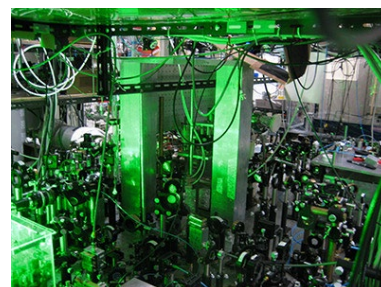
Our undergraduate program offers the fundamental courses of algebra, geometry and analysis that were established in the first half of the 20<sup>th</sup> century, toward the understanding of modern mathematics. In addition, the department of Mathematics is responsible for general mathematics education for all undergraduate programs in Kyoto University. This includes in particular basic mathematics courses such as Calculus or Linear Algebra.



## DIVISION OF PHYSICS & ASTRONOMY

### Department of Physics I

In the Department of Physics I, research and education are carried out in order to interpret the characteristic properties of materials such as the macro-aggregate of atoms and molecules from the standpoint of modern physics in both experimental and theoretical approaches.



Research and educational activities are conducted in cooperation with the Institute for Chemical Research, the Kyoto University Research Reactor Institute, and the Yukawa Institute for Theoretical Physics, in addition to the core courses, which consist of the following experimental and theoretical studies:

#### Research Fields:

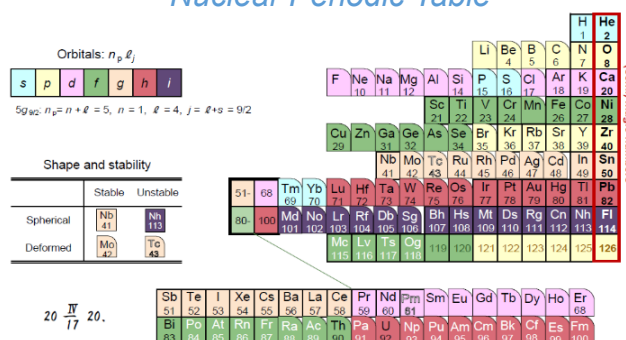
**Core Courses:** Physics of Disordered Systems / Quantum Optics / Low Temperature Physics / Solid State Spectroscopy / Quantum Materials / Electronic Properties of Solids / Dissipative and Life physics / Softmatter Physics / Nonlinear Dynamics / Theory of Condensed Matter Physics / Phase Transition Dynamics / Fluid Physics / Nonequilibrium Dynamics / Quantum Information and Physics

**Cooperation Courses:** Atomic and Molecular Physics / Nanophotonics/ Neutron Scattering / Physics of Matter (Statistical Dynamics, Condensed Matter Physics)

### Department of Physics II

The Department of Physics II aims to clarify the universal and fundamental laws of nature, from micro-systems to the macro world. The main goals thereby are to advance theoretical and experimental research of basic physics in elementary particles, atomic nuclei and the Universe, as well as to promote graduate student education.

#### Nuclear Periodic Table



Research and educational activities are conducted in cooperation with the Institute for Chemical Research, the Kyoto University Research Reactor Institute, and the Yukawa Institute for Theoretical Physics, in addition to the following core courses:

**Research Fields:**

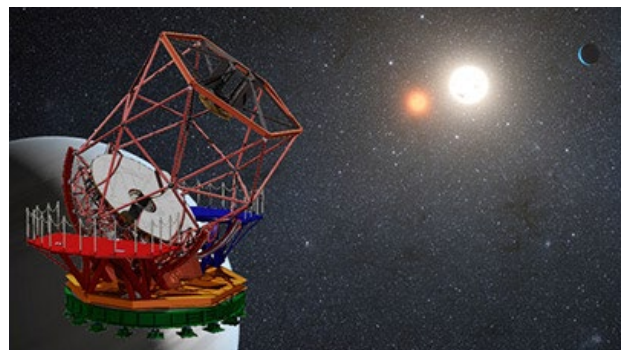
- **Core Courses:** Theoretical Particle Physics / Nuclear Theory / Theoretical Astrophysics / High Energy Physics (particle experiments) / Experimental Nuclear and Hadronic Physics / Cosmic Ray Physics (experiments and observations)
- **Cooperation Courses:** Fundamental Physics / Accelerator Beam Physics / Laser Matter Interaction Science / Nuclear Reaction Physics / Nuclear Beam Material Science

## Department of Astronomy

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The Department of Astronomy consists of approximately 10 faculty members and 50 graduate students and trainees, who work continuously on their research in astronomy – sometimes all day round.

