Information of the Researchers

Main Research Themes 2019

Faculty of Environmental Engineering and
Graduate School of Environmental Engineering, The University of Kitakyushu

Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology

Graduate School of Information, Production and Systems, Waseda University

Fukuoka University Graduate School of Engineering

Fukuoka Research Commercialization Center for Recycling Systems

KITAKYUSHU SCIENCE AND RESEARCH PARK

You can see researchers information with
“the Kitakyushu Science and Research Park researchers information search system” by input of professional affiliation or name.

The access site is as follows,
http://fais.ksrp.or.jp/05kenkyusha/srch_e.asp

Kitakyushu Foundation for the Advancement of Industry, Science and Technology
FAIS

Faculty of Environmental Engineering and Graduate School of Environmental Engineering,
The University of Kitakyushu
TEL +81-93/695-3310　U R L http://www.kitakyu-u.ac.jp/env/
FAX +81-93/695-3368　E-mail admin-sec@kitakyu-u.ac.jp

Position	Name	Main Research Themes
Department of Chemical and Environmental Engineering		
Chemical Processes		
Professor	Kenji Asami	Development of Novel Processes for the Production of Synthetic Clean Fuels and their Utilization
Professor	Xiao-Hong Li	1. Woody biomass to syngas at lower temperature 2. The synthesis of super clean diesel fuel (Fischer-Tropsch synthesis) 3. The synthesis of gasoline 4. The synthesis of LPG 5. Eggshell catalyst
Professor	Kazuharu Yoshizuka	1. Lithium recovery from various resources 2. Recycle system of rare metals from various wastes 3. Removal system of arsenic and boron from various underground waters
Professor	Syouhei Nishihama	1. Separation and recovery process of rare metals from waste materials. 2. Removal process of toxic compounds in water environment.
Associate Professor	Fumiaki Amano	1. Study on photocatalysis and photoelectrochemistry 2. Development of photoenergy conversion systems and materials
Advanced Materials		
Professor	Isamu Akiba	1. Synthesis, Properties and Structures of Organic Polymers 2. Mesomorphic Phase Formation of Multicomponent Polymer Materials
Professor	Seung-Woo Lee	1. Nano-structured materials 2. Fabrication and application of chemical sensors 3. Analysis of disease odors
Professor	Katsutoshi Yamamoto	1. Synthesis and application of new structures of porous materials 2. Development of new synthesis routes for porous materials 3. Development of catalysts for bio-fuel synthesis
Associate Professor	Takuya Suzuki	1. Development of nobel oxide photo catalyst 2. Development of enviromental device using optical fiber and visible light
Associate Professor	Hiroyuki Imai	1. Development of novel catalysts for application to catalytic reaction processes 2. Synthesis and functionalization of porous materials as a solid catalyst in processes of effective utilization of petrolium resources and production of chemicals from non-petrolium resources
Environmental Processes		
Professor	You Ito	1. Remediation of soil contamination 2. Monitoring on CO_2 geological storage 3. Application technology of solar heat storage system
Professor	Hitoshi Ohya	Development of recycling technology and its system design
Professor	Hidenari Yasui	1. Activated Sludge Population Dynamics 2. Anaerobic Digestion 3. Nutrient Removal and Recovery 4. Pretreatment of Industrial Wastewaters
Professor	Masahide Aikawa	Atmospheric Science(Acid Deposition (Acid Rain, Acid Fog), Air Pollution(Gaseous compounds, Particulate matter))
Associate Professor	Mitsuharu Terashima	1. Hydrodynamics in waste water treatment plant 2. Precipitation of inorganics and bio-fauling in water system
Department of Mechanical Systems Engineering		
Energy Systems		
Professor	Masaaki Izumi	1. Study on Improvement of Performance and Endurance of Solid Oxide Fuel Cells 2. Study on Inspection and Diagnosis for Fuel Cell Performance 3. Study on Manufacturing of Fuel Cells by 3D Printing Technique
Professor	Yoshiaki Miyazato	1. Measurements of Shock Train Oscillations by High-Speed Mach-Zehnder Inteferograms 2. Three-Dimensional Density Measurements in Supersonic Jets Using Tomographic Rainbow Schlieren 3. RANS Simulations of Pseudo-Shock Waves in Scramjet Engines
Professor	Sadami Yoshiyama	1. Development of Combustion Diagnostics Method for Production SI Engine Using Ion Sensor 2. Measurement and Modeling of Turbulent Premixed Flame in Internal Combustion Engine 3. Development of Waste Heat Recovery System for Reciprocting Internal Combustion Engines
Professor	Koichi Inoue	1. Electronics cooling 2. Condensation heat transfer on a large tube bank 3. Heat spreader 4. Internal natural convection
Associate Professor	Shinichirou Nakao	1. Research on applying non-contact measurement techniques to compressible flow fields. 2. Research on methods to soup up small size wind turbines.
Design and Manufacturing System		
Professor	Takanori Kiyota	1. Study on Mechanical System Control Method based on Inherently Safe Design 2. Development and Application of Power Assist Systems 3. Study on Safe and High-Performance Control of Pneumatic Systems
Professor	Nobuhiro Okada	1. 3D visual measurement 2. Robotics 3. System engineering
Associate Professor	Takumi Sasaki	1. Development of Nonlinear Vibration Isolator 2. Development of Vibration Analysis Method for Large Scale Systems 3. Development of Vibration Control Device using MR Fluid
Associate Professor	Changhee Cho	Study on the Wear of Ultra-High Molecular Weight Polyethylene for Artificial Joints
Associate Professor	Hiroshi Murakami	1. Development of a System for 3-D Micro Metrology Using an Optical Fiber Probe 2. Study on an intelligent machine tool 3. Development of a high-speed air turbine microspindle for monitoring machining processes
Associate Professor	Hiroki Cho	1. Research for performance improvement of shape memory alloy 2. Research and development of actuator and medical equipment using shape memory alloy 3. Research and development of the heat-engine using shape memory alloy
Lecturer	Takeshi Miyaguni	1. Development of small wind turbine with high efficiency and high selfstart ability 2. Study on waste collection system of a waste cleaning ship
Lecturer	Takuya Ikeda	1. Sparse modeling 2. Optimal control 3. Multi-agent system
Department of Information Systems Engineering		
Signal Processing		
Professor	Masahiro Okuda	Multimedia Processing, Signal Processing
Associate Professor	Seisuke Kyochi	My research is fundamental signal processing technique for efficient audio/image/video acquisition, analysis, compression and transmission.
Systems Control		
Professor	Lianming Sun	1. Modeling and system design for control and communication systems 2. Adaptive signal processing
Professor	Kazumi Horiguchi	Systems and Control Theory
Lecturer	Yusuke Fujimoto	My research interests include 1. identification of linear or nonlinear systems, 2. data-driven controller designs, and 3. applications to practical systems.
Networking		
Associate Professor	Hiroyuki Koga	1. Computer Communication Networks 2. Internet Architecture

