

## Faculty and Research Laboratories of Science and Technology for Health Care and Medicine (2026.1.1)

Department	Title	Name	Field of Specialization
Mechanical Engineering	Professor	Satoshi II	Data Assimilation in Biological Flows / Hierarchical Integrative Mathematical Modeling / Numerical Analysis of Complex Flows
	Professor	Joon-wan KIM	ECF-Based Soft Actuators / Micro-and Nanopatterning of Biomaterials / Organ-on-a-Chip with Integrated Actuators
	Professor	Motoki SHINO	Cooperative Assist and Control in Human-Machine Systems / Intelligent Mobility / Comfort Design Based on Behavioral and Physiological Information
	Professor	Tadahiko SHINSHI	Magnetic levitation / Intestinal Ventilation Systems / Artificial Liver Perfusion Systems
	Professor	Katsuko FURUKAWA	Tissue Engineering / Mechanical Stress and Stem Cells / 3D Fabrication
	Professor	Tohru YAGI	Neural Interfaces / Human-Computer Interaction / Physiological Measurement
	Professor	Yasuko YANAGIDA	BioMEMS and Biofunctional Engineering / Bioanalysis / Micro/Nano Systems
	Associate Professor	Ishida TADASHI	Nano-Observation MEMS / Microfluidic Devices / Biomicro Devices
	Associate Professor	Toshio TAKAYAMA	Mechatronics / Medical Devices / Microfluidic Devices
	Associate Professor	Kotaro TADANO	Surgical Robotics / Human-Machine Systems / Pneumatic Systems
	Associate Professor	Takatoki YAMAMOTO	AC Nanopore Methods / Microbial and Virus Sensing / Physics-Driven Explainable Sensing AI
	Associate Professor	Takako YOSHIDA	Visuo-Haptic Multimodal Man-Machine Interfaces
	Specially Appointed Associate Professor	Hiroshi YOSHITAKE	Driver Error Modeling & Driver Behavior Assessment / Driver Assistance for Older Drivers / Intelligent Personal Mobility Vehicles
	Assistant Professor	Tetsuya YAMADA	Compact SOFC / Ceramics Processing / Reforming Catalysts
Systems and Control Engineering	Professor	Hideyuki TSUKAGOSHI	Soft Fluidic Robotics / Cardiac Surgical Robotics / Self-Propelled Catheters for Bronchial Navigation
	Professor	Motomu NAKASHIMA	Sports Dynamics Simulation / Swimming Humanoid Robots / Musculoskeletal Load Analysis
	Associate Professor	Yusuke Miyazaki	Human Biomechanical Modeling / Ambient Sensing for Physical Function / Injury Prediction Modeling
Electrical and Electronic Engineering	Professor	Akitoshi OKINO	Atmospheric Plasma Engineering / Plasma Medicine / Plasma Spectrochemistry
	Professor	Safumi SUZUKI	Terahertz Oscillator Devices / Terahertz Sensors / Terahertz Biomedical Applications
	Professor	Takashi TOKUDA	Electronic Circuits / Implantable Devices / IoT
	Professor	Kentaro NAKAMURA	Ultrasonic Droplet Manipulation / Photoacoustic Imaging / Optical Fiber Sensors
	Assistant Professor	Marie TABARU	Soil Morphology Visualization / Wearable Medical Ultrasound / Wave Propagation Modeling
Information and Communications Engineering	Professor	Takashi OBI	Medical Information Security / Healthcare Data Analytics / Medical Authentication Systems
	Professor	Hirohiko KANEKO	Visual Psychophysics / Spatial Perception / Eye Movements
	Professor	Yasuharu KOIKE	Musculoskeletal Modeling / Motor Control and Learning / Cognitive Mechanisms
	Professor	Kenji SUZUKI	Small-Data Deep Learning / AI-Aided Diagnosis / Virtual AI Imaging
	Professor	Konstantinos SLAVAKIS	Signal Processing / Machine Learning
	Professor	Masahiro YAMAGUCHI	Hyperspectral Imaging / AI for Digital Pathology / Holography
	Associate Professor	Takehiro NAGAI	Visual Aesthetic Value / Color and Material Perception / Visual Brain Functions
	Associate Professor	Kotaro FUNAKOSHI	Natural Language Processing / Multimodal Dialogue Systems / Human-Machine Interaction