The study of astronomy aims to describe various phenomena of space with physical concepts, and to deepen our understanding of the Universe. Objects of astrophysical study range widely from the active Sun, the evolution of star formation and planetary systems, interstellar phenomena, the evolution of galaxy formation, explosions and activity phenomena of supernovae, and active galaxies, to cosmology, the study and the research of large scale structures, and the birth and evolution of the Universe. The Department of Astronomy conducts cutting-edge research in the fields of stellar physics, galactic physics and theoretical astrophysics.



**Research Fields:** Solar Physics / Solar & Cosmical Plasma Physics / Stellar Astrophysics / Galactic Astrophysics / Theoretical Astrophysics





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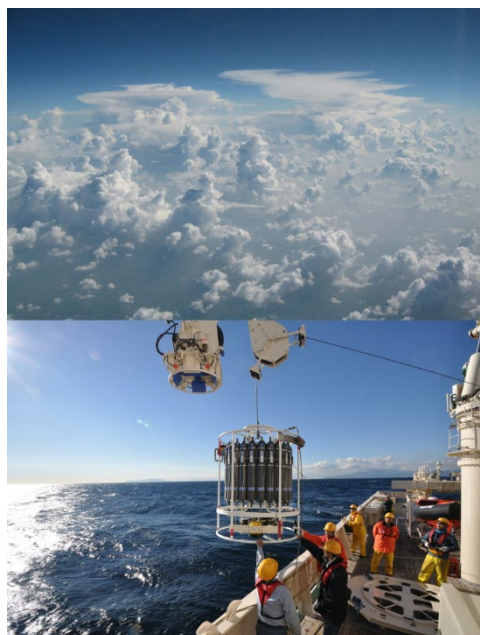
## DIVISION OF EARTH & PLANETARY SCIENCES

### Department of Geophysics

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The Department of Geophysics is composed of three groups; Physics of the Solid Earth, Hydrospheric and Atmospheric Physics, and Solar Planetary Electrodynamics. The faculty consists of instructors from the Department of Geophysics, the Institute for Geothermal Sciences, and the Data Analysis Center for Geomagnetism and Space Magnetism which all belong to the Graduate School of Science, as well as instructors from the collaborative courses of the Disaster Prevention Research Institute and the Research Institute for Sustainable Humanosphere.

In the Department of Geophysics, we conduct research on the solid earth including the earth's core, mantle, and crust, and also on a wider range of areas including the ocean, atmosphere and interplanetary space. We are advancing to clarify terrestrial dynamics which changes hourly and to forecast its variations by combining the analysis of ground-based and satellite data, and the studies utilizing theoretical, numerical, and simulation techniques.



<p><b>Research Fields:</b> Geodesy and Physics of Crustal Movements / Seismology and Physics of the Earth's Interior / Physical Volcanology / Crustal Geophysics and Active Tectonics / Environmental Geoscience / Physical Oceanography / Physical Hydrology / Atmospheric Sciences / Geothermal Sciences / Solar-Planetary Physics and Geomagnetism / Electromagnetism of the Earth's Interior</p>
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## Department of Geology and Mineralogy

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The Department of Geology and Mineralogy is composed of four groups; Geotectonics, Material Science of the Earth, Historical Geoscience of the Biosphere and Correlation Geochemistry.

