長岡技術科学大学
Nagaoka University of Technology

2018

OUTLINE OF MASTER'S PROGRAM and 5-YEAR INTEGRATED DOCTORAL PROGRAM

≪Major Fields & Research Areas≫

IN THE GRADUATE SCHOOL OF ENGINEERING

Contents

1. Graduate School of Engineering Outline of Major Fields and Research Areas

≪Master's Program≫

≪5-year Integrated Doctoral Program≫

2. Academic staff in Graduate School of Engineering

≪Master's Program≫

≪5-year Integrated Doctoral Program≫

1. Graduate School of Engineering
Outline of Major Fields and Research Areas

≪Master's Program≫

1. Mechanical Engineering

Mechanical engineering covers fields concerning development, design, production, inspection, and maintenance of various kinds of equipment, or machines, which enable us to make human-life and human-work convenient. Its main subjects are materials and strength, motion and control, design and production, and energy and environment. Mechanical engineering treats with equipment in various sizes from a large oil tanker to an atomic force microscope. Computers play very important roles in all those fields. A student in this major course studies the forefront of each subject and technology together with management engineering subjects and cultivates one's ability to find and solve engineering problems through seminars and researches for the master's thesis. This major course aims to train a leading engineer with practical competence and creativity.

Content of Courses

This major has five courses, Information and Control Engineering Course, Design and Production Engineering Course, Fluids and Thermal Engineering Course, Materials Science and Engineering Course, and Innovative Interdisciplinary Mechanical Engineering Course.

Research Areas

Information and Control Engineering

This research area covers control engineering, measurement engineering and computer application engineering. Control engineering deals with control theory, and visual feedback control of robots. Measuring engineering deals with instrumentation for production, geometrical product specifications and their verification, development of industrial standard measures, precision measurement, nanometrology and image data handling/processing. Computer application engineering treats computational mechanics for stress analysis of electrical packaging, paper die cutting simulation, simulation of flexible media (papers, bank notes, tickets) handling, and so on.

Design and Production Engineering

This research area covers machine elements, mechanical engineering design, precision engineering, production processes, dynamics of machinery, and tribology. Major research themes are dynamics of rolling bearings and gears, dynamics based system safety design focusing on construction and materials handling machines, tribological characteristics of electric sliding contacts and human artificial joints, ultrasonic cutting and grinding of difficult-to-machine materials, dynamics characteristics of fluid film of journal bearings and non-contact seals, and so on.

Fluids and Thermal Engineering

This research area deals principally with fluids and/or heat that concern energy and environment, on which human life is essentially dependent. Engineering fields covered by this area include Fluids Engineering (Incompressible or Compressible Fluid Dynamics, Computational Fluid Dynamics, and Non-Newtonian Fluid Flow), Energy and Heat Transfer, Combustion Engineering, and Global/local Environmental Protection.

Research topics now running are: Flow-Induced Vibration, Optical-Rheometry, Heat Exchanger, Flame Instability, Chaos in Combustion, Ignition of Hydrogen, Smoldering or Flaming of Solid Combustible, Renewable Thermal Energy of Snow and Ground, Physical Properties of Snow and Ice, and so on.

Materials Science and Engineering

The concept is to apply basic understandings on the relationship between microscopic structure/texture

and characteristics/functions to design and fabrication of new materials and integrated materials systems. The research areas are: materials analysis, measurement of physical and chemical properties; material design/production; structural/safety analysis, and materials recycles. The following materials are covered: metallic materials, ceramics, composites, functional materials, intermetallic compounds, non-ferrous alloys, heat resisting materials, environmental coatings and ultra-light materials.

Innovative Interdisciplinary Mechanical Engineering

This research area widely covers mechanical engineering fields and its research activities such as energy system, non-traditional machining, and advanced sensing toward sustainable future society are interdisciplinary. Such state-of-art technologies demand multidisciplinary knowledge and thus, research and education in this course expand over not only traditional branches of mechanical engineering, but also other disciplines. Collaborative researches and activities with world's leading companies and other institutes are highly encouraged and being carried out. The students can learn wide and substantial expertise and useful skills in mechanical engineering, as well as fundamental knowledge of interdisciplinary areas that meets emerging needs.

2. Electrical, Electronics and Information Engineering

This major, on the basis of the fundamental knowledge learned during the corresponding undergraduate course, conducts interdisciplinary and practice-oriented education at the graduate school level through systematized cooperation with other related disciplines and aims to train leading high-level engineers who can conduct research and development of practice-oriented electrical, electronics and information engineering fields. The objectives of this major are directed not only toward the research and development for the functionally organized following three courses but also to the education to incubate the pioneering engineers who are rich in vitality, originality and service, i.e. **VOS** in abbreviation.

Research Areas

Electric Energy System and Control Engineering

Activity in this research area focuses on the following topics: new energy systems, plasma applications, pulsed-power technology, electric power systems, energy conversion and control, motion control and robotics, industrial and transportation systems, home appliances, and new materials for energy systems. Research and development for enhancing and improving functionality and performance of those systems are demanded by human society in view of reducing the global environmental load.

The energy and electric power supply systems, the hubs of the transformation and distribution of energy, are of immense importance to our sophisticated modern society. This course has advanced its performance due to the development of new material parts for electronic devices. In fact the demands of society on the electric and electronic systems are becoming increasingly sophisticated, leading to multiplying components and a deepening relation with other disciplines. In order to coincide with such demands of modern industrial society, the important themes are how to develop electric and energy systems anchoring an integrated relation with the other disciplines and also how to develop the electronic devices which may be involved in such an electric power system. The continuous target of the energy systems research field is to study and develop energy and related systems in order to support the dynamism of modern and future society.

In this course, fundamental scholastic ability and practice-minded knowledge are cultivated through education of the corresponding undergraduate course. Also, due to the close interrelationship with other two courses in this major, knowledge of system application is to be deepened.

Electronic Devices and Photonics Engineering

This research area consists of solid electronic engineering, semi-conducting material engineering, energy transforming element engineering and opto-electronics.

Electronic devices which utilize the basic properties of semi-conductors, magnetic substances, super-

conductors and dielectric substances are studied with regard to their properties and functions, including production technology, with the objective of improving the properties of electronic devices and developing new electronic and opto-electronic devices with new technology.

Electronic engineering plays an important role in modern society, contributing to wide areas including domestic electronic appliances, electronic computers, control devices and electronic devices for educational and medical use. It is to be said that electronic engineering has become indispensable to every aspect of science and technology. Therefore, it is no exaggeration to say that the future development of science and technology depends on the close interrelation of electronic engineering to all other disciplines. Because of this reasoning, great expectations are held of leading engineers to partake in the development and production of electronic devices to support future development.

In addition fundamental scholastic ability and practice-minded knowledge are cultivated through education of the corresponding undergraduate course. Furthermore, due to the close interrelationship with other two courses in this major, knowledge of system application is to be deepened.

Information, Telecommunication and Control Systems

This research area is concerned with studying the information and telecommunication systems which are considered to be worthwhile in the present global age supported by the diverging evolution of the information technology.

Activity in this research area is focused on the following disciplines: electronic computer engineering, human information processing, mathematical informatics, digital signal processing, human interface and sound communication systems, multi-media information processing, electric circuit theory, knowledge-based information processing, and natural language processing, and cybernetics. These research fields are closely related to the previously mentioned two courses because the information technology may play a crucial role as an infra-technology in the modern industrial society which requires global human communication systems as is well appreciated nowadays. Performance-improving developments and new proposals in these areas are among the main priorities determining the research area activity.

In similar to the above-mentioned two courses, fundamental scholastic ability and practice-minded knowledge are cultivated through education of the corresponding undergraduate course. In addition, due to the close interrelationship with other two courses in this major, knowledge of system application is to be deepened.

