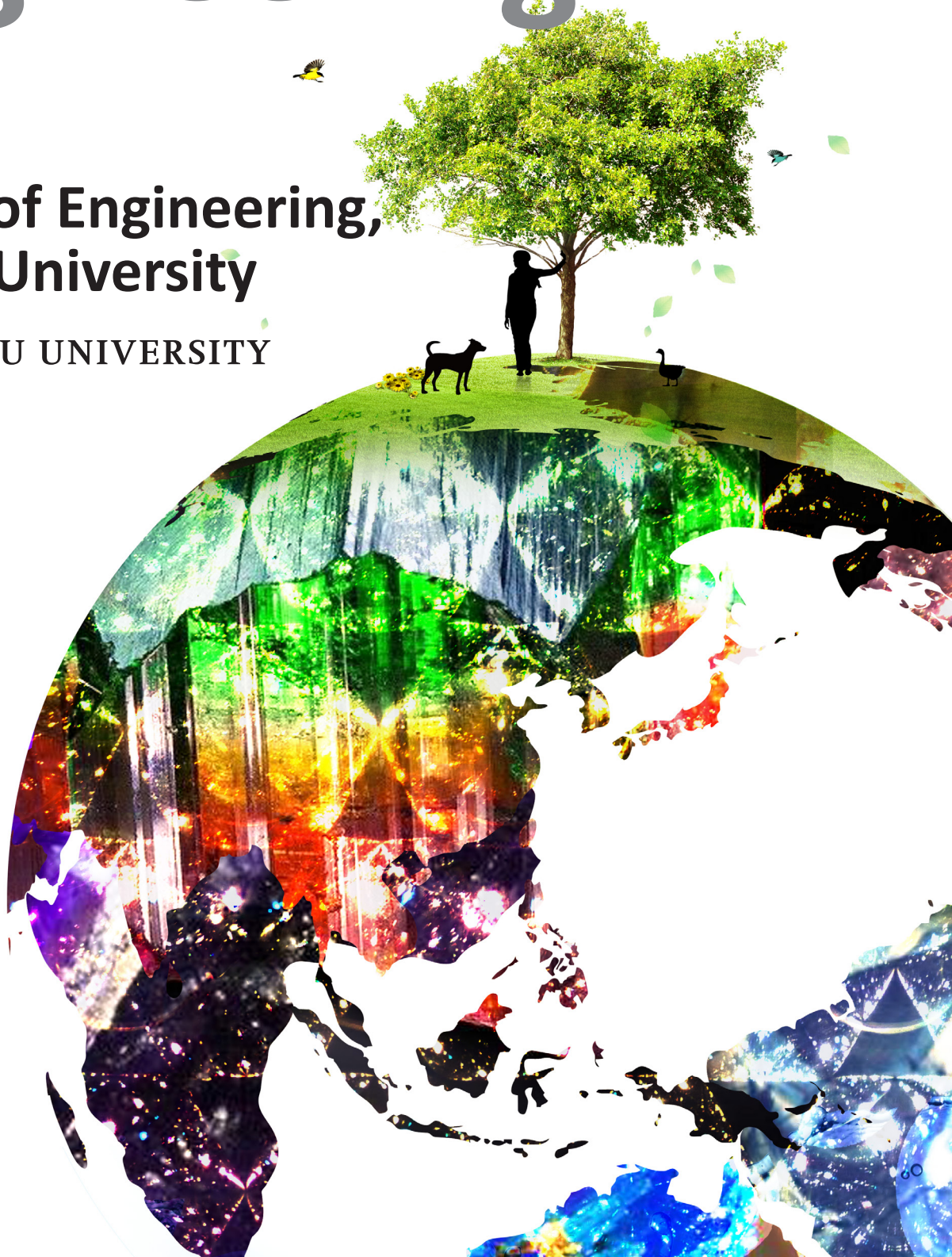


# Department of Earth Resources Engineering

Faculty of Engineering,  
Kyushu University



KYUSHU UNIVERSITY





# Think Globally! Act Globally!

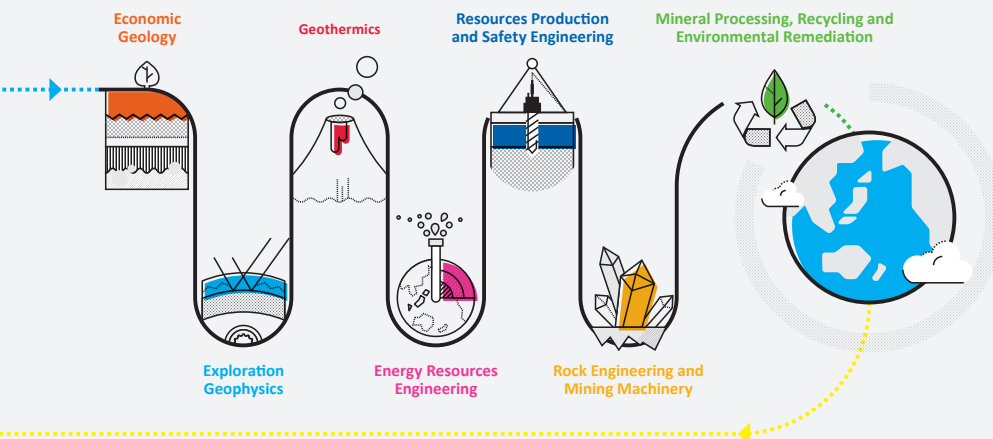
## Department of Earth Resources Engineering

The Department of Earth Resources Engineering was newly established in April 1998 as the successor to the Mining Engineering Department. Kyushu University has a long history of fostering the study of Earth Science and Technology, Mining Engineering and Energy Resources Engineering to meet the growing needs for development of useful minerals and energy resources including geothermal resources applied to many industrial purposes. Areas of experience encompass Economic Geology, Exploration Geophysics, Geothermics, Resources Production and Safety Engineering, Rock Engineering and Mining Machinery, Mineral Processing and Recycling and Energy Resources Engineering.



## Educational Aims of the Department of Earth Resources Engineering

Our department is involved in the sustainable development of energy and mineral resources essential for all types of industrial infrastructure and society, as well as the novel development of green technology, and resources recycling. In addition, our target is to foster global technologists and researchers who can proactively apply creative thinking and unique invention skills. Our department provides professional education relating to underground energy and mineral resources, ranging from surveying to development and usage. Furthermore, faculty members and graduate students are able to appreciate the fields of study as comprising essential elements of earth systems, and deal with resources and the environment from the perspective of coexistence with the earth's environment. Our ultimate target is for students to acquire values and skills based on these policies, ready to become active as researchers and technologists in these fields, both in Japan and overseas.



