イベント名：平成 26 度　第 2 回総合防災セミナー
日　時：2015 年 2 月 27 日（金）　15:00～18:00
場　所：宇治キャンパス・防災研究所・連携研究棟 3 階大セミナー室

2nd Seminar on Integrated Arts and Sciences for Disaster Reduction
Date and Time: Friday, 27 February 2015, 15:00 – 18:00
Location: DPRI Renkei-Kenkyu building 301(3F), Uji Campus, Kyoto University

Presentations:

1. “RAPID-N: Rapid natech risk assessment and mapping framework.”
Dr. Serkan Girgin, Research Fellow, Joint Research Centre, European Commission, Ispra, Italy.

Major accidents at industrial plants that are triggered by natural hazards (Natechs) are an emerging risk with possibly serious economic, environmental and human-health related consequences. For the mitigation of Natech risk, which is expected to increase in the future due to growing industry and predicted increase of natural hazards, the authorities need to identify Natech prone areas and assess Natech risk in a methodical way. Currently hardly any Natech risk maps exist for many countries and where available they are simple overlays of natural and technological hazards without considering site-specific features or the interaction of hazards.
In order to facilitate probabilistic Natech risk mapping, a unified methodology was developed that is based on the estimation of on-site natural hazard parameters, determination of damage probabilities of plant units due to natural hazard, and assessment of probability and severity of possibly triggered Natech events. The methodology was implemented as an on-line, extensible risk assessment and mapping software called RAPID N, which allows rapid local and regional Natech risk assessment and mapping with minimal data input. RAPID-N features an innovative data estimation framework to complete missing input data, such as on-site natural hazard parameters or plant unit characteristics. The framework is also used for damage assessment and Natech consequence analysis, and allows easy modification of input parameters, dynamic generation of consequence models according to data availability, and extension of models by adding new equations or substituting existing ones with alternatives. Results are presented as summary reports and interactive risk maps, which can be used for land-use and emergency planning purposes by using scenario

hazards, or for rapid Natech consequence assessment following actual disasters. As proof of concept, the framework provides an implementation of the U.S. EPA's RMP Guidance for Offsite Consequence Analysis methodology to perform Natech consequence analysis and includes comprehensive data for world-wide earthquakes (M > 5.5). It is readily extendible to other natural hazards and industries (e.g. pipelines) and can also be supported with more comprehensive risk assessment methods.
During the presentation, the key elements of the Natech risk assessment methodology, such as damage classifications, fragility curves, and risk states will be described. The features and the modules of RAPID-N will be explained in detail and the flowchart of the risk assessment calculations will be described step by step. Finally, the capabilities of RAPID-N will be demonstrated by using a case-study which will involve the impact of an earthquake on multiple industrial plants.

2. "Understanding the general picture of issues concerning people evacuating across wide areas from Fukushima Nuclear Power Plant."
Dr. Yoko Matsuda, Associate Professor, Kwansei Gakuin University, Japan.

Due to the Fukushima Daiichi nuclear accident and the Great East Japan Earthquake, approximately 50,000 or more people have still displaced from Fukushima and nearby prefectures to all over Japan. This issue of the long-term and widespread evacuation has lack of prospect.
The evacuees who lived distanced from their homeland are suffering from separation and conflict among their family, loss of job opportunities and diminished quality of life. In addition, since they spread all over the country, it is quite difficult for them to discuss and get consensus for the communities' future process of recovery.
The presentation characterizes this issue of long-term evacuation, to compare it from the cases of past natural disasters in Japan. Then it is pointed out that the structure of the problem is similar to the international refugee problem. From these analyses, the paper concludes that diverse support measures are required not merely repatriation support or settlement support.