List of Supervising Professors of Ph.D. of Disaster Management Program for Spring Semester 2021 Academic Year

Supervising Professors			
ICHII, Koji	Professor	Doctor of Engineering (Kyoto University)	75550

E-mail: ichiik@kansai-u.ac.jp

Theme Performance-based Seismic Design

Seismic design of structures is a key element of societal safety against earthquake disaster. However, there are various type of structures to be considered. For example, not only the safety of buildings, but also the safety of lifelines such as electric power supply networks, pipelines for water supply, railways, road networks are essential for emergency response. However, the characteristics of damage to these various structures are not uniform. This seminar focuses on the method to estimate the damage to various types of structures. And students are expected to discuss how to integrate the advanced technologies into seismic design codes.

Lecture Earthquake Engineering

- Koji Ichii, Takeko Mikami (2018) Cyclic threshold shear strain in pore water pressure generation in clay in situ samples, *Soils and Foundations*, Vol.58, pp.756-765.
- Koji Ichii and Yu Nandar Hlaing (2018) A simple framework for planning emergency routes in small townships in response to earthquake disasters, *Journal of Societal Safety Sciences*, No.7, pp.43–54.
- Koji Ichii, Keisuke Kitade, Mayumi Kawano and Ikuo Taguchi (2014) Surface wave-based health monitoring method for a sheet pile quay wall, *International Journal of Structural Stability and Dynamics*, Vol.14, No.05, DOI: 10.1142/S0219455414400094.
- Susumu Iai and Koji Ichii (2010) Soils and Foundations during Earthquakes, *Soils and Foundations* Vol.50, No.6, pp.937-953.
- Koji ICHII (2005) Towards the optimum seismic design of a gravity quay wall a risk based approach for a soil-structure interaction problem, *On course (PIANC magazine)*, PIANC (International Navigation Association), Vol.120, pp.13-24, 2005.

	Su	pervising Professors	Code Number
KAMEI, Katsuyuki	Professor	Ph.D in Commerce (Osaka City University)	94732

E-mail: kamei@kansai-u.ac.jp

Theme Risk Management

In modern society, facing with complicated and socialized risk, it is necessary to carry out social risk management approach. In this course, we try to study the general principle of organizational risk management and its practice from a viewpoint of social risk management. The topics addressed in the seminar include (1) contemporary risk control and risk finance, (2) organization of risk management, (3) risk information disclosure as a means of risk communication, (4) strategy and risk management, (5) leadership and crisis management, (6) SME and risk management, and (7) safety for school and children risk management, etc.

Lecture Risk Management

Research Works

Annelot Wismans, Roy Thurik, Ingrid Verheul, Olivier Torrès and Katsuyuki Kamei (2020), "Attention-Deficit Hyperactivity Disorder Symptoms and Entrepreneurial Orientation: A Replication Note" *Applied Psychology International Review*, Volume69, Issue3.

Katsuyuki Kamei et Bérangère Deschamps (2020), "Cas Oikawa Denim Une entreprise japonaise reprise par l'épouse du fondateur", Audrey Missonier et Catherine Thévenard-Puthod (sous la direction de), *Transmission-reprise d'entreprise 11 études de cas*, éditions ems pp.184-195.

Katsuyuki Kamei (2019) Risk Management Basic Theory and Case, Kansai University Press.

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	Su	pervising Professors	Code Number
KOSHIYAMA, Kenji	Professor	Doctor of Philosophy in Engineering (Kobe University)	70555

E-mail: k-koshi@kansai-u.ac.jp

Theme Urban Disaster Reduction Planning

Globalization and Urbanization bring our society new risk of disasters. This seminar focuses the mechanism of new disaster occurrence and the methodology for disaster reduction from the viewpoint of urban design and planning. This will deal with the development of the disaster management cycle, the vulnerability approach, the hazard simulation, the environmental design after disaster and the prevention urban planning for disasters. This theme will face the new challenge for the risk reduction.

Lecture Urban Disaster Mitigation

Research Works

Kenji Koshiyama (2017) Sheltering Status after 1 year of the Multiple Disaster in Fukushima, the 8th International i-Rec Conference, Toronto

Kenji Koshiyama (2016) Housing Recovery Process of the Great East Japan Earthquake Disaster, the 4th International Conference on Urban Disaster Reduction

Kenji Koshiyama (2014) Analysis of the allocation pattern of the temporary housing sites after disasters, the 3rd International Conference on Urban Disaster Reduction

Kenji Koshiyama (2014) Characteristics of emergency response at the Great East Japan Earthquake, International Disaster Risk Conference in DAVOS, Poster Collection, pp.91-94

Kenji Koshiyama (2011) Comparison of International and Domestic Methods of Providing Housing After Disasters, *Journal of Disaster Research* Vol.6, No.2, pp.230-235.