## Masters Course

The master course is a two year program, consisting of advanced lectures and a research project. Lectures are given in a class of relatively small number; consisting of 10-15 students. We have two Master Course; Earth Resources Engineering and Cooperative Program for Resources Engineering. Cooperative Program for Resources Engineering is a collaborative graduate school education program in Resources Engineering of Kyushu University and Hokkaido University, established in 2017. This is the first of its kind in the resources engineering area among universities in Japan. The Department of Earth Resources Engineering commenced a Double Degree program with the Institute of Technology Bandung from 2016 and Gadjah Mada University from 2017. This program provides opportunities for students to obtain a Master's degree from universities in two different countries.



## Doctoral Course

The main objective of the doctoral course is to complete a research project in three years and submit a doctor dissertation with new and significant findings. Earth Resources Engineering has an International Doctoral Program. Every year, 15 to 20 international students mainly from ASEAN and African countries are enrolled.

# Laboratory

Our department consists of seven laboratories as below. This wide range of research fields can cover technical and engineering topics, such as the prediction of natural disasters, utilization of ground heat, urban mining for valuable resources recycling, and remediation of contaminated groundwater resources. As environmental problems related to resource development have become an important global issue, we focus on promotion of cooperative work and research with overseas organizations and universities. From this point of view, our department is actively accepting graduate students from overseas and carries out joint research with overseas universities.