In the Department of Geology and Mineralogy, researches are characterized by decoding the record of past events and elucidating the history of Earth and planet, through observation and analysis of sediments, rocks, minerals, and fossils, from the field and indoor experiments, within the context of Earth's and planetary evolution. Therefore, the curriculum is designed so that students can systematically acquire the advanced knowledge and analytical methods of each field.

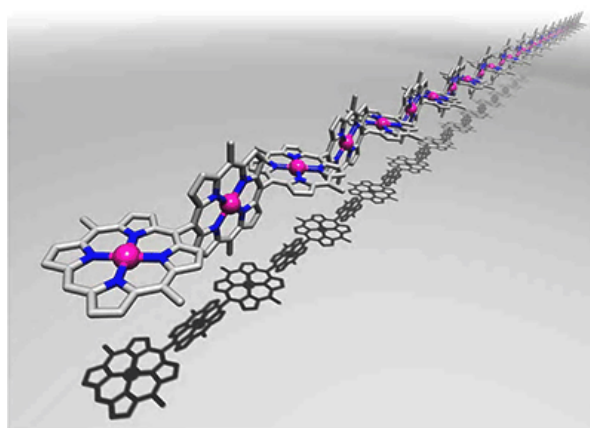


<p><b>Research Fields:</b> Geotectonics / Earth and Planetary Material Science (Petrology, Mineralogy) / Historical Geoscience of the Biosphere (Paleoenvironmental Studies, Tectonics and Paleontology) / Cosmochemistry and Geochemistry</p>
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## DIVISION OF CHEMISTRY

Chemistry, as the core investigative system of "Material Science," has played a central role in the development of this science which supports contemporary society, built around the hubs of a systematic understanding of the principles and laws governing the character of material, and the creation of newer and more expedient materials. The research objective of chemistry is all materials which exist as gases, liquids, and in a solid state, and ranges diversely from simple organic & inorganic compounds and metallic units to complex organism-related molecules.



The Division of Chemistry is comprised of 27 laboratories, 17 from the Department of Chemistry (Kitashirakawa Campus), 8 from the Institute for Chemical Research (Uji Campus), 1 from the Institute for Frontier Life and Medical Sciences (Hospital Campus), 1 from the Institute for Integrated Radiation and Nuclear Science (Kumatori Campus), and 3 laboratories headed by the adjunct faculty members of Kyoto University.

The field of research and education in the Division of Chemistry envelopes the diversity and multilayer characteristics which chemistry possesses, and is mainly classified into four areas: Theoretical & Physical Chemistry, Inorganic Chemistry of Materials, Organic Chemistry, and Chemical Biology. By integrating the study of these four areas, we are developing ultimately desired innovations in the fundamental fields such as the precise description of chemical reactions and the methodology to synthesize arbitrary molecules. Additionally, our objective in this Division is to enhance fundamental chemical concepts into a highly complex system including vital phenomena, and as a result foster graduate students who can accomplish such research.

**Research Fields:**

**Core Courses:** Solid-State Chemistry / Biological Structural Chemistry / Quantum Chemistry / Theoretical Chemistry / Molecular Spectroscopy / Physical Chemistry / Photo-physical Chemistry / Molecular Chemical Physics / Molecular Materials Science / Solid State Physics and Chemistry / Inorganic Chemistry of Materials / Surface Chemistry / Synthetic Organic Chemistry / Organic Chemistry / Organic Chemistry of Molecular Assembly / Chemical Biology / Fluid Chemistry

**Cooperation Courses:** Organoelement Chemistry / Electron Microscopy and Crystal Chemistry / Molecular Aggregation / Chemistry of Functionalized Surfaces / Hydrospheric Environment Analytical Chemistry / Advanced Inorganic Synthesis / Advanced Solid State Chemistry / Nanospintronics / Gene Analysis / Radiation Biochemistry



## DIVISION OF BIOLOGICAL SCIENCES

### Department of Zoology

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The Department of Zoology consists of the following three groups:

In the Science of Natural History Group, we advance the research of the function and mechanism of animal behavior, classification, systematics and biogeography of terrestrial and freshwater animals, and adaptation, speciation and diversity of insects and fish.