Security		
Professor	Satoshi Uehara	Sequence design for communications applications
Professor	Takashi Satoh	1. Information security 2. Future communication networks
Associate Professor	Yasushi Yamazaki	1. Biometrics 2. Information security 3. Pattern recognition
Integrated Systems		
Professor	Shigetoshi Nakatake	1. VLSI Physical Design 2. Mixed Signal LSI Design 3. Sensor System Integration 4. Analog Reconfigurable Device
Professor	Makoto Sugihara	1. VLSI design technique 2. Embedded system design 3. IT system design for advanced driver assistance
Associate Professor	Yasuhiro Takashima	Algorithms to VLSI system layout design
Communications and Sensing		
Professor	Akihiro Kajiwara	1. Radio communication systems 2. Microwave/Millimeter wave propagation 3. Automotive radar and health-care radio sensor
Software		
Associate Professor	Susumu Yamazaki	1. System implementation to solve issues of information quantity explosion including the Elixir programming language 2. Social Implementation to realize the future of regions, environment and the world with regional industries and entrepreneurs 3. Application of mathematical approaches to social implementation design 4. Gentle AI social implementation that can cooperate and co-work with human
Biomedical Engineering and Human Information Processing		
Professor	Masayuki Sato	Psychophysics on human visual perception, especially on depth perception and visual stability during eye movements
Lecturer	Yasuaki Tamada	1. Proposition of multi-modal stimulation method for 3D or VR contents 2. Development of applications for visual function diagnosis
Department of Architecture		
Structure and Construction		
Associate Professor	Masae Kido	Seismic Design and Frame Stability of Steel and Concrete Filled Steel Tubular Structures
Associate Professor	Kazuaki Hoki	1. Evaluation of Seismic Performance of Old Building 2. Development of Seismic Retrofit
Lecturer	Shinnosuke Fujita	Research on application of the optimization method into practical design, Development of the computational design tool based on mathematical engineering, Research on mechanical/structural characteristics of shell & spatial structures, Structural design and digital fabrication
Building Materials Design		
Professor	Koji Takasu	1. Development of cement-free concrete contributing to CO^2 reduction targets of the Paris Agreement 2. Study on modification of recycled building materials 3. Study on high performance concrete using recycled aggregate 4. Study on properties of the concrete using high volume by-products particles 5. Environmental impact assessment considered performance of building material 6. Study on analysis and test method of concrete by various analysis devices
Professor	Hidehiro Koyamada	1. Safety management in buildings 2. Hot weather concreting 3. Medium fluidity concrete 4. Properties of the concrete using by-products particles 5. Research and maintenance of existing and aged buildings 6. Sustainabule system of forest resources
Associate Professor	Hiroki Suyama	1. Performance of concrete containing by-product powder 2. Pore structure in concrete 3. Composition of different concrete 4. New building material made from by-product
Building Environment and Energy System		
Executive Director, Vice-president, Professor	Yuji Ryu	1. Natural energy utilization technologies in buildings 2. Analysis on thermal storage HVAC systems 3. Field study on Sick House in the Kyushu District
Professor	Weijun Gao	1. Architectural/urban environment planning/design 2. Building/city energy and resource planning 3. Study on urban environment in Asia
Professor	Yasuyuki Shiraishi	1. Advanced air-conditioning system to realize energy saving and comfort 2. Development of performance prediction method of various passive environmental controll systems 3. Environmental control engineering for large scale building based on CFD analysis
Lecturer	Shintaro Ando	1. Effect of thermal environment on health (e.g. blood pressure, physical activity, sleep quality, and body temperature) 2. Effect of community environment on physical activity
Architectural Design		
Professor	Hiroatsu Fukuda	1. Architectural Design 2. Design of Recyclable Houses, Low-Energy Houses, Recycle of Construction Materials 3. High-Rise Residences 4. Urban Environment, Urban Design, Compact City 5. New construction methodes of Japanese ceder 6. Histrical Architecture
Professor	Bart Julien Dewancker	1. Research on urban planning and citizen involvement in urban planning 2. Research on Sustainable Architecture and Urban Design 3. Landscape planning, green buildings
Professor	Takao Akagawa	1. Architectural Design 2. Urban Design 3. Urban Planning
Associate Professor	Noriko Okamoto	1. Prediction of sound field in rooms 2. Measurement of acoustic properties of materials 3. Development of sound absorbers 4. Bioacoustics 5. Acoustical environment in public spaces
Department of Life and Environment Engineering		
Life Science & Biomaterials		
Dean, Professor	Kazuya Uezu	1. Biosensors utilizing the structures and functions of living organisms 2. Biomaterials for capturing the intracellular messengers 3. Design of functional materials with computational chemistry 4. Environmentally-friendly firefighting foam for forest fire
Professor	Kohji Nakazawa	1. Development of cell array 2. Development of sensing technology of cell functions 3. Study of tissue engineering using cultured cells
Associate Professor	Takaaki Isoda	Development of a new bio sensor and the application, 1: Cancer tests, 2: Salivary diagnosis, 3: Food freshness assessment, 4: Bio-IoT (bio sensor network)
Associate Professor	Shinichi Mochizuki	1. Biopolymer 2. Biomaterial 3. Immunotherapy
Biological and Ecological Engineering		
Professor	Akira Haraguchi	1. Evaluation of the soil - water - plants interaction in the terrestrial and wetland ecosystems and the rehabilitation of the damaged ecosystems 2. Eco-physiological study on aquatic plants and their function on environmental protection 3. Chemical process of limnological ecosystems with special reference to redox reaction and decomposition of organic materials
Professor	Hiroshi Morita	1. Study on physiological function of IGUSA; 2. Bio-control science of mold spores and mites; 3. Study on novel co-culture Koji for Sake brewing; 4. Development of submerged culture system for brewing

