KYUSHU
UNIVERSITY

Platform of Inter / Transdisciplinary Energy Research

Transdisciplinary Projects and the Creation of a Comprehensive Environment for Energy Research

Q-PIT : Kyushu University Platform of Inter/ Transdisciplinary Energy Research

Greetings from the Director General

Q-PIT
Kyushu University Platform of Inter/
Transdisciplinary Energy Research

Kubo Chiharu
President,
Kyushu University

Kyushu University is located in Fukuoka Prefecture, where many towns were integral to the development of the power sources that supported the rapid industrialization of Japan. These towns have been registered on the World Heritage List as “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining”. Following this heritage, research has continued for more than sixty years to develop more efficient electrical and heating systems, to discover natural renewable energy sources, and to optimize coal resource energy. We support a large number of researchers and have encouraged research in association and collaboration with overseas universities and the business community. In the area of hydrogen energy, research into the practical use of hydrogen is being performed at the University in collaboration with industrial entities, the national government, and local municipalities. Based on the strength of energy research at our University, the “Kyushu University Platform of Inter/Transdisciplinary Energy Research” was established in October 2016.

This platform targets the promotion of research to solve the global challenges necessary to “achieve a balance between emissions caused by humans and the removal of greenhouse gases in the second half of this century” as stressed in the Paris Agreement adopted at COP21. Moreover, this platform designs a new concept for future energy systems to generate a paradigm shift in energy for technology, industry, and society. This platform also aims to design an energy society that reduces the load produced by humans to allow us to co-exist with the global environment.

The current energy issues are causing social problems such as a global increase of energy demand, resource depletion, global warming, and environmental deterioration, including radiation, natural disasters, human disasters, and cyber-terrorism. Even though it is challenging, in order for human beings to live in a safe environment, we must positively deal with these problems. This platform offers a new organization for research and education that has been generated utilizing the strength of a comprehensive university, including the faculties of Humanities and Sociology, and Science and Technology. We are creating a research and educational environment that enables us to freely exchange professors and provide an interdisciplinary experience for graduate and undergraduate students who wish to study in a wide range of research areas.

The world has received abundance through the results of past research. On the other hand, problems such as resource depletion and environmental deterioration have become even more severe. It is the responsibility of our university, which has in the past led energy research, to continue to promote a well-educated citizenry and to target research that connects to the next generation. We must make great effort to realize a sustainable, future-oriented energy society.

This platform continuously promotes a variety of activities and deals with future problems. We look forward to your continued support and cooperation.

