Graduate School of
Life Science and
Systems Engineering

Kyushu Institute of Technology

2021

www.lsse.kyutech.ac.jp

MESSAGE FROM DEAN

Invitation to Life Science and Systems Engineering

Dean

Takashi YASUDA

Graduate School of Life Science and Systems Engineering (LSSE) was established in 2000 at Kitakyushu Science and Research Park to promote advanced research based on superior biological functions and implement them into practical engineering technology. LSSE has succeeded in creating frontier technologies for meeting social needs in broad technical fields related to environment/energy, robot/artificial intelligence, medical application, etc.

Diversity in students is a big feature of LSSE. In addition to students from two undergraduate schools of Kyushu Institute of Technology, many students gather from domestic universities and colleges of technology throughout Japan and from various overseas universities. Collaborative works among these students with different experiences and values generate fresh ideas leading to technical innovation as well as fostering communication ability with recognition of diversity.

LSSE has educational programs and research projects in collaboration with universities and companies within Kitakyushu Science and Research Park. Also, LSSE is offering study abroad programs with overseas partner universities, and conducting many international joint research projects with them. Through these programs and projects students can strongly enhance their global perspectives.

We invite you to LSSE to immerse yourself in a cutting-edge education and research environment and to launch your promising career on an international stage.

INDEX

Graduate School of Lifescience and Systems Engineering, Kyushu Institute of technology

GENERAL FEATURES

Distinctive Educational Objectives

The underlying goal is the development of new areas of advancement in the fields of mechanical, electronic, chemical engineering, information technologies and in life sciences along with other disciplines, through technological application of the superb structures and functions of many organisms. Education and training at this graduate school is directed toward the development and mastery of the following areas. To achieve a high level of expertise and knowledge together with a strong awareness of their important roles as technocrats of life science and systems engineering.

1. *Understanding the role of each specialized area of life science and system engineering to meet the needs of society.*

2. *Capability and competence in the logical analysis and solution of problems and the attainment of objectives.*

3. *Skills and competence necessary for effective presentation and introduction of new technologies and innovations.*

4. *Skills and competence in accurate communication based on logical thoughts.*

5. *Capability for both independent and collaboration proposal consideration, and implementation of solutions to problems and tasks in fields of specialization.*

Basic Content of Education and Research

Living organisms perform motor neuron control and movement together with their transformation of materials and energy. Elucidation of these processes requires systematic research into their structures, materials and energy transformation, sensing, motility, control, information processing, and other salient aspects, in addition to the existing techniques and methods of life science at the molecular and cellular level.

The underlying purpose and goal of the Graduate School of Life Science and Systems Engineering is to ensure students' knowledge and skills needed to achieve a technological understanding of these multifaceted functions of living organisms as comprehensive systems.

SPECIAL COURSES FOR INTERNATIONAL STUDENTS

The following courses are special courses for international students, such as classes in English. Please check the website for details on each course.

Advanced Assistive Robotics (Global AAR) Course

This course is an international course operated by our institute since 2015, and consists of Japanese and international students in the Department of Human Intelligence and Systems Engineering (masters course) and the Department of Life Science and Systems Engineering. We have accepted students from diverse fields such as integrated circuits, control, sensing, nanosystems, artificial intelligence, LOT systems, behavioral science, and neuroscience.

The course is designed to accommodate international students by using English as the language for slide presentations and Q&A sessions. Besides, the course provides opportunities for English presentation and communication training through journal clubs where students read and understand the latest papers, AAR seminars with top-notch lecturers, and the practicum in Robot Operating System.

http://www.brain.kyutech.ac.jp/global_aar/

Global Green Energy and Electronics (G2E2) Course

This course provides advanced education and research, which demands for the realization of green, clean, and sustainable growth. One of the main aims of this course is to nurture global leaders, who can become a bridge between techno-scientific societies of Japan and abroad in the future. Education and research on green electronics will not only contribute to the development of peaceful, safe, and secure societies but also step forward towards achieving the Sustainable Development Goals (SDGs).

Courses are conducted in English in order to cater to the need for the international students.
"G2E2 Seminar" provides state-of-the-art technologies and research topics. "Exercises on Measurement Control Systems" aims at cooperative and active learning opportunities between Japanese and foreign students.

http://www.life.kyutech.ac.jp/~g2e2/en/

Exercises on Measurement Control Systems

- Printable photovoltaic cells
- Functional materials and their electrochemical devices
- Organic electronic devices
- Highly efficient and flexible energy-conversion
- Motor-drive system
- Next-generation power semiconductor devices and their applications


G2E2 Seminar

MAIN PROJECTS

Clean Cycle Chemistry (Tri-C) Course

In the Clean Cycle Chemistry (Tri-C) Course, we aim to develop engineers and researchers who contribute to a sustainable society by conducting education and research centered on chemical and biogeochemical cycles to make substances and elements into recyclable resources. Specifically, we conduct education and research related to chemical circulation in the research fields of "Interface Functional Engineering", "Photo-functional Materials engineering", "Electrocatalytic Engineering" and biological circulation of "Environmental Bio-adaptation Engineering". This course is for graduate students in the master's program.

- ● Functional Interface Engineering
- ● Environmental Bio-adaptation
- ● Photo-functional Materials
- ● Electrocatalytic Engineering
- ● Collaborative Brainstorming on Clean Cycle Chemistry
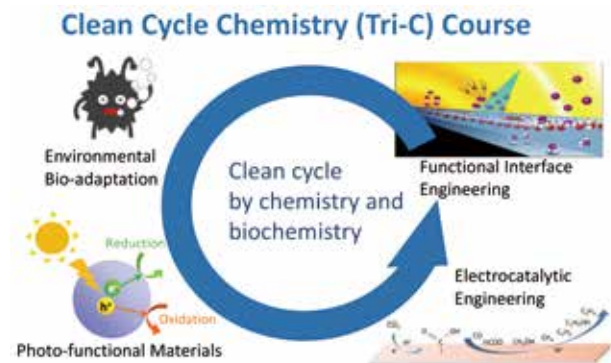
MSSC

Nine years have passed in 2021 since MSSC overseas education and research base was established. MSSC is operated jointly with University of Putra Malaysia (UPM). MSSC is an international center promoting education and research along with supporting various activities such as short-term study programs, research programs at UPM, corporate internships with Japanese companies in Malaysia, and alumni associations with Malaysian graduates. The most representative program between the two schools is SAES, which is held alternately every year at each university. The number of participants, which initially started in 2013, was about 100 but has grown to more than 500 in 2020 even though both countries under the COVID-19 pandemic.

Online symposium SAES2020

These our activities have also greatly spread on the outcome of the research of both schools. Compared with MSSC before established, the number of papers co-authored by the University and UPM is increasing as shown in the figure. The research fields of papers to be published are also expanding due to increase collaboration groups. The new joint research which is cofounded by both universities that began in 2017 seemed to significantly contribute to the results. And the double-degree program also started in 2020. Both universities expect to become more active in a wider range of fields.
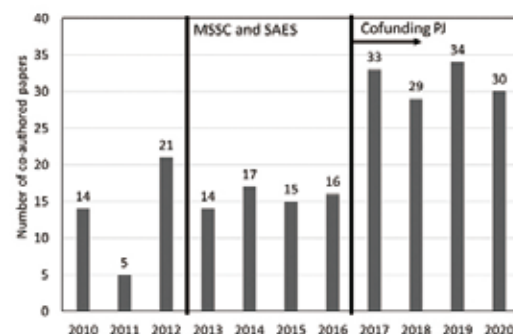
The number of papers co-authored by the University and UPM

Join Robot Competitions!!