Professor	Tomonori Kawano	1. Plant Biology and Microbiology 2. Cell Signaling 3. Redox biochemistry 4. Environmental Science and Technology 5. Metal eco-toxicity 6. Biosensing and microbiorobotics 7. Fire-fighting technologies and bioengineering 8. Science history 9. Blood biology and biochemistry 10. Fish bioengineering
Associate Professor	Takanori Kihara	1. Biomineralization in our body 2. Phenotypic regulation of smooth muscle cells 3. Tissue formation with stem cells
Associate Professor	Katsunori Yanagawa	Microbial distribution, community composition and biogeochemical cycles in the geobiosphere including extreme environment.
Environmental Management		
Professor	Tohru Futawatari	Regional environmental management
Professor	Atsushi Nogami	1. Computer simulation for environmental assessment 2. Development of atmospheric microparticles sensing system
Professor	Toru Matsumoto	1. Sound material-cycle society and industrial symbiosis 2. Urban environmental management in Asia 3. Servicing as sustainable business models 4. Environmentally conscious life style
Professor	Takaaki Kato	1. Economic evaluation of environmental and energy policy 2. Evaluation and management of risk

Institute of Environmental Science and Technology,The University of Kitakyushu

TEL +81-93/695-3311 U R L http://office.env.kitakyu-u.ac.jp/kangiken/
FAX +81-93/695-3368

Position	Name	Main Research Themes
Professor	Kazuo Sakurai	1. Polymer Physics 2. Biopolymer 3. Biochemistry
Professor	Tsuruo Matsuda	Biomedeical Eng., and so on. Magnetic and Electrical stimulation of the Human Brain, peripheral nervas system and Blood flow system.
Professor	Masaaki Nagahara	My research interests are fundamental theory of automatic control and artificial intelligence, and their applications to vehicles, drones, power systems, and acoustics.
Professor	Kyozo Kanamoto	1. Research on characterization, improvement and monitoring in reliability of power electronics modules. 2. Research on cooling technology for power electronics modules.
Specially Appointed Professor	Kiwao Kadokami	1. Development of automated identification and quantification system using database (AIQS) for GC-MS and LC-MS 2. Development of analytical methods for micro-pollutants 3. Environmental survey on micro-pollutants and risk evaluation
Lecturer	Atsushi Fujiyama	Study on energy management systems Study on using information technology in the environmental field

