

Degree Programs in Systems and Information Engineering

Graduate School of Science and Technology

Faculty member list (5-year doctoral program)

<Doctoral Program in Empowerment Informatics>

Research Field	Fuculty Members	Detailed Description of Research Field
Supplementation	AIYAMA Yasumichi	Human-like Dexterous Robot Manipulation, Advanced Industrial Robot.
	UTSURO Takehito	Natural Language Processing, Web Mining, Information Retrieval, Human-Machine Communication by Speech and Language, Understanding and Creating Entertainment and Educational Contents, Language Processing by Deep Learning, Artificial Intelligence.
	KURODA Yoshihiro	Interactive Biological Media, Medical Artificial Intelligence, Medical System.
	SUZUKI Kenji	Artificial Intelligence, Autonomous Humanoid Robot, Human Assistive Technology, Music & Sound Media Technology, Kansei Research.
	MORITA Masahiko	Brain-like Computing, Neural Networks, Modeling Brain Functions.
	YANO Hiroaki	Cooperative VR Environment, Virtual Reality, Assistive Technology.
	IZAWA Jun	Computational Neuroscience, Motor Control and Learning, Neural Decoding, VR Rehabilitation Robot, Stroke Simulator, Decision Making.
	KAWASAKI Masahiro	Neuroscience, Cognitive Science, Psychology, Communication, Signal Processing.
	KAWAMOTO Hiroaki	Integration of Human and Robot, Biological Control Systems, Biological Motion & Physiology Analysis, Robot Therapy, Robot Safety.
	TANAKA Fumihide	Social Robotics, Feel Safe AI, Feel Safe Technologies, Human-Robot Interaction, Education Support, Development and Learning, Active Seniors.
	★SHOJI Gaku	Earthquake Engineering and Structural Dynamics. Clarification on Nonlinear Seismic Response of Infrastructure Subjected to Extreme Ground Motions, Development of Seismic Retrofit Technologies, Structural Reliability Assessment.
	★HIDAKA Kikue	Rehabilitation Nursing.
		Social Cognitive Engineering, Social Robotics,

	<p>【IIO Takamasa】</p> <p>【OSAWA Hirotaka】</p> <p>【PUENTES Sandra】</p> <p>【ZEMPO Keiichi】</p> <p>【HASHIMOTO Yuki】</p> <p>【Hachisu Taku】</p> <p>【HIROKAWA Masakazu】</p>	<p>Human Robot Interaction.</p> <p>Human-Agent Interaction, Artificial Intelligence, Human Interface, Communication Game, Engineering Ethics, Technology in Science Fiction.</p> <p>Cybernetics, Clinical Gait Analysis, Motor Disturbances, Wearable Robot.</p> <p>Augmentation of Human Perception, Sense Substitution, Disability Support, Human Augmentation Engineering, Big Data Utilization and Integration on Sensor Signals.</p> <p>Tactile Interface, Tactile Perception, Interactive Technique, Virtual Reality, Telexistence.</p> <p>Haptics, Touch, Wearable Device.</p> <p>Artificial Intelligence, Human-Machine Cooperation, Robotics for Developmental Support, Sports Engineering.</p>
H a r m o n y	<p>KOGA Hiroki</p> <p>TSUBOUCHI Takashi</p> <p>YABUNO Hiroshi</p> <p>EBIHARA Tadashi</p> <p>SAKAINO Sho</p>	<p>Information Theory, Information Security.</p> <p>Self-Contained Autonomous Mobile Robots, Outdoor Autonomous Mobile Vehicles.</p> <p>Nonlinear Mechanical Systems, Nonlinear Control of Nano-Micro Machines, Bifurcation Control and its Applications.</p> <p>Communication and Information Engineering, Oceanic Engineering, Network Engineering.</p> <p>Mechatronics, Haptics, Manipulation.</p>