The Kyutech Home Service Robot team Hibikino-Musashi@Home (HMA) won the first prize two years in a row in Domestic Standard Platform League (DSPL) of RoboCup 2017 and 2018, and Partner Robot Challenge (Real Space) in World Robot Summit 2018. HMA also won the first prize six times in RoboCup JapanOpen.

Achievements

RoboCup 2017 Nagoya, @Home DSPL first place.
RoboCup 2018 Montreal, @Home DSPL first place, P&G Dishwasher Challenge Award
World Robot Challenge Service Robotics Category Partner Robot Challenge Real Space first place. METI Minister's Award. RSJ Special Award.
RoboCup 2019 Sydney, @Home DSPL third place.

RoboCup JapanOpen 2018, @Home Open Platform League (OPL) first place. JSAI Award.
RoboCup JapanOpen 2019, @Home OPL first place, DSPL first place.
RoboCup JapanOpen 2020, @Home OPL first place, DSPL first place, OPL Technical Challenge first place.

https://www.brain.kyutech.ac.jp/~hma/

Team introduction!

Team KUROSHIO, the allied team of 8 institutions including Kyutech, won the second place and 1 million US dollars in Shell Ocean Discovery XPRIZE, the international competition of autonomous ocean exploration technologies.

The Kyutech Underwater Team won in the AUV League of Underwater Robotics Competition in Okinawa URC in 2020. As the URC is held in the sea, AUVs are required to be highly autonomous and completeness.

Agricultural robots must work in the actual field and need AI, gentle mechanism to living things. Kyutech "Tometoers" join the Tomato-Harvesting-Robot competition and show good results (Winner in 2019, 3rd in 2020).

The Kyutech Robo Cup MSL team Hibikino-Musashi won the championship more than 10 times in Japan Open and one of veteran teams in World Cup. Each team joins with 5 soccer robots which act autonomously with mounted sensors only.

DEPARTMENT OF BIOLOGICAL FUNCTIONS ENGINEERING

Graduate School of Life Science and System Engineering

Division Overview

The research and education in this department deals with the realization of materials, structures and energy conversion functionalities of nature/organisms along with their utilization in engineering. The main objective of this department lies in discovering solutions to social issues like the global environment and human health to promote the creation of new industries, by integrating the fields of the environment, energy, materials, and bioengineering. Apart from this, global education such as international internship has been performed at our international research bases.
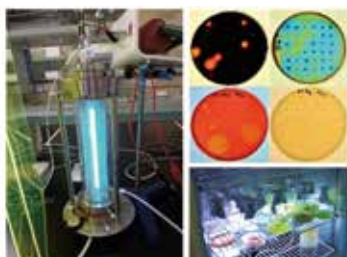
Divisions

Division of Green Electronics

This division is devoted to the investigation of "green electronics technology," such as the fabrication and evaluation of printable solar cells, new functional materials, and their application to electrochemical devices, organic photo-electronic devices, construction of flexible and efficient power conversion and motor control systems, development of energy production systems utilizing renewable energies and environmentally friendly devices with carbon materials. The teaching curriculum is provided under the research themes outlined above.
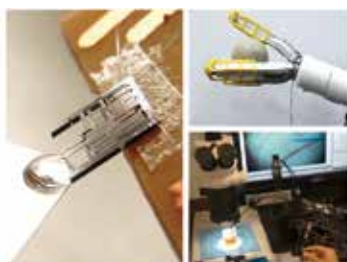
Divsion of Biological Mechanics

The research and education in this division are conducted based on mechanical engineering such as the mechanics of materials, fluid and thermodynamics, the dynamics of machinery and micromachining, and the materials science of metals and ceramics. These activities contribute to the following area of industrial/medical applications: (i) the maintenance and recovery of bio-functions, (ii) medical and welfare support, (iii) development of biocompatible materials and medical devices, and (iv) design and development of biomimetic materials and intelligent machines.

Division of Environment Conscious Chemistry and Bioengineering

The goal of this division is to re-vitalize the engineering technologies responsible for the sustainable development of industries and society with environmental consciousness. The academic field of this division includes chemical and biological research and technologies that are learned from the highly efficient reactions of biological systems. Environmentally conscious chemistry and bioengineering may lead to innovations in chemical and biological technologies. This division strives to globalize our graduate program through the development of frontier research in environmentally conscious chemistry and bioengineering.

FACULTY MEMBER
Department of Biological Functions Engineering

Division of Green Electronics

Research Area Power Electronics

Professor, Dr. Eng. Tsuyoshi HANAMOTO

Study on power electronics and its application. Development of motor controls and power conversion systems

E-mail hanamoto@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~hanamoto/

Keywords	Research Overview
● Power electronics ● Motor control ● Hardware control ● High efficiency power conversion ● Environmentally friendly control	Development of Human-friendly and environmentally friendly electrical power conversion systems and application for motor control systems.

Division of Green Electronics

Research Area Power Electronics / Power Semiconductors

Professor, Dr. Eng. Ichiro OMURA

Power electronics, power semiconductors and their system

E-mail omura@life.kyutech.ac.jp

URL http://power.kyutech.ac.jp/

Keywords	Research Overview
● Power Erectonics ● Power semiconductors ● Digital System ● Reliability ● Condition monitoring	Development of ultimate power semiconductor devices aimed at achieving extreme energy conservation, Development of integrated power electronics to realize micro-miniaturization, for green electronics research to enable the effective use of electrical energy with to realize a highly electrified society.

Division of Green Electronics

Research Area Nanomaterials,solar cells, Metal ion batteries

Professor, Ph.D. Tingli MA

Development of nanomaterials and application for solar cell,metal ion batteries, metal air batteries.

E-mail tinglima@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~tinglima/

Keywords	Research Overview
● Design and synhthesis of Nano material ● Li ion battery ● Na ion Battery ● Metal ion battery ● Perovskite solar cell ● High performance ● Low cost ● Application	Design and syhthesis of nanomaterials and their characterization. Development of new materials for stable perovskite solar cells. Developing electrode materials with high performance and low-cost for application in Li-ion batteries and Na-ion batteries, as well as metal-air batteries.

Division of Green Electronics

Research Area Functional Materials and Devices

Associate Professor, Ph.D. Shyam S.PANDEY

Photo-functional Materials for Advanced Applications

E-mail shyam@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~hayase/

Keywords	Research Overview
● Molecular design ● Solar cells ● Organic semiconductors ● Organic devices ● Photo-functional materials ● Smart materials	Design and development of photo-functional materials for energy harvesting and organic electronic devices.

Division of Green Electronics

Research Area Power semiconductor, Semiconductoer material

Associate Professor, Dr. Eng. Akihiko WATANABE

Development of diamond power devices to realize the next generation power society

E-mail watanabe@life.kyutech.ac.jp

Keywords	Research Overview
● Power semiconductor ● Diamond device ● Ultra high voltage power device	Realizing high-performance power devices that take advantage of the material properties unique to diamond. Diamond device fabrication process, Power device evaluation, Study of new features of diamonds, etc.