In the Zoological Science Group, we conduct research to clarify the molecular mechanism of animal development and evolution, determination of the complete genome sequences of basal chordates, and the mechanism of speciation and the restraint of gene-mutation.

In the Anthropology Group, we conduct behavioral and ecological researches on various primates such as Japanese macaques and great apes, morphological investigation of fossils of Hominoidea, and research on paleoenvironments, in order to clarify the position of *Homo sapiens* in nature and the process of its evolution.

<b>Research Fields:</b> Systematic Zoology / Ethology / Animal Ecology / Developmental Biology / Stress Response Biology / Physical Anthropology / Human Evolution Studies
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### Department of Botany

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The Department of Botany consists of two groups:

In the Molecular Plant Sciences Group, we study molecular mechanisms underlying reception and transduction of outer environmental signals, biological timing system and its diversification, morphogenesis in primitive multicellular eukaryotes, functional differentiation of organelles of plant cells, and regulation of photosynthesis.

The Plant Systematics and Evolution Group comprehensively analyzes information such



as the morphological and anatomical characteristics of plants, genome sequences and DNA fragment length polymorphisms to clarify plant diversity and the process of phylogenetic evolution.

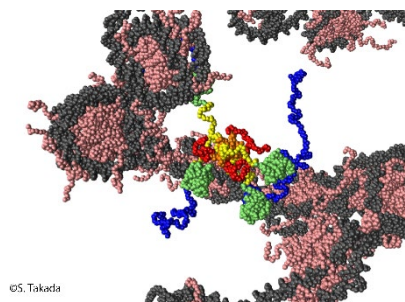
**Research Fields:** Plant Physiology / Chronobiology / Plant Phylogeny and Taxonomy / Plant Molecular Cell Biology / Plant Molecular Genetics

## Department of Biophysics

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The Department of Biophysics consists of three Groups:

The Integration Biology Group elucidates the molecular mechanism of expression, maintenance, and regulation of synaptic plasticity, studies the molecular mechanism of evolution and the diversity of living organisms, and promotes the theoretical study of the structure and function of biomolecules.



In the Signal Biology Group, we research the structure & function of signaling proteins, and the molecular mechanism which adjusts the expression of genome information.

The Systems Biology Group investigates the molecular mechanism of sight, and the cellular and molecular mechanism of skeleton construction in sponges.

**Research Fields:** Structural Biology / Molecular Biology / Neuroscience / Theoretical Biophysics / Molecular Physiology / Molecular Developmental Biology



## Astronomical Observatory

The affiliated astronomical observatory is mainly composed of the following three observatories:

(1) Hida Observatory has two characteristic solar telescopes and two types of telescopes for night time observation. It stands at the vanguard of solar observation.

(2) Okayama Observatory has a 3.8 m new technology optical infrared telescope that is called as "Seimei telescope", aiming at observations of black hole X-ray binaries, gamma ray bursts, stellar flares and planetary formation regions.

(3) Kwasan Observatory has facilities for observation, data analysis, and numerical simulation research. They are also used for education and training of graduate and undergraduate students.



Research and education in these astronomical observatories consists chiefly of the following three areas:

- Solar physics research whose objective is observationally to clarify atmospheric structure and the mechanism of energy storage, dissipation, and transport, based on high resolution observation of the solar atmospheric structure and solar active phenomena.
- Solar and cosmical plasma physics research which approaches the hydromagnetic, active phenomena of universe which extends to the sun, stars, and even to galaxies, through theoretical simulation and analysis of observation data.
- Stellar physics research which primarily targets transient active phenomena such as black hole X-ray binary stars, cataclysmic variables, gamma-ray bursts, and stellar flares and the like, principally centered on spectroscopic and photometric observation in the visible range.

