

**Notification about Revision of the list of specialization areas on Application Guides for
Entrance Examination 2021 (Graduate Admission 2021) at Degree Programs in Systems and
Information Engineering**

We notify that we revise the list of specialization areas in Application Guides as follows.
The guides which are now posted will be revised.

【Master's Programs】

Master's Program in Policy and Planning Sciences

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
		(Omitted)
	KAWASHIMA, Hiroichi	Public-sector management, Open data, Public information-driven innovation generation, city development strategies, local government information policy making.
		(Omitted)
	TURNBULL, Stephen John	Internet economy (equipment and system organization; electronic commerce), Economic environment of open source software.
		(Omitted)
	★YAMAMOTO, Sachiko	Management system of building stocks, Regional facility planning, Community design with the urban-rural exchange.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
		(Omitted)
	KAWASHIMA, Hiroichi	<u>Local gov. management, Open data, Co-creative planning, local information policy.</u>
		(Omitted)
	TURNBULL, Stephen John	<u>Economics of the Internet and social networks, Economics of open source, Mathematical structure of games, Environmental economics</u>
		(Omitted)
	★YAMAMOTO, Sachiko	<u>Management and utilization method of building stock (vacant house / closed school, etc.), Maintenance and regeneration system in rural area, Regional management by local residents</u>
		(Omitted)
	<u>【OHYAMA, Tomoya】</u>	<u>Crime Prediction, Spatial Information Science, Behaviormetrics</u>

Master's Program in Computer Science

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
Information Mathematics and Modeling	(Omitted)	
	IMAKURA Akira	Numerical analysis: Numerical algorithms for solving linear systems and eigenvalue problems.
	(Omitted)	
Software System	(Omitted)	
	OKA Mizuki	Social Media Analysis, Web Science, Artificial Life.
Media Engineering	(Omitted)	
	KUDO Hiroyuki	Image processing and medical imaging : Image and video processing, imaging science, medical imaging (CT,PET,MRI) and computer-aided diagnosis, intelligent image sensing, music and sound processing, mathematics of inverse problems.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
Information Mathematics and Modeling	(Omitted)	
	IMAKURA Akira	Numerical analysis: Numerical algorithms for solving linear Systems , eigenvalue problems <u>and matrix computation-based machine learning.</u>
	(Omitted)	
	<u>[TOKUDA Keita]</u>	<u>Dynamical systems, Neural networks, Chaos, Machine learning, Learning and memory, Hippocampus, Biomarker, Central nervous system disease.</u>
Software System	(Omitted)	
	OKA Mizuki	<u>Social Media,</u> Web Science, Artificial Life.
Media Engineering	(Omitted)	
	KUDO Hiroyuki	Image processing and medical imaging : Image and video processing, imaging science, medical imaging (CT,PET,MRI) and computer-aided diagnosis, <u>machine learning and artificial</u>

		intelligence, intelligent image sensing, music and sound processing, mathematics of inverse problems.
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Master's Program in Intelligent and Mechanical Interaction Systems