Division of Biological Mechanics

Research Area Biofluid Engineering

Professor, Dr.Eng. Masaaki TAMAGAWA

Biofluid Engineering for Advanced Medicine and Development of Medical Devices

E-mail tama@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~tama/

Keywords	Research Overview
● CFD ● Flow visualization ● Blood flows ● Hemolysis and Thrombus formation ● Shock wave drug delivery systems ● Micromachine with concentration Marangoni effect engine ● Fractal analysis and network of arterials ● Biomechanical Analysis of Brain Injury by Fall	1.Computational and experimental studies of Hemolysis and Thrombus formation in blood flows 2. Application of Shock Waves and Ultrasonic to Drug Delivery Systems, Water treatment, Tissue Engineering, (3)Development of the driving force of micromachines by investigating chemotaxis of neutrophile, Keyword: Bio-fluid dynamics, Biomedical Engineering, CFD, Shock Wave

Division of Biological Mechanics

Research Area Bio-microdevices

Professor, Ph.D. Takashi YASUDA

Study on Bio-microdevices for Medical Research and Drug Development

E-mail yasuda@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~yasuda/

Keywords	Research Overview
● Micromachine ● MEMS(Micro Electro Mechanical Systems) ● Micro-nanofabrication ● Surface modification ● Cell culture ● Cell analysis ● Biosensing ● Microliquid handling	Using microfabrication and surface modification, we are developing biomedical microdevices such as microfluidic devices for single-cell analysis, microelectrode array devices for extracellular potential measurement, microhole array devices for production/separation of extracellular vesicles, etc.

Division of Biological Mechanics

Research Area Biomechanics

Professor, Dr. Eng. Hiroshi YAMADA

Biomedical Engineering and Biomechanics for Life-Sustaining Technologies

E-mail yamada@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~yamada/

Keywords	Research Overview
● Biomedical engineering ● Microbiomechanics ● Mechanical testing ● Finite element method ● Human tissues ● Vascular diseases ● Pressure injury ● Endodontic instruments	Medical diagnosis assistance and prevention of diseases and injuries through measurement-device development, mechanical testing, constitutive modeling and computational analysis, focusing on mechanics of diseased arteries, endodontic treatments, prevention of pressure injury

FACULTY MEMBER

Division of Biological Mechanics

Research Area: Functional Biomaterials

Professor, Ph.D. Toshiki MIYAZAKI

Development of novel biomaterials for tissue repair

E-mail tmiya@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~tmiya/

Keywords
● Biomaterial
● Biocompatible material
● Ceramics
● Hybrid material
● Artificial bone
● Artificial joint
● Cancer treatment

Research Overview
Development of biocompatible materials for repair and regeneration of bone, tooth and nerve Development of ceramic processing with low energy consumption inspired by the biological system Development of microparticles for cancer treatment.

Division of Biological Mechanics

Research Area: Intelligent machine

Associate professor, Ph.D.(Eng.) Kazuto TAKASHIMA

Study on soft sensors and actuators, and applications to medical, welfare and industrial technologies

E-mail ktakashima@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~ktakashima/

Keywords
● Smart soft materials
● Soft actuator
● Endovascular treatment
● Tactile sensor
● Surgical simulator
● Stiffness control
● Biomimetics
● Biotribology

Research Overview
Applications of shape-memory materials and artificial muscle to a human-interactive robot. Development of soft tactile sensor. Development of device placement simulator for endovascular treatment.

Division of Biological Mechanics

Research Area: Biomedical Robotics

Associate Professor, Ph.D. Tomohiro KAWAHARA

Study on ultra-high-speed robotics, and application to biomedical field

E-mail kawahara@lsse.kyutech.ac.jp

URL https://www.lsse.kyutech.ac.jp/~kawahara/en

Keywords
● Ultra-High-Speed Robotics
● BioMedical Robotics
● AI Robotics
● Biomechatronics
● Micro-Nano Fabrication
● Bionic Design
● Sensing and Control
● Microsurgical Devices

Research Overview
Dynamic sensing and control for investigation of mechanical characteristics of body, organ, tissue and cell by utilizing Ultra-High-Speed Robotics. It contributes discovery of unknown mechanisms of living organisms and development of next generation biomedical and robotic systems.

Division of Biological Mechanics

Research Area: MEMS-based biomedical engineering

Associate Professor, Dr.Sci. Momoko KUMEMURA

MEMS, Microchip technology for oncological studies

E-mail momo@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~yasuda/

Keywords
● MEMS
● Micro Total Analysis Systems
● Micromachining
● Mechanical characterization
● Real-time measurement
● DNA
● Tumor cell
● On-chip analysis

Research Overview
Applying MEMS (Micro Electro-Mechanical Systems) technology to biological research at the molecular, cellular, and tissue level. Development and characterization of novel micro-devices for mechanical, chemical, and genetic assays for oncological studies. Research into in vitro tissue modeling for tumor tissue analysis.

Division of Environment Conscious Chemistry and Bioengineering

Research Area: Biochemical Zero-Emission

Professor, Dr.Agric Yoshihito SHIRAI

Sustainable Lower Carbon and Recycling Society and Prevention from the Global warming issues in the 21st Century

E-mail shirai@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~shirai/html/

Keywords
● Biomass
● Zero Emission
● Poly-lactate
● Chemical Recycling
● Malaysia
● Palm Oil Industry
● Global Warming Gas
● Innovative Development in the Local Area

Research Overview
We are studying widely and aiming to create a sustainable society in the 21st Century by creating effective utilization of biomass and their recycling, resulting in establishing the lower carbon society and avoiding global warming issues.

Division of Environment Conscious Chemistry and Bioengineering

Research Area: Functional Interface Engineering

Professor, Ph.D. Tetsuya HARUYAMA

Establishing technology from elucidation of interface functions: leading to solutions to social issues

E-mail haruyama@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~haruyama/

Keywords
● Functional interface
● New energy
● CO_2 fixation
● Radical chemical process
● Phases and Interfaces

Research Overview
We are developing research to realize various functional interfaces (reaction fields) by elucidating the functions of heterogeneous interfaces. "Chemical resource conversion of nitrogen, oxygen, and water (phase interface reaction technology)", "interface that converts CO2 into resources", "process technology with low environmental load", "safe decomposition of harmful substances", etc.

Division of Environment Conscious Chemistry and Bioengineering

Research Area: Biopolymers, Structure and Function

Associate Professor, Ph. D. Tamaki KATO

Design, synthesis, and conformational analysis of functional biomolecules

E-mail tmkato@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~tmkato/

Keywords
● Peptide
● Protein
● Enzyme
● Amino acids
● Molecular design
● Organic Synthesis
● SAR

Research Overview
Design, synthesis, and conformational analysis of peptide-based artificial functional molecules(Peptide nanostructures, peptide-based drug design, etc).

Division of Environment Conscious Chemistry and Bioengineering

Research Area: Biological Recycling

Associate Professor, Ph. D. Minato WAKISAKA

Sustainable Utilization of Biomass

E-mail wakisaka@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~wakisaka/

Keywords
● Biomass
● Sustainability
● Recycle

Research Overview
Research interests are on biomass resources and waste utilization towards sustainable circular economy. Ongoing topics are bioenergy production from microalgae, composites using nano/microfiber from plant biomass such as bamboo, and upgrade recycling of waste plastics.