Center for Fundamental Education, Hibikino Campus, The University of Kitakyushu

Position	Name	Main Research Themes
English Education		
Professor	Tetsuya Kashiwagi	1. Learner Corpus Compilation and Analysis for Pedagogical Application in Mitigating L1 Interference 2. Grammar Teaching as a Clue to Output Pedagogy 3. Contrastive Rhetoric Study in Variation and Context
Associate Professor	Kiyomi Okamoto	1.Extensive reading 2. English teaching at companies 3. Development of instructional models 4. e-learning 5. Corpus linguistics 6. Vocabulary acquisition 7. English for specific purposes
Associate Professor	Masanobu Ueda	A quantitative and qualitive analysis of verb semantics and construtions
Associate Professor	Eiichiro Tsutsui	1. English education 2. EFL with information and communication technology 3. Creating web apps for Japanese learners of English 4. Analyzing computer-mediated communication data
Associate Professor	Roger J.A. Prior	Translation studies, particularly the potential for translating jokes and humour
Associate Professor	Anne Marie Crescini	1. Research on the Effectiveness of Using Study Abroad as One Way to Improve Language Ability and Increase Cultural Awareness 2. Research on the Relationship between Foreign loanwords and the English Pronunciation of Native Japanese Speakers
Lecturer	Naoki Kiyama	Multi-factorial analysis on the English Quotative Constructions
Japanese Education		
Professor	Ryusuke Ikeda	1. Japanese for Specific Purpose 2. Analysis of The Features of Language Adjustment of Japanese Native Speakers 3. Development of Learning Resouses for International Students Majoring in Environmental Engineering 4. Research on Academic Writing Education in Japanese
Liberal Arts		
Professor	Tsukasa Morimoto	1. Philosophy of Life (Hermeneutics,Evolutionary Epistemology,Problem-Solving Thinking) 2. Environmental Ethics
Professor	Hiroyuki Tsujii	Management for Sustainability 1. Corporate Environmental Management 2. Engineering Ethics Education 3. Business Education
Associate Professor	Miyuki Nakaoka	I am engaged in a comparative study of urban mechanisms and urban structures in Asian countries, focusing especially on China. I am also interested in the differences between the Japanese economy during its rapid growth period and the present Chinese economy.

Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology

TEL +81-93/695-6000 U R L http://www.lsse.kyutech.ac.jp/
FAX +81-93/695-6008 E-mail sei-soumu@jimu.kyutech.ac.jp

Position	Name	Main Research Themes
Department of Biological Functions Engineering		
Green Electronics		
Dean, Professor	Tsuyoshi Hanamoto	Development of human-friendly and environmentally friendly electrical power conversion systems and application for motor control systems.
Professor	Ichiro OMURA	Development of ultimate power semiconductor devices aimed at achieving extreme energy conservation, development of integrated power electronics to realize micro-miniaturization, development of real-time monitoring technology to detect failure causes of power semiconductor devices, and research of power electronics control and its integration with the digital network.
Professor	Tingli Ma	1. Development of functional nano materials 2. Organic and inorganic molecular devices 3. Fuel Cell 4. Na and Li ion battery 5. Supercapacitor
Associate Professor	PANDEY Shyam Sdhir	1. Functional organic dyes and organic conjugated polymers 2. Development of next generation solar cells 3. Environment friendly low cost organic electronic devices 4. Development of high sensitivity biosensors
Associate Professor	Kazunori Hasegawa	Research on highly-integrated and reliable power electronic converters
Specially Appointed Associate Professor	Masanori Tukuda	Research on power semiconductor devices for renewable energy and next-generation traffic, and high reliability technology at the system level to overcome harsh environment including ocean and desert