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
Man-Machine System and Robotics	(Omitted)	
	SANKAI Yoshiyuki	Cybernetics: New Academic Frontier combining Humans, Robots and Information Systems, Innovative Cybernetic Systems in in Brain-nerve/Physical/Physiological/Life field, Human Big-data & AI (artificial intelligence) processing, Biomedical Technology.
	(Omitted)	
	YANO Hiroaki	Cooperative VR Environment, Virtual Reality, Assistive Technology.
	(Omitted)	
	TANAKA Fumihide	Social Robotics, Feel Safe AI, Feel Safe Technologies, Human-Robot Interaction, Education Support, Development and Learning, Active Seniors.
	【YAMASHITA Jun】	Application of Ubiquitous Computing to Remote Collaboration and Computer Supported Collaborative Learning.
Professor of Cooperative Graduate School	(Omitted)	
	KONDOH Shinsuke (National Institute of Advanced Industrial Science and Technology)	Development of Design Tools and Methodologies for Sustainable Design, Life Cycle Design, and Environmentally Conscious Design.
	HAMASAKI Masahiro (National Institute of Advanced Industrial Science and Technology)	Online Community System, Social Media Analysis, Web Mining, Semantic Web.
	MATSUMOTO Yoshio (National Institute of Advanced Industrial Science and Technology)	Service Robotics (Assistive Robotics and Rehabilitation Robotics), Evaluation, Real-Time Vision, Human-Robot Interaction, Android.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
Man-Machine System and Robotics	(Omitted)	
	SANKAI Yoshiyuki	Cybernetics: New Academic Frontier fusing Humans, Robots and Information Systems, Innovative Cybernetic Systems in Brain-nerve/Physical/Physiological/Life field, Human Big-data & AI (artificial intelligence) processing, Biomedical Technology.
	(Omitted)	
	YANO Hiroaki	<u>Virtual Reality, Haptic Interface, Locomotion Interface, Assistive Technology.</u>
	(Omitted)	
	TANAKA Fumihide	Social Robotics, Feel Safe AI, Feel Safe Technologies, Human-Robot Interaction, Education Support, Development and Learning, Active Seniors.
	<u>(Removed)</u>	<u>(Removed)</u>
Professor of Cooperative Graduate School	(Omitted)	
	KONDOH Shinsuke (National Institute of Advanced Industrial Science and Technology)	Development of Design Tools and Methodologies for Sustainable Design, Life Cycle Design, and Environmentally Conscious Design.
	<u>SAGAWA Ryusuke (National Institute of Advanced Industrial Science and Technology)</u>	<u>Computer Vision, Computational Imaging, 3D Reconstruction, Motion Analysis, Human Behavior Analysis.</u>
	HAMASAKI Masahiro (National Institute of Advanced Industrial Science and Technology)	Online Community System, Social Media Analysis, Web Mining, Semantic Web.
	MATSUMOTO Yoshio (National Institute of Advanced Industrial Science and Technology)	Service Robotics (Assistive Robotics and Rehabilitation Robotics), Evaluation, Real-Time Vision, Human-Robot Interaction, Android.
<u>Visiting Associate Professor</u>	<u>KUMANO Shiro</u>	<u>Affective Computing.</u>

Master's Program in Engineering Mechanics and Energy

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
Solid and Structural Mechanics	(Omitted)	
	OKAWAI Masamichi	Modeling and experiments for deformation and strength of fiberreinforced composite materials in aerospace structures and for inelastic and damage behavior of refractory metals in hightemperature components.
	SAKAI Yuki	Studies on relationship between characteristics of strong ground motions and damage to structures and its application to earthquake damage mitigation.
	(Omitted)	
	KAMEDA Toshihiro	Innovative engineering combining computational mechanics and new devices such as high-power laser, high-speed camera, based on applied mechanics theory handling mechanical behavior of inelastic and/or inhomogeneous material.
Energy and Electrical Engineering	(Omitted)	
	FUJINO Takayasu	Research on application of magnetohydrodynamics and plasmadynamics to energy and aerospace engineering.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
Solid and Structural Mechanics	(Omitted)	
	OKAWAI Masamichi	Modeling and experiments for deformation and strength of fiberreinforced composite materials in aerospace structures and for inelastic and damage behavior of refractory metals in hightemperature components.
	<u>(Removed)</u>	<u>(Removed)</u>
	(Omitted)	

	KAMEDA Toshihiro	<u>Innovative engineering with computational mechanics handling high-power laser.</u> <u>Smart society realization using LPWA and data platform.</u>
Energy and Electrical Engineering	(Omitted)	
	FUJINO Takayasu	<u>Research on plasma and magnetohydrodynamic technologies for power engineering and aerospace engineering.</u>

【Doctoral Programs】

Doctoral Program in Policy and Planning Sciences

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
	(Omitted)	
	KAWASHIMA, Hiroichi	Public-sector management, Open data, Public information-driven innovation generation, city development strategies, local government information policy making.
	(Omitted)	
	TURNBULL, Stephen John	Internet economy (equipment and system organization; electronic commerce), Economic environment of open source software.
	(Omitted)	
	YAMAMOTO, Sachiko	Management system of building stocks, Regional facility planning, Community design with the urban-rural exchange.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
	(Omitted)	
	KAWASHIMA, Hiroichi	<u>Local gov. management, Open data, Co-creative local solution making, local information policy making.</u>
	(Omitted)	
	TURNBULL, Stephen John	<u>Economics of the Internet and social networks, Economics of open source, Mathematical structure of games, Environmental economics</u>
	(Omitted)	
	YAMAMOTO, Sachiko	<u>Management and utilization method of building stock (vacant house / closed school, etc.), Maintenance and regeneration system in rural area, Regional management by local residents</u>