FACULTY MEMBER

Department of Biological Functions Engineering

Division of Environment Conscious Chemistry and Bioengineering

Research Area Environmental Bio-Adaptation

Associate Professor, Ph. D. **Toshinari MAEDA**

Advanced Biotechnologies using Unique Microbial Functions

E-mail toshi.maeda@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~toshi.maeda/

Keywords	Research Overview
● Metabolic Engineering ● Protein Engineering ● Genetic Engineering ● Environmental Biotechnology ● White Biotechnology ● Bioremediation ● Environmental Bio-adaptation ● Bacterial interaction	Unique microbial functions can be elucidated and improved using biotechnologically-engineered approaches to construct an innovative technology which should be useful to the environment and human society.

Division of Environment Conscious Chemistry and Bioengineering

Research Area Photo-functional nanomaterials

Associate Professor, Ph.D. **Naoya MURAKAMI**

Spectroscopic analysis on semiconductor photocatalyst and development of photocatalytic system for light-energy conversion

E-mail murakami@che.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~murakami/

Keywords	Research Overview
● Photocatalyst ● Photoacoustic spectroscopy ● Nanomaterial ● Photoelectrode	Analysis of photo functional material using photoacoustic spectroscopy, Development of photocatalytic system for light-energy conversion.

Division of Environment Conscious Chemistry and Bioengineering

Research Area Biomolecular Engineering

Associate Professor, Ph. D. **Shinya IKENO**

Development and application of functionalized nanomaterials using biomolecular

E-mail ikeno@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~ikeno/

Keywords	Research Overview
● Functionalized peptide ● Bioprocess ● Genetic engineering ● Recombinat protein ● Biopesticide ● Drug screening ● Biosensor ● Nanoparticle	I have been studying the development of functionalized nanomaterial combined with biomolecule and nanoparticle, and application of functionalized biomolecular to bioprocess such as the production of recombinant protein.

Division of Environment Conscious Chemistry and Bioengineering

Research Area Catalyst Electrolytic Engineering

Associate Professor, Ph. D. **Yoshiyuki TAKATSUJI**

Efficient and selective electrochemical conversion of substances

E-mail takatsuji@life.kyutech.ac.jp

Keywords	Research Overview
● Catalytic metal electrode ● Plating technology ● CO_2 fixation ● Energy and environment ● Electrochemistry	Our research has committed to solving environmental and energy problems with the catalytic a metal electrode that can produce the efficiency substance. The catalytic metal electrodes have been developing and also analyzing the reaction mechanism and the produced substance.

Division of Green Technology

Research Area Micro-Technology

Professor, Ph.D. **Iwao SASAKI**

The research on the upgrading of the materials for Mechatoronics equipments

E-mail sasaki@life.kyutech.ac.jp

Keywords	Research Overview
● Functional Thin Film ● Solid Lubrication Bearing ● Vapor Deposition ● Magnetic Material ● sensor	Research on functional materials utilizing the unique phenomena, which are prominent in a micro/nanometer scale.

Division of Green Technology

Research Area Mechatronics

Visiting Professor, Doctor of Engineering **Hideki HONDA**

Mechatronics Control to fit in human society

E-mail honda@life.kyutech.ac.jp

URL http://www.life.kyutech.ac.jp/~honda/

Keywords	Research Overview
● Mechatronics ● Control Theory ● Motion Control	As robots are good examples, mechatronic devices are now used in various fields as well as in the industry. Therefore, in addition to research on the high-speed and high-accuracy performance required by the industry, we also study mechatronics technology that is kind to people and supports them.

Division of Green Technology

Research Area Energy

Visiting Professor, Dr.Eng. **Tohru KATO**

Solid Oxide Fuel Cell technologiy and hydrogen production technology by high temperature steam electrolysis

Keywords	Research Overview
● Fuel Cell ● Hydrogen production ● High temperature steam electrolysis ● Electrochemistry ● Ceramics	Study of the electrochemistry energy systems such as the solid oxide fuel cell, the high-temperature steam electrolysis cell.

Division of Plant Life-cycle Engineering

Research Area Plant Life Cycle Engineering

Special Appointment Associate Professor **Masahiro NAKANO**

Plant Life Cycle Engineering

E-mail nakano.masa@life.kyutech.ac.jp

Keywords	Research Overview
● Plant Life Cycle ● Robot welding ● Image analysis ● Thermal elasto-plastic analysis ● AI ● Equipment diagnosis ● Welding repair	Plant Life Cycle Engineering (Research on autonomously controlled robot welding, and Research on thermal elasto-plastic analysis of welds and optimization of welding order)

FACULTY MEMBER

Organization for Promotion of Research and Innovation

| Research Area | Environmental-Benign Functional Materials |

Associate Prof, Ph.D. in Engineering　　**Yoshito ANDO**

Design and evaluation of functional materials based on biomass and/or waste with a high-added value forward to sustainable society

| E-mail | yando@life.kyutech.ac.jp |
| URL | http://www.life.kyutech.ac.jp/~yando/ |

Keywords	Research Overview
● Biomass ● Sustainable Society ● Additional value ● Material Recycling ● Malaysia ● Global Issue ● Polymer Materials ● Organic Synthesis	We aim to realize a material cyclical society based on both environmental preservation and economy. Highly value-added functional materials based on characteristics of waste and biomass are established and evaluated.

Department of
Biological Functions Engineering

DEPARTMENT OF HUMAN INTELLIGENCE SYSTEMS

Graduate School of Life Science and System Engineering

Division Overview

Department of Human Intelligence Systems aims to incorporate the principles of human intelligence into intelligent information processing platforms and artificial intelligent systems, as well as to actively contribute to the development in the industry.
The research and education in this department covers but is not limited to (i) advanced development of mechanical systems and devices such as intelligent autonomous robots, (ii) intelligent information system development and artificial intelligence algorithms design that incorporates the principles of human reasoning, (iii) scientific analysis of social activities and human intelligence by using mathematical modeling, brain science and cognitive science in general.

Divisions
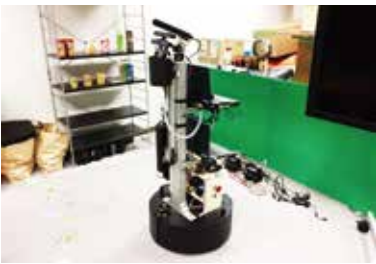
Division of Human Intelligence and Machines

Division of Human Intelligence and Machines is teaching and researching in the fields of robotics and devices, which could realize human-like intelligence by utilizing rational and significant structures as well as functions of biological organisms to achieve low-energy consumption, harmony with the environment, and human-friendly behavior. Through the teaching and research, we will bring students up to be persons and professionals who are actively involved in the global world with to create new public services, new business, and new social value.

Division of Intelligence Systems and Emergent Design

The division is engaged in the design of new technologies and theories that are inspired by human intelligence. It is a form of societal engineering focusing not only on cognitive functions of recognition, learning, and reasoning, but also on social abilities with emotions, Kansei, and communications. This field requires the study of mathematical modeling, informatics, and systems engineering toward a comprehensive understanding of computation in brain-body-environment interaction and an advanced development of intelligent partners and platforms.

Division of Human Interaction and Brain Functions

It is important to study the relationship between the function of the brain, and the nature of society made by humans to clarify human intelligence. In this division, we study the characteristics of neurons of which the brain consists, the information processing in which many neurons are involved, behaviors as results of the processing, and the communication mechanism of humans in a society.

Cooperative Divisions

The Division of Human Behavioral Sciences specializes in teaching and researches for explicating emergent mechanisms and building explanatory models of interactions between cognitions/emotions and actions, of innateness and constraints, in sports activities and of language, both rule-based cognitive behaviors unique to humans.