## Lab and Faculty Members

### Earth Science and Technology



#### Economic Geology

Akira IMAI, D. Sc., Professor  
Kotaro YONEZU, D. Eng., Associate Professor  
Akane ITO, D. Eng., Assistant Professor  
Geology for Mineral Exploration  
Magmatic Hydrothermal Systems  
Geochronology and Thermochronology for Earth Resources



#### Exploration Geophysics

Hideki MIZUNAGA, D. Eng., Associate Professor  
Tatsunori IKEDA, D. Eng., Associate Professor  
Toshiaki TANAKA, D. Eng., Assistant Professor  
Exploration of Mineral and Oil, Gas, and Geothermal Reservoirs  
Monitoring Reservoirs for CO<sub>2</sub> Storage, Earthquake Faults and Volcanoes  
Development of Exploration System and Robot for Space and Marine Resources



#### Geothermics

Yasuhiro FUJIMITSU, D. Eng., Professor  
Jun NISHIJIMA, D. Eng., Associate Professor  
Keigo KITAMURA, D. Sc., Associate Professor  
Mitsuo MATSUMOTO, D. Sc., Assistant Professor  
Geothermal System Modeling and Enhancing Techniques of Geothermal Reservoir  
Sustainability Monitoring of Subsurface Fluid by Geodetic Observations  
Social Acceptance of Geothermal Power Plant in Local Community

### Mining System Engineering



#### Resources Production and Safety Engineering

Yuichi SUGAI, D. Eng., Professor  
Takehiro ESAKI, D. Eng., Assistant Professor  
Mineral and Energy Resources Production and CO<sub>2</sub> Storage  
Mine Ventilation and Safety Engineering  
Microbial Technology for Productions of Hydrocarbon Reserves



#### Rock Engineering and Mining Machinery

Hideki SHIMADA, D. Eng., Professor  
Takashi SASAOKA, D. Eng., Associate Professor  
Akihiro HAMANAKA, D. Eng., Assistant Professor  
Mine Planning and Equipment Selection for Surface and Underground Mines  
Design of Mine Rehabilitation for Sustainable Development  
Smart Mining and Civil Infrastructure with AI and IoT Technologies



#### Mineral Processing, Recycling and Environmental Remediation

Naoko OKIBE, Ph.D. (UK), Professor  
Hajime MIKI, D. Eng., Associate Professor  
Keishi OYAMA, D. Eng., Assistant Professor  
Biomining (Biological Mineral Processing/Environmental Remediation)  
Resource Separation and Hydrometallurgy  
Biomaterials