	Assistant Professor	Ze JIN	Deep Learning / Medical Image Analysis / Computer-Aided Diagnosis
	Assistant Professor	Kyohei SUZUKI	Signal processing / Sparse modeling / Optimization
	Assistant Professor	Supat SAETIA	Brain Network Connectivity Estimation / fMRI Analysis / Causal Modeling of Brain Activity
	Assistant Professor	Saori TAKEYAMA	Hyperspectral Image Restoration-Reconstruction / Adaptive Spectral Imaging / High-Resolution Microscopic Spectral Imaging
	Assistant Professor	Rumi HISAKATA	Visual Information Processing / Spatial Perception / Psychophysical Experiments
Materials Science and Engineering	Professor	Toshiyuki IKOMA	Scaffolding Materials for Regenerative Medicine / Materials for Cancer Therapy / Biomimetic Materials
	Professor	Yoshitaka KITAMOTO	Magnetic Medical Technologies / Protein-Immobilized Magnetic Nanostructures / Magnetic Liposome Sensing
	Professor	Chie KOJIMA	Nanomedicine for Cancer Therapy and Diagnosis / Delivery Systems to Lymph Node and Immune Cells / Stimuli-Responsive Biomaterials
	Professor	Takumi SANNOMIYA	Electron Microscopy / Cathodoluminescence / Optical Metrology
	Professor	Masato SONE	Materials for Biosensors / Materials for Medical Devices / Materials for Wearable Devices
	Professor	Takeharu TSUGE	Biodegradable Plastics / Bio-Based Plastics / CO <sub>2</sub> Utilization
	Professor	Yuhei HAYAMIZU	Biosensors / Controlled Bio-Nano Interfaces / Development of Self-Assembling Peptides
	Professor	Hideki HOSODA	Superelastic Alloys for Medical Devices / MRI-and CT-Visible Materials / Magnetic Composite Materials
	Professor	Junko MORIKAWA	Thermal Devices and Measurements / Thermal Properties of Single Crystals and Thin Films / Bio-Thermal Imaging
	Visiting Professor	Hideki ABE	Advanced Biopolyester Materials / Biopolymers
	Specially Appointed Professor	Hiroki ISHIZAKI	Ferroelectric Semiconductor Devices / Soft Actuator Devices / CO <sub>2</sub> Resource Utilization Technologies
	Associate Professor	Azusa OOI	Surface Modification for Biomedical Metals / Fuel Cell Catalysts / Nanoscale Corrosion Mechanisms
	Associate Professor	Kyohei OKUBO	Oral Function Evaluation Devices / Magnetic Biosensors / Near-Infrared Optical Imaging
	Associate Professor	Equo KOBAYASHI	Biomedical Materials / Non-Ferrous Metallic Materials / Standardization of Medical Devices
	Associate Professor	Masaki TAHARA	Medical Shape Memory Alloys / Titanium Alloys / Functional Metallic Materials
	Associate Professor	Tso-fu CHANG	Green Energy Catalytic Semiconductors / Advanced Functional Flexible Materials / Electroplated Metallic Materials for Medical MEMS
	Associate Professor	Tomohiro HAYASHI	Biointerfaces / Surface and Interface Science / Materials Design Using Information Science
	Associate Professor	Saeko YANAKA	Biomolecular Engineering / Integrative Structural Biology
	Assistant Professor	Tomoyuki KURIOKA	Electrodeposited Hybrid Materials / Environmentally Friendly Electrochemical Systems / Micro-Electrodeposited Materials for MEMS
	Assistant Professor	Zizhen LIU	Magnetic Nanoparticle Synthesis / Biosensors / Biocompatible Nano-Biomaterials
Chemical Science and Engineering	Professor	Mina OKOCHI	Peptide-Based Olfactory Sensors / Migrasome Function Analysis / Functional Peptide Discovery
	Professor	Katsunori TANAKA	In Vivo Synthetic Chemistry / In Vivo Organic Synthesis / Novel Cancer Diagnosis and Therapy
	Associate Professor	Masayoshi TANAKA	Green-Synthesized Gold Nanoparticles / Membrane Curvature-Sensing Proteins / Cell Network Fabrication by Liquid Drawing
	Associate Professor	Hiroyuki WADA	Optical Microparticles for Cancer Therapy / White Solar Cells / Lightweight High-Rigidity Solar Cells