FACULTY MEMBER

Division of Human Intelligence and Machines

Research Area Brain-like Integrated Systems

Professor, Dr.Eng. Takashi MORIE

Design and development of integrated circuits, devices and systems for brain-like artificial intelligence

E-mail morie@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~morie/

Keywords

- Brain-like artificial intelligence
- Vision and image recognition
- Integrated circuits and systems for robots
- Integrated circuits for nonlinear dynamical systems
- Analog/digital integrated circuits and system design
- Nano-structure device design

Research Overview

Research and development of brain-like processing models, nanodevice and digital/analog integrated circuit (VLSI) design toward brain-like artificial intelligence.

Division of Human Intelligence and Machines

Research Area Field Robotics

Professor, Ph.D Kazuo ISHII

R&D of Field Robots and Its Social Implementation

E-mail ishii@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~ishii/

Keywords

- Field robot
- Underwater robots
- RoboCup soccer
- Agricultural robot
- Image proessing
- Acoustic communication

Research Overview

Development of field robots, e.g., underwater robot, sewer pipe inspection robot, agricultural robot, RoboCupf soccer robot, and related robotic technologies such as image processing, Artificial Intelligence, simulation-based optimization, etc.

Division of Human Intelligence and Machines

Research Area Intelligence Emerging Nanosystems

Professor, Dr.Eng. Hirofumi TANAKA

Design, development, and integration of nanodevices for artificial intelligence hardware devices.

E-mail tanaka@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~tanaka/

Keywords

- Intelligent information processing nanodevices
- Artificial intelligence nanodevices
- Neuromorphic nanodevices
- Integrated circuits for nonlinear dynamical nanosystems and nanostructure device design

Research Overview

Research and development of electric nanodevices for artificial intelligence hardware, whose target is to generate new electrical functionalities by using the circuit of the nanodevices.

Division of Human Intelligence and Machines

Research Area Human function substitution systems

Professor, Ph.D.(Eng.) Chikamune WADA

Research on developing functional substitution system for the disabled/the elderly people based on human sensory/motor characteristics

E-mail wada@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~wada/

Keywords

- Human interface
- Assistive technology
- Functional substitution
- Biological information
- Biological data measurement
- Rehabilitation engineering

Research Overview

Research on developing human-friendly assistive device/substitution system for the disabled/the elderly people based on psychophysical analysis of human sensory-motor systems.

Division of Human Intelligence and Machines

Research Area Brain-like Computer System

Professor, Ph.D. Hakaru TAMUKOH

Realization of a brain-like computer system and its application to human-friendly systems

E-mail tamukoh@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~tamukoh/

Keywords

- Brain-like computer
- Softcomputing
- hw/sw complex system
- Digital hardware design
- Home service robotics

Research Overview

A brain-like computer system laboratory aims to realize a brain-like computer based on a hardware/software complex system and its application to embedded systems on home-service robots.

Division of Human Intelligence and Machines

Research Area Brain-Like Intelligent Machines

Associate Professor, Ph. D. Hiroyuki MIYAMOTO

Development of brain-like intelligent machines based on computational neuroscience, with emphasis on construction of self-learning robots

E-mail miyamo@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~miyamo/

Keywords

- Learning by watching
- Skill acquisition
- Motor learning
- Autonomous robots
- Image processing
- Neural network

Research Overview

Development of learning by watching robot, skill acquisition robot, motor learning robot, welfare robot.

Division of Human Intelligence and Machines

Research Area Field Robotics

Associate Professor, Ph.D Shinsuke YASUKAWA

Information processing in biological systems and their applications in field robotics

E-mail s-yasukawa@brain.kyutech.ac.jp

URL http://www.brain.kyutech.ac.jp/~s-yasukawa/

Keywords

- Bio-inspired system
- Visual information processing
- Underwater robot
- Agricultural robot
- Sensory-motor control
- Embedded system
- IoT system

Research Overview

Development of living creature observation/manipulation technique using robot, Development of Bio-inspired robot and embedded system, Trials of their techniques infield, etc...

Division of Human Intelligence and Machines

Research Area Field Robotics

Associate Professor, Dr.Eng. Yuya NISHIDA

Development of control system and technology for field robot

E-mail y-nishida@brain.kyutech.ac.jp

Keywords

- Field robot
- Autonomous underwater robot
- Motion control
- Motion analysis

Research Overview

To reliably accomplish the mission, our laboratory develops robot that robustly navigates in actual environment, and its elemental technology. We survey actual environment using developed robot and system to benefit society.

FACULTY MEMBER

Department of Human Intelligence Systems

Division of Human Intelligence and Machines

Research Area Nanomaterial Intelligence

Assistant Professor, Dr. Sci. **Yuki USAMI**

Creation for brain-inspired information processing system by nanomaterial

Keywords
- Nanomaterial
- Hybrid material
- Mesoscopic physics
- Neuromorphic computing
- Nanostructure analysis
- Molecular electronics

Research Overview
Research and development nanoscale various basic physical properties of organic/inorganic materials for extracting flexible bio-inspired function. Creation of unconventional nanodevices by circuitization and deviceization from nanomaterial function.

Division of Human Intelligence and Machines

Research Area Brain-Like Intelligent Machines

Specially Appointed Professor **Tomotsugu RIKITAKE**

Development of brain-like intelligent machines based on computational neuroscience, with emphasis on construction of self-learning robots.

Keywords
- Motion learning robot
- Autonomous mobile robot
- Image processing
- Image recognition
- Engine control
- Automatic driving

Research Overview
Research and development of high-precision capital directional movement mechanisms for industrial and medical applications.

Division of Human Intelligence and Machines

Research Area Brain-like Integrated Circuit, and Nonlinear Dynamical Systems

Assistant Professor, Dr.Eng. **Seiji UENOHARA**

Design and development of integrated circuits, devices and systems for brain-like artificial intelligence

Keywords
- Brain-like artificial intelligence
- Integrated circuits for nonlinear dynamical systems
- Mixed signal integrated circuits
- Nonlinear time-series data analysis

Research Overview
Research of brain-like processing models, integrated circuit (VLSI) design toward brain-like artificial intelligence and its social implementation.

Division of Intelligence Systems and Emergent Design

Research Area Learning theory of brain-like artificial intelligence

Professor, Ph.D. **Tetsuo FURUKAWA**

Learning theories of brain-like artificial intelligence and mathematical modeling of behavior development

E-mail furukawa@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~furukawa/

Keywords
- Brain-like artificial intelligence
- Self-organizing systems
- Neural networks
- Machine learning
- Behavior development

Research Overview
Our destination is to develop the learning theory and its algorithms, which enable us to discover general rules and intrinsic information underlying the given datasets. Typical themes are higher-order modeling through meta-learning and multi-task learning. Besides, we also challenge to model children's behavior and development.

Division of Intelligence Systems and Emergent Design

Research Area Human and Social Intelligence Systems

Professor, Ph.D. **Tomohiro SHIBATA**

Understanding and assisting humans and societies from the view point of adaptive systems

E-mail tom@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~tom/

Keywords
- Intelligent robotics
- Artificial intelligence
- Biomechanics
- Biological signal processing
- Brain science
- Medical welfare
- Low-cost signal monitoring equipment
- Control

Research Overview
With the primary purpose of application to medical welfare, human-centered AI/robot research, and low-cost biological signal/behavior monitoring, and further system research to demonstration experiments are conducted by using the multidisciplinary knowledge such as intelligent robotics, artificial intelligence, biomechanics, biological signal processing, and brain science.