TOLICHIDA GL." D. (Suj	pervising Professors	Code Number
1SUCHIDA, Snoji Professor 97501	TSUCHIDA, Shoji	Professor		97501

E-mail: tsuchida@kansai-u.ac.jp

Theme Psychology of Societal Safety

Theories in social psychology, such as attitude structure, emotion, social cognition, self-concept, interpersonal relations, communication, group dynamics, and collective behaviors are applied to field cases and studied as researches of (1) risk perception, (2) risk communication, and (3) psychological processes in crisis. The field cases, for example, are public acceptance/rejection and consensus formation processes of science/ technology (EMF, nuclear, GMO, etc.), the social psychological responses to disasters and crises (earthquake, tsunami, severe accident, etc.).

Lecture Psychology of Disaster Risks

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- Shoji Tsuchida (2017) The Government and TEPCO Problems in Communicating Information with the Public during the Fukushima-1 NPP Accident.", IN Faculty of Societal Safety Sciences (ed.), THE FUKUSHIMA AND TOHOKU DISASTER, pp.287-308. Elsevier / Butterworth-Heinemann.
- Shoji Tsuchida, Takamasa Shiotani, Norifumi Tsujikawa, & Yuri Nakagawa (2016) Social Capital, Mutual Aids in Disasters, and Evaluation on Neighborhood's Disaster-Preparation: Comparison between the States of Volunteer-Firefighter and the States of Career-Firefighter in the United States, *Safety Science Review*, 6, 21-38.
- Norifumi Tsujikawa, Shoji Tsuchida, & Takamasa Shiotani (2016) Changes in the Factors Influencing Public Acceptance of Nuclear Power Generation in Japan Since the 2011 Fukushima Daiichi Nuclear Disaster, *Risk Analysis*, 36(1), 98-113.
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- Hans Peter Peters, Dominique Brossard, Suzanne de Cheveigné, Sharon Dunwoody, Monika Kallfass, Steve Miller, & Shoji Tsuchida (2008) Interactions with the Mass Media, *Science*, 21, 204-205.

	Su	pervising Professors	Code Number
NAGAMATSU, Shingo	Professor	Ph.D. (Osaka University)	70558

E-mail: nagamatu@kansai-u.ac.jp

Theme Economics of Disasters and Policy Analysis for Disaster Reduction

This seminar will focus on disaster management policy in terms from Economics. Students are expected to learn economic theory of disasters and policy analysis skills such as econometric analysis and cost benefit analysis (CBA), and write academic papers that can contribute to support or challenge existing disaster management theories. Students are also expected to have a compassionate heart, an accurate knowledge of scientific facts and policy practices, and an analytical mind to study policies under economic and public policy theory.

Lecture Economics of Risk and Disaster

Research Works

Shingo Nagamatsu (2017) Building Back a Better Tohoku After the March 2011 Tsunami: Contradicting Evidence, Vicente Santiago-Fandino et al. eds. *The 2011 Japan Earthquake and Tsunami: Reconstruction and Restoration (Advance in Natural and Technological Hazards Research Vol.47)*, Springer, pp.37-54.

Shingo Nagamatsu and Akiko Ono (2017) Job Creation after Catastrophic Events: Lessons from the Emergency Job Creation Program after the 2011 Great East Japan Earthquake, *Japan Labor Review*, Vol.14, No.1, Winter 2017, pp.112-131, 2017

Shingo Nagamatsu (2016) Targeting Vulnerable People with a Social Safety Net: Lessons from the CFW program for the 2011 Great East Japan earthquake and Tsunami Disaster, *Journal of Disaster Research*, Vol.11 No.5 pp. 926-934.

Supervising Professors			
HOSOKAWA, Shigeo	Professor	Doctor of Engineering (Kobe University)	76814

E-mail: hosokawa@kansai-u.ac.jp

Theme Industrial Safety System

Industrial systems such as power plants, petrochemical complexes, steal mills and mechanical systems are essential for modern society and life. Their safety deeply depends on the mechanical characteristics and heat and fluid flows in the systems. This seminar focuses on safety of industrial systems from the viewpoint of mechanics, especially thermal-fluid dynamics. Understanding and control of heat and fluid flows for system safety are main subject. Experimental approaches are mainly used for investigation of thermal-fluid phenomena. Development of measurement methods for understanding and monitoring heat and fluid flows is also one of the subjects.

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Shigeo Hosokawa, Kosuke Hayashi, Akio Tomiyama (2009) Multi-Fluid Simulation of Turbulent Bubbly Pipe Flows, *Chemical Engineering Science*, Vol. 64, pp. 5308-5318.

HOSOKAWA, Shigeo Professor: Changed "Lecturer Professor" to "Supervising Professor".