Biological Mechanics		
Professor	Hiroshi Ishiguro	1. Biothermal engineering and biothermal technology 2. Biomedical engineering 3. Investigation and application of bioheat and mass transfer in living systems (Biotransport) 4. Measurement, Mathematical modeling, Design of process and device
Professor	Masaaki Tamagawa	1. Drug Delivery Systems by Shock Waves 2. Bioprocess by Shock Waves 3. Prediction of Haemolysis and Thrombus in Blood Pumps 4. Application to tissue engineering by shock waves 5. Development of shock wave generator 6. Multi-fractal analysis for branch flow of blood pipe using medical image data 7. Water Treatment Systems by shock waves and cavitation flows
Professor	Takashi Yasuda	1. Cell stimulation devices for regenerative medicine and drug discovery 2. Microliquid handling using wettability control of device surfaces 3. Blood plasma extraction devices for point-of-care testing 4. Electrochemical bio-sensing for medical diagnosis 5. Derivation and separation of liposomes from human cells 6. Nanowire formation using DNA metallization
Professor	Hiroshi Yamada	1. Mechanical evaulation of human vascular diseases and its application to medical treatment 2. Experimenal and numerical studies to delay pressure ulcers, mechanical evaluation of pressure redistribution mattresses 3. Computer simulation to improve the tooth repair technique
Professor	Toshiki Miyazaki	Development of functional biomaterials for tissue repairing
Associate Professor	Kazuto Takashima	1. Development of soft tactile sensor 2. Development of device placement simulator for endovascular treatment 3. Applications of shape-memory polymer and artificial muscle to human-interactive robot
Associate Professor	Satoshi Iikubo	1. Development of the calculation techniques for the materials design 2. Hydrogen diffusion behavior in the steal 3. Battery materials (solid electrolyte, electrode) 4. Perovskite solar cell
Associate Professor	Tomohiro KAWAHARA	Ultra-High-Speed Robotics and Its Biomedical Applications
Associate Professor	Momoko Kumemura	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.
Environmentally-Conscious Chemistry and Bioengineering		
Professor	Yoshihito Shirai	1. Development of rural area by recylcing of not used materials and energy and resulting in yeilding useful human esources 2. Zero discharge from Malaysia palm oil industry and creation of green industries by using excess biomass
Professor	Tetsuya Haruyama	We have developed research projects to elucidate or apply specific functions of various interfaces. We are working on research into "Resources for global warming gas", "Resources for atmospheric components", "Oxidation and decomposition processes with oxygen and water", etc. by unique chemical reactions that apply interface characteristics. Our HARUYAMA laboratory website introduces not only academic achievements but also commercialized achievements.
Associate Professor	Tamaki Kato	Study on the functioning structures of biopolymers and the building superstructures
Associate Professor	Minato Wakisaka	Sustainable Utilization of Biomass
Associate Professor	Toshinari MAEDA	1. Microbial biodegradation of environmental pollutants 2. Bioenergy production and low-carbon technology by bacteria 3. Reduction and recycling of excess sludge to construct environmentally-friendly technology 4. Probiotics for periodontal pathogens 5. New anti-microbial technologies by lytic bacteria
Associate Professor	Shinya Ikeno	1.Development of novel functional materials by fusion technology between biological functional molecules and nanomaterials 2. Boost protein expression system by co-expression of functional peptide for high efficiency technology of bioprocess 3.Improving the abiotic stress tolerance for plants and microorganisms by expression of functional peptides
Assistant Professor	Yoshiyuki Takatsuji	Development of electrode for efficient conversion between energy and substance
Physiological and Biochemical Adaptation		
Associate Professor	Naoya Murakami	1. Development of photo-functional nanomaterials for photocatalyst and photovoltaic cell 2. Spectroscopic analysis for elucidation of photoreaction mechanism over semiconductors
Green Technology		
Visiting Professor	Iwao Sasaki	Research on the optimization of the control mechanisms for mechatronics systems and human-friendly supporting devices.
Visiting Professor	Hideki Honda	Realization of high-performance Mechatronics control system.
Visiting Professor	Toru KATO	Development of the electrochemical energy devices such as the solid oxide fuel cells (SOFC), the high temperature steam electrolysis cells (HTSE) . Study of evaluation and the simulation techniques for the electrochemical energy devices and systems.
Collaborative Research Laboratory		
Specially Appointed Professor	Kouichi Nakano	1. Physical properties of metal matrix FGM 2. Static tensile and fatigue properties of Cu/Mo composite materials 3. Mechanical properties, corrosion resistance and cytocompatibility of tungsten short fiber reinforced Ti-6Al-4V alloy 4. Fatigue properties of fillet welded joints in piping system 5. Evaluation of diffusion bonding strength between molybdenum and cupper 6. Study on microbially influenced corrosion
Specially Appointed Professor	Hiroshi KANETA	Characterization and control of defect state of semiconductor wafers for the power devices. Research and development are made for new technique and apparatus to evaluate the bulk lifetime of the free carrier in the wafer. Development of a novel method for lifetime measurement is now in progress based on the original dual-laser-beam technique.
Department of Human Intelligence Systems		
Human Intelligence and Machines		
Professor	Takashi Morie	1. VLSI design for brain-like computers and its application to image recognition systems 2. Information processing circuits using nanostructures
Professor	Kazuo Ishii	1. Robotics 2. Intelligent Mobile Robot 3. Control System based on Neural Network
Professor	Hirofumi Tanaka	We try to decrease power consumption of computer by developing device mimicing biosignals. 1. Brain signal reproducing using nanocarbon network devices 2. Development of metallic and magnetic nanoparticles utilized for brain type computing 3. Haptic sensor for robot and artificial skin 4. Development of low dimensional nanomaterials for next generation electric wiring
Professor	Chikamune Wada	1. Research on human characteristics in order to develop assistive devices for the disabled 2. Application of the results to human interface, virtual reality and robotics
Associate Professor	Hiroyuki Miyamoto	Generation of arm movement trajectory based on minimization principle, Robot learning by watching
Associate Professor	Hakaru Tamukoh	A brain-like computer system laboratory aims to realize a brain-like computer and its application to human-friendly systems. We integrate state-of-the-art devices, such as field programmable gate arrays, many-core central processing units, and Internet, to achieve high performance, low-power consumption, and flexible processing. To enable a brain-like computer, we integrate it with an artificial model of learning and growing structures. Furthermore, we widely apply the brain-like computer to an autonomous robot for supporting daily life and a human-friendly interface system including intelligent image processing and recognition.
Associate Professor	Shinsuke Yasukawa	Development of living creature observation / manipulation technique using robot, Development of bio-inspired sensor and embedded system, Trials of their techniques in field, etc…