Division of Intelligence Systems and Emergent Design

Research Area Intelligent Information Processing Systems

Professor, Ph.D. **Keiichi HORIO**

Development of fundamental technology of intelligent information processing system aiming at modeling and analyzing behavior of human beings

E-mail horio@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~horio/

Keywords
- Behavior analysis
- Communication analysis
- Estimation of personality
- Intelligent data analysis
- Intelligent image processing
- Learning system

Research Overview
The Research aimed at estimating and classifying individual characteristics by measuring and analyzing human behavior. Besides, we pursue optimization of the intervention method based on analysis results and aim to apply it to real-world society, especially data analysis involving humans.

Division of Intelligence Systems and Emergent Design

Research Area IoT / Big Data

Professor, Doctor of Engineering **Sozo INOUE**

Human Activity Recognition and Future Disease Prevention

E-mail sozo@brain.kyutech.ac.jp
URL http://sozolab.jp

Keywords
- Human Activity Recognition
- Web / Ubiquitous
- Application of Machine Learning
- Big Data
- Application for Healthcare/Nursing
- Behavior Change

Research Overview
We develop human activity recognition from smartphones and sensors, and their services. We also cultivate AI by collecting medical and nursing care big data.

Division of Intelligence Systems and Emergent Design

Research Area Kansei Information Processing, Soft Computing

Associate Professor, Dr. (Eng.) **Kaori YOSHIDA**

Designing information system based on Kansei Information Processing

E-mail kaori@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~kaori/html/index-jp.html

Keywords
- Kansei Information Processing
- Human-Computer Interaction
- Soft Computing
- Cognitive Psychology
- Intelligent Image Processing
- Information System Design

Research Overview
We study on Kansei Information Processing as one of Human-Computer Interaction research. The research aims to design appropriate information system based on psychological, social, and technical analysis. Research topics include human-centered design, soft computing, usability, and affordances, conceptual models and interface metaphors, human cognitive models, information, and interactivity structures.

FACULTY MEMBER

Department of Human Intelligence Systems

Division of Intelligence Systems and Emergent Design

Research Area Brain-Inspired Robotics and Intelligence Dynamics

Associate Professor, Ph.D. Hiroaki WAGATSUMA

Investigating principles of neural dynamics, body kinetics/morphology and societal abilities to understand biological intelligence

E-mail waga@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~waga/

Keywords
- Nonlinear dynamics
- Emergent intelligence
- Episodic memory and emotion
- Societal robot
- Computational neuroscience
- Neuroinformatics
- Sport biomechanics
- Rehabilitation support

Research Overview

We explore systems design inspired by biological emergent intelligence, through an understanding of what makes us human (intelligence), how we are embodied in the environment (body kinetics/morphology), why emotional and social aspects are so important to us (sociality). Our mathematical modeling and investigation are applied to the design of an artificial intelligence, robot development, and rehabilitation tools.

Division of Intelligence Systems and Emergent Design

Research Area Intelligent Behavioral Learning Systems

Associate Professor, Ph.D. Takayuki OSA

Developmet of intelligent systems for autonomous behavioral learning

E-mail osa@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~osa/

Keywords
- Robot learning
- Motion planning
- Control
- Machine learning
- Reinforcement learning
- Imitation learning

Research Overview

We work on robot learning, including reinforcement learning and imitation learning, for autonomous exploration and acquisition of skills in intelligent systems. We aim for solving problems in the real world through collaboration with industrial partners.

Division of Intelligence Systems and Emergent Design

Research Area Bioinspired Intelligence Systems

Associate Professor, Ph.D. Shuhei IKEMOTO

Robots/Algorithms inspired from biological systems

E-mail ikemoto@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~ikemoto/index.html

Keywords
- Bioinspired robot
- Bioinspired algorithm
- Learning control
- Stochastic resonance

Research Overview

Behind sophisticated abilities of living organisms are the mechanisms that exploit demerits, e.g., complexity/flexibility of body and unignorable noise, as merits. Toward understanding and applying the mechanisms, academic studies about biologically inspired systems based on robotics have been conducted.

Division of Intelligence Systems and Emergent Design

Research Area Statistical learning theory

Assistant Professor, Ph.D. Hideaki ISHIBASHI

Learning theory of information geometrical hierachical-modeling

E-mail ishibashi@brain.kyutech.ac.jp

Keywords
- Hierarchical-modeling
- Multi-task learning
- Meta-learning
- Bayesian inference
- Machine learning
- Stocastic process
- PAC learnin
- Information geometry

Research Overview

Our research aims is to develop the learning theory and its algorithms for hierarchical-modeling, which enables to discover meta-knowledge by modeling a set of knowledge or models. The proposed framework is applied to cognitive science and robotics.

Division of Human Interaction and Brain Functions

Research Area Neuronal rhythm and Brain Machine Interface (BMI)

Professor, Ph.D. Kiyohisa NATSUME

The relationship between the generation of neuronal rhythm and memory process

E-mail natume@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~natume/

Keywords
- Neuronal rhythm
- EEG
- Theta rhythm
- Circadian rhythm
- Hippocampal slices
- Brain machine interface
- L2 English learning
- Video Game

Research Overview

We study experimentally on the generation of neuronal rhythm and compute the rhythm on the computer. We also developed the e-learning system for Japanese English learners using BMI technology.

Division of Human Interaction and Brain Functions

Research Area Team Management

Professor, Ph.D. Doosub JAHNG

A Story of diverse individuals becoming one as a team

E-mail jahng@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~jahng/

Keywords
- Team Communication
- Occupational Health Marketing
- Key Words Meeting®
- Versatile Educational Tools
- Comprehensive Health Resources Integrated Solution

Research Overview

For diverse individuals to agree with each other and become one as a team, innate needs, learned knowledge/skills acquired needs from personal/environmental circumstances, self-action, health resources and communication become essential. We conduct research on the factors above by utilizing both people's conceptual needs and experimental/statistical designs to further our study on team management.

Division of Human Interaction and Brain Functions

Research Area Mathematical Neural Network

Associate Professor, Ph.D. Katsumi TATENO

Neural coding and Neurodynamics

E-mail tateno@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~tateno/

Keywords
- Neural coding
- Hippocampus
- Medial entorhinal cortex
- Memory
- Learning
- Glass catfish
- Electroreceptor

Research Overview

Our interests are complex behavior of neural activity and theoretical investigation on neural coding in the brain. Specifically, we are currently researching neural network models of the medial temporal lobe.

Division of Human Interaction and Brain Functions

Research Area Neuroscience

Associate Professor, Ph.D. Yoshitaka OTSUBO

Taste transduction mechanisms

E-mail otsubo@brain.kyutech.ac.jp
URL http://www.brain.kyutech.ac.jp/~otsubo/

Keywords
- Patch-clamp
- Ca^{2+}-imaging
- Immunohistochemistry
- Single cell RT-PCR
- Action potentials
- Confocal laser microscope
- Signal transduction

Research Overview

We investigate the cellular and molecular mechanisms underlying the signal processing occurred in mammalian taste buds and we contribute to develop a new signal processing based on features of taste buds.