3. Materials Science and Technology

Students majoring in Materials Science and Technology will gain a wide and deep knowledge of materials chemistry from the fundamental and industrial viewpoints. Chemistry is the science of matter not only on atomic and molecular levels but also on the materials level. Progress in chemistry has brought about numerous novel materials, to make breakthroughs in modern technology. Chemistry also contributes to the safe lives for human beings. The Department of Materials Science and Technology provides students opportunities to study intimately with faculty members through attractive lectures and potential researches. We emphasize and encourage the highest degree of individual development in students.

Content of Courses

Courses are composed of four research areas in materials science and technology; materials function engineering, materials design engineering, energy and environment materials engineering, and bio-interactive and bio-inspired materials engineering, which orient to functionalization, designing, environment, and biological & medical engineering, respectively.

Research Areas

Materials Function Engineering

Knowledge of functional materials and functionalization of materials is indispensable for practical

applications of new materials. Research area covers the synthesis of supramolecules for conducting materials and soft materials having various molecular architectures, crystalline and liquid-crystalline, and nonlinear rheology. Specific research topics in progress include new synthetic methods, property evaluation and structural analysis of new inorganic functional materials, and magneto-optics investigation of metal oxide thin films.

Materials Design Engineering

This research area aims at designing of materials with specific functionality and high performance. The research area covers new synthetic methods, property evaluation and structural analysis of new organic and inorganic functional materials , and plasma chemistry. Research topics include pharmaceutical drugs, agrochemicals, nonlinear optical devices, and opto-electronic devices as well as sophisticated molecular design and simulation.

Energy and Environment Materials Engineering

This research area involves the development of materials for new energy and advance waste water treatment, the treatment technology of hazardous wastes and environmental-oriented production process technology. Researches on electrode reaction, fuel cells, secondary batteries, photocatalysis and catalytic reaction at solid surface, nonlinear optical glasses and crystals, synthesis of thin films, and computer simulation for material design, are also actively proceeding.

Bio-interactive and Bio-inspired Materials Engineering

This research area involves the development of materials for biointeractive properties and the designs of materials inspired with biological functionality, as well as the applications of natural products, biomass and their wastes. Specific research topics in progress are the functionalization of natural rubber, the development of new-sophisticated and intelligent materials in regenerated biomass and composites, which contribute to sustainable society and environmental conservation, the attractive usage of nanotechnology and composite-technology as tissue recognition & medical materials and also seen in environmental materials.

4. Civil and Environmental Engineering

Civil and Environmental engineering is the discipline of construction of the infrastructure which helps mankind to maintain a highly developed civilization while securing harmony with the nature environment, and this major aims to create new technology which can solve various problems in construction of infrastructure with a wide view and deep insight from the standpoint of earth engineering.

Therefore, this major instructs students in high-level technology in each area through lectures, experiments and training and, at the same time, offers a chance to study interdisciplinary areas and management, planning, life cycle based design for sustainable development, and natural disaster prevention and restoration which are essential knowledge for civil engineers. Thus, this major aims to train students as civil engineers who can solve practical problems in civil and environmental engineering from a wide viewpoint.

This major is divided into four research areas called Infrastructure Design Engineering, Infrastructure Management Engineering, Disaster Prevention Systems Engineering and Environment Management Engineering.

Content of Courses

Understanding that construction works, as they become large-scaled, have a grave impact on human society and the natural environment, courses offered fully take into account various effects and impacts of construction and are woven under an integrated view.

Research Areas

Infrastructure Design Engineering

This research area is composed of three groups: regional and urban planning group, geotechnical

engineering group and transportation engineering group. The regional and urban planning group focuses on land use analysis, policy and planning. The geotechnical engineering group studies soil engineering, especially focuses on mechanical property of various soils and advanced technology in tunneling engineering. The transportation engineering group studies all around technology for construction and maintenance of paved road.

Infrastructure Management Engineering

This research area is composed of three groups: social system management group, steel structural engineering group and concrete engineering group. The social system management group studies the management of social system including SCM and TDM, and the evaluation of management policy especially in transportation. The steel structural engineering group studies the basic aspects of structural analysis, corrosion durability of steel structures and observation based maintenance system. The concrete engineering group studies the properties of concrete, durability and structural performance of concrete structures.

Disaster Prevention Systems Engineering

This research area is composed of four groups: disaster prevention and restoration systems group, hydraulic engineering group, environment and disaster prevention engineering group and earthquake engineering group. The disaster prevention and restoration systems group focuses on advanced planning and policy for disaster prevention and restoration. The hydraulic engineering group, the environment and disaster prevention engineering group and the earthquake engineering group study characteristics of disaster-causing natural phenomena and carry out basic and applied research on modern development of infrastructure. River engineering, coastal engineering, geotechnical earthquake engineering including strong motion seismology, slope engineering and simulation of earth structures are some of the topics covered. Risk assessment for various disasters is focused.

Environment Management Engineering

This research area is composed of three groups: global environment engineering group, water environment control engineering group and resource-energy recycle engineering group. The global environment engineering group focuses on the water and energy cycle at all spatial and temporal scales, fully utilizing in-situ and remote sensing data and high-speed, large sized computers. The water environment control engineering group focuses on the advanced technology of wastewater treatment and biotechnology for protection of the water environment. The resource-energy recycle engineering group studies the treatment technology of solid and hazardous wastes and environment-oriented production process technology.

5. Bioengineering

Bioengineering is a transdisciplinary field that integrates various engineering and biological principles. Rapidly-expanding information and technologies in life and physical sciences create critical and unique opportunities for bioengineers to make a significant impact on human health and environmental sustainability, two of the greatest challenges in our world. Research in this field is aimed at developing and applying biological molecules and systems to solve a broad spectrum of health, industrial and environmental problems. Utilizing engineering analysis and design to deal with medical and other societal needs is the other research area of this field. Biological molecules and systems are efficient and successful, but highly complex. Therefore, understanding biological molecules and systems is also an important part of our research activity.

The current research in our department exploits new developments in biomolecular science and various technologies to advance fundamental understanding of how biological molecules and systems operate and to develop effective designs and tools for medical practice, industrial application and bioremediation of environmental problems. The research topics of faculties range from molecular structure to direct diagnostic applications.

Content of Courses

The goal of our educational program is to generate a next generation of capable engineers and researchers. The stuff members with diverse expertise and background provide various educational and research opportunities, leading to a master or Ph.D. degree. Participating students will receive rigorous research and intellectual training in their selected research focus in a highly interactive environment that facilitates a fusion of various scientific disciplines and ideas that promotes scientific discovery and new technologies.

Research Areas

Bioproduction Technology Group

The research in this group is concerned with intensive utilization of plants producing biomass and production of valuable materials from biomass using biomass-decomposing microorganisms aiming for development of useful enzymes, functions and varieties and their productive systems based on a variety of research on cultural techniques, enzymes, genes and genomes. This group will cultivate human resources with talent for realization of sustainable society and wide vision on agricultural fields.

Biosystems Technology Group

The research in this group is concerned with understanding and utilization of high-order biological function such as signal transduction, transportation and movement in cells or tissues of humans and animals aiming for development of technology and system useful for medical care, health and welfare. This group will cultivate human resources with knowledge on tissue and cellular functions of humans and animals and talent for its application.

Environmental Biotechnology Group

The research in this group is concerned with conservation and improvement of global environment by utilization of microbial function and ecosystem control aiming for development of useful microorganisms, enzymes and their utilization technology through research on enzymes, genes and genomes of microorganisms responsible for environmental cleanup and compound degradation and their regulatory mechanisms and understanding of ecosystem and technology development on evaluation and conservation of ecosystem and genetic resources. This group will cultivate human resources with talent for realization of sustainable society and wide vision ranging from genes to ecosystem.