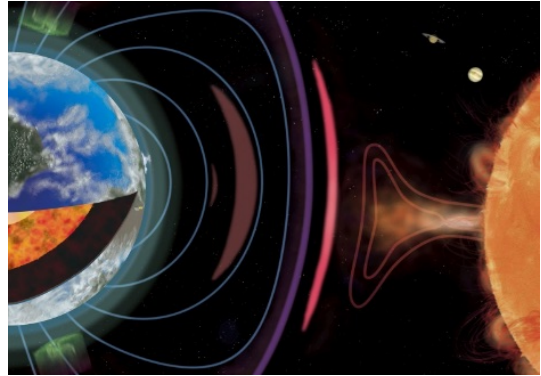
In recent years, we also apply our research results and experience to address space weather research to clarify the relationship between solar active phenomena and environmental disturbance in interplanetary space and Earth's magnetosphere through observational and theoretical approaches.

**Research Fields:** Solar Physics / Solar & Cosmical Plasma Physics / Stellar Physics / Basic Study of Space Weather Prediction



## Data Analysis Center for Geomagnetism & Space Magnetism

**Data Service:** Data Analysis Center for Geomagnetism and Space Magnetism operates the World Data Center (WDC) for Geomagnetism, Kyoto. The WDC is a regular member of the World Data System which is an interdisciplinary body of the International Science Council. As WDC, we provide geomagnetic field data supplied from a worldwide network of magnetic observatories, and geomagnetic indices derived in this Data Analysis Center to the research community. Our data archive is regarded as one of the best repositories in the world in terms of both quality and quantity.



**Education and Research:** Through the analysis of data associated with plasma phenomena occurring in outer space around the Earth, we study the structure and formation mechanisms of currents flowing in outer space, the origin and propagation mechanism of plasma waves, and the electrical structures of the Earth, planets and their moons. We also promote comprehensive analyses of the origin and variation of the geomagnetic field.

**What is Geomagnetic Field:** The geomagnetic field is mostly dipolar like a magnetic field of a strong magnet at the center of the Earth directing to the south. There were many occasions in the past that the direction of the geomagnetic field was opposite to the present Earth. We call the temporal geomagnetic variation with timescales of 10 - 1,000 years 'secular variation' in which strength as well as direction of the geomagnetic field varies. Both the geomagnetic field itself and its secular variation are almost caused by the currents flowing in the Earth's liquid outer core. On the contrary, the variations of less than about 10 years period are mostly caused by the currents flowing external to the Earth. 'Geomagnetic storms' have durations of several days, during which the geomagnetic field is severely disturbed from its normal state. There is another phenomenon called the substorm, in which the geomagnetic field in the polar region is perturbed by strong electric currents flowing in the upper atmosphere with timescales of tens of minutes. Bright auroras show intense variations at the time of the substorm. The geomagnetic field also shows daily variations because of the Earth's rotation.

<b>Research Fields:</b> Space Plasma Physics / Upper Atmospheric Physics / Electromagnetic Induction in the Earth and planets / Physics and Informatics of Natural Electromagnetic Environment
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## Institute for Geothermal Sciences

The Institute for Geothermal Sciences was launched in 1997 for the purpose of "research and education of thermal structure and thermal phenomena, from Earth's crust to its mantle," by integrating both the Beppu Geophysical Research Laboratory (in Beppu City, Oita Prefecture: established in 1924) and the Aso Volcanological Laboratory (in Minamiaso Village, Kumamoto Prefecture: established in 1928).



The facilities in Beppu serve as the headquarters, and those in Aso are referred to as the Volcanological Research Center, while the branch institute is located in Kyoto. All three facilities promote both educational and research activities.

We recognize the premise that "the earth is a huge thermomotor, which converts its internal thermal energy into the crustal phenomena of diastrophism, seismic activity, volcanic activity, and terrestrial heat hot spring activity and the like." We therefore aim to promote comprehensive earth science research concerning geothermal activity, by making the best use of our geographical advantage, and emphasizing observation, surveys, and experiments in the central part of Kyushu Island, which is considered "a huge experimental facility" of geothermal activity.