FACULTY MEMBER

Division of Human Technology

Research Area Visual Motor Control

Visiting Associate Professor, Dr. Med. **Makoto KATO**

Research on visually guided motor control mechanisms

Keywords
- Visual information processing
- Motor control
- Functional MRI
- Non-invasive brain function Measurements

Research Overview

The ocular movement is controlled so that the visual information, such as a position, size, the form of the object is provided as an image on the retina appropriately. About such an oculomotor control, the information processing mechanism is elucidated from the viewpoints of visual information processing and brain control system for movement.

Division of Human Technology

Research Area Systems Intelligence

Visiting Professor, Ph.D. **Hiroshi NAKAJIMA**

Basic and applied research on intelligent system development

Keywords
- Intelligent system
- Soft computing
- Computational intelligence
- Causal analysis
- Social intelligence
- Systems healthcare
- Health management
- Machine learning

Research Overview

Research and development on algorithms of intelligent systems by studying soft computing, statistical analysis, and social intelligence in human-machine collaboration systems with application studies.

Division of Human Technology

Research Area Vision Sensing

Visiting Professor, Ph.D. **Masaki SUWA**

Basic and applied research on intelligent vision system

Keywords
- Vision Sensing
- 3D Sensing
- Physics-based Vision
- Pattern Recognition

Research Overview

Research and development on vision sensing technologies such as object detection, 3D surface reconstruction and reflectance property analysis, for applications in factory automation or society's infrastructure.

Division of Human Technology
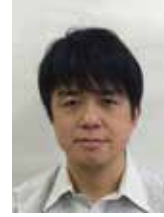
Research Area Biomimetic Robot System

Visiting Associate Professor, Ph.D **Takayuki MATSUO**

Development of Robot Systems based on motion control and information processing system of animals

Keywords
- Biomimetic robot
- Adaptive control
- Nonlinear oscillator
- Neural network

Research Overview

Development of mobile robot systems inspired by mechanisms of animals for irregular terrain, underwater and so on.

Department of
Human Intelligence Systems

INTERNATIONAL EXCHANGES

List of overseas dispatched students in FY2019 (by country)

World map showing number of overseas dispatched students by country:

- Norway 8
- Poland 1
- Russia 1
- China 7
- Korea 9
- Taiwan 11
- America 19
- Hungary 1
- Mongol 5
- Belgium 1
- Germany 3
- France 1
- India 4
- Switzerland 5
- Macau 1
- Hong Kong 2
- Portugal 1
- Spain 2
- Turkey 2
- Sri Lanka 1
- Singapore 5
- Vietnam 7
- Mexico 3
- Italy 6
- Thailand 5
- Indonesia 1
- Australia 23
- Malaysia 73
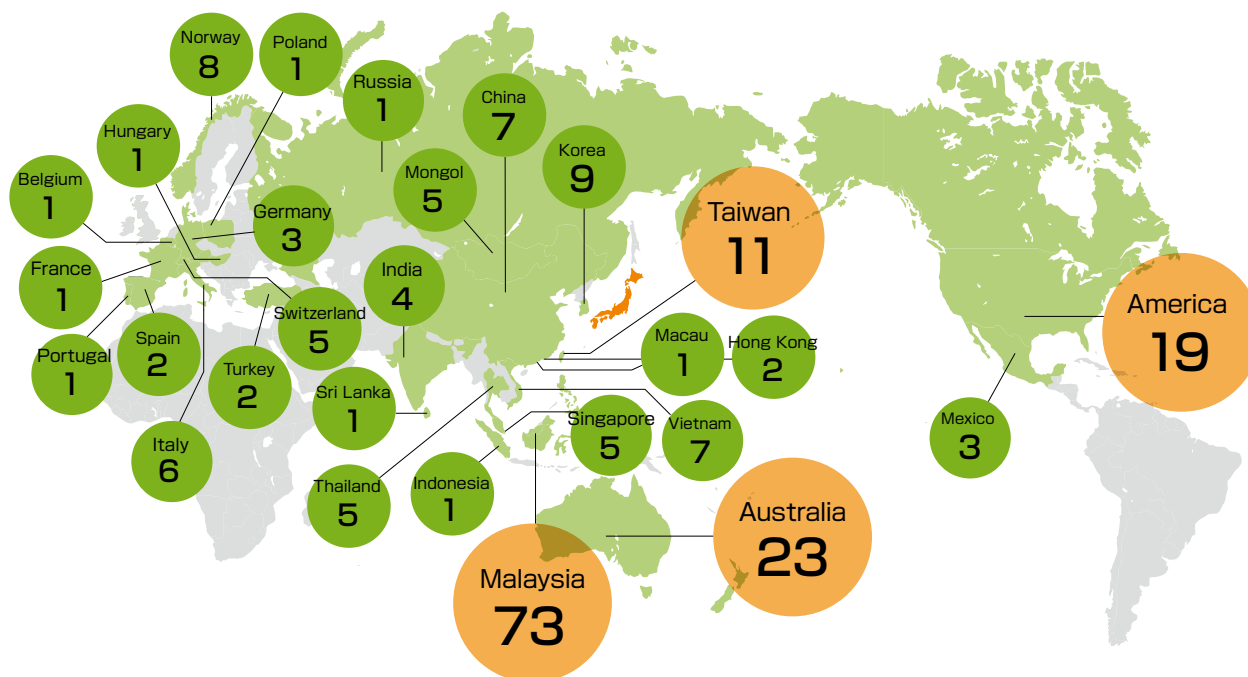
Tuition and other fees, and exemption	The tuition and other fees are shown below. Only a limited number of students can get exemption of full or half of fees through a selection procedure. **Application fee: ¥30,000** **Enrollment fee: ¥282,000** **Tuition fee: ¥267,900 per half year**
Scholarship, research assistant and living cost	Students can apply for various scholarships financed by our university and other foundations. The monthly stipend is from ¥20,000 to ¥140,000. Doctoral course students can get about ¥45,000 per month as a professor's assistant. The monthly cost of living in Kitakyushu city is approximately from ¥60,000 to ¥80,000 including house rent and utilities.
Accommodation	Students can apply to stay in the international student housing (Sakura House) in Wakamatsu campus. However, as we have limited rooms available, not all students will be able to stay at Sakura House. The rent of Sakura House is ¥12,000 per month. If you have to rent an apartment on your own, the university can be your guarantor.
Tutor	A tutor, who is current student in the laboratory, can help you with your study and daily life in Japan. This tutor system is available for the first three months after enrollment.
Japanese language class	Students can take the appropriate Japanese language class.

English Information for international students in our web site is as follows.

http://www.kyutech.ac.jp/english/

Department of Biological Functions Engineering
Miyazaki Lab.

Mr. Simon HOCQUAUX

Research
There are some existing materials called injective filler that can help bone regeneration. However, these gel-like materials are very soft. My research is focused on the development of composite materials with natural reinforcement to make those gels stronger. This could lead to new treatment methods for elderly people suffering from osteoporosis.

I always wanted to go to Japan! And I had the chance by going to Kyutech
Going to Japan has been my dream since long ago. After my colleague who was already studying in Kyutech recommended it to me, I found a laboratory related to my major and interests, then started studying here (Pr. Miyazaki's Laboratory). By presenting my research results to both Kyutech and the University of Lorraine (EEIGM) I can graduate from a Double Degree Program.

Best point of Kyutech
The exchanges between local students, international students and the tutor supporting system is so enriching!

My recommended place from Kyutech
The gymnasium!

What surprised me most in Japan
People are very kind even when you meet them for the first time. They might not speak English or not even know some of the places you are asking for the information about, but somehow they will find a way to help you! This is quite different in France...

