

Technological Directory - Graduate School and Faculty of Information Science and Technology (2020)

Department of Network Design

Discipline	Field	Expertise	Keyword 1	Keyword 2	Keyword 3	Open to consultations on	Lab	Researcher
Information network	Communication and network engineering	Communication systems (wireless, wired, optical)	Communication systems	Networks/LAN	Networks	Reliable and energy saving technologies for optical access networks, Communication network technologies	Information and Communication Networks Lab	Kazuyoshi OSHIMA, Professor
Information network	Information security	Cryptography and Authentication	Cryptography	Authentication	Risk Analysis	Security and safety technologies, cryptography, authentication and risk analysis for cyber physical systems	Information Security Lab	Yasuko, FUKUZAWA Professor
Information network	Communication engineering	Wireless / Optical / Microwave Photonics Communication Networks	Radio on Fiber	Radio Access Network	Mobile Front/Backhaul Network	Radio on Fiber communication technologies and their application for radio access networks	Microwave Photonics Communication Networks Lab	Katsutoshi TSUKAMOTO, Professor
Information network	Network architecture	TCP/IP protocols	Reliable Networks	Wireless	Protocols	Architecture, protocol, and security of enterprise & global TCP/IP networks, including wireless access.	Communication Systems Lab	Yukiji YAMAUCHI, Professor
Audiovisual information processing	Image information processing	Earth sciences	Flume experiments	X-ray CT	DEM Geomorphic analyses using DEM (Digital Elevation Model)	Geomorphic analyses and 3D visualization using DEM (Digital Elevation Model), Analyses of fabric of sand-sized deposits with X-ray CT, Reconstruction of Paleo-hydraulic conditions based on flume experiments	Geoenvironment Lab	Miwa YOKOKAWA, Professor
Software	Design and development of information systems	OSS Design and development of systems using open source software	Open source software	Educational support systems	Geographical information systems	Development of educational support systems incorporating open source software, and geographical information systems	Advanced Software Lab	Seigo YASUTOME, Professor
Information network	multimedia communication	multimedia processing and its security	video transmission	watermark	web of things	Efficient multimedia communication services with privacy and content protection, and international standardization of multimedia systems	Intelligent Media Communications Lab	Shigeyuki SAKAZAWA, Professor
Complex Systems	Exercise physiology	Analysis of physiological responses	Circulatory response	Improved performance	Motion analysis	Analysis of human physiological responses and motions	Exercise Physiology Lab	Yumiko INOUE, Associate Professor

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Informatics	Informatics	Information network	Internet	Network design, operation, management and analysis technology	Service provision infrastructure	Laborsaving on networking	Networking Lab	Akitsugu SHIMANO, Associate Professor
Audiovisual information processing	Image information processing	Multisensor information processing	Sensor information processing	Video understanding	Telepresence	Understanding of human behavior and support of human activities based on sensor information	Image Information Processing Lab	Satoshi NISHIGUCHI, Associate Professor
Information systems	Intelligent informatics	Knowledge discovery and data mining	Autonomous learning systems	Search algorithms	Machine learning	Optimization of distribution networks, large-scale scheduling, multipurpose-optimization of layouting problems	Intelligence Modeling and Soft Computing Lab	Youichi HIRASHIMA, Associate Professor
General	Informatics	Bioinformatics/Life Informatics	Bioinformatics	Computer simulation	System biology	Intracellular signaling computer simulation, microarray data analysis, medical image processing	Bioinformatics Lab	Kojiro YANO, Associate Professor
Information network	Internet engineering	Internet communication, architecture and systems	Cyber-Physical-Systems	IoT	Resilient network	Internet communication, architecture, and systems for multidisciplinary fields, e.g., disaster relief, fisheries.	Cyber-Human Systems Laboratory	Shigeru KASHIHARA, Associate Professor
Information systems	Optimization	Combinatorial optimization	Production scheduling	Mathematical model	Artificial intelligence	Optimization for Production Systems, Distribution Systems, and Transportation Systems	System Informatics Lab	Satoshi SUGIKAWA, Assistant Professor
Informatics	Information science	Intelligent informatics	Service informatics	Artificial intelligence	Sports informatics	Development of information system applying intelligent information processing	Intelligent Information and Communication Systems Lab	Yuhei YAMAMOTO, Assistant Professor