TOYAMA KOSEN

Researchers List 2026

National Institute of Technology, Toyama college

President

Department	Name	Position	Research Fields	Research Subjects
President	KUNIEDA Yoshiaki	President	Maritime Education and Training	Development of effective maritime education and training methods Study on the Effectiveness of Sailing Ship Training Study on Ship Collision Accident Prevention Disaster Relief by Ship

President　KUNIEDA Yoshiaki

Education Philosophies

Originality and Creation

Autonomy and Independence

Coexistence and Symbiosis

Department of Mechanical Engineering

Department	Name	Position	Research Fields	Research Subjects
Mechanical Engineering	INOUE Makoto	Professor	Light metals Metal refining	Metal refining using vacuum distillation method Magnesium recycling using vacuum distillation and plastic working
Mechanical Engineering	OKANE Masaki	Professor	Fatigue and fracture of engineering materials, Friction stir welding	Fatigue properties of aluminum alloy and steel dissimilar joints by friction stirring Friction stir welding of dissimilar aluminum alloys Improving fretting fatigue strength using surface modification
Mechanical Engineering	SAKAMOTO Yoshinori	Professor	Metallurgy Plating	On Sn Whisker Suppressing Mechanism by Heat Treatment Study on the Generation of the Intermetallic Compound and the Occurrence of the Sn Whiskers Main techniques: SEM, FIB
Mechanical Engineering	SHIRAKAWA Hidemi	Professor	Thermal engineering, Fluid engineering	Interests: Development of an energy transduction machine using the heat fluid phenomenon accompanied by phase change Keywords: heat exchanger, water-power generation system, geothermal energy machines
Mechanical Engineering	YOSHIKAWA Fumie	Professor	Chemical engineering, Aerosol science technology	Evaluation of air-filtration systems. A study of aerodynamic behavior of fibrous aerosol particles. Keywords : Aerosol filtration, Fibrous filter, Collection mechanism
Mechanical Engineering	ISHIGURO Minoru	Associate Professor	Mechanical and electronic manufacturing for household equipment.	Implementation of FEM to design of household equipment. Development investigation of household appliances for assisting elderly persons in marginal society. Investigation of snow removal procedures for assisting human-intensive snow removal work in a marginal society. Applied investigation of remote control and observation procedures assisting marginal society.
Mechanical Engineering	KITA Masao	Associate Professor	Material science	Development and characterization of oxide semiconductors with narrow and wide band gaps for optoelectronics Main techniques: XRD, TEM

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Mechanical Engineering	TAJIRI Tomoki	Associate Professor	Robotics	Interests: Autonomous mobile robots, Simultaneous Localization and Mapping, Cooperative control
Mechanical Engineering	MASUYAMA Keiichi	Associate Professor	Material science (Powder metallurgy)	Interests: High-pressure torsion (HPT). HPT is a severe plastic deformation (SPD) process to produce bulk nanostructured materials. Main target materials: Metal pure powder (Cu, WC, Co, Ni, Ti) Consolidation process: up to 1 GPa with up to 100 turns Main techniques: microhardness and tensile strength and SEM and CIM (FIB) of consolidated sample by HPT.
Mechanical Engineering	YAMAMOTO Hisashi	Associate Professor	Fluid control engineering, Microprocessing technology	Interests: Magnetic functional fluids and applications Analysis and observation of magnetic cluster behavior during processing, Precision polishing of a cylinder inner surface using magnetic functional fluid
Mechanical Engineering	ZHAO Wei	Assistant Professor	Mechanics, Vibration, Origami Engineering	Interests: Multi-Stable Vibration Energy Harvesting. Hydraulic Dampers Using Origami Structure, Energy absorption Using Origami Structure
Mechanical Engineering	HATAKEYAMA Junpei	Assistant Professor	Thermal engineering	Interests: Reduction of thermal conductivity measurement time using Steady Temperature Prediction Method, Applying 1DCAE to thermal design.
Mechanical Engineering	SASE Naoki	Commissioned Professor	Machine elements, Machining	Interests: Loosening of screw fasteners Analysis of loosening mechanism of screw fasteners Development of anti-loosening screw fasteners Evaluation method of anti-loosening capability
Mechanical Engineering	TAKAHASHI Katsuhiko	Commissioned Professor	Metallurgy (ironmaking etc.), Surface treatment, Biomass	Ironmaking processes with low environmental load Research of composite materials made by select reduction Formation of Fe-Al on steel using new surface treatment Usage of charcoal carbonized from biomass