	<p>DATE Hisashi</p> <p>HASEGAWA Manabu</p> <p>WAKATSUKI Naoto</p> <p>★ ITOH Makoto</p> <p>★ SAKAI Ko</p> <p>★ FUKUI Kazuhiro</p> <p>★ SARUWATARI Yasufumi</p> <p>★ NISHIO Chizuru</p> <p>★ YANAGA Masao</p> <p>★ MORISHIMA Atsuyuki</p> <p>【NIIZATO Takayuki】</p> <p>【KAWAI Shin】</p> <p>【SHIBUYA Takeshi】</p> <p>【MAEDA Yuka】</p> <p>【YAMAGUCHI Tomoyuki】</p> <p>【Nguyen Van Triet】</p>	<p>Model Predictive Control for Nonlinear Systems, Autonomous Mobile Robot, Self-Driving System, Snake-Like Robot and Mechanical System Design.</p> <p>System Modeling.</p> <p>Simulation based Visualization, Vibration Sensors and Actuators, Acoustical Engineering, Musical Acoustics, Inverse Problems.</p> <p>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.</p> <p>Computational vision: representation of shape, perception of 3D structure, figure-ground segregation, cortical representation, cognitive neuroscience, and psychophysics.</p> <p>Pattern recognition and computer vision: Face recognition, 3D object recognition, human sensing, robot vision.</p> <p>Operations Research.</p> <p>Marketing Management.</p> <p>Law.</p> <p>Crowdsourcing, Data Engineering, Database Systems.</p> <p>Emergence, Learning and Collective Behavior.</p> <p>Control Theory, Discretization, Descriptor System</p> <p>Machine Learning, Reinforcement Learning, Multi-Agent System including Hardware Components.</p> <p>Non-invasive Measurement by Photoplethysmography, Developing Wearable Devices for Home Healthcare System.</p> <p>Instrumentation Engineering, Robotics, Robot's Eye, Human Interface, Image Processing.</p> <p>Digital Control, Electrical Power System, Smart Power Router.</p>
E x t e n s i o n	<p>KAMEDA Yoshinari</p> <p>NAKAUCHI Yasushi</p> <p>HOSHINO Kiyoshi</p>	<p>Massive Sensing, Intelligent Image Understanding / Processing, Multimedia Understanding, Model based Vision, Mixed Reality.</p> <p>Human-Robot Interaction, Intelligent Environments, Sensor Network.</p> <p>Biomedical Measurement and Analysis, Mathematical Models for Biological System, Brain</p>

		Science.
	KAKEYA Hideki	3D Imaging, Information Display, Geometric Optics, Computer Aided Surgery, Media Technology, Natural Language Processing.
	KITAHARA Itaru	Real World Imaging, Free-Viewpoint Video, Mixed-Reality, Augmented Reality.
	NOBUHARA Hajime	Computational Intelligence, Multimedia Processing, Advanced Sensing by UAV.
	HOSHINO Junichi	Entertainment Computing, Game Technologies, Storytelling Technologies.
	MOCHIYAMA Hiromi	Soft Robotics, Haptics Technology.
	★KATO Kazuhiko	System Software: Distributed System, Cloud Computing, Operating System, Cyber-Physical System, Software Security.
	★MITANI Jun	CG and CAD: Geometric Modeling, Human Computer Interface, Computational Origami.
	★AYABE-KANAMURA Saho	Perception and Cognitive Psychology.
	★TANAKA Sayoko	Science Visualization.
	【SHISHIDO Hidehiko】	Computer Vision, Image Media Processing, Sports Science.

(Note)

Only the applicants applying for admission to the third year of the program can choose faculty members marked "★".

Applicants cannot choose faculty members written in square brackets as a prospective supervisor directly, but, can choose them with the cooperation of faculty members who are not written in square brackets.

Applicants have to contact a prospective supervisor (a faculty member from whom you wish to receive academic instruction) and obtain his/her consent to your application in advance.