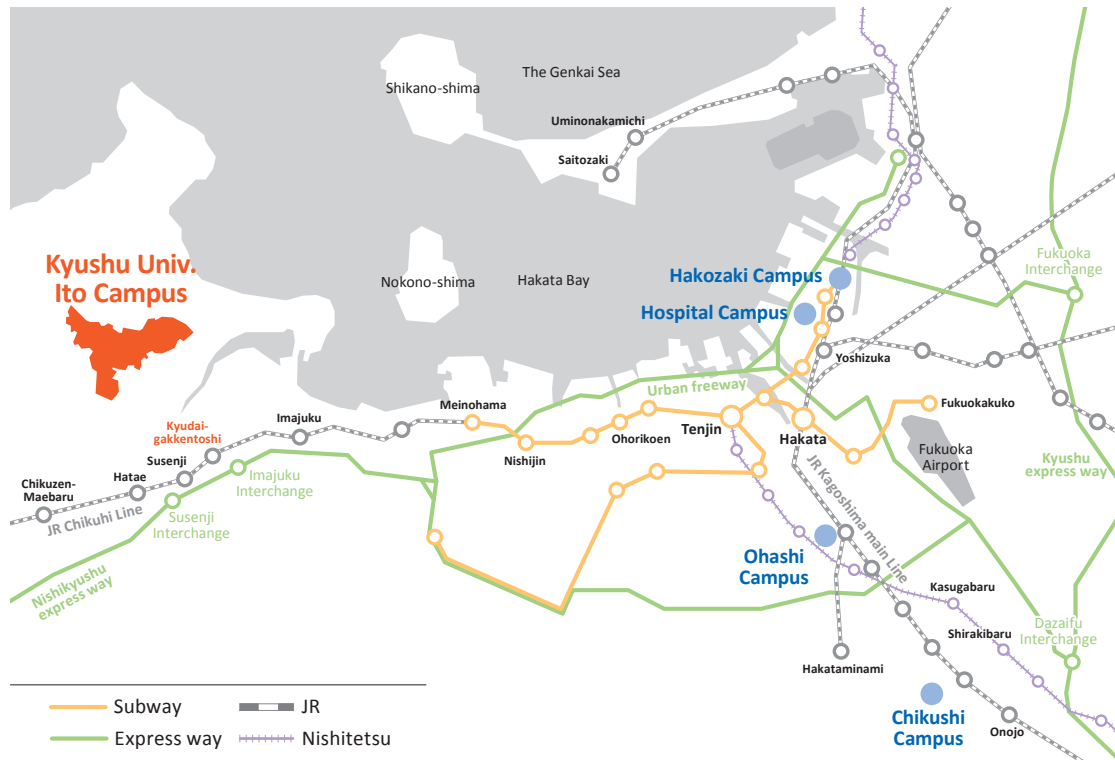
### Energy Resources Engineering



#### Energy Resources Engineering

Yasuhiro YAMADA, Ph.D., Professor  
Kosuke EGAWA, Ph.D., Associate Professor  
Geo-fluid and Energy Resources Engineering  
Frontier Science and Technology to Explore Subsurface  
Carbon-dioxide Capture and Storage

## Access



### From Fukuoka Airport

#### Subway

Take Fukuoka City Subway going to “Meinohama”, “Chikuzen-Maebaru”, or “Nishi-Karatsu” from **Fukuokakuko(Airport) Station**.  
Meinohama: Take the JR Chikuhui Line going to “Karatsu” at Meinohama Station. Get off at **Kyudai-gakkentoshi Station**.  
Chikuzen-Maebaru or Nishi-Karatsu: Get off at **Kyudai-gakkentoshi Station**.  
Take the Showa Bus going to “**Kyudaikougakubumae**”.

### From Hakata Station

#### Subway

Take Fukuoka City Subway going to “Meinohama”, “Chikuzen-Maebaru”, or “Nishi-Karatsu” at **Hakata Station**.  
Meinohama: Take the JR Chikuhui Line going to “Karatsu” at Meinohama Station. Get off at **Kyudai-gakkentoshi Station**.  
Chikuzen-Maebaru or Nishi-Karatsu: Get off at **Kyudai-gakkentoshi Station**.  
Take the Showa Bus going to “**Kyudaikougakubumae**”.

#### BUS

Take the Nishitetsu Express Bus going to “**Kyudaikougakubumae**” at **Hakata Station A bus stop**.

### From Tenjin

#### Subway

Take Fukuoka City Subway going to “Meinohama”, “Chikuzen-Maebaru”, or “Nishi-Karatsu” at **Tenjin Station**.  
Meinohama: Take JR Chikuhui Line going to “Karatsu” at Meinohama Station. Get off at **Kyudai-gakkentoshi Station**.  
Chikuzen-Maebaru or Nishi-Karatsu: Get off at **Kyudai-gakkentoshi Station**.  
Take Showa Bus going to “**Kyudaikougakubumae**”.

#### BUS

Take Nishitetsu Express Bus going to “**Kyudaikougakubumae**” at **Tenjin2B(Solaria Stage)** or **Tenjin-kita bus stop**.

## Contacts

### Department of Earth Resources Engineering, Faculty of Engineering

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Website

<https://mine.kyushu-u.ac.jp/en/>



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