Intelligence Systems and Emergent Design		
Professor	Tetsuo Furukawa	1. Multi-perspective big data analysis and visualization methods. 2. Learning theory of finding out essence from experiences for brain-like intelligence. 3. Developoing brain-like artificial intelligence which learns oneself through interaction with others. 4. Theoretical study on statistical learning, manifold learning.
Professor	Tomohiro Shibata	Basic and applied research, as well as social implementation on Robotics, behavioral neuroscience, and smart life care. Other keywords include machine learning, artificial intelligence, biological signal measurement, soft robotics, medical care, etc.
Associate Professor	Keiichi Horio	1. Measurement and analysis of human behavior and internal state 2. Modeling and analysis of influence of human internal state on behavior and performance 3. Development of intelligent information processing method that imitates expert reasoning mechanism 4. Application of image processing, signal processing and optimization to real problems.
Associate Professor	Hiroaki Wagatsuma	1. Bio-medical signal processing, efficient sparse coding and the applications 2. Artificial intelligence, system design, rehabilitation supports inspired from non-linear dynamics in the brain-body-environment coordination 3. Sport dynamics and synergy analysis based on mathematical methods focusing on the non-linearity 4. Computational neuroscience based on theta phase coding and brain-inspired robotics
Associate Professor	Kaori Yoshida	1. Human-Computer Interaction 2. Kansei Information Processing 3. Visual Perception
Associate Professor	Sozo Inoue	<Human Activities in the World and Curing Future Diseases>We research technologies to recognize human activities from sensor data gathered from smartphones/devices and utilize them for various healthcare services. We also cultivate AI while gathering medical and nursing care big data.
Associate Professor	Takayuki Osa	We are working on imitation and reinforcement learning for robotic applications such as motion planning and control. We propose algorithms for trajectory planning or system optimization based on a machine learning approach.
Associate Professor	Shuuhei Ikemoto	His research interests includes biologically inspired robotics and algorithms and physical human-robot interaction.
Assistant Professor	Hiroshi Sho	1. Dynamic model selection based on evolutionary computation 2. Data interpretation by inverse optimization 3. Technical development for multi-objective optimization 4. Swarm intelligence
Assistant Professor	Hideki Ishibashi	1. Theory construction for meta-learning. 2. Algorithm development for general rule estimation and meta knowledge discovery based on meta-learning theory. 3. Applying to cognitive science such as mathematical modeling of self-understanding and cognitive viewpoint analysis.
Human Interaction and Brain Functions		
Professor	Kiyohisa Natsume	1. Electrophysiological and computer simulation studies on the role of brain rhythm or neuronal oscillation in the information processing 2. Glial [Ca^{2}+]i oscillation and wave 3. Brain Simulator 4. E-learning system for English rhythm using Brain Computer Interface
Professor	Doosub JAHNG	Occupational Health Marketing, Health Resources Management, Team Management, Communication
Associate Professor	Katsumi Tateno	1. Neurodynamics 2. Chemical sensor array inspired by mouse taste buds
Associate Professor	Yoshitaka Otsubo	Research for taste transduction mechanisms
Human Technology		
Visiting Associate Professor	Makoto Kato	Processing of visual information and eye movement control in human brain
Visiting Professor	Satoru Miyauchi	Non-invasive measurements of human brain activity, Psychophysiology
Visiting Professor	Hiroshi NAKAJIMA	Research and development on algorithms of intelligent systems by studying soft computing, statistical analysis, and social intelligence in human-machine collaboration with application studies.
Visiting Professor	Takayuki MATSUO	1. Biomimetic robot 2. Embedded system

Kyushu Institute of Technology Organization for Promotion of Research and innovation

TEL +81-93/695-6150 URL http://www.ccr.kyutech.ac.jp/
FAX +81-93/695-6151

Position	Name	Main Research Themes
Professor	Yasushi Sato	1. Controlling of Device Installed Artificial Intelligence 2. Sound Compression and Noise Removal by Sound Signal Process 3. Noise Removal by Array microphone 4. High Quality Sound and Lossless Compression by Sound Signal Process 5. Interface by Dialogue System 6. High Quality image and Search System by image Processing Technology 7. Development of Microwave Parts Using Dielectric
Associate Professor	Yoshito Ando	Fabrication of functional materials through up-graded recycle of biomass and waste materials aiming to be sustaibable materials society 1.Development of sutainable bioplastics 2.Nano-fibrization of unutilized agriculural wastes 3.Developments of high-performanced fuctional material made form biomass/industrial waste 4.Functional materialized biomass and industrial waste through surface modification

Kyushu Institute of Technology Frontier Research Academy for Young Researchers

TEL +81-93/884-3510 URL http://www.ccr.kyutech.ac.jp/ttacademy/
FAX +81-93/884-3020

Position	Name	Main Research Themes
Assistant Professor	Yuuya Nisida	1. Fishery resource survey using Autonomous 2. Underwater VehicleUnderwater 3D scanner using structured light method 3. Ultra-wide area seafloor survey using unmanned vehicles

