TOHOKU INSTITUTE OF TECHNOLOGY

都市工学課程／Department of Civil Engineering

教員紹介／Teaching Staff

職位／Title	氏名／Name	学位／Education	研究内容／Research
Professor	KAWAI Tadashi	Doctor of Engineering	In order to use a numerical simulation method for the problem related to the seismic performance of a nuclear power plant, my concerns are related to the validation of numerical method for practical use. I conduct model tests, laboratory tests, and numerical simulation with regard to the slope failure and the ground liquefaction. Final goal of the research is to establish a framework of practical usage of numerical simulation method with reliable validations.
Professor	KIKUCHI Akira	Doctor of Engineering	1) Transportation Planning:Research on transportation policies including Travel Demand Management and traffic flow on road network. 2) Activity & Travel Behavior Analysis: Analysis and modeling on individuals' travel behaviors including travel mode choice and route choice under uncertainty. 3) Behavioral Decision Making: Research on personal decision making based on cognitive, social psychology, b ehav ioral economics and experimental economics, especially focuses on relationships between pro-environmental behavior and traffic information.
Professor	KOIDE Hideo	Doctor of Engineering	The most important research for me is on the tensile properties of cement concrete. The tensile strength of cement concrete is low, so tensile properties have not been treated as a very important property. However, the occurrence and growth of “cracks”, which are very important in “durability of concrete structures”, are greatly related to tensile properties. Therefore, I am developing a special testing equipment and test method for direct tensile test, and studying the tensile properties of various types of cement concrete by using the equipment.
Professor	KWON Youngcheul	Doctor of Engineering	My research focuses on the investigation of deformation characteristics of soils in the different mechanical conditions. I am particularly interested in the liquefaction and consolidation phenomenon of the sandy and clayey soils. To date, I worked in these two different research areas by hybrid simulation system to understand the fundamental aspects of the mechanical behavior of various soils. Summary of Research interests: 1） Development of hybrid simulation system to apply in geotechnical engineering problems. 2） Long-term consolidation settlement of clayey soils under static loading condition. 3） Quantitative estimation of deformation by liquefaction phenomenon.
Professor	KONDO Yuichiro	Doctor of Philosophy	Based on design studies and environment studies, we study a methodology of community development, practice and evaluation. Recent studies are follows. 1） Designing of environmental education programs with teaching materials. 2） Community development using rural resource. 3） Consciousness investigation by text mining.
Professor	YAMADA Masaki	Doctor of Engineering	The Strength of Structural Components ・Bonding strength between steel and concrete ・Exploitation of torque shear test for bonding strength ・Real loading capacity of non-composite steel plate girder bridges ・Maintenance and repair of steel bridges
Associate Professor	ONO Keisuke	Doctor of Engineering	We study river flooding, urban inundation, and landslides caused by heavy rainfall. We are also conducting research on assessing the impact of recent climate change on water-related disasters. Furthermore, we are developing disaster education tools for elementary and junior high school students by combining flood hazard maps and Minecraft.
Associate Professor	SUGAWARA Keiichi	Doctor of Engineering	We are conducting research on river disaster prevention and environmental conservation using a 3D printer and PIV（particle image velocimetry）technique. The current themes are as follows. ・A study on flow resistance of river vegetation ・A study on soliton splitting of river tsunami ・A study on the applicability of PIV for the real river flow images taken by UAV ・Development of disaster prevention education tools
Associate Professor	TOMARI Naoyuki	Doctor of Engineering	My research, grounded in civil engineering, lies in the fields of infrastructure planning and management, urban planning, and transport policy. My work focuses on two main areas: （1） planning systems, including planning processes and public involvement, and （2）transport policy, particularly in urban contexts, examining specific topics such as taxi systems, airport planning, and high-speed rail development. I also engage in international comparative studies across these domains.
Associate Professor	HOJO Toshimasa	Doctor of Engineering	By using the functions of microorganisms, energy such as methane gas can be created from wastewater and waste containing organic matter rich. The development of methane fermentation technology contributes to the achievement of low-carbon society and recycling society.