

6th Taiwan-US-Japan Workshop on Water System Seismic Practices

Technical Program

October 14 (Wednesday)	
08:30-09:00	Registration
09:00-09:20	Opening Ceremony
Keynote Speeches <i>Chair: Dr. Shen-Hsien Chen</i>	
09:20-09:40	Water supply facilities damages by the 1999 Chi-Chi earthquake and the aftershock restoration works <i>Dr. Tsung-Shen Liao, President, Chinese Taiwan Water Works Association, Taiwan</i>
09:40-10:00	Integration of seismic modeling software with emergency response software <i>Dr. Xavier Irias, East Bay Municipal Utility District, US</i>
10:00-10:20	Recent topics related to seismic safety of dams <i>Prof. Tatsuo Ohmachi, Tokyo Institute of Technology, Japan</i>
10:20-10:40	Break
Session 1: Seismic Mitigation Measures (I) <i>Chairs: Prof. Hiroshi Nagaoka and Prof. Jiin-Song Tsai</i>	
10:40-10:55	A sensor network for real-time damage location and assessment <i>Prof. Masanobu Shinozuka, University of California at Irvine, US</i>
10:55-11:10	The project of reinforcement of embankment for measure against earthquake of the Murayama-Shimo Reservoir <i>Mr. Akira Suzuki, Bureau of Waterworks, Tokyo Metropolitan Government, Japan</i>
11:10-11:25	Strategy of Shihmen Reservoir high turbidity <i>Dr. Shen-Hsien Chen, Water Resources Agency, MOEA, Taiwan</i>
11:25-11:40	Earthquake-resistant distribution pipeline project in Nagoya City <i>Mr. Toshichika Matsui, Waterworks & Sewerage Bureau, City of Nagoya, Japan</i>
11:40-11:55	Memphis Light, Gas and Water seismic planning: the role of tanks, generators, and distribution system piping <i>Ms. Chandrika Winston, Memphis Light, Gas and Water, US</i>
11:55-12:10	Aged-pipeline renewal plan with enhancing seismic upgrade - in case of Bureau of Public Enterprises, Ibaraki Prefecture <i>Mr. Hayato Nakazono, Tokyo Engineering Consultants Co., Ltd., Japan</i>
12:10-13:40	Lunch
12:40-13:00	NCREE Laboratory Tour (for Taiwanese Participants, in Chinese)

Session 2: Seismic Analysis, Design and Retrofit (I) <i>Chairs: Mr. David L. Pratt and Mr. Nan-Tzer Hwu</i>	
13:00-13:15	Magic R: seismic design of water tanks <i>Mr. John M. Eidinger, G&E Engineering Systems Inc, US</i>
13:15-13:30	Effects of sloshing of water in receiving water tank on water distribution system during earthquake <i>Prof. Masakatsu Miyajima, Kanazawa University, Japan</i>
13:30-13:45	From Chi-Chi earthquake to study about aseismic measures and disaster crisis management in Taipei <i>Mr. Chin-Tse Cheng, Taipei Water Department, Taiwan</i>
13:45-14:00	Study for the safety of ductile iron pipe earthquake-resistant joint in massive earthquake <i>Mr. Yoshinori Itani, Kubota Corporation, Japan</i>
14:00-14:15	The Italian contribution to the analysis of the effects of earthquakes on water supply systems: practical experiences and theoretical investigations <i>Prof. Mario Rosario Mazzola, Federico II University, Italy</i>
14:15-14:30	Break
Session 3