	Supervising Professors			
OKUMURA, Yoshihiro	Associate Professor	Ph.D in Informatics (Kyoto University)	70838	

E-mail: okumura@kansai-u.ac.jp

Theme Disaster Reduction and Resilient Society

This lecture focuses on a broad field for disaster reduction and measures for a resilient society against a mega disaster, ranging from the mechanism of natural disasters, analysis of people's evacuation behavior, and implementation of research. The following topics are an example of what will be covered; (1) a tsunami source modeling, (2) numerical analysis of tsunami propagation and inundation, (3) numerical analysis of structural response to a tsunami, (4) development of an evacuation simulation model focusing on evacuation start, and (5) evacuation behavior observation by using UAV.

Research Works

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- Yoshihiro Okumura, Kenji Harada, Yoshiaki Kawata, Evacuation Behavior in the 29 September 2009 Samoa Islands Region Earthquake Tsunami, Journal of Earthquake and Tsunami, Vol.5, No.3, pp.217-229, 2011.

	Su	pervising Professors	Code Number
KOYAMA, Tomofumi	Associate Professor	Ph. D Land and Water Resources Science (Royal Institute of Technology, KTH, Sweden)	69845

E-mail: t-koyama@kansai-u.ac.jp

Theme Geo-disaster Prevention and Mitigation

Recently many geo-disasters (such as landslide, slope collapse and liquefaction) have been occurred by torrential rainfall and earthquakes. This seminar focuses on the mechanism of geo-disasters caused by torrential rainfall and earthquake and their structural and non-structural countermeasures. Students are expected to solve one the problems related geo-disaster prevention and mitigation using computer simulations, field measurement/monitoring and in-situ/laboratory experiments. Students are also expected write academic papers and make a spresentation at the international/domestic conferences.

Lecture Geo-disaster

- Ryota Hashimoto, Mamoru Kikumoto, Tomofumi Koyama and Mamoru Mimura (2017) Method of deformation analysis for composite structures of soils and masonry stones. *Computers and Geotechnics*, 82(2), 67-84.
- Tomofumi Koyama, Yusuke Yasuki and Hiroyuki Shimizu (2016) CFD-DEM simulations for dynamic injection of cement-based grout-grout injection mechanism and suitable injection conditions. *Nordic Grouting Symposium*, Oslo, Norway, 26-27, September, pp.87-98.
- Tomofumi Koyama, Masakazu Chijimatsu, Hiroyuki Shimizu, Shigeo Nakama, TomooFuijita, Akira Kobayashi and Yuzo Ohnishi (2013). Numerical modeling for the coupled thermal-mechanical processes and spalling phenomena in Äspö Pillar Stability Experiment. J Rock MechGeotechEng, DECOVALEX-2011 special issue, 5(1), 58-72.
- Tomofumi Koyama, Kohei Nagano, Keita Lee and Yuzo Ohnishi (2013). Experimental and numerical studies on rainwater infiltration mechanism during torrential rainfall. Caspian Journal of Applied Sciences Research, 2 (AICCE' 12/GIZ' 12): 440-448.

List of Supervising Professors of Ph.D. of Disaster Management Program for Fall Semester 2021 Academic Year

	Su	pervising Professors	Code Number
ICHII, Koji	Professor	Doctor of Engineering (Kyoto University)	75550

E-mail: ichiik@kansai-u.ac.jp

Theme Performance-based Seismic Design

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	Su	pervising Professors	Code Number
KAMEI, Katsuyuki	Professor	Ph.D in Commerce (Osaka City University)	94732

E-mail: kamei@kansai-u.ac.jp

Theme Risk Management

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Lecture Risk Management

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	Su	pervising Professors	Code Number
KOSHIYAMA, Kenji	Professor	Doctor of Philosophy in Engineering (Kobe University)	70555

E-mail: k-koshi@kansai-u.ac.jp

Theme Urban Disaster Reduction Planning

Globalization and Urbanization bring our society new risk of disasters. This seminar focuses the mechanism of new disaster occurrence and the methodology for disaster reduction from the viewpoint of urban design and planning. This will deal with the development of the disaster management cycle, the vulnerability approach, the hazard simulation, the environmental design after disaster and the prevention urban planning for disasters. This theme will face the new challenge for the risk reduction.

Lecture Urban Disaster Mitigation

Research Works

Kenji Koshiyama (2018) Sheltering Status a Year After the Multiple Disaster in Fukushima, Resettlement Challenges for Displaced Populations and Refugees, pp.153-162, Springer

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TOLICHIDA GL." D. (Suj	pervising Professors	Code Number
1SUCHIDA, Snoji Professor 97501	TSUCHIDA, Shoji	Professor		97501

E-mail: tsuchida@kansai-u.ac.jp

Theme Psychology of Societal Safety

Theories in social psychology, such as attitude structure, emotion, social cognition, self-concept, interpersonal relations, communication, group dynamics, and collective behaviors are applied to field cases and studied as researches of (1) risk perception, (2) risk communication, and (3) psychological processes in crisis. The field cases, for example, are public acceptance/rejection and consensus formation processes of science/ technology (EMF, nuclear, GMO, etc.), the social psychological responses to disasters and crises (earthquake, tsunami, severe accident, etc.).