Biomaterials Technology Group

The research in this group is concerned with utilization and designing of biomaterials such as enzymes, proteins and biopolymers aiming for development of high functional biosensors and polymer macromolecules, creation of functional materials by combination of motor and physiological functions and development of high-functional proteins based on mechanisms of structural formation and characteristic expression. This group will cultivate human resources with sophisticated technology and broad knowledge on utilization of biomolecules and polymer macromolecules.

6. Information and Management Systems Engineering

It is clear that Information & Communication Technology(ICT) is transforming not only ways of doing business but also the basis of society as we know it and that it will increasingly be the key to the creation of successful and competitive businesses in the future.

However, the successful transition to the new information society will require not only the development of groundbreaking new information technology itself but also the expertise to take full advantage of the strategic potential of information technology. Although leading the world in many areas of electronics, data processing and communication technology, Japan lags behind in the application of ICT to creation of innovative new management and social systems. This situation is undoubtedly due in large part to a shortage of highly-skilled manpower with sufficient mastery of the new technology to

develop new applications for the design, implementation and control of management information systems.

The objective of this Department is to study information and management systems and to train specialists with the expertise knowledge and skills necessary to develop the vast potential of information and management technology and to do so with an appreciation of socioeconomic environment of the real world. Such expertise is necessary to imagine totally new and different social structures and to develop innovative ways of organizing and managing businesses.

Research Areas

Human Informatics Group

The Human Informatics Group conducts education and research to analyze humans from the viewpoint of informatics and to integrate the analytical results for developing artificial systems in the manner of systems engineering. For the purpose we study complicated human physiology and psychology as well as behaviors to solve those principles, then utilize the discoveries to develop new systems, e.g. for controlling the human situation to the appropriate state and for assisting humans on daily tasks.

Management Systems Group

In order to manage companies or organizations, corporate managers must undertake various issues including organizational, managerial as well as strategic ones. Corporate management should be also conducted taking into account structure changes caused by economic globalization, technology innovation, energy and natural resources, the global environment, the financial environment, and even international politics. The Management Systems Group conducts education and research about management systems based on social sciences as well as the viewpoint of informatics.

Social Information Systems Group

Our daily lives could be supported by various information technologies. Some of them are those to record and analyze human activities, e.g. political, economic, educational and cultural activities as well as behaviors in the daily lives including those in the Internet, which might facilitate well-being in our future daily lives. The Social Information Systems Group conducts education and research to analyze human behaviors, activities and their interactions with informatics and to apply the results to artificial systems that support our daily lives.

7. Nuclear System Safety Engineering

Research Areas

Safety Technology

This course will provide instruction and research in the key areas necessary for maintaining nuclear safety, including the safe use of radiation, back-end systems, nuclear fuel engineering, radiochemistry, seismic safety technology system engineering, and radiation monitoring. After outlining nuclear safety engineering, lectures will be held on the chemical and biological aspects of nuclear safety, the nuclear fuel cycle and control of radioactive waste, back-end engineering (decommissioning of plants, disposal of depleted fuel, etc.), seismic safety assessment, and radiation monitoring.

Safety Management

This course will provide instruction and research on topics necessary for examining all possible circumstances and reducing the risks that are below tolerable levels by using the system safety approach, including safety management, risk evaluation, technical communication, nuclear safety legislation, maintenance engineering, and maintenance system control. In addition to lectures in such key system safety topics as engineering ethics, safety management, and risk evaluation, instruction will also cover technical communications, nuclear safety legislation, maintenance systems, and the like.

Advanced Energy Engineering

This course will provide instruction and research for students with specialist knowledge of key topics in the use of nuclear power, such as mechanical, electrical, and electronic engineering; communications; materials science; construction and biology in the production of radiation; reactor engineering; nuclear power systems; nuclear fusion systems; and structural and materials engineering related to nuclear power. Lectures will also be presented on the key principles of nuclear power technology, such as the use of radiation, the physics of reactors, structural and materials engineering as they relate to nuclear power and nuclear power systems, and their management and maintenance.

8. Common courses

(1) Principles of common courses at our university

Development of highly intellectual and knowledgeable individuals, capable of leading a knowledge-based society supported by advanced information and technology, is necessary for the solution of various problems faced by mankind, such as global environmental issues, population growth, and ethnic conflicts, as well as the various problems faced by Japan, such as the declining birthrate and aging population, industrial restructuring, and decreasing social vitality. With the objective of nurturing these knowledgeable individuals, the master's program at our graduate school offers common courses in various knowledge areas that promote the superior intellectual ability, social and international perspectives, and management ability necessary for applying and implementing technology in society, in combination with specialized knowledge and skills. Courses are classified into 3 course areas, specifically, intellectual ability development courses, social and international perspective development courses, and management ability development courses. All are elective courses, and at the minimum 6 units of common courses must be completed.

(2) Course classifications are as follows.

1) Intellectual ability development courses: These courses aim to nurture technical experts capable of supporting a knowledge-based society by developing superior intellectual ability based on firm ideas and philosophy, and enables rational and flexible understanding, consideration, and expression of matters. Knowledge will also be empirically obtained through practice of technology. Subject areas include mathematical and natural sciences, logic and communication, systems and information, and human studies.

2) Social and international perspective development courses: These courses aim to nurture the fundamental ability to understand interrelationships between technology and various social situations surrounding technology, from a multi-aspectual and international perspective. Society creates a need for technological development, while technology exerts multi-aspectual and global effects on humans, lifestyle, industry, society, environments, and other factors. Practice of technology requires provision of information regarding effects on society, and society manages the practice of technology to inhibit the predicted negative effects. Subject areas include society, industry, and international perspectives.

3) Management ability development courses: These courses aim to nurture the ability to manage the operating resources of corporations and other organizations to enable the use of the merits of the technology, by adequately determining relationships between technology and the situations of corporations and other organizations planning to utilize it. Corporations demonstrate the need to develop the practice of technology, while the practice of technology itself results in profit (or loss) and benefits (or disadvantages) for corporations. The practice of technology provides information regarding effects on business management, and business management involves management of the practice of technology under given restrictions. Subject areas include technology management, business management, and human resource development.

≪5-year Integrated Doctoral Program≫

Science of Technology Innovation

(1) Fostering Human Resources

This department offers a 5-year integrated doctoral program that combines the conventional master's program and doctoral program. In this program, students may acquire a doctoral degree in as little as 3 years without having to undergo master's thesis screening, as well as participate in long-term overseas study programs and earn an MBA.

With a foundation in advanced research capabilities and an education that incorporates different disciplines and cultures, we aim to cultivate outstanding leaders (global innovation leaders) that are globally competitive, have the power to innovate, and the ability to drive Japanese and global industries. The following exemplify the types of personnel that we aim to foster in this department.

◇Startup Company/Business-Oriented Personnel◇

Here, we cultivate engineers with the ability to adopt a managerial perspective by integrating front-line research experience in specialist fields with an MBA earned from the International University of Japan, which is a collaborative partner of Nagaoka University of Technology.

◇Project Manager-Oriented Personnel◇

By providing experience in multidisciplinary research projects, we train project managers who are able to implement a cross-disciplinary approach.

(2) Education Objectives

With a focus on the target personnel described above, this program aims to facilitate the acquisition of the following abilities in students to cultivate global innovation leaders who can play an active role at the international level.