Doctoral Program in Computer Science

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
Information Mathematics and Modeling	(Omitted)	
	IMAKURA Akira	Mathematical modeling of animal behavior and its applications: Nonlinear dynamics, Field recordings of animal calls, Sensor networks.
	(Omitted)	
Software System	(Omitted)	
	OKA Mizuki	Social Media Analysis, Web Science, Artificial Life.
Media Engineering	(Omitted)	
	KUDO Hiroyuki	Image processing and medical imaging : Image and video processing, imaging science, medical imaging (CT,PET,MRI) and computer-aided diagnosis, intelligent image sensing, music and sound processing, mathematics of inverse problems.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
Information Mathematics and Modeling	(Omitted)	
	IMAKURA Akira	<u>Numerical analysis: Numerical algorithms for solving linear Systems , eigenvalue problems and matrix computation-based machine learning.</u>
	(Omitted)	
Software System	(Omitted)	
	OKA Mizuki	<u>Social Media,</u> Web Science, Artificial Life.
Media Engineering	(Omitted)	
	KUDO Hiroyuki	Image processing and medical imaging : Image and video processing, imaging science, medical imaging (CT,PET,MRI) and computer-aided diagnosis, <u>machine learning and artificial intelligence, intelligent</u> image sensing, music and sound processing, mathematics of inverse problems.

Doctoral Program in Intelligent and Mechanical Interaction Systems

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
Man-Machine System and Robotics	(Omitted)	
	SANKAI Yoshiyuki	Cybernetics: New Academic Frontier combining Humans, Robots and Information Systems, Innovative Cybernetic Systems in in Brain-nerve/Physical/Physiological/Life field, Human Big-data & AI (artificial intelligence) processing, Biomedical Technology.
	(Omitted)	
	YANO Hiroaki	Cooperative VR Environment, Virtual Reality, Assistive Technology.
	(Omitted)	
	TANAKA Fumihide	Social Robotics, Feel Safe AI, Feel Safe Technologies, Human-Robot Interaction, Education Support, Development and Learning, Active Seniors.
	【YAMASHITA Jun】	Application of Ubiquitous Computing to Remote Collaboration and Computer Supported Collaborative Learning.
Professor of Cooperative Graduate School	(Omitted)	
	KONDOH Shinsuke (National Institute of Advanced Industrial Science and Technology)	Development of Design Tools and Methodologies for Sustainable Design, Life Cycle Design, and Environmentally Conscious Design.
	HAMASAKI Masahiro (National Institute of Advanced Industrial Science and Technology)	Online Community System, Social Media Analysis, Web Mining, Semantic Web.
	MATSUMOTO Yoshio (National Institute of Advanced Industrial Science and Technology)	Service Robotics (Assistive Robotics and Rehabilitation Robotics), Evaluation, Real-Time Vision, Human-Robot Interaction, Android.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
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Man-Machine System and Robotics	(Omitted)	
	SANKAI Yoshiyuki	Cybernetics: New Academic Frontier fusing Humans, Robots and Information Systems, Innovative Cybernetic Systems in Brain-nerve/Physical/Physiological/Life field, Human Big-data & AI (artificial intelligence) processing, Biomedical Technology.
	(Omitted)	
	YANO Hiroaki	<u>Virtual Reality, Haptic Interface, Locomotion Interface,</u> Assistive Technology.
	(Omitted)	
	TANAKA Fumihide	Social Robotics, Feel Safe AI, Feel Safe Technologies, Human-Robot Interaction, Education Support, Development and Learning, Active Seniors.
	<u>(Removed)</u>	<u>(Removed)</u>
Professor of Cooperative Graduate School	(Omitted)	
	KONDOH Shinsuke (National Institute of Advanced Industrial Science and Technology)	Development of Design Tools and Methodologies for Sustainable Design, Life Cycle Design, and Environmentally Conscious Design.
	<u>SAGAWA Ryusuke</u> <u>(National Institute of Advanced Industrial Science and Technology)</u>	<u>Computer Vision, Computational Imaging, 3D Reconstruction, Motion Analysis, Human Behavior Analysis.</u>
	HAMASAKI Masahiro (National Institute of Advanced Industrial Science and Technology)	Online Community System, Social Media Analysis, Web Mining, Semantic Web.
	MATSUMOTO Yoshio (National Institute of Advanced Industrial Science and Technology)	Service Robotics (Assistive Robotics and Rehabilitation Robotics), Evaluation, Real-Time Vision, Human-Robot Interaction, Android.
<u>Visiting Associate Professor</u>	<u>KUMANO Shiro</u>	<u>Affective Computing.</u>

