

## **INTRODUCTION**

The US-Taiwan Workshop on the Advancement of Societal Responses to Mega-Disasters Afflicting Mega-Cities, jointly supported by the National Science Council (NSC) of Taiwan and the National Science Foundation (NSF) of the USA, explores new technological advances and pioneering strategic measures for emergency response/recovery/rebuild against mega city - mega disasters (MCMD). In addition, the workshop examines the broader questions that surround these issues, including factors that may cause long-term changes in the risk of disaster and factors that may affect and impede responses by governments, aid agencies, and the general populations. The workshop was held in Taipei city on May 6-7, 2010. The organizers of the workshop invited a diverse set of international research leaders working in the MCMD domain to participate. There were 21 researchers from the U.S., more than 80 from Taiwan and 2 international observers (1 from Japan, 1 from Hong-Kong) attending the workshop.

In order to identify and define pioneering new research areas for future research and implementation, the workshop was organized into four working groups. These working groups were identified as follows:

1. Methods to Forecast Natural Hazard Occurrence and the Impacts on Societal Systems
2. Technology to Increase Societal and Infrastructure Resiliency when Exposed to Major Natural Hazards
3. Assessment Techniques to Quantify the Risk Posed to Individual Infrastructure and Systems of Infrastructures
4. Post-event Management Plans that Minimize the Socio-economic Impact of Natural Hazards

The outcome of the workshop is a set of detailed resolutions that shapes the allocation of future research investment in MCMD technology. In addition, the workshop resolutions identify short- and long-term actions government agencies should take to be better prepared for future mega-disasters.

---

## Workshop Organizers:

### On the U.S. Side:

- Chair:

*Billie F. Spencer Jr.*, the Chair of Nathan M. and Anne M. Newmark Endowed in Civil Engineering, University of Illinois at Urbana-Champaign.

- Co-chair:

*Michael F. Goodchild*, Director Center for Spatial Studies, University of California Santa Barbara.

*Jerome P. Lynch*, Associate Professor of Civil and Environmental Engineering and Electrical Engineering and Computer Science, University of Michigan.

### On the Taiwan Side:

- Chair:

*Chin-Hsiung Loh*, Professor, Department of Civil Engineering, National Taiwan University.

- Co-chair:

*Chang-Yu Ou*, Professor and Dean of the College of Engineering, National Taiwan University of Science and Technology.

*Liang-Chun Chen*, Director, National Science and Technology Center for Disaster Reduction.

*Kuo-Chun Chang*, Director, National Center for Research on Earthquake Engineering.

*Cheng-Shang Lee*, Director, Taiwan Typhoon and Flood Research Institute.

*Wei-Ling Chiang*, President, Disaster Management Society of Taiwan.

*Liang-Jenq Leu*, Chair, Department of Civil Engineering, National Taiwan University.

Foreign Advisor:

*Shih-Chi Liu*, Program Director, National Science Foundation.