	Assistant Professor	Ambara Rachmat Pradipta	Bioorganic Chemistry / Organic Synthesis for Cancer / In Vivo Functional Molecules
	Assistant Professor	Shogo SAITO	Functional Peptide Discovery / Migrasome Capture / Peptide-Induced Ferroptosis
	Assistant Professor	Akimitsu MIYAJI	Tripeptide Antioxidant Activity / Biocatalysts for Sustainable Methane Utilization / Quantum Chemical Descriptors of Organic Acid Sourness
Computer Science	Professor	Takashi ISHIDA	Computational Drug Discovery Technologies / Biomolecular Modeling / Medical and Dental Data Analysis
	Professor	Isao ONO	Evolutionary Computation / Reinforcement Learning / Optimization

	Professor	Masahiro TAKINOUE	Molecular Computing and Programming / Synthetic Biology of Artificial Cells / Computational Living Soft Matter Physics
	Professor	Masayuki YAMAMURA	Paddy Soil Microbiomes and Annual Farming / Biofermented Amendments and Upland Soil Microbiomes / Molecular Robots for Marine Nucleic Acid Detection
	Professor	Natsue YOSHIMURA	Brainwave Information Extraction Algorithms / Brain Information Decoding for QOL / Brain-Machine Interfaces
	Assistant Professor	Shogo HAMADA	Molecular Robotics / Molecular Computing / DNA Nanotechnology
	Assistant Professor	Laura Alejandra MARTINEZ TEJEDA	Non-Invasive Brain-Computer Interfaces / Emotion Recognition / Motor Control Decoding
Life Science and Technology	Professor	Ryuji IGARASHI	Quantum Sensing/Next-Generation Liquid Biopsy/Cell-and Molecule-Level Measurement
	Professor	Yoshitaka ISHII	Physical Chemistry / Structural Biology / Alzheimer's Disease
	Professor	Hiroshi ICHINOSE	Dopamine Physiology and Pathology / Novel Bioprotein Functions / Clinical Applications of Neopterin
	Professor	Takafumi UENO	Protein engineering / Bioinorganic chemistry / Biomaterials / Chemical biology
	Professor	Yuriko OSAKABE	Novel Genome Editing Technologies / Gene Therapy for Rare Diseases / Genetic Engineering of Plant Functions
	Professor	Susumu KAJIWARA	Microbial Infection / Immune Response / Biotechnology / Genome Editing
	Professor	Toshiaki KAMACHI	Bioinorganic Chemistry / Photoenergy Transduction / Cellular Oxygen Concentration Imaging
	Professor	Mako KAMIYA	Chemical Biology / Organic Chemistry / Analytical Chemistry / Bioimaging
	Professor	Shoen KUME	Stem Cell Biology / Regenerative Medicine
	Professor	Kumi KURODA	Neuroscience of Social Behavior / Parent-Infant Relations / Transport-Based Childcare DX
	Professor	Naohiko KOSHIKAWA	Cancer Diagnostics and Drug Discovery / Cancer Progression Mechanisms / Carcinogenesis Mechanisms
	Professor	Kengo SATO	Biomedical Data Science / Bioinformatics / Medical AI
	Professor	Takeo SANEYOSHI	Molecular Neuroscience / Quantum Biology
	Professor	Kohji SEIO	Nucleic Acid Chemistry / Nucleic Acid Therapeutics / Bioorganic Synthesis
	Professor	Masahiro TAKINOUE	Molecular Programming / Synthetic Biology of Artificial Cells / Computational Living Soft Matter Physics
	Professor	Hiroyuki NAKAMURA	Cancer Medicinal Chemistry and Neutron Capture Therapy / Protein Chemical Modification / Novel Heterocycle Synthesis
	Professor	Nobuhiro NISHIYAMA	Nanomedicine / Nucleic Acids Delivery / Antibody Therapeutics
	Professor	Nobuhiro HAYASHI	Molecular Biology and Proteomics
	Professor	Toshinori FUJIE	Bioinspired Materials / Wearable Diagnostic and Therapeutic Devices / Plant Bioelectronics
	Professor	Takao YASUI	Quantum Life science / Bioanalytical Chemistry / Nanospace Chemistry / Nanobiodevices / Liquid Biopsy
	Professor	Yasuko YANAGIDA	Cellular Function Evaluation System Using BioMEMS, Intraoral Monitoring System Development, Marine CO2 Measurement Using Microfluidic Channels