1. A strong interest in the courses and research conducted at Science of Technology Innovation, the ability to innovate at the global level, and fulfill a leading role in the advancement and development of the world's industries
2. Advanced research capabilities in various fields (such as mechanical engineering, electrical engineering, materials science, civil engineering, and bioengineering), a multifaceted perspective, as well as practical and interdisciplinary integrated capabilities in science and technology
3. English language ability, communication capability, facilitation capability, research proposal development capability, and the fundamental capabilities for business development that can aid in research, project promotion, and information transmission
4. Ability to recognize the core essence of a research topic through scientific methods, and to deduce truly innovative solutions
5. Farsighted perspective, business-mindedness, strong ethical values, and the ability to practically utilize these abilities

2. Academic staff in Graduate School of Engineering

※は、他に主担当の専攻を有する教員を表す。
Note: The sign "※" signifies the staff hold another main Major of Field.

《大学院工学研究科修士課程　Graduate School of Engineering(Master's Program)》

1.機械創造工学専攻　Mechanical Engineering

(1)機械情報・制御工学講座　Information and Control Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	明田川　正人 AKETAGAWA, Masato	ナノメートル・ピコメートル計測制御研究室 Nanometer & Picometer Measurement Control Laboratory
教　授 Professor	永澤　茂 NAGASAWA, Shigeru	計算力学支援・塑性加工研究室 Intelligent Supportology for Engineering Computation, Plastics Technology
准教授 Associate Professor	倉橋　貴彦 KURAHASHI, Takahiko	数理設計研究室 Mathematical Design Laboratory
准教授 Associate Professor	小林　泰秀 KOBAYASHI, Yasuhide	騒音・振動制御工学研究室 Noise and Vibration Control Laboratory
准教授 Associate Professor	平田　研二 HIRATA, Kenji	制御システム研究室 Control Systems Laboratory
准教授※ Associate Professor	木村　哲也 KIMURA, Tetsuya	レスキュー工学研究室 Rescue Engineering Laboratory
助　教 Assistant Professor	韋　冬 WEI, Dong	ナノメートル・ピコメートル計測制御研究室 Nanometer & Picometer Measurement Control Laboratory
助　教 Assistant Professor	梅本　和希 UMEMOTO, Kazuki	計算力学支援・塑性加工研究室 Intelligent Supportology for Engineering Computation, Plastics Technology

(2)設計・生産工学講座　Design and Production Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	太田　浩之 OHTA, Hiroyuki	機械要素研究室 Laboratory of Machine Elements
教　授 Professor	金子　覚 KANEKO, Satoru	トライボロジー研究室 Tribology Laboratory
教　授 Professor	田辺　郁男 TANABE, Ikuo	加工・生産工学研究室 Laboratory for Machining & Production Engineering
教　授※ Professor	阿部　雅二朗 ABE, Masajiro	機械‐環境系設計工学研究室 Machine-Environment System Design Engineering Laboratory
准教授 Associate Professor	磯部　浩已 ISOBE, Hiromi	精密加工・機構研究室 Precision Machining, Mechanism Laboratory
准教授 Associate Professor	田浦　裕生 TAURA, Hiroo	トライボロジー研究室 Tribology Laboratory
准教授 Associate Professor	柳澤　憲史 YANAGISAWA, Kenji	機械‐環境系設計工学研究室 Machine-Environment System Design Engineering Laboratory
助　教 Assistant Professor	角　直広 KADO, Naohiro	機械要素研究室 Laboratory of Machine Elements

(3)熱・流体工学講座　Heat and Fluid Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	上村　靖司 KAMIMURA, Seiji	雪氷工学研究室 Snow & Ice Engineering Laboratory
教　授 Professor	高橋　勉 TAKAHASHI, Tsutomu	流体工学研究室 Fluids Engineering and Rheology Laboratory
教　授※ Professor	門脇　敏 KADOWAKI, Satoshi	燃焼学・システム安全研究室 Laboratory of Combustion and System Safety
教　授※ Professor	福田　隆文 FUKUDA, Takabumi	システム安全工学研究室 System Safety Engineering Laboratory
准教授 Associate Professor	鈴木　正太郎 SUZUKI, Masataro	反応性流体工学研究室 Laboratory of Reactive Fluid Engineering
准教授 Associate Professor	船越　邦夫 FUNAKOSHI, Kunio	雪氷工学研究室 Snow & Ice Engineering Laboratory
准教授※ Associate Professor	山崎　渉 YAMAZAKI, Wataru	航空流体工学研究室 Computational Fluid Dynamics Laboratory
助　教 Assistant Professor	高田　守昌 TAKATA, Morimasa	雪氷工学研究室 Snow & Ice Engineering Laboratory
助　教 Assistant Professor	トエ　トエ　アウン THWE THWE AUNG	燃焼学・システム安全研究室 Laboratory of Combustion and System Safety
助　教 Assistant Professor	吉武　裕美子 YOSHITAKE, Yumiko	流体工学研究室 Fluids Engineering and Rheology Laboratory

(4)材料システム工学講座　Materials Science and Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	岡崎　正和 OKAZAKI, Masakazu	耐熱材料工学研究室 Materials Technology Laboratory for High Temperature Applications
教　授 Professor	武田　雅敏 TAKEDA, Masatoshi	エネルギー材料研究室 Energy Materials & Devices Laboratory
教　授 Professor	南口　誠 NANKO, Makoto	高温材料研究室 High Temperature Materials Laboratory
教　授※ Professor	鈴木　一彦 SUZUKI, Kazuhiko	先進設備設計・工学研究室 Advanced Equipment Design / Engineering Laboratory
教　授※ Professor	鈴木　雅秀 SUZUKI, Masahide	原子力材料・保全工学研究室 Nuclear Materials & Maintechnoligy Laboratory
准教授 Associate Professor	本間　智之 HOMMA, Tomoyuki	ナノ・原子レベル解析研究室 Nano & atomic scale analysis Laboratory
准教授 Associate Professor	宮下　幸雄 MIYASHITA, Yukio	材料強度・接合強度研究室 Strength of advanced materials and joints
准教授※ Associate Professor	大塚　雄市 OTSUKA, Yuichi	構造安全性評価研究室 Structural Integrity Assessment
助　教 Assistant Professor	徐　超 XU, Chao	先端軽金属材料研究室 Advanced Light Metals Laboratory
助　教 Assistant Professor	中田　大貴 NAKATA, Taiki	先端軽金属材料研究室 Advanced Light Metals Laboratory

職　名	氏　名	研　究　室　等
助　教 Assistant Professor	山岸　郷志 YAMAGISHI, Satoshi	耐熱材料工学研究室 Materials Technology Laboratory for High Temperature Applications
助　教 Assistant Professor	山下　健 YAMASHITA, Ken	高温材料研究室 High Temperature Materials Laboratory

(5)創未来テクノロジー講座　Innovative Interdisciplinary Mechanical Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	井原　郁夫 IHARA, Ikuo	超音波・非破壊センシング研究室 Ultrasonic sensing and nondestructive evaluation Laboratory
教　授※ Professor	中山　忠親 NAKAYAMA, Tadachika	環境・プロセスデザイン研究室 Environment and Process Design Laboratory
教　授※ Professor	山田　昇 YAMADA, Noboru	エネルギー工学研究室 Energy Engineering Laboratory
准教授 Associate Professor	勝身　俊之 KATSUMI, Toshiyuki	燃焼エネルギー研究室 Combustion and Energy Laboratory
助　教 Assistant Professor	田邉　里枝 TANABE, Rie	特殊加工研究室 Non-traditional machining Laboratory
助　教 Assistant Professor	松谷　巌 MATSUYA, Iwao	超音波・非破壊センシング研究室 Ultrasonic sensing and nondestructive evaluation Laboratory