Kyushu University Platform of Inter/ Transdisciplinary Energy Research

Q-PIT
Kyushu University Platform of Inter/
Transdisciplinary Energy Research

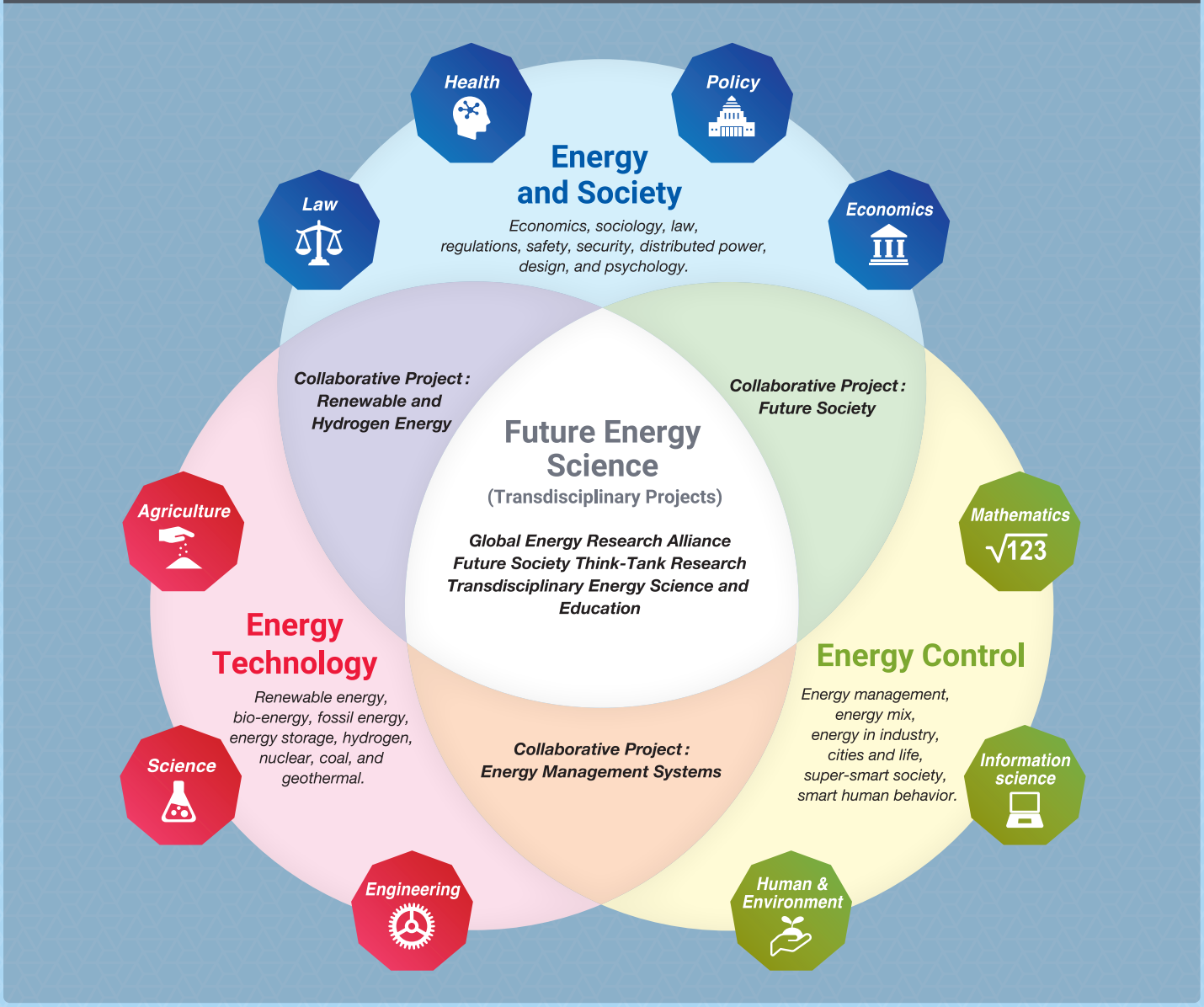
Vision

Realization of an ideal energy society in 2100,
through cooperation across disciplines.

Goal

To design a new concept for future energy systems and generate a paradigm shift in energy technology, industry, and society.

Conceptual diagram of the organization of the All-Kyushu University Platform, without barriers between departments.



Research Units

Organization of Kyushu University Platform of Inter/Transdisciplinary Energy Research

As of September 1, 2019

Director General — Kubo Chiharu (President of Kyushu University)

Strategic Conference

Deputy Director General — Inoue Kazuhide (Executive Director / Executive Vice-President)

Faculty Council for Q-PIT

Energy Research Units

Renewable Energy Utilization Research Unit
Associate Professor : Watanabe Kohichi
Associate Professor : Li Haiwen

Future Energy Management Research Unit
Associate Professor : Hori Maiya
Associate Professor : Farzaneh Hooman

Future Energy Society Research Unit
Associate Professor : Aoki Keiko
Assistant Professor : Takashima Nobuyuki

Global Energy Research Alliance Unit
Professor : Hayashi Akari
Associate Professor : Lyth M Stephen
Associate Professor : Wakeyama Tatsuya