<p><b>Research Fields:</b> Geothermal Sciences / Physical Volcanology / One segment of the field of Hydrological Geophysics, Seismology, Electromagnetism of the Earth's Interior, and Active Tectonics</p>
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## Center for Science Adventure and Collaborative Research Advancement (SACRA)

The Center for Science Adventure and Collaborative Research Advancement (SACRA) was established in the Graduate School of Science, Kyoto University, on April 1, 2019. SACRA promotes interdisciplinary and frontier sciences by producing and supporting researchers who will lead the next generation in the natural sciences. The center also contributes to the whole school by handling important matters such as international relations and community outreach.



SACRA consists of three divisions: the Interdisciplinary Science Division, the Publicity & Community Relations Division, and the International Strategy Division: which is supported by the Strategy Planning Office.

- **Interdisciplinary Science Division**, covers the boundary areas of the GSS's five academic disciplines, and promotes the frontier sciences.
- **Publicity & Community Relations Division**, is responsible for all public relations and outreach in GSS. Whilst publicizing our educational and research activities both in print and via websites, it also hosts various scientific events for the local and broader communities.
- **International Strategy Division**, facilitates international research collaborations and promotes the recruitment and exchange of international students and researchers.
- **Strategy Planning Office**, supports and coordinates projects implemented by the above three mentioned divisions. The office also serves as a contact point and information hub of the GSS.

## Faculty & Staff

1 May 2021

Faculty				Total
Professor	81	(Limited term)		513
Associate Professor	86	Faculty member	33	
Senior Lecturer	8	Researcher	28	
Assistant Professor	80			
Total	255	Total	61	
Staff				
Administrative Staff	15	(Limited term)		
Technical Staff	14	Specialist Administrative Staff	1	
Counselor	1	Staff	166	
Total	30	Total	167	

## Number of Students

Graduate School

1 May 2021

Divisions \ Course	Master Course	Doctoral Course
Mathematics and Mathematical Analysis	118(11)	55(7)
Physics and Astronomy	179(7)	128(14)
Earth and Planetary Sciences	95(2)	74(26)
Chemistry	131(9)	88(29)
Biological Sciences	129(16)	146(50)
Subtotal	652(45)	491(126)
Total	1, 143(171)	

Number of international students are shown in parenthesis.

Undergraduate School

1 May 2021

Department \ Grade	1	2	3	4	Total	Non-degree seeking students
Undergraduate School of Science	325(7)	324(6)	317(1)	429	1395(14)	5

Number of international students are shown in parenthesis.