Graduate School of Information, Production and Systems, Waseda University
TEL +81-93/692-5017　U R L https://www.waseda.jp/fsci/gips/
FAX +81-93/692-5021　E-mail ips-offce@list.waseda.jp

Position	Name	Main Research Themes
Information Architecture Field		
Professor	Shigeru Fujimura	1. Production Planning and Scheduling 2. Production Management 3. Project Management 4. Business Process Modeling
Professor	Jinglu HU	Neurocomputing Systems and their Applications to Identification and Control of Nonlinear Systems
Professor	Mizuho Iwaihara	1. Database Query Processing 2. Web Information Systems 3. Web Mining 4. XML Document Processin 5. Security and Privacy
Professor	Seiichiro Kamata	1. Image Processing 2. Pattern Recognition and Computer Vision 3. Applications of Space-filling curves 4. Image & Video Retrieval 5. Visual Information Processing
Professor	Keiichi Koyanagi	For studying 'Thinking Networks', we develop 'Bottom-up Intelligent Networks', 'Streaming Grid Computing' and 'Global IP Network Management'
Professor	LEPAGE, Yves	1. Natural language processing 2. Artificial intelligence 3. Information theory 4. Example-based and statistical machine translation 5. Study of analogy and application to morphology, syntax and semantics 6. Use of analogy in machine translation and paraphrasing 7. Multilingual word alignement
Professor	Takafumi MATSUMARU	Bio-Robotics & Human-Mechatronics 1. Remote Operation System of Mobile Robot 2. Preliminary Announcement of Mobile Robot's Intention 3. Form and Movement of Human Synergetic Robot 4. Interaction with Human Symbiotic Robot 5. Measurement and Analysis of Human Motion and Behavior 6. Systematic Learning on Mechatronics
Professor	Makoto Tsubokawa	1. Optical network architecture (Survivable network architecture, Maintenance techniques, Transmission systems) 2. Sensing technologies (Fiber-optic sensors, Optical measurement techniques) 3. Optical waveguide design (Optical fiber textile, Light concentrator, Nano waveguide devices)
Professor	Osamu Yoshie	1. Global machine diagnosis service using the Internet technologies 2. Environmental Information Processing 3. IoT application to manufacturing 4. Analysis of consensus building 5. Knowledge logistics
Professor	Jiro Tanaka	1. Fusion of the real world and the virtual world 2. Augmented reality 3. Ubiquitous computing 4. Remote communication support
Lecturer	Kenjiro Sugimoto	Image processing and pattern recognition based on fast and accurate digital filtering algorithms
Production Systems Field		
Professor	Hiroshi Inujima	Plant diagnosis technologies
Professor	Hee-Hyol Lee	1. Development of Binary Power Generation Plant 2. Bayesian Network and Production & Inventory Control 3. Cellular Automaton and Traffic Flow Modeling 4. Traffic Signal Control 5. Cooperative Action Learning of Carrier Robot Swarn 6. Design of Decoupling Control System for MIMO Large-Scale Systems 7. Design of Sliding Mode Control System and Its Applications to Servo-Systems and Process Systems 8. Intelligent Control 9. Stochastic Control
Professor	Tomohiro Murata	Research on modeling, analysis and synthesis of Discrete Event Systems and its application for design
Professor	Harutoshi Ogai	1. Seel process modeling, Simulator building and Control system design 2. Operation prediction and Control of Waste combuster 3. Microorganism application for environment control 4. Automobile Engine Control, Autonomous Driving Control 5. Bridge diagnosis technique using sensor network 6. Office lighting control using sensor network 7. Pope inspection robot using wireless communication 8. Modeling of labor fatigue and Medical Imformation Processing
Professor	Eiichiro Tanaka	1. Automatic Remote Diagnosis of Gear Driving System Using a Small Laser Sensor 2. Development of a Walking Assistance Device for Gait Training of Patients and Promotion Exercise of the Elderly 3. Development of Various Assistance Devices for ADL, lifting up and standing up, etc.
Dean, Professor	Kohei Tatsumi	1. Semiconductor Packaging Materials and Technologies 2. Electronics Materials 3. Microstructure in Crystalline Materials 4. Materials and technologies for energy and environment field
Associate Professor	Takeo Miyake	1. Smart contact lens using integrated circuits 2. Wearable biofuel cell using enzyme catalysts 3. H+-mediated control of biofunction with electrochemical pH modulation 4. DDS system with nanostraw membrane
Associate Professor	Shigeyuki Tateno	1. Development of fault detection and diagnosis systems for chemical plants 2. Estimation of Corrosion Rates for Corrosion Under Insulation in Petrochemical Plants 3. Wireless Communication support system for rescue actions 4. Development of on-demaid PC BTO systems
Professor	Masahide Inuishi	1. Power electronics (Conversion circuit) 2. Power semiconductor devices ① Structure design and process ② Reliability study 3. Modeling of advanced power devices for circuit simulation
Professor	Koichi Shimizu	Biomedical application of optical techniques: 1. Tranillumination imaging of animal body (Optical scattering analysis, Optical trans-body imaging, Optical CT, etc.), 2. Optical noninvasive measurement of physiological information in vivo, 3. Remote measurement and transmission of biomedical data (Optical biotelemetry, Optical body-area-network, etc.)
Lecturer	Tomonori Iizuka	1. Nano/Micro-Composite Insulator Materials for Electronics Device Packaging 2. Voltage Endurance Improvement and High Thermal Conductivity Characteristics by Nano/Micro-composite Technologies
Integrated Systems Field		
Professor	Takeshi Ikenaga	Video compression, video filter and video recognition systems
Professor	Shinji Kimura	High Level System LSI Design and Verification, Design for Testability
Professor	Hirofumi Shinohara	1. Hardware security 2. Neuro information processing 3. Energy Efficient circuits and systems
Professor	Takahiro Watanabe	1. Physical Design Automation for ASIC/PCB 2. Network-on-Chip Architecture and Routing 3. Online-Task-Placement Problem for Reconfigurable Devices 4. Processor Design
Professor	Noriyoshi Yamauchi	Wearable Body Sensor Network (WBSN)
Professor	Toshihiko Yoshimasu	1. RFIC circuit design methodologies such as power amplifiers, VCOs, filters, and so on 2. RF transistor modeling for SiGe HBTs, Si CMOS, and so on
Associate Professor	Tamio Ikehashi	Micro Electro-Mechanical Systems(MEMS) 1. MEMS Sensors(physical sensors, gas sensors, etc), 2. Actuator devices, thermal devices
Associate Professor	Takaaki Kakitsuka	Information-communication systems employing light emitting devices 1. Semiconductor lasers and light emitting devices, 2. Optical circuit design, 3. Nanophotonics, 4. Optical signal processing
Associate Professor	Kiyoto Takahata	Integration of optical devices and LSIs 1. Opto-electronic integrated circuits 2. High-speed optical transmitter/receiver modules 3. Photonic microwave/millimeter-wave devices
Professor	Takashi OHSAWA	Novel memory systems 1. Single transistor memory 2. Nonvolatile working memories 3. Distributed memory architecture 4. Cognitive computers
Lecturer	Kosuke KATAYAMA	Communication system for the next generation 1. Analysis of radio propagation 2. Design automation of MMIC 3. Theory of multiple communication