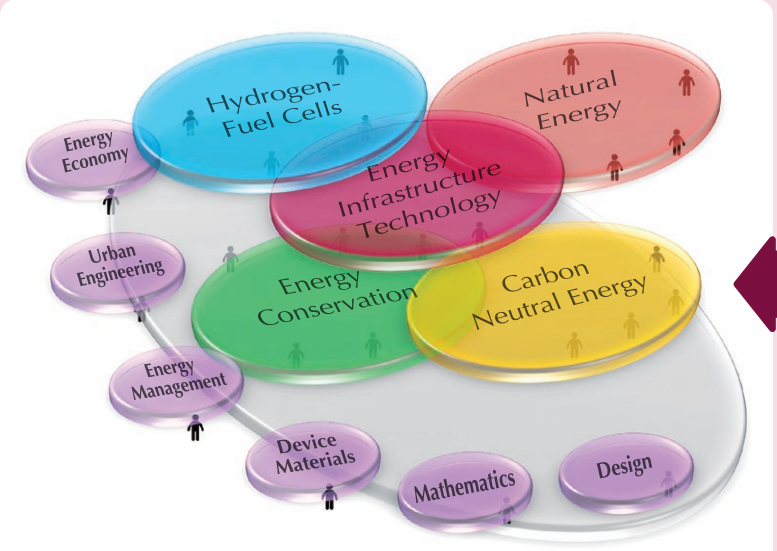
Future Society Think-Tank Research Unit
Professor : Yoshida Kentaro
Associate Professor : Lindner Robert
Assistant Professor : Choi Youngjin

Transdisciplinary Energy Science and Education Unit
Professor : Yamazaki Yoshihiro
Professor : Tada Tomofumi
Professor : Yoshida Kentaro (additional post)

Secretariat
(Kyushu University Platform of Inter/Transdisciplinary Energy Research Administrative Office)

Participation of Young Researchers & Doctoral Students

- Our platform promotes cross-cutting innovative research among young researchers.
- Our platform develops individuals who will address futureenergy concerns and act as human resources.



All-Kyushu University

- International Institute for Carbon-Neutral Energy Research (I²CNER)
- Next-Generation Fuel Cell Research Center (NEXT-FC)
- International Research Center for Hydrogen Energy
- Research Center for Hydrogen Industrial Use and Storage
- Research Institute for Applied Mechanics
- Institute of Materials Chemistry and Engineering
- Graduate School of Integrated Frontier Sciences
- Research Center for Green Technology
- Institute of Mathematics for Industry
- Faculties of : Engineering; Science; Agriculture; Information Science & Electrical Engineering; Design; Law; and Economics
- Research Center for Synchrotron Light Applications
- Center for Advanced Instrumental Analysis
- Ultramicroscopy Research Center

About the Research Units in Our Energy Platform

Renewable Energy Utilization Research Unit

This research unit studies renewable energy utilization systems integrating wind energy and hydrogen technology. The unit is also contributing to lowering the cost and increasing the capacity of renewable energy.

Future Energy Management Research Unit

This research unit carries out advanced research on information technology, systems control and assessments that serve as central technologies in realizing energy management systems (EMS), that can adapt to and accommodate changes in society, devices, and human behavior. Additionally, this research unit is contributing to the establishment of a standard model of local EMS and to its implementation.

Future Energy Society Research Unit

This research unit is engaged in advanced energy research aimed at achieving low-carbon and renewable energy for the middle and long term. This unit is also promoting renewable energy, setting medium-term and long-term goals.

Global Energy Research Alliance Unit

This research unit will advance cutting-edge research aimed at creating a low-carbon and carbon-free society, and will play a role in leading the Platform of Inter/Transdisciplinary Energy Research, by promoting international research activities and experiences in studying abroad.

Future Society Think-Tank Research Unit

This research unit will carry out transdisciplinary research on energy, resources and the environment. It showcases technologies, policies and regulations that can facilitate the realization of a future low-carbon renewable energy society.

Transdisciplinary Energy Science and Education Unit

While engaging in advanced energy research, this unit will build a "Transdisciplinary Energy Science and Education Program" to coordinate collaborations with transdisciplinary projects across each graduate and undergraduate school.