Department of Electrical and Control Systems Engineering

Department	Name	Position	Research Fields	Research Subjects
Electrical and Control Systems Engineering	ISHIDA Fumihiko	Professor	Biological information science/engineering	Interests: Analysis of human behavior and application of human interfaces Research themes: Information analysis of neural signals, Quantitative analysis of physical human communication, Synergy analysis of muscle activity, Pointing systems, Gaze estimation systems, Motor assist systems
Electrical and Control Systems Engineering	SATO Keisuke	Professor	Autonomous robots	Interests: Solve the robot motion planning problem Main techniques: Maze search algorithm, CPFS algorithm.
Electrical and Control Systems Engineering	TAKADA Eiji	Professor	Radiation measurement	Development of new radiation detector systems ("Tissue equivalent" radiation detector with an organic photodiode, fast neutron detector for nuclear fusion plasma diagnostics, new radiation detection systems for the decommissioning of Fukushima-Daichi nuclear power plant etc.)
Electrical and Control Systems Engineering	FURUKAWA Hiroto	Professor	High-frequency circuits Power electronics	Propagation characteristics of microwaves and their application for non-destructive diagnostics Wireless power transfer system using circuit resonation
Electrical and Control Systems Engineering	MOMOSE Noboru	Professor	Control engineering, Robotics and thermal science	Actuator arrangement for link mechanism. Parallel link mechanisms, Verbose actuator Control method for moving bodies, Operability, Comfort Heat transfer control using a Peltier element. High-efficiency uses of solar energy
Electrical and Control Systems Engineering	IZAWA Masaki	Associate Professor	Machine tool, Machining process, Flexible material handling techniques, Additive manufacturing	Cutting force monitoring based on end-mill rotational speed Development of simple page turner composed of two rods Development of new AM system using a welding robot
Electrical and Control Systems Engineering	KANEKO Shin-ichiro	Associate Professor	Robotics	Localization and Mapping for autonomous mobile robots Biped locomotion

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Electrical and Control Systems Engineering	KITAMURA Takuya	Associate Professor	Machine learning, Soft computing	Online learning for pattern recognition, fuzzy systems and regression problems, Support vectormachines, Subspace method
Electrical and Control Systems Engineering	TADA Kazuhiro	Associate Professor	Nano-engineering	Interests: single nanometer and atomic level fabrication and manufacturing Research topics: Multiphysics in SPM, e-beam, NIL
Electrical and Control Systems Engineering	NISHIJIMA Kenichi	Associate Professor	Switching power supply, EMC noise	Investigation of low-noise switching power supplies for compatibility of miniaturization trends of electronic equipment and new EMI standards
Electrical and Control Systems Engineering	FUJISAKI Akihiro	Associate Professor	Condensed matter physics	Optical properties of alkali-rare-gas exciplexes Few-body systems (especially Efimov effect in atomic physics).
Electrical and Control Systems Engineering	OTA Mamoru	Assistant Professor	Data Science	Bayesian inference, Mathematical optimization, Analysis of scientific data
Electrical and Control Systems Engineering	SATO Daichi	Assistant Professor	Radiation measurement, Image reconstruction	Development of radiation detector systems for medical applications (e.g., X-ray computed tomography systems equipped with photon-counting detectors).

Department of Applied Chemistry and Chemical Engineering

Department	Name	Position	Research Fields	Research Subjects
Applied Chemistry and Chemical Engineering	KAWAI Takae	Professor	Material science (porous materials)	Interests: Development of new methods for evaluation of pores Main techniques: Volumetric adsorption apparatus, Electric furnace (Kanthal) Main target materials: CFI, BEA, MFI
Applied Chemistry and Chemical Engineering	SHINOZAKI Yukiko	Professor	Applied microbiology	Interests: Isolation and characterization of microbial products Main target materials: enzymes, siderophores (iron chelating compounds).
Applied Chemistry and Chemical Engineering	TAFU Masamoto	Professor	Environmental Engineering (Eco-materials)	Interests: Development of novel techniques to remove fluoride and heavy metals from the environments Recycling system for waste gypsum board Carbon-free lime production from unused resources Main techniques: ICP-AES, XRD, SEM, Fluoride measurements Main target materials: Calcium phosphates, Gypsum
Applied Chemistry and Chemical Engineering	NAKAJIMA Eiji	Professor	Chemical engineering, Transport phenomena	Interests: Double-diffusive convection in a solar pond system, Freeze concentration of aqueous solution with supersonic radiation Instruments: supersonic radiator, thermo-controlled water bath, digital refractometer, data logger
Applied Chemistry and Chemical Engineering	MINEMOTO Yasumasa	Professor	Chemical engineering, Food engineering	Interests: Lipid oxidation, Microencapsulation, Freeze-drying, Hysteresis process Main techniques: emulsification, drying process Main target materials: Fatty acid, Polysaccharide, Protein
Applied Chemistry and Chemical Engineering	SAKONO Naomi	Associate Professor	Nanomaterials	Interests: Development of functional nanoparticles Main techniques: Synthesis of nanoparticles in vapor phase Main target materials: Metal nanoparticles
Applied Chemistry and Chemical Engineering	TAKAMATSU Saori	Associate Professor	Environmental engineering	Interests: Phosphorus recovery from wastewater treatment Main techniques: ICP-AES, XRD, SEM Main target materials: Sewage sludge, phosphorus

