April 7, 2021

Doctoral Program in Risk and Resilience Engineering
Faculty member list

Field of Research	Faculty	Detailed Description of Research Field
Foundations of Risk Analysis and Resilience Assessment	ITOH Makoto	Systems safety: mutual trust and cooperation in human-machine systems, cognition, inference, and decision making under uncertainty or gray zone, perception and acceptance of risk.
	SATO-ILIC Mika	Multi-dimensional data analysis, statistics: latent structure models, fuzzy clustering, and multi-way data theory.
	ENDO Yasunori	Fundamentals and applications of soft computing techniques underlying artificial intelligence: machine learning including clustering and deep learning, and fuzzy inference and fuzzy control
	【KURAHASHI Setsuya】	Social simulation, Evolutionary computing, Agent technology, Data mining, Skill extraction support system, Recommender system.
	【KINO Yasunobu】	Project Risk Management, Application Development, Social Systems Modeling and Design.
	FURUKAWA Hiroshi	Cognitive interface design: Human interface to extend cognitive capability, Navigation support, Learning support, Mental models.
	【SAITO Yuichi】	Human-machine systems, cognitive systems science, systems safety and control, human-machine interface and interaction, and risk prediction and avoidance based on data analysis.
	【TAKAYASU Akitoshi】	Verification methods for nonlinear mathematical models including mathematical models for environmental problems, Numerical analysis, Verified numerical computation.
	【MISAKI Hiroumi】	Statistics, econometrics and quantitative finance: high-frequency data analysis, volatility and covolatility of asset prices, financial risk management, state space models, and particle filters.
	※ABE Genya (Japan Automobile Research Institute)	Vehicle safety: interactions between human and advanced driver assistance systems, trust in automated driving systems, recognition, decision and implementation while driving
	※UCHIDA Nobuyuki (Japan Automobile Research Institute)	Human error analysis and traffic accident prevention, Safety evaluation for automated driving systems
	※OKABE Kohei (National Institute of Occupational Safety and Health, Japan)	Risk Management: labor accident, safety design, collaborate robot, nursing care equipment
	※SATO Toshihisa (National Institute of Advanced Industrial Science and Technology)	Science of driving pleasure, Cognitive and behavior characteristics of elderly drivers, and Ergonomic experiments of drivers with automated and advanced driver assistance systems

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Foundations of Risk Analysis and Resilience Assessment	※SANAMI Shou (Dai Nippon Printing Co., Ltd.)	Machine Learning: Understanding and dealing with risks in application to actual problems.
Information Systems and Security	【TSUDA Kazuhiko】	Database, Information Retrieval, Human Factors, Cognitive Science, Natural Language Processing, Computer Algorithm, Software Engineering.
	【YOSHIDA Kenichi】	Application of Internet, Data Mining, Artificial Intelligence.
	OMOTE Kazumasa	Information security: risk assessment for cyber attacks, security for blockchain and cryptocurrency, malware countermeasure, cloud security, IoT security, privacy-preserving data analysis.
	NISHIDE Takashi	Information security: design of public key encryption, cryptographic protocol, privacy-enhancing technology, method for securing information systems.
	※SHIMAOKA Masaki (SECOM CO., LTD)	Information Security and Trust: PKI application (e-signature, authentication), Trust model of PKI, Social Trust of Information Infrastructure, ethics for security res earch
Urban Resilience and Disaster Management	SUZUKI Tsutomu	Urban Analysis, Facility Planning, Location Analysis, Environmental Modeling, Geographical Information Science.
	TANIGUCHI Ayako	Attitude and behavioral modification concerning Urban transport planning, Risk communication, Mobility management, Social acceptance of Autonomous Vehicles.
	UMEMOTO Michitaka	Countermeasures against infrequent risk in urban and regional area: Evacuation planning, Disaster information, Regionals' countermeasures against nuclear disaster, Perception of disaster risk.
	【KINOSHITA Yohei】	Meteorological application of space geodetic tools (e.g. SAR and GNSS), Satellite remote sensing, MaaS application
	※USUDA Yuichiro (National Research Institute for Earth Science and Disaster Resilience)	Disaster Informatics, Disaster Dynamics, Cyber-Physical System for Disaster Resilience, Risk Communication, Decision Support
	※SAKAI Naoki (National Research Institute for Earth Science and Disaster Resilience)	Geotechnical engineering, Landslides, Heavy rainfall-induced disaster, Model tests, IoT/AI, Satellite and remote sensing data, Disaster risk, TDA(Trans-disciplinary approach)

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Urban Resilience and Disaster Management	※FUJIWARA Hiroyuki (National Research Institute for Earth Science and Disaster Resilience)	Seismic hazard and risk assessment, Numerical simulation, Strong motion prediction, Subsurface structure Modeling, Real-time earthquake damage estimation system
Environmental and Energy Systems	OKAJIMA Keiichi	New energy systems: LCA evaluation and reliability analysis of energy systems with new energy devices such as photovoltaic cell and fuel cell systems.
	HATANO Yuko	Fate and transport of pollutants in the natural environment. Remediation; adsorption; molecular dynamics simulations.
	【AKIMOTO Yutaro】	Non-invasive measurement and evaluation methods of fuel cell, Resilience power system, Energy analysis of new generation societies and vehicles
	【SUZUKI Kengo】	Multi-agent simulation, gaming simulation, and methods for higher education related with energy and environmental systems
	※YAMAMOTO Hiromi (Central Research Institute of Electric Power Industry)	Low carbon energy systems analysis, Evaluation of renewables and hydrogen technologies in energy systems
	※KATO Kazuhiko (National Institute of Advanced Industrial Science and Technology)	Safety Management Measures and Evaluation Methods for Photovoltaic Power Plants
	※TAHARA Kiyotaka (National Institute of Advanced Industrial Science and Technology)	Development of sustainability assessment based on life cycle thinking, inventory database, technology assessment

※: Professor (Collaborative Graduate School Program)

(Note)

Before applying, applicants must contact a faculty member and obtain consent to become your prospective supervisor (the person who gives you academic instructions after enrollment).

Applicants cannot choose faculty members whose names are written in square brackets as a prospective supervisor. However, under the supervision of a faculty member without square brackets, you can choose a faculty member with square brackets as a sub-supervisor and conduct research related to the sub-supervisor's research topics.

[Contact Information]

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