2.電気電子情報工学専攻　　Electrical, Electronics and Information Engineering

(1)電気エネルギーシステム・制御工学講座　Electric Energy Systems and Control Engineering group

職　名	氏　名	研　究　室　等
教　授※ Professor	伊東　淳一 ITOH, Junichi	パワーエレクトロニクス研究室 Power Electronics Laboratory
教　授※ Professor	大石　潔 OHISHI, Kiyoshi	モーションコントロール研究室 Motion Control Laboratory
教　授※ Professor	江　偉華 JIANG, Weihua	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute
准教授 Associate Professor	佐々木　徹 SASAKI, Toru	プラズマ力学研究室 Plasma Dynamics Laboratory
准教授 Associate Professor	芳賀　仁 HAGA, Hitoshi	電力変換研究室 Power Conversion Laboratory
准教授 Associate Professor	宮崎　敏昌 MIYAZAKI, Toshimasa	メカトロニクス研究室 Mechatronics Laboratory
准教授※ Associate Professor	菊池　崇志 KIKUCHI, Takashi	プラズマ力学研究室 Plasma Dynamics Laboratory
助　教 Assistant Professor	高橋　一匡 TAKAHASHI, Kazumasa	プラズマ力学研究室 Plasma Dynamics Laboratory
助　教 Assistant Professor	横倉　勇希 YOKOKURA, Yuki	モーションコントロール研究室 Motion Control Laboratory
助　教※ Assistant Professor	須貝　太一 SUGAI, Taichi	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute

(2)電子デバイス・フォトニクス工学講座　Electronic Devices and Photonics group

職　名	氏　名	研　究　室　等
教　授 Professor	内富　直隆 UCHITOMI, Naotaka	機能性半導体工学研究室 Functional Semiconductor Engineering Laboratory
教　授 Professor	小野　浩司 ONO, Hiroshi	応用波動光学研究室 Applied Waveoptics Laboratory
教　授 Professor	河合　晃 KAWAI, Akira	ナノ・マイクロシステム工学研究室 Nano-Micro System Engineering Laboratory
教　授 Professor	木村　宗弘 KIMURA, Munehiro	液晶デバイス研究室 Liquid Crystal Device Laboratory
教　授 Professor	安井　寛治 YASUI, Kanji	半導体工学研究室 Laboratory of semiconductor engineering
教　授※ Professor	末松　久幸 SUEMATSU, Hisayuki	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute
准教授 Associate Professor	鵜沼　毅也 UNUMA, Takeya	量子半導体エレクトロニクス研究室 Quantum Semiconductor Electronics Laboratory
准教授 Associate Professor	岡元　智一郎 OKAMOTO, Tomoichiro	電子セラミック研究室 Electroceramics Laboratory
准教授 Associate Professor	加藤　有行 KATO, Ariyuki	光物性・テラヘルツ工学研究室 Optoelectronic materials and terahertz engineering Laboratory
准教授 Associate Professor	佐々木　友之 SASAKI, Tomoyuki	電磁波制御デバイス研究室 Electromagnetic Wave Control Device Laboratory
准教授 Associate Professor	田中　久仁彦 TANAKA, Kunihiko	光エネルギーデバイス研究室 Photo-Energy Devices Laboratory
准教授 Associate Professor	玉山　泰宏 TAMAYAMA, Yasuhiro	メタマテリアル研究室 Metamaterials Laboratory
准教授※ Associate Professor	鈴木　常生 SUZUKI, Tsuneo	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute
助　教 Assistant Professor	加藤　孝弘 KATO, Takahiro	機能性半導体工学研究室 Functional Semiconductor Engineering Laboratory
助　教 Assistant Professor	坂本　盛嗣 SAKAMOTO, Moritsugu	応用波動光学研究室 Applied Waveoptics Laboratory

(3)情報通信制御システム工学講座　Information, Telecommunication and Control Systems group

職　名	氏　名	研　究　室　等
教　授 Professor	岩橋　政宏 IWAHASHI, Masahiro	画像情報システム研究室 Image Processing System Laboratory
教　授 Professor	中川　健治 NAKAGAWA, Kenji	ネットワーク特性評価研究室 Laboratory of Network Performance Evaluation
教　授 Professor	山崎　克之 YAMAZAKI, Katsuyuki	情報ネットワーキング研究室 Information Networking Laboratory
教　授 Professor	和田　安弘 WADA, Yasuhiro	神経情報処理研究室 Neural Information Processing Laboratory
教　授※ Professor	中川　匡弘 NAKAGAWA, Masahiro	カオス・フラクタル情報数理工学研究室 Chaos & Fractals Informatics Laboratory

職　名	氏　名	研　究　室　等
教　授※ Professor	平尾　裕司 HIRAO, Yuji	機能安全研究室 Functional Safety Laboratory
准教授 Associate Professor	圓道　知博 YENDO, Tomohiro	空間映像メディア研究室 Spatial image media Laboratory
准教授 Associate Professor	杉田　泰則 SUGITA, Yasunori	信号処理応用研究室 Signal Processing Application Laboratory
准教授 Associate Professor	坪根　正 TSUBONE, Tadashi	非線形システム工学研究室 Nonlinear System Engineering Laboratory
准教授 Associate Professor	山本　和英 YAMAMOTO, Kazuhide	自然言語処理研究室 Natural Language Processing Laboratory
助　教 Assistant Professor	南部　功夫 NAMBU, Isao	神経情報処理研究室 Neural Information Processing Laboratory
助　教 Assistant Professor	白清　学 HAKUSEI, Manabu	カオス・フラクタル情報数理工学研究室 Chaos & Fractals Informatics Laboratory
助　教 Assistant Professor	峯脇　さやか MINEWAKI, Sayaka	画像情報システム研究室 Image Processing System Laboratory
助　教 Assistant Professor	谷内田　昌寿 YACHIDA, Masatoshi	カオス・フラクタル情報数理工学研究室 Chaos & Fractals Informatics Laboratory
助　教 Assistant Professor	吉田　太一 YOSHIDA, Taich	画像情報システム研究室 Image Processing System Laboratory
助　教 Assistant Professor	渡部　康平 WATABE, Kouhei	ネットワーク特性評価研究室 Laboratory of Network Performance Evaluation
助　教 Assistant Professor	和田森　直 WADAMORI, Naoki	カオス・フラクタル情報数理工学研究室 Chaos & Fractals Informatics Laboratory

3.物質材料工学専攻　Materials Science and Technology

(1)物質機能工学講座　Physical and Analytical Chemistry group

職　名	氏　名	研　究　室　等
教　授 Professor	石橋　隆幸 ISHIBASHI, Takayuki	光・磁性材料工学研究室 Optic & Magnetic Materials Laboratory
教　授 Professor	斎藤　秀俊 SAITOH, Hidetoshi	光・電子セラミックス研究室 Opto-Electronic Ceramics Laboratory
教　授 Professor	松原　浩 MATSUBARA, Hiroshi	エネルギー変換材料研究室 Energy Conversion Material Laboratory
准教授 Associate Professor	今久保　達郎 IMAKUBO, Tatsuro	超分子物性化学研究室 Laboratory of Supramolecular Solid State Chemistry
助　教 Assistant Professor	小松　啓志 KOMATSU, Keiji	光・電子セラミックス研究室 Opto-Electronic Ceramics Laboratory
助　教 Assistant Professor	西川　雅美 NISHIKAWA, Masami	光・磁性材料工学研究室 Optic & Magnetic Materials Laboratory

(2)材料設計工学講座　Materials Design Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	竹中　克彦 TAKENAKA, Katsuhiko	高分子材料化学研究室 Laboratory of Polymer Materials Chemistry