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Applied Chemistry and Chemical Engineering	FUKUDA Tomohiro	Associate Professor	Polymer chemistry (Organic synthesis)	Interests: Polymerization of acryloyl and methacryloyl monomers Main techniques: NMR, HPLC, FT-IR Main target materials: Polymerization of reactive monomer having succinimidyl group, etc.
Applied Chemistry and Chemical Engineering	MANAKA Atsushi	Associate Professor	Analytical chemistry	Interests: Development of simple on-site analysis Main techniques: UV–visible spectrophotometer, pH and ion meter Main target materials: several organic and inorganic materials
Applied Chemistry and Chemical Engineering	YAMAGISHI Masakazu	Associate Professor	Material science (Organic materials for electronics)	Interests: Organic materials with high device performance, unique electronic properties, new physical phenomena, or new functionality Research Fields: Synthetic chemistry, Device engineering, Device physics
Applied Chemistry and Chemical Engineering	GOTO Michimasa	Commissioned Professor	Pharmaceutical chemistry (Organic chemistry)	Interests: 1) Organic reaction: Investigation of scope of application on transesterification reaction of N-protected amino acid esters and of the reaction mechanism. 2) Organic synthesis: Development of novel biologically active compounds; anti-bacterial, anti-inflammatory, anti-allergic, and anti-cancer compounds. Instruments: NMR, HPLC, Cryocool, Vacuum sample drying oven, Water distillation apparatus, Shaking incubator, Centrifuge machine
Applied Chemistry and Chemical Engineering	TAKAHIRO Masahiko	Commissioned Professor	Polymer materials, Textile engineering	Interests: Analysis of necking properties in drawing processes Polymer monofilaments, Mechanical properties of polymer materials, Mechanical properties of fiber-reinforced plastics Main techniques: DMA, Ultrasonic homogenizer, Tensile tester
Applied Chemistry and Chemical Engineering	TSUMORI Nobuko	Commissioned Professor	Catalyst (using metal complex)	Development of a new highly efficient environmental catalyst and activity evaluation using a metal nanoparticle and metal-organic framework (MOF)

Department of Electronics and Computer Engineering

Department	Name	Position	Research Fields	Research Subjects
Electronics and Computer Engineering	ASO Tsukasa	Professor	Computing Science	Development of radiation simulation for medical physics, life science, and radiation detection systems Dose map calculation Radiation imaging simulation
Electronics and Computer Engineering	OGUMA Hiroshi	Professor	Information and communications technology	Research on wireless communication networks and IoT security.
Electronics and Computer Engineering	FURUYAMA Shoichi	Professor	- High Speed Computing - Object Recognition from Image	Interests: High-performance computing on GPU including Artificial Intelligence, Combination ICT and Environmental issues Techniques: GPU computing (GPGPU), Android Apps., AI, Vision AI by google, AWS Main target: AI-assisted Environmental quality sensor on Android device
Electronics and Computer Engineering	YOSHII Yotsumi	Professor	Optical engineering	Interests: Trace gas detection using laser spectroscopic methods, air pollution measurements, industrial gas monitoring.
Electronics and Computer Engineering	AKIGUCHI Syunsuke	Associate Professor	Laser Doppler velocimetry	Measurement of blood flow velocity in a model of stenosis *in vitro* and in mesenteric vessels *in vivo* using non-invasive micro multipoint laser Doppler velocimetry Noninvasive in-vivo measurement of microvessels by reflection-type Micro multipoint laser DOPPLER velocimeter
Electronics and Computer Engineering	ITO Nao	Associate Professor	Multi-agent simulation, Econometrics	Multi-agent simulation on emergence of another money system Evaluation of the Gini coefficients extended to a case in which the sum of samples is negative