Information, Production and Systems Research Center, Waseda University

TEL +81-93/692-5396　U R L https://www.waseda.jp/fsci/ipsrc/
FAX +81-93/692-5021　E-mail ips-offce@list.waseda.jp

Position	Name	Main Research Themes
Assistant Professor	Michael Conrad MEYER	Distributed Computing 1. Network-On-Chip 2. Photonics 3. Fog-Comptuing 4. Fault-tolerance
Research Associate	RADZIKOWSKI Kacper Pawel	Speech recognition, Non-native speech recognition, Speaker recognition, Voice authentication, Natural language processing
Research Associate	Taiki TAKAMATSU	Wearable Biodevice 1. Wireless Power Trasfer 2. Conducting Polymers Application 3. Biosensing
Research Associate	Jyun-Rong ZHUANG	Hybrid assistance approach integrating physical and mental for enhanced walking. (Development of the Assistive walking device / Human emotion recognition)
Research Associate	Xun PAN	Application of computer vision in autonomous driving(road detection and white line detection)
Research Associate	Tin gyu ZHOU	A Study of Online Task Scheduling and Placement Problem on Dynamic Partial Reconfigurable Devices
Research Associate	Keiko WADA	1. Semiconductor Packaging Materials and Technologies 2. Electronics Materials 3. Microstructure in Crystalline Materials

Fukuoka University Graduate School of Engineering

TEL +81-93/695-3061　U R L http://www.fukuoka-u.ac.jp/english/
FAX +81-93/695-3047　E-mail kogaku@adm.fukuoka-u.ac.jp

Position	Name	Main Research Themes
Recycling and Eco-Technology		
Professor	Sotaro Higuchi	Municipal Solid Waste Management System
Professor	Yasuo YANAGIBASHI	Water Supply System, Odor Measurement

Fukuoka Research Commercialization Center for Recycling Systems

TEL +81-93/695-3068　U R L https://www.recycle-ken.or.jp/
FAX +81-93/695-3066　E-mail https://www.recycle-ken.or.jp/toiawase.html

Main Research Themes
◇Research and development function Studies improving social system concerning waste disposal, such as separate collection, recycling technology, are carried out synthetically by cooperating with industries, governments, universities, and citizens. ◇Practice support function Regional development and making the result of the research achieved by a joint research are supported. ◇Environmental information function Information on recycling technology and the social system are sent, and the measure of related each subject for the construction of the recycling society is supported.

【Contact】 Industry-Academia Cooperation General Center
Kitakyushu Foundation for the Advancement of Industry,Science and Technology
2-1 Hibikino,Wakamatsu-ku,Kitakyushu,808-0135,Japan
TEL +81-93/695-3006 FAX +81-93/695-3018
URL https://www.ksrp.or.jp/fais/iac/ E-mail iac@ksrp.or.jp

September 2019