職　名	氏　名	研　究　室　等
教　授 Professor	前川　博史 MAEKAWA, Hirofumi	有機反応設計研究室 Laboratory of Organic Reaction Design and Synthesis
教　授※ Professor	鈴木　達也 SUZUKI, Tatsuya	放射化学研究室 Laboratory for Nuclear and Radiochemistry
准教授 Associate Professor	伊藤　治彦 ITO, Haruhiko	分子・プラズマ物理化学研究室 Laboratory of Physical Chemistry for Molecules and Plasmas
准教授 Associate Professor	内田　希 UCHIDA, Nozomu	無機材料シミュレーション研究室 Laboratory of simulation for inorganic materials
准教授 Associate Professor	田中　諭 TANAKA, Satoshi	セラミック研究室 Ceramic Material Design Laboratory
助　教 Assistant Professor	戸田　智之 TODA, Tomoyuki	高分子材料化学研究室 Laboratory of Polymer Materials Chemistry

(3)エネルギー・環境材料工学講座　Energy and Environment Materials Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	梅田　実 UMEDA, Minoru	電気化学エネルギー変換材料研究室 Electrochemical Energy Conversion Laboratory
教　授 Professor	佐藤　一則 SATO, Kazunori	環境浄化保全材料研究室 Environmental conservation and remediation Materials Science Laboratory
准教授 Associate Professor	齊藤　信雄 SAITO, Nobuo	光エネルギー変換材料研究室 Photo Energy Conversion Material Laboratory
准教授 Associate Professor	高橋　由紀子 TAKAHASHI, Yukiko	環境ナノ材料研究室 Nano Dyes and Thin Films Laboratory
准教授 Associate Professor	本間　剛 HONMA, Tsuyoshi	機能ガラス工学研究室 Functional Glass Engineering Laboratory
産学融合特任准教授 Specially Appointed Associate Professor for Academia-Industry Fusion	白仁田　沙代子 SHIRONITA, Sayoko	エネルギー材料科学研究室 Materials Science for Energy Laboratory
助　教 Assistant Professor	松田　翔風 MATSUDA, Shofu	電気化学エネルギー変換材料研究室 Electrochemical Energy Conversion Laboratory
助　教 Assistant Professor	山本　雅納 YAMAMOTO, Masanori	環境浄化保全材料研究室 Environmental conservation and remediation Materials Science Laboratory

(4)バイオ複合材料工学講座　Biointeractive and Bioinspired Materials Engineering group

職　名	氏　名	研　究　室　等
教　授※ Professor	小林　高臣 KOBAYASHI, Takaomi	バイオサステナブル・環境材料工学研究室 Biosustainable Environmental Materials Engineering
准教授 Associate Professor	河原　成元 KAWAHARA, Seiichi	グリーン資源化学研究室 Green Chemical Resources Laboratory
准教授 Associate Professor	多賀谷　基博 TAGAYA, Motohiro	ナノバイオ材料研究室 Nano-Bio Materials Laboratory
助　教 Assistant Professor	シリポーン　タオガァオ SIRIPORN TAOKAEW	バイオサステナブル・環境材料工学研究室 Biosustainable Environmental Materials Engineering

4.環境社会基盤工学専攻　Civil and Environmental Engineering

(1)社会基盤デザイン講座　Infrastructure Design group

職　名	氏　名	研　究　室　等
教　授 Professor	杉本　光隆 SUGIMOTO, Mitsutaka	地盤工学研究室 Geotechnical Engineering Laboratory
教　授 Professor	高橋　修 TAKAHASHI, Osamu	交通工学研究室 Highway Engineering Laboratory
教　授 Professor	中出　文平 NAKADE, Bunpei	都市計画研究室 Urban Planning Laboratory
准教授 Associate Professor	豊田　浩史 TOYOTA, Hirofumi	地盤工学研究室 Geotechnical Engineering Laboratory
准教授 Associate Professor	樋口　秀 HIGUCHI, Shu	都市計画研究室 Urban Planning Laboratory
助　教 Assistant Professor	中村　健 NAKAMURA, Takeshi	交通工学研究室 Highway Engineering Laboratory
助　教 Assistant Professor	松川　寿也 MATSUKAWA, Toshiya	都市計画研究室 Urban Planning Laboratory

(2)社会基盤マネジメント講座　Infrastructure Management group

職　名	氏　名	研　究　室　等
教　授 Professor	岩崎　英治 IWASAKI, Eiji	鋼構造研究室 Structural Engineering Laboratory
教　授 Professor	佐野　可寸志 SANO, Kazushi	都市交通研究室 Urban Transport Engineering & Planning Laboratory
教　授 Professor	下村　匠 SHIMOMURA, Takumi	コンクリート研究室 Concrete Laboratory
准教授 Associate Professor	宮下　剛 MIYASHITA, Takeshi	鋼構造研究室 Structural Engineering Laboratory
産学融合特任准教授 Specially Appointed Associate Professor for Academia-Industry Fusion	鳩山　紀一郎 HATOYAMA, Kiichiro	都市交通研究室 Urban Transport Engineering & Planning Laboratory
助　教 Assistant Professor	中村　文則 NAKAMURA, Fuminori	コンクリート研究室 Concrete Laboratory

(3)防災システム講座　Disaster Prevention Systems group

職　名	氏　名	研　究　室　等
教　授 Professor	大塚　悟 OHTSUKA, Satoru	環境防災研究室 Environment and Disaster Prevention Laboratory
教　授 Professor	細山田　得三 HOSOYAMADA, Tokuzo	水圏防災研究室 Hydraulic Disaster Prevention Laboratory
教　授※ Professor	池田　隆明 IKEDA, Takaaki	地震工学研究室 Earthquake Engineering Laboratory
准教授 Associate Professor	松田　曜子 MATSUDA, Yoko	防災・復興システム工学研究室 Disaster resilience and reconstruction systems engineering laboratory

職　名	氏　名	研　究　室　等
准教授 Associate Professor	宮木　康幸 MIYAKI, Yasuyuki	環境防災研究室 Environment and Disaster Prevention Laboratory
助　教 Assistant Professor	犬飼　直之 INUKAI, Naoyuki	水圏防災研究室 Hydraulic Disaster Prevention Laboratory
助　教 Assistant Professor	福元　豊 YUTAKA, Fukumoto	環境防災研究室 Environment and Disaster Prevention Laboratory

(4)環境マネジメント講座　Environment Management group

職　名	氏　名	研　究　室　等
教　授 Professor	陸　旻皎 LU, Minjiao	水文気象研究室 Laboratory of Hydrology and Meteorology
教　授※ Professor	解良　芳夫 KERA, Yoshio	環境生物化学研究室 Environmental Biochemistry Laboratory
教　授※ Professor	佐藤　一則 SATO, Kazunori	環境浄化保全材料研究室 Environmental conservation and remediation Materials Science Laboratory
教　授※ Professor	山口　隆司 YAMAGUCHI, Takashi	水圏土壌環境研究室 Aqua and Soil Environmental Laboratory
准教授 Associate Professor	熊倉　俊郎 KUMAKURA, Toshiro	水文気象研究室 Laboratory of Hydrology and Meteorology
准教授 Associate Professor	小松　俊哉 KOMATSU, Toshiya	資源エネルギー循環研究室 Laboratory of Resource and Energy Cycles
准教授 Associate Professor	高橋　一義 TAKAHSHI, Kazuyoshi	防災・復興システム工学研究室 Disaster resilience and reconstruction systems engineering laboratory
准教授※ Associate Professor	高橋　祥司 TAKAHASHI, Shouji	環境生物化学研究室 Environmental Biochemistry Laboratory
准教授※ Associate Professor	高橋　由紀子 TAKAHASHI, Yukiko	環境ナノ材料研究室 Nano Dyes and Thin Films Laboratory
准教授※ Associate Professor	姫野　修司 HIMENO, Shuji	資源エネルギー循環研究室 Laboratory of Resource and Energy Cycles
産学融合特任准教授 Specially Appointed Associate Professor for Academia-Industry Fusion	幡本　将史 HATAMOTO, Masashi	水圏土壌環境研究室 Aqua and Soil Environmental Laboratory
助　教 Assistant Professor	楊　宏選 YANG, Hongxuan	水文気象研究室 Laboratory of Hydrology and Meteorology
助　教 Assistant Professor	渡利　高大 WATARI, Takahiro	水圏土壌環境研究室 Aqua and Soil Environmental Laboratory