Lecture Psychology of Disaster Risks

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	de Number
NAGAMATSU, Shingo Professor Ph.D. (Osaka University)	70558

E-mail: nagamatu@kansai-u.ac.jp

Theme Economics of Disasters and Policy Analysis for Disaster Reduction

This seminar will focus on disaster management policy in terms from Economics. Students are expected to learn economic theory of disasters and policy analysis skills such as econometric analysis and cost benefit analysis (CBA), and write academic papers that can contribute to support or challenge existing disaster management theories, and develop a path breaking new policy. Students are also expected to have a warm heart, but cool mind to see policy issues in a real world.

Lecture Economics of Risk and Disaster

Research Works

- Takeshi Miyazaki and Shingo Nagamatsu (2018) Estimation of the fiscal impact on Japanese governments of Anticipated Nankai Trough Megathrust Earthquake. Discussion Paper of Economics and Buisiness, Kyushu University, 2018-01.
- Shingo Nagamatsu (2017) Building Back a Better Tohoku After the March 2011 Tsunami: Contradicting Evidence, Vicente Santiago-Fandino et al. eds. *The 2011 Japan Earthquake and Tsunami: Reconstruction and Restoration (Advance in Natural and Technological Hazards Research Vol.47)*, Springer., pp.37-54.
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Supervising Professors			Code Number
HOSOKAWA, Shigeo	Professor	Doctor of Engineering (Kobe University)	76814

E-mail hosokawa@kansai-u.ac.jp

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HOSOKAWA, Shigeo Professor: Changed "Lecturer Professor" to "Supervising Professor".

Supervising Professors			
OKUMURA, Yoshihiro	Associate Professor	Ph.D in Informatics (Kyoto University)	70838

E-mail: okumura@kansai-u.ac.jp

Theme Disaster Reduction and Resilient Society

This lecture focuses on a broad field for disaster reduction and measures for a resilient society against a mega disaster, ranging from the mechanism of natural disasters, analysis of people's evacuation behavior, and implementation of research. The following topics are an example of what will be covered; (1) a tsunami source modeling, (2) numerical analysis of tsunami propagation and inundation, (3) numerical analysis of structural response to a tsunami, (4) development of an evacuation simulation model focusing on evacuation start, and (5) evacuation behavior observation by using UAV.

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Supervising Professors			
KOYAMA, Tomofumi	Associate Professor	Ph. D Land and Water Resources Science (Royal Institute of Technology, KTH, Sweden)	69845

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Theme Geo-disaster Prevention and Mitigation

Recently many geo-disasters (such as landslide, slope collapse and liquefaction) have been occurred by torrential rainfall and earthquakes. This seminar focuses on the mechanism of geo-disasters caused by torrential rainfall and earthquake and their structural and non-structural countermeasures. Students are expected to solve one the problems related geo-disaster prevention and mitigation using computer simulations, field measurement/monitoring and in-situ/laboratory experiments. Students are also expected write academic papers and make a spresentation at the international/domestic conferences.

Lecture Geo-disaster

- Ryota Hashimoto, Mamoru Kikumoto, Tomofumi Koyama and Mamoru Mimura (2017) Method of deformation analysis for composite structures of soils and masonry stones. *Computers and Geotechnics*, 82(2), 67-84.
- Tomofumi Koyama, Yusuke Yasuki and Hiroyuki Shimizu (2016) CFD-DEM simulations for dynamic injection of cement-based grout-grout injection mechanism and suitable injection conditions. *Nordic Grouting Symposium*, Oslo, Norway, 26-27, September, pp.87-98.
- Tomofumi Koyama, Masakazu Chijimatsu, Hiroyuki Shimizu, Shigeo Nakama, TomooFuijita, Akira Kobayashi and Yuzo Ohnishi (2013). Numerical modeling for the coupled thermal-mechanical processes and spalling phenomena in Äspö Pillar Stability Experiment. J Rock MechGeotechEng, DECOVALEX-2011 special issue, 5(1), 58-72.
- Tomofumi Koyama, Kohei Nagano, Keita Lee and Yuzo Ohnishi (2013). Experimental and numerical studies on rainwater infiltration mechanism during torrential rainfall. Caspian Journal of Applied Sciences Research, 2 (AICCE' 12/GIZ' 12): 440-448.