Q-PIT Faculty, Council Members, and Staff

Q-PIT
Kyushu University Platform of Inter/Transdisciplinary Energy Research

Our Approaches to Future Energy Research

World-leading research and industry-university-government collaborations

Kyushu University pursues academic research of the world's highest standards; proposals for new social systems; and demonstrable experimental research results.

- Our platform will consider energy needs from the perspectives of society, economics, policy, the environment, industry, and technology.
- At Kyushu University, students and young researchers will play a leading role in solving future energy challenges.
- Our platform will collaborate with world class international researchers, universities, industries and regions.
- Implementation of future energy society on the university campus, and its deployment in society will be realized.

Q-PIT
Kyushu University Platform of Inter/Transdisciplinary Energy Research

Research and Education Activities

- Merging wind technologies and hydrogen technology *(Renewable Energy Utilization).*
- Energy management integrated with energy-based technology *(Future Energy Management Research).*
- *(Future Energy Society).* Research on modern biomass energy systems in collaboration with local communities
- Collaborative research and activities with universities around the world *(Global Energy Research).*
- Recommendations for a low-carbon renewable energy society from the medium to long-term perspectives *(Future Society Think-Tank).*
- Connecting the education programs of graduate/undergraduate schools *(Transdisciplinary Energy Science and Education).*

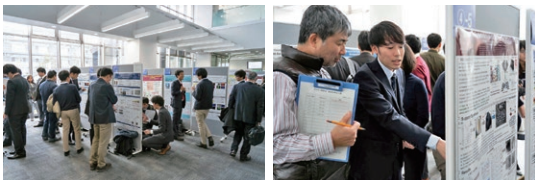
Support and Training for Young Researchers

Poster Presentations AY2018

Purpose: Promotion of innovative research

Summary: Date: January 28, 2019
Poster presentation of research results by young researchers and doctoral students.

Award: President award (1 person); Merit award (7 people)



Poster session

Suport program for Young Researchers and Doctral Students AY2018

Purpose: Financial support for young researchers and doctoral students

Summary: Q-PIT screened the applications and awarded subsidies for research support according to the regulations of the university.

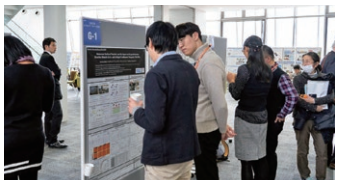
Award: ***Quota of young researchers/Adoption*** Number of Awards: 12
Quota of doctoral students/Win Gold Prize: 1 person Silver Prize: 2 people
Bronze Prize: 5 people
Encouragement Prize: 17 people

Award winners of poster presentation and promotion program of young researchers and doctoral students, AY2018

Invitation Program of Overseas Reserchers for Intenational Collaborative Research

Purpose: Promotion and support for energy-related international collaborative research

Summary: Invited collaborators and presented posters of initiatives as a follow-up to international joint research proposals presented at the previous Energy Week.



Poster presentation of international invited students and researchers

Our Platform will Host International Symposiums and Workshops for Transdisciplinary Projects

Annual Symposium "Kyushu University Energy Week 2019"

Date: January 28 - February 1, 2019 (5 days)

Venue: 9 sites Participating Department: 7 departments

Summary: Q-PIT organized an international symposium, including invited lectures by well-known energy researchers from all over the world and experts from industry and government.

Invited lectures from overseas

Panel Discussion

Date: January 28, 2019 (1st day of Energy Week 2019)

Summary: Discussion on international graduate education programs for energy by invited researchers from world's top universities.

Panel discussion

ACCESS

- Fukuoka Airport ➡ (Subway Kuko Line) ➡ Meinohama Station (Transfer JR Chikuhi Line) ➡ Kyudai-Gakkentoshi Station ➡ Showa Bus ➡ Ito Campus

  ※ Alternatively, board a train bound for NishiKaratsu or Chikuzen-Maebaru, which eliminates the need to transfer at Meinohama Station.

- Fukuoka Airport ➡ (Subway Kuko Line) ➡ Hakata Station ➡ Nishitetsu Bus ➡ Ito Campus

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