5.生物機能工学専攻　Bioengineering

(1)生物生産工学講座　Bioproduction Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	政井　英司 MASAI, Eiji	微生物代謝工学研究室 Laboratory of Microbial Metabolic Engineering
教　授※ Professor	小笠原　渉 OGASAWARA, Wataru	生物資源工学研究室 Laboratory of Bioresource Engineering

職　名	氏　名	研　究　室　等
准教授 Associate Professor	高原　美規 TAKAHARA, Yoshinori	応用植物工学研究室 Laboratory of Applied Plant BioTechnology
准教授 Associate Professor	西村　泰介 NISHIMURA, Taisuke	植物エピジェネティクス研究室 Plant epigenetic Engineering
助　教 Assistant Professor	上村　直史 KAMIMURA, Naofumi	微生物代謝工学研究室 Laboratory of Microbial Metabolic Engineering
助　教 Assistant Professor	志田　洋介 SIDA, Yosuke	生物資源工学研究室 Laboratory of Bioresource Engineering

(2)生物システム工学講座　Biosystems Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	滝本　浩一 TAKIMOTO, Koichi	分子生理工学研究室 Laboratory for Molecular Physiology
准教授 Associate Professor	佐藤　武史 SATO, Takeshi	糖鎖生命工学研究室 Laboratory of Glycobiology
准教授 Associate Professor	霜田　靖 SHIMODA, Yasushi	神経機能工学研究室 Laboratory for Molecular Neuroengineering
准教授※ Associate Professor	大沼　清 OHNUMA, Kiyoshi	システム幹細胞工学研究室 Laboratory for Stem Cell tissue Engineering
助　教 Assistant Professor	内山　尚志 UCHIYAMA, Hisashi	医用生体工学研究室 Laboratory of Medical Engineering

(3)生物環境工学講座　Environmental Bioengineering group

職　名	氏　名	研　究　室　等
教　授 Professor	解良　芳夫 KERA, Yoshio	環境生物化学研究室 Environmental Biochemistry Laboratory
准教授 Associate Professor	笠井　大輔 KASAI, Daisuke	環境微生物工学研究室 Laboratory of Applied and Environmental Microbiology
准教授 Associate Professor	高橋　祥司 TAKAHASHI, Shouji	環境生物化学研究室 Environmental Biochemistry Laboratory
准教授 Associate Professor	山本　麻希 YAMAMOTO, Maki	野生動物管理学研究室 Laboratory of Engineering of Wildlife Management
助　教 Assistant Professor	阿部　勝正 ABE, Katsumasa	環境生物化学研究室 Environmental Biochemistry Laboratory

(4)生物材料工学講座　Biomaterials Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	城所　俊一 KIDOKORO, Shun-ichi	分子生物物理学研究室 Molecular Biophysics Laboratory
教　授 Professor	下村　雅人 SHIMOMURA, Masato	生物材料工学研究室 Material Laboratory for Bioengineering
教　授 Professor	本多　元 HONDA, Hajime	生体運動研究室 Laboratory for Biological Motility
准教授 Associate Professor	木村　悟隆 KIMURA, Noritaka	高分子機能工学研究室 Polymer Functionalization Laboratory

職　名	氏　名	研　究　室　等
助　教 Assistant Professor	桑原　敬司 KUWAHARA, Takashi	生物材料工学研究室 Material Laboratory for Bioengineering

6.情報・経営システム工学専攻　Information and Management Systems Engineering

(1)ヒューマン情報学講座　Human Informatics group

職　名	氏　名	研　究　室　等
教　授 Professor	北島　宗雄 KITAJIMA, Muneo	認知行動科学研究室 Cognitive and Behavioral Sciences Laboratory
教　授 Professor	塩野谷　明 SHIONOYA, Akira	スポーツ工学・生理生体情報研究室 Sports Engineering Psysio-human Dynamics Laboratory
教　授 Professor	三宅　仁 MIYAKE, Hitoshi	医用福祉工学研究室 Medical and Welfare Engineering Laboratory
准教授 Associate Professor	野村　収作 NOMURA, Shusaku	アンビエント生体医工学研究室 Ambient Biomedical Engineering Laboratory
講　師 Associate Professor	西山　雄大 NISHIYAMA, Yuta	理論生命科学研究室 Theoretical Life Science Laboratory
助　教 Assistant Professor	秋元　頼孝 AKIMOTO, Yoritaka	認知行動科学研究室 Cognitive and Behavioral Sciences Laboratory
助　教 Assistant Professor	中平　勝子 NAKAHIRA, Katsuko, T.	認知行動科学研究室／ eラーニング研究実践センター／教育方法開発センター Cognitive and Behavioral Sciences Laboratory/ Center for e-Learning Research and Application Center for Faculty Development
助　教 Assistant Professor	永森　正仁 NAGAMORI, Masahito	医用福祉工学研究室 Medical and Welfare Engineering Laboratory

(2)経営システム学講座　Management Systems group

職　名	氏　名	研　究　室　等
教　授 Professor	中村　幸一郎 NAKAMURA, Koichiro	経済活力研究室 Economic Vitalization Laboratory
教　授 Professor	李　志東 LI, Zhidong	３Ｅ（経済、エネルギー、環境）研究室 3E's (Economy, Energy and Environment) Laboratory
教　授 Professor	綿引　宣道 WATAHIKI, Nobumichi	経営社会研究室 Economic Sociology
准教授 Associate Professor	伊藤　嘉浩 ITO, Yoshihiro	経営戦略・ビジネスモデル・マーケティング研究室 Strategic management, Business model and Marketing Lab.
准教授 Associate Professor	鈴木　信貴 SUZUKI, Nobutaka	経営戦略・技術経営・ものづくり経営研究室 Strategic, Technology and Manufacturing Management Laboratory
准教授※ Associate Professor	岡本　満喜子 OKAMOTO, Makiko	安全法学・組織文化研究室 Organizational Culture Laboratory

(3)ソーシャル情報システム学講座　Social Information Systems group

職　名	氏　名	研　究　室　等
教　授 Professor	山田　耕一 YAMADA, Koichi	知能情報学研究室 Laboratory for Intelligent Informatics

職　名	氏　名	研　究　室　等
教　授※ Professor	湯川　高志 YUKAWA, Takashi	知識システム研究室 Knowledge Systems Laboratory
准教授 Associate Professor	高橋　弘毅 TAKAHASHI, Hirotaka	数理工学・宇宙物理学研究室 Mathematical Engineering and Astrophysics Group
准教授 Associate Professor	羽山　徹彩 HAYAMA, Tessai	知識メディア研究室 Knowledge Media Laboratory
講　師 Associate Professor	野中　尋史 NONAKA, Hirofumi	知識マイニング研究室 Knowledge Mining Laboratory
助　教 Assistant Professor	安藤　雅洋 ANDO, Masahiro	知識システム研究室 Knowledge Systems Laboratory
助　教 Assistant Professor	畦原　宗之 UNEHARA, Muneyuki	知能情報学研究室 Laboratory for Intelligent Informatics
助　教 Assistant Professor	鈴木　泉 SUZUKI, Izumi	知能情報学研究室 Laboratory for Intelligent Informatics
助　教 Assistant Professor	吉田　富美男 YOSHIDA, Fumio	知能情報学研究室 Laboratory for Intelligent Informatics