Doctoral Program in Engineering Mechanics and Energy

(Change from)

Field of Research	Faculty	Detailed Description of Research Field
Solid and Structural Mechanics	(Omitted)	
	KANAKUBO Toshiyuki	Studies on structural performance of seismic, isolated or controlled structures. Development of high performance structural materials and new techniques for buildings and infrastructures.
	SAKAI Yuki	Studies on relationship between characteristics of strong ground motions and damage to structures and its application to earthquake damage mitigation.
	(Omitted)	
	KAMEDA Toshihiro	Innovative engineering combining computational mechanics and new devices such as high-power laser, high-speed camera, based on applied mechanics theory handling mechanical behavior of inelastic and/or inhomogeneous material.
Solid and Structural Engineering	(Omitted)	
	【ASAI Takehiko】	Smart structural vibration control and self-powered control systems with energy harvesting technologies
Energy and Electrical Engineering	(Omitted)	
	FUJINO Takayasu	Research on application of magnetohydrodynamics and plasmadynamics to energy and aerospace engineering.



(Change to)

Field of Research	Faculty	Detailed Description of Research Field
Solid and Structural Mechanics	(Omitted)	
	KANAKUBO Toshiyuki	Studies on structural performance of seismic, isolated or controlled structures. Development of high performance structural materials and new techniques for buildings and infrastructures.
	<u>(Removed)</u>	<u>(Removed)</u>

	(Omitted)	
	KAMEDA Toshihiro	<u>Innovative engineering with computational mechanics handling high-power laser.</u> <u>Smart society realization using LPWA and data platform.</u>
Solid and Structural Engineering	(Omitted)	
	<u>ASAI Takehiko</u>	Smart structural vibration control and self-powered control systems with energy harvesting technologies
Energy and Electrical Engineering	(Omitted)	
	FUJINO Takayasu	<u>Research on plasma and magnetohydrodynamic technologies for power engineering and aerospace engineering.</u>

【5-year doctoral program】

Doctoral Program in Empowerment Informatics (First Year Enrollment)

(Change from)

Research Field	Fuculty Members	Detailed Description of Research Field
Supplementation	(Omitted)	(Omitted)
	★HIDAKA Kikue 【YAMASHITA Jun】	Rehabilitation Nursing. Application of Ubiquitous Computing to Remote Collaboration and Computer Supported Collaborative Learning.
	(Omitted)	(Omitted)



(Change to)

Research Field	Fuculty Members	Detailed Description of Research Field
Supplementation	(Omitted)	(Omitted)
	★HIDAKA Kikue <u>(Removed)</u>	Rehabilitation Nursing. <u>(Removed)</u>
	(Omitted)	(Omitted)

Ph.D. Program in Empowerment Informatics (Third Year Enrollment)

(Change from)

Name	Position & Affiliation	Field of Research
(Omitted)		

- Appointed until 31 March 2022**
- Appointed until 31 March 2023**
- Appointed until 31 March 2024**
- Appointed until 31 March 2025**
- Appointed until 31 March 2026**



(Change to)

Name	Position & Affiliation	Field of Research
(Omitted)		

- Appointed until 31 March 2021**
- Appointed until 31 March 2022**
- Appointed until 31 March 2023**
- Appointed until 31 March 2024**
- Appointed until 31 March 2025**