	Professor	Asako YAMAYOSHI	Chemical Biology / Nucleic Acid Drugs / Chemistry for Nucleic Acids / DDS
	Professor	Hideya YUASA	Bioorganic Chemistry
	Associate Professor	Daisuke ASANUMA	Innovative Chemical Tool Development And Cellular-Molecular Function Elucidation, Development And Application Of Next-Generation Bioimaging Technologies, Nanobiology Enabled By Advanced Super-Resolution Techniques
	Associate Professor	Koichiro URIU	Mathematical Biology / Mathematical Developmental Biology / Mathematical Chronobiology
	Associate Professor	Satoshi OKADA	Molecular Imaging / Chemical Biology / Nanotechnology
	Associate Professor	Shun-ichiro OGURA	Novel Cancer Diagnosis and Therapy / Mitochondrial Activators / Biomarker Development
	Associate Professor	Kanami ORIHARA	Circadian Rhythm-based Health Optimization / Prevention of Allergy Exacerbation / Remission Maintenance in Autoimmune Diseases
	Associate Professor	Tetsuya KADONOSONO	Biologics Design/ Tumor Probes / Quiescent Cancer Biology
	Associate Professor	Tetsuya KITAGUCHI	Bioimaging / Protein Engineering / Biosensors
	Associate Professor	Nobuaki SHIRAKI	Stem Cell Biology
	Associate Professor	Takakazu SEKI	Interfacial Vibrational Spectroscopy / Microscopy / Nano-Bio Device / Biosensing / Supramolecular Chemistry
	Associate Professor	Yasuka TODA	Molecular biology / Evolutionary biology / Food science
	Associate Professor	Yoshiaki MASAKI	Bioorganic Chemistry / Nucleic Acid Chemistry / Nucleic Acid Therapeutics
	Associate Professor	Yutaka MIURA	Polymer Synthesis / Drug Delivery System / Biomaterials Science
	Associate Professor	Masayasu MIE	Protein Engineering, Tissue Engineering, Biosensing
	Associate Professor	Eizo MIYASHITA	Systems Neuroscience
	Associate Professor	Toshiaki MORI	Bioorganic Chemistry / Polymer Chemistry
	Assistant Professor	Taiga AJIRI	Micro-and Nanostructure-Based Diagnostics / Quantum Sensing Technologies
	Assistant Professor	Ryo KAKIUCHI	PPI Inhibitors Based on Three-Dimensional Scaffolds
	Assistant Professor	Bo ZHU	Protein Screening / Antibody-Enzyme Sensors / Protein Function AI
	Assistant Professor	Xinyue CHEN	Microbial infection, Host-pathogen interaction, Microbial application
	Assistant Professor	Sho TSUKIYAMA	RNA Structure Prediction / AI for Biological Phenomena / Genome Language Models
Assistant Professor	Nobuaki FUNAHASHI	Cancer Molecular Pathology / MASH Molecular Pathology / Splicing Mechanisms	
Assistant Professor	Kseniia PROKOFEVA	Prosocial Behavior Neuroscience / Parental Care Neuroscience / Prosocial-Parental Integration	
Assistant Professor	Tatsuhiro HORII	Polymer Actuators and Sensors / Bioelectrodes	
Assistant Professor	Yuto HONDA	Drug Delivery System / Biomaterials / Gene Therapeutics	
Assistant Professor	Kazuki MIURA	Light-Based Cancer Therapy / Natural Product Mechanisms / Glycosylation Enzyme Targets	
Assistant Professor	Yu MIKAME	Cancer Therapies / Genome-Targeted Drugs / Genome Editing Technologies	
Assistant Professor	Kyohei MUGURUMA	Antibody Therapeutics / Functional Polymers / Coordination Complex Drug Discovery	
Assistant Professor	Takanobu YASUDA	Enzyme Switches / Fluorescence Immunosensors / Immunosensor Screening	
Assistant Professor	Tokiwa YAMASAKI	Memory Molecular Basis / Inhibitory Synapse Mechanisms / Synaptic Dysfunction Therapy	
Innovation Science	Professor	Eiichiro KIMURA	Entrepreneurship and New Business Development / Innovation Management / Food, Wellness and Healthcare Industry
	Associate Professor	Taro SUGIHARA	User Research / Social Implementation of Information Technology / Healthcare Technology Management