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Electronics and Computer Engineering	HAYASE Yoshikazu	Associate Professor	Problem solving environment (PSE)	Interests: Unique functions of an autonomous asynchronous cooperation (AAC) useful for a problem-solving environment (PSE) Techniques: Distributed computing for asynchronous cooperation on a heterogeneous computer and network Main target: Web-based PSE
Electronics and Computer Engineering	MATOBA Ryuichi	Associate Professor	Artificial intelligence, Cognitive science	Interests: Language evolution, and First language acquisition. Especially, I am interested in cognitive biases that help infants to acquire their mother tongue without hindrance. To capture the efficacy of the cognitive biases, I construct computer simulation models. In recent years, I have also been working on object detection using DeepLearning.
Electronics and Computer Engineering	YAMAGUCHI Akifumi	Associate Professor	Information technology	Interests: The method of support to create a sequence of instructions of the PIC microcontroller.
Electronics and Computer Engineering	TAKIZAWA Masaaki	Lecturer	Signal Processing	Interests: Development of online estimation algorithms for nonlinear functions and its applications Main Techniques: kernel adaptive filtering, convex optimization
Electronics and Computer Engineering	MIZUMOTO Iwao	Commissioned Professor	Measurement system (Electronics)	Interests: Development of measurement instrument system Main techniques: Spectroscopy, Low level near-infrared light detection Main target materials: Measurement of singlet oxygen, Weak signal detection system
Electronics and Computer Engineering	KADOMURA Hideki	Research Associate	Information technology	Interests: Development of distributed computing platforms in high latency, unreliable network environment
Electronics and Computer Engineering	SHIINA Toru	Specially Appointed Professor	Image instrumentation, Electromagnetic wave propagation	Interests: Snowfall measurement system and image measuring algorithm Instruments: Micro Rain Radar, Ceilometer

Department of International Business

Department	Name	Position	Research Fields	Research Subjects
International Business	EBIHARA Tsuyoshi	Professor	International relations, China's politics and foreign policy	Interests: China's domestic policy and foreign policy, Japan–China relations (governmental, economic and social relations) International relations in the northeast Asian region after the Cold War
International Business	OKAMOTO Katsunori	Professor	Human geography	Interests: Development of port economy, trade of used cars and used auto parts, trade between Japan and Russia. Problems of the conventional railway lines parallel with the *Shinkansen* line Main techniques: Field work, hearing survey, GIS
International Business	MATSUBARA Yoshihiro	Professor	Labor law, Social security law	Interests: Employment support, employment of people with disabilities, reasonable accommodation for workers, social security for people with disabilities
International Business	MIYAZAKI Izumi	Professor	Russian art history, Russian religion	Interests: Russian religious art, Icon painting from the 18th to the beginning of the 20th century, Russian religion, history and current situation of the Old believers
International Business	MIYASHIGE Tetsuya	Professor	Corporate strategy management of technology (MOT), Corporate social responsibility (CSR)	Interests: Pharmaceutical R&D performance, analyzing differences in new drug production in firms, business ethics for corporate growth, verifying that companies adopting an ethics program can recruit more excellent researchers and knowledge workers as employees
International Business	SHIOMI Kosuke	Associate Professor	Management accounting	Interests: Target costing, Management accounting change, Parts sharing, Analysis of suitable products for parts sharing
International Business	HAGIWARA Shingo	Associate Professor	Computer science	Interests: Formalization of legal knowledge-base, simulated evolution of language on multi-agent systems Main techniques: Intuitionistic logic, iterative learning model Main targets: Legal reasoning, language evolution
International Business	MURAYAMA Masako	Associate Professor	Marine traffic engineering	Interests: Marine evacuation traffic related to tsunami disasters, system for visualizing ship movement using AIS for collision avoidance

Department	Name	Position	Research Fields	Research Subjects
International Business	KITAI Shoko	Lecturer	Second Language Acquistion	Interests: Technology-mediated Task-Based Language Teaching, International Telecollaboration in English as a Foreign Language Classes, Qualitative Research Synthesis in the TESOL field
International Business	KEI Setsuka	Lecturer	Economics, Social Security Theory	Interest: Pension system, Gender equality in the labor market, Income inequality, poverty among the elderly women
International Business	TAJIMA Yuta	Assistant Professor	Human Resource Management	Interest: Human Resource Management, particularly recruitment research.
International Business	HASEGAWA Hiroshi	Commissioned Professor	Business education, Cooperation with local communities	Interests: Personnel training based on the theory of adult education (andragogy), experiential learning, cooperative learning, and tacit knowledge

Department of Maritime Technology (WAKASHIO MARU)