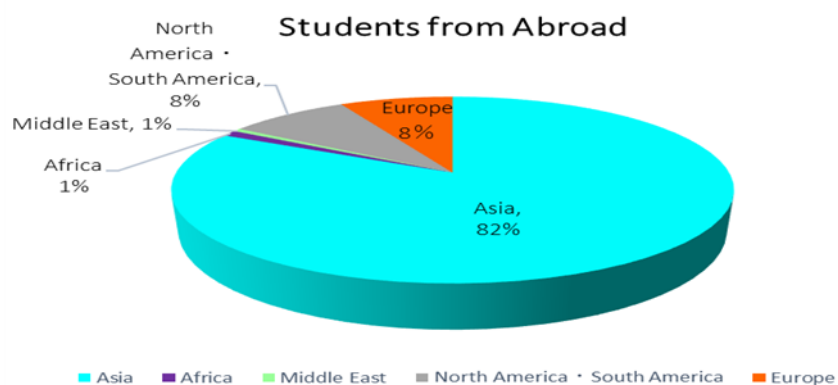
## Students from Abroad

### Students from Abroad

1 May 2021

Category Country/ Region	Undergraduate	Special Auditor (Undergraduate)	Credited Auditor (Undergraduate)	Total	Graduate		Research Student (Graduate)	Total
					Master's Course	Doctoral Course		
Argentina				0		1		1
Iraq				0	1			1
India				0	2	11		13
Indonesia				0	1	5		6
Ukraine				0	1			1
Egypt				0	1			1
Estonia				0		1		1
Austria				0		1		1
Netherlands				0		1		1
Singapore				0	1	1		2
Switzerland				0		1		1
Spain				0		1		1
Sri Lanka				0			1	1
Thailand	2			2	1			1
Nepal				0		1		1
Bangladesh				0	1	1		2
Pakistan				0		1		1
Philippines				0	1	3		4
Finland				0		1		1
France				0		4		4
Brazil	2			2	1	2		3
Vietnam	1			1		1		1
Belgium				0		1		1
Peru	1			1		1		1
Botswana				0		1		1
Portugal				0		2		2
Malaysia				0		3		3
Myanmar				0		2		2
Mexico				0		2		2
United Kingdom				0		1		1
Republic of Korea	2			2	4	7		11
Hong Kong				0		1		1
Taiwan	2			2	1	6		7
China	4			4	28	57	7	92
United States				0	1	5		6
Total	14	0	0	14	45	126	8	179

Commonly known names are used for the country names.





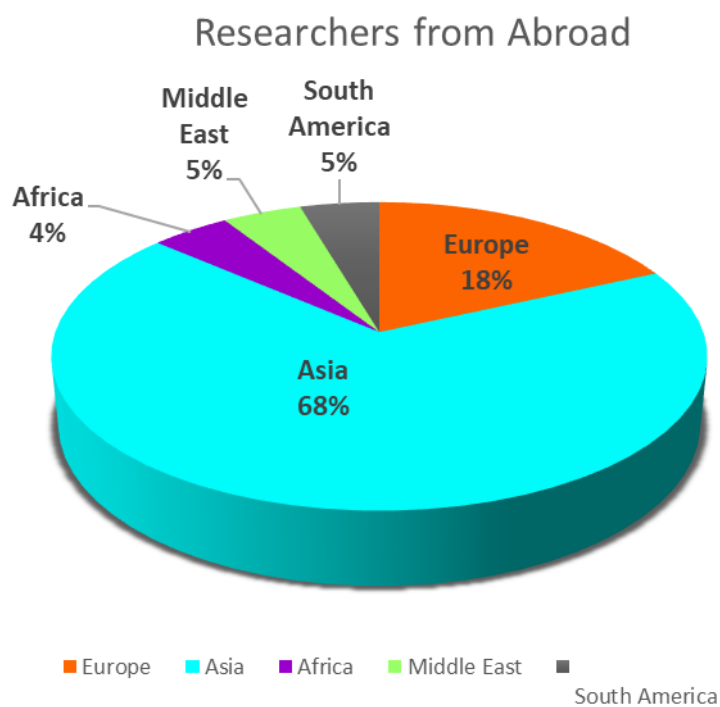
## Researchers from Abroad

### Researchers from Abroad

Academic Year 2020 (Apr.1-Mar.31)

Country	Category	Guest Scholar	Guest Research	Total
Italy			1	1
India			3	3
Colombia			1	1
Denmark			1	1
Germany			2	2
Philippines			1	1
Madagascar			1	1
Jordan		1		1
Republic of Korea			1	1
Taiwan			1	1
China		3	5	8
Japan		1		1
Total		5	17	22

Commonly known names are used for the country names.