I love Japanese Culture!
Fan of Japanese style, I even chose a flat with tatami on the floor.

What kind of life
It's been a few months since I came to Japan, but I still enjoy eating new food and visiting new places (^^).

My future dream
I want to pursue research and development in the Biomedical field, in Japan, France, or Europe.

Department of Human Intelligence Systems
Shibata Lab

Mr. Salvador BLANCO NEGRETE

Dr. Shibata, whom I met in Mexico, attracted me to Kyutech.
I chose the Professor more than the University. When I met Dr. Shibata at the National University of Technology of Mexico where I studied, I was fascinated by his energy and passion. This is why I decided to go to Kyushu Institute of Technology.

Best point of Kyutech
The Wakamatsu campus, located in the Hibikino Science Park, is an ideal location if you want to devote yourself to research. There are many opportunities of interaction between the international students' community and researchers from different backgrounds.

My recommended place from Kyutech
There is a common room on the second floor! A nice place to have a break between studies.

What surprised me most in Japan
A plane full of businessmen is quieter than a Mexican library ...

What kind of life
I live in a flat. I like training, but Japanese food is so healthy and small in quantity that I lost weight for the first time! This is why I started home cooking.

My future dream
Entrepreneur ▪ Politician

Research
I am currently developing a detecting device for a 3D motion of animals using artificial intelligence. Computers can read movement changes at a level unnoticeable to the human eye, helping to develop treatments for diseases such as Parkinson's.

ACCESS

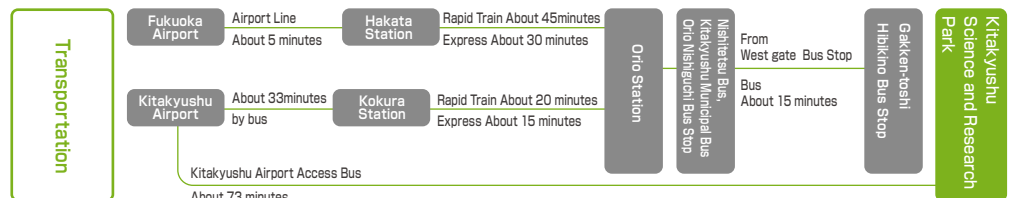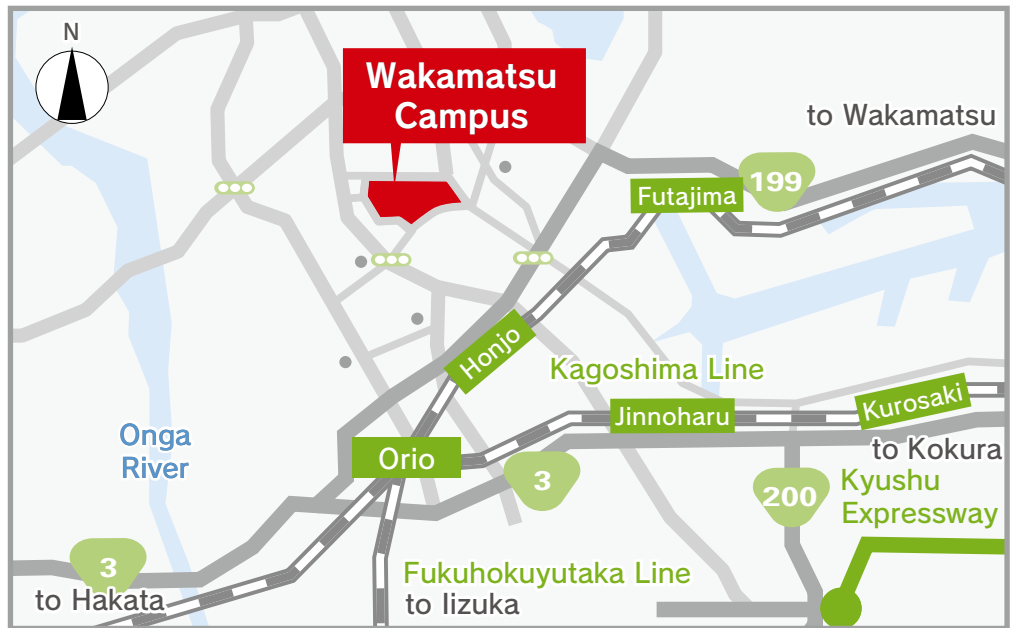## Wakamatsu Campus in Kitakyushu Science and Research Park

Graduate School of Life Science and Systems Engineering

Cafeteria

Kitakyushu Science and Research Park

Other Campuses of Kyushu Institute of Technology

Tobata Campus

Iizuka Campus

N

Wakamatsu Campus

to Wakamatsu

Futajima 199

Honjo

Kagoshima Line

Jinnoharu

Kurosaki

Onga River

Orio

3

to Kokura

200 Kyushu Expressway

to Hakata

3

Fukuhokuyutaka Line to Iizuka

Transportation

Fukuoka Airport	Airport Line About 5 minutes	Hakata Station	Rapid Train About 45minutes / Express About 30 minutes	Orio Station	Nishitetsu Bus, Kitakyushu Municipal Bus Orio Nishiguchi Bus Stop	From West gate Bus Stop Bus About 15 minutes	Gakken-toshi Hibikino Bus Stop	Kitakyushu Science and Research Park
Kitakyushu Airport	About 33minutes by bus	Kokura Station	Rapid Train About 20 minutes / Express About 15 minutes					
	Kitakyushu Airport Access Bus About 73 minutes							

Commute Time From Major Cities

Shinkansen (Nozomi)

Tokyo — Kokura .... About 4H45M
Shin Osaka — Kokura ..... About 2H
Hakata — Kokura .... About 17M

Airline

Tokyo — Kitakyushu .... About 1H35M
Tokyo — Fukuoka .... About 1H40M
Seoul — Fukuoka .... About 1H10M
Beijin — Fukuoka .... About 2H15M
HongKong — Fukuoka .... About 2H50M

Car Time Required From airport or station to Kitakyushu Science and Research Park

From Kitakyushu Airport .... About 60M
From Fukuoka Airport .... About 70M
From Kokura Station .... About 35M
From Orio Station .... About 10M

Shimonoseki City

Moji

Wakamatsu Campus

Orio

Kokura

Tobata Campus

Kitakyushu Airport

Chikuho Line

Kagoshima Line

3

Kitakyushu City

Hita Hikosan Line

322

201

Nippo Line

Iizuka Campus

Tagawa City

Shinkansen (bullet train)

200

201

201

Shin Iizuka

Iizuka City

200

Fukuoka City

Hakata

✈ Fukuoka Airport

Sasaguri Line

ADMISSIONS

	Examination Date	Application period
The 1st selection	July 3, 2021	June 1 – 10, 2021
The 2nd selection	August 28, 2021	July 26 – August 6, 2021
The 3rd selection	October 9, 2021	September 8 – 22, 2021
The 4th selection	February 5, 2022	December 31 – January 13, 2022

※**For interview and oral examinations may be conducted through the Internet.**

How to apply

Contact
1
Find a laboratory in your desired field and contact the faculty member.

Access
2
Access the online registration website and read the guidance.

Password to apply
3
Send the requesting email to the admission section

Apply
4
Enter your information.

Submit
5
Print and mail the application documents.

Online Registration Website

Admission Application Guidance

http://www.guide.52school.com/guidance/net-kyutech-g/eng/

http://www.lsse.kyutech.ac.jp/english/admission/information.html