Department	Name	Position	Research Fields	Research Subjects
Maritime Technology	KAMEI Shisei	Professor	Marine engineering, Safety engineering	Interests: Loading, Discharging operation, Deck strength and the Modal shift for the vessel
Maritime Technology	NAKATANI Toshihiko	Professor	Control engineering, Control applications in marine systems, Time series analysis	Interests: Ship's autopilot system, Ship motion stabilization, Rudder roll stabilization, Engine governor system,-Time series analysis through auto-regressive model
Maritime Technology	HOMAE Tomotaka	Professor	Explosion safety, Shock compression of solids	Mitigation of damage caused by explosion of high explosives (Blast wave, Fragments) Materials synthesis using hypervelocity impact phenomena
Maritime Technology	MATSUMURA Shigemi	Professor	Ship management, Marine engineering, Tug boat	Interests: Ship management, ship repair, engine plant operation, and tug boat consulting
Maritime Technology	MUKOSE Kiichiro	Professor	Marine engineering	Interests: Maritime education using information technology
Maritime Technology	KANAYAMA Emi	Captain (WAKASHIO MARU) Specially Appointed Professor (Associate Professor)	Maritime education	Interests: Education of Training Ship
Maritime Technology	KYODEN Tomoaki	Associate Professor	Mechanical engineering (Thermal science and technology)	Interests: Development of new cooling system using thermoacoustic phenomena, Measurement system of blood flow velocity
Maritime Technology	FUKUDOME Ken-ichi	Associate Professor	Ocean physics	Research providing synoptic views of ocean currents in coastal and marginal seas conducted mainly by analyzing ship-mounted Acoustic Doppler Current Profiler data

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Maritime Technology	YAMADA Keisuke	Associate Professor	Combustion engineering	Interests: Internal combustion engine, Fuel droplet combustion, Emulsified fuel
Maritime Technology	YAMATANI Naohiro	Chief Engineer (WAKASHIO MARU) Specially Appointed Professor (Associate Professor)	Combustion engineering, Maritime education	Interests: Marine diesel engine, Fuel injection pressures and fuel spraying quantity
Maritime Technology	KOBAYASHI Dai	Lecturer	Marine engineering, Fluid measurement	Interests: Marine diesel engine, Auxiliary machinery, Measurement system by MLDV
Maritime Technology	MURATA Hiroaki	Lecturer	Marine engineering	Interests: Ship bottom paint, offshore production, hydrodynamics, sensor engineering
Maritime Technology	NUNOME Akihiro	Assistant Professor	Marine engineering	Interests: Maritime education using information technology
Maritime Technology	Morii Naoto	Chief officer (WAKASHIO MARU) Assistant Professor	Maritime education	Interests: Education of Training Ship
Maritime Technology	IKENO Kazunari	First engineer (WAKASHIO MARU) Assistant Professor	Maritime education	Interests: Education of Training Ship

Department of General Education

Department	Name	Position	Research Fields	Research Subjects
General Education	MORITA Yasufumi	Professor	Natural products chemistry	Interests: Chemical components of Basidiomycetes, mycorrhizal fungi Main techniques: NMR, IR Main target materials: Terpenoids, Sterols, Phenylpropanoids
General Education	TOSHIMA Takeshi	Associate Professor	Material science (Crystal growth)	Interests: Search effective parameters of shape-controlling, Development of new crystallization methods, Unveiling formation mechanisms of non-trivial shaped crystals Main techniques: SEM, EDS, XRD, TEM, FIB Main target materials: Calcium phosphates system (environmental material)
General Education	OHTAKE Yukiko	Associate Professor	High energy physics	Interests: Field theory, String theory
General Education	OHASHI Chisato	Associate Professor	Health Science	Development of Health Management System for Home Patient, Rugby Coaching Method
General Education	YAMAMURA Hiroto	Associate Professor	English language teaching	Creating a communicative classroom in EFL contexts Evaluation and development of ELT materials Professional development for EFL teachers
General Education	CHEN Lu	Lecturer	English literature	Interests: Edmund Spenser, English literature, cultural and historical research on early modern England
General Education	NAKAMURA Yutaro	Lecturer	Sociology of Sport	Interests: Lifelong Sports, Volleyball Coaching, Recreational Sports
General Education	HAYASHI Naoto	Lecturer	Physical Education	Interests: Sports Biomechanics,Athletics
General Education	HOSHINO Akemi	Commissioned Professor	Chinese speech recognition, Chinese utterance analysis	Development of pronunciation education systems for Chinese using IT technology Development of pronunciation training systems for Chinese using CAI Automatic judgment system for Chinese retroflex and dental affricates pronounced by Japanese students Pronunciation training system of Chinese aspiration for Japanese students