7.原子力システム安全工学専攻　Nuclear System Safety Engineering

(1)安全技術講座　Safety Technology group

職　名	氏　名	研　究　室　等
教　授 Professor	鈴木　達也 SUZUKI, Tatsuya	放射化学研究室 Laboratory for Nuclear and Radiochemistry
教　授 Professor	髙瀬　和之 TAKASE, Kazuyuki	原子炉伝熱流動・安全技術研究室 Laboratory for Reactor Thermal-Hydraulics & Safety Technology
准教授 Associate Professor	菊池　崇志 KIKUCHI, Takashi	プラズマ力学研究室 Plasma Dynamics Laboratory
准教授 Associate Professor	鈴木　常生 SUZUKI, Tsuneo	加速器応用･新材料設計研究室 Accelerator applications and novel material design laboratory
助　教 Assistant Professor	立花　優 TACHIBANA, Yu	放射化学研究室 Laboratory for Nuclear and Radiochemistry
助　教 Assistant Professor	松本　義伸 MATSUMOTO, Yoshinobu	放射化学研究室 Laboratory for Nuclear and Radiochemistry

(2)安全マネジメント講座　Safety Management group

職　名	氏　名	研　究　室　等
教　授 Professor	池田　隆明 IKEDA, Takaaki	地震工学研究室 Earthquake Engineering Laboratory
教　授 Professor	鈴木　雅秀 SUZUKI, Masahide	原子力材料・保全工学研究室 Nuclear Materials & Maintechnoligy Laboratory
教　授※ Professor	佐野　可寸志 SANO, Kazushi	都市交通研究室 Urban Transport Engineering & Planning Laboratory
准教授 Associate Professor	村上　健太 MURAKAMI, Kenta	原子力材料・保全工学研究室 Nuclear Materials & Maintechnoligy Laboratory

職　名	氏　名	研　究　室　等
助　教 Assistant Professor	ドウ ティ マイ ズン DO THI MAI DUNG	原子力材料・保全工学研究室 Nuclear Materials & Maintechnoligy Laboratory

(3)先端エネルギー工学講座　Advanced Energy Engineering group

職　名	氏　名	研　究　室　等
教　授 Professor	江　偉華 JIANG, Weihua	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute
教　授 Professor	末松　久幸 SUEMATSU, Hisayuki	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute
教　授 Professor	鈴木　一彦 SUZUKI, Kazuhiko	先進設備設計・工学研究室 Advanced Equipment Design / Engineering Laboratory
助　教 Assistant Professor	須貝　太一 SUGAI, Taichi	極限エネルギー密度工学研究センター Extreme Energy-Density Research Institute

技術科学イノベーション専攻　Science of Technology Innovation

(1)エネルギー技学講座　Gigaku Energy group

職　名	氏　名	研　究　室　等
教　授 Professor	伊東　淳一 ITOH, Junichi	パワーエレクトロニクス研究室 Power Electronics Laboratory
教　授 Professor	大石　潔 OHISHI, Kiyoshi	モーションコントロール研究室 Motion Control Laboratory
教　授 Professor	中川　匡弘 NAKAGAWA, Masahiro	カオス・フラクタル情報数理工学研究室 Chaos & Fractals Informatics Laboratory
教　授 Professor	山田　昇 YAMADA, Noboru	エネルギー工学研究室 Energy Engineering Laboratory
教　授 Professor	湯川　高志 YUKAWA, Takashi	知識システム研究室 Knowledge Systems Laboratory

(2)環境技学講座　Gigaku Environment group

職　名	氏　名	研　究　室　等
教　授 Professor	小笠原　渉 OGASAWARA, Wataru	生物資源工学研究室 Laboratory of Bioresource Engineering
教　授 Professor	山口　隆司 YAMAGUCHI, Takashi	水圏土壌環境研究室 Aqua and Soil Environmental Laboratory
准教授 Associate Professor	姫野　修司 HIMENO, Shuji	資源エネルギー循環研究室 Laboratory of Resource and Energy Cycles
准教授 Associate Professor	山崎　渉 YAMAZAKI, Wataru	航空流体工学研究室 Computational Fluid Dynamics Laboratory

(3)材料技学講座　Gigaku Materials group

職　名	氏　名	研　究　室　等
教　授 Professor	小林　高臣 KOBAYASHI, Takaomi	バイオサステナブル・環境材料工学研究室 Biosustainable Environmental Materials Engineering
教　授 Professor	中山　忠親 NAKAYAMA, Tadachika	環境・プロセスデザイン研究室 Environment and Process Design Laboratory
准教授 Associate Professor	大沼　清 OHNUMA, Kiyoshi	システム幹細胞工学研究室 Laboratory for Stem Cell tissue Engineering

大学院工学研究科修士課程　専攻・講座名 Research Areas of Master's Program

課 程 Course	専 攻 名 Fields of Study	講 座 名 Research Areas
修士課程 Master's Program	機械創造工学専攻 Mechanical Engineering	機械情報・制御工学講座 Information and Control Engineering
		設計・生産工学講座 Design and Production Engineering
		熱・流体工学講座 Heat and Fluid Engineering
		材料システム工学講座 Material Science and Engineering
		創未来テクノロジー講座 Innovative Interdisciplinary Mechanical Engineering
	電気電子情報工学専攻 Electrical, Electronics and Information Engineering	電気エネルギーシステム・制御工学講座 Electric Energy System and Control Engineering
		電子デバイス・フォトニクス工学講座 Electronic Devices and Photonics Engineering
		情報通信制御システム工学講座 Information, Telecommunication and Control Systems
	物質材料工学専攻 Materials Science and Technology	物質機能工学講座 Materials Function Engineering
		材料設計工学講座 Materials Design Engineering
		エネルギー・環境材料工学講座 Energy and Environment Materials Engineering
		バイオ複合材料工学講座 Biointeractive and Bioinspired Materials Engineering
	環境社会基盤工学専攻 Civil and Environmental Engineering	社会基盤デザイン講座 Infrastructure Design
		社会基盤マネジメント講座 Infrastructure Management
		防災システム講座 Disaster Prevention Systems
		環境マネジメント講座 Environment Management
	生物機能工学専攻 Bioengineering	生物生産工学講座 Bioproduction Engineering
		生物システム工学講座 Biosystems Engineering
		生物環境工学講座 Environmental Bioengineering
		生物材料工学講座 Biomaterials Engineering
	情報・経営システム工学専攻 Information and Management Systems Engineering	ヒューマン情報学講座 Human Informatics
		経営システム学講座 Management Systems
		ソーシャル情報システム講座 Social Information Systems
	原子力システム安全工学専攻 Nuclear System Safety Engineering	安全技術講座 Safety Technology
		安全マネジメント講座 Safety Management
		先端エネルギー工学講座 Advanced Energy Engineering

大学院工学研究科５年一貫制博士課程　専攻・講座名
Research Areas of 5-year Integrated Doctoral Program

課 程 Course	専 攻 名 Fields of Study	講 座 名 Research Areas
５年一貫制博士課程 5-year Integrated Doctoral Program	技術科学イノベーション専攻 Science of Technology Innovation	エネルギー技学講座 GIGAKU Energy
		環境技学講座 GIGAKU Environmental
		材料技学講座 GIGAKU Materials

長岡技術科学大学
Nagaoka University of Technology

〒940－2188
新潟県長岡市上富岡町 1603－1
長岡技術科学大学　学務部入試課
TEL 0258-47-9271・9273　Fax 0258-47-9070

Division of Admissions
Nagaoka University of Technology
1603-1 Kamitomioka, Nagaoka,
Niigata 940-2188, JAPAN
Phone +81-258-47-9271, 9273
Fax +81-258-47-9070
E-mail:nyushigroup@jcom.nagaokaut.ac.jp
URL: http://www.nagaokaut.ac.jp

平成２９年４月１日現在