## International Exchange

### International Exchange

#### Departmental-level Memoranda for Academic Cooperation and Exchange

1 May 2021

Country/Region	Institution's Name	Title	Since
Gabonese Republic	Le Centre National de la Recherche Scientifique et Technologique	Convention de Cooperation Internationale entre L'Institut des Sciences de l'Universite de Kyoto et Le Centre National de la Recherche Scientifique et Technologique	1 October 2009
Kingdom of Denmark	Faculty of Science and Technology, Aarhus University	Academic Cooperation Agreement	5 July 2010
Republic of Indonesia	The National Coordinating Agency for Surveys and Mapping	Protocol of Agreement between the National Coordination Agency for Surveys and Mapping (BAKOSURTANAL), CIBINONG, Indonesia and the Graduate School of Science, Kyoto University, Kyoto, Japan, for Precise Gravity Measurements in Indonesia	10 January 2005
Russian Federation	National Research University, Higher School of Economics	Agreement on Cooperation between the Graduate School of Science, the Research Institute for Mathematical Sciences, Kyoto University and National Research University Higher School of Economics	1 August 2011
United Kingdom of Great Britain and Northern Ireland, and Federal Republic of Germany	University of Bristol Botanic Garden; Botanic Garden and Herbarium, Heidelberg	Memorandum of Understanding: a Partnership to Promote the Objectives of the Global Strategy for Plant Conservation (GSPC)	6 November 2015
United States of America	College of Science, University of Utah	Memorandum of Understanding concerning Academic Cooperation between the College of Science at the University of Utah, USA and the Graduate School of Science and the Research Institute for Mathematical Sciences at Kyoto University, Japan	13 October 2016
China	Chengdu Institute of Biology, Chinese Academy of Sciences	General Memorandum of Understanding for Academic Cooperation and Exchange between Chengdu Institute of Biology, Chinese Academy of Sciences and Graduate School of Science, Kyoto University	10 July 2017
Russian Federation	Borisevsk Institute of Catalysis, Siberian Branch of the Russian Academy of Sciences	General Memorandum for Academic Cooperation and Exchange between The Faculty and Graduate School of Science, Kyoto University, Japan and Borisevsk Institute of Catalysis, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia	10 January 2018
United Kingdom	University of Edinburgh	General Memorandum for Academic Cooperation and Exchange between the University Court of the University of Edinburgh and the Faculty and Graduate School of Science, the Research Institute for Mathematical Sciences, Kyoto University	24 September 2020
Republic of Croatia	Institute of Physics	General Memorandum for Academic Cooperation and Exchange between the Faculty and Graduate School of Science, Kyoto University and Institute of Physics	17 November 2020

#### Departmental-level Student Exchange Agreements

1 May 2021

Country/Region	Institution's Name	Title	Since
China	Fudan University	Student Exchange Agreement between the School of Mathematical Sciences, Fudan University and the Faculty and Graduate School of Science, Kyoto University	30 August 2013
Federal Republic of Germany, France, United States of America, China	University of Bonn, École Normale Supérieure, New York University, Peking University	Memorandum of Understanding for GlobalMathNetwork	01 July 2017
Italy	University of Parma	Student Exchange Agreement between Università degli studi di Parma (Italy) – Dipartimento di Scienze Matematiche, Fisiche e Informatiche and the Faculty and Graduate School of Science, Kyoto University	27 July 2018
United Kingdom	University of Edinburgh	Student Exchange Agreement between the University Court of the University of Edinburgh and the Faculty and Graduate School of Science, the Research Institute for Mathematical Sciences, Kyoto University	24 September 2020

## Map & Access



Railway Station	Transportation from the Station	Boarding Bus Stop	Bus Route No.	Travel Time	Arrival Bus Stop
JR Kyoto Sta.	Kyoto City Bus	Kyoto Sta.	206, 17	35 min	Hyakumanben (206) Kyodai Nogakubu-mae(17)
Hankyu Railway Kyoto Kawaramachi Sta.		Shijo Kawaramachi	201, 31, 17, 3	25 min	Hyakumanben (201,31,3) Kyodai Nogakubu-mae (17)
Subway Karasuma Line Imadegawa Sta.		Karasuma Imadegawa	203, 201	15 min	Hyakumanben (201) Kyodai Nogakubu-mae (203)
Subway Tozai Line Higashiyama Sta.		Higashiyama Sanjo	206, 201, 31	20 min	Hyakumanben
Keihan Railway Demachiyanaagi Sta.		Demachiyanaagi Sta.	203,201,17,3	8 min	Kyodai Nogakubu-mae(203,17) Hyakumanben (201,3)
	Walk			20 min	

See also: <http://www.kyoto-u.ac.jp/en/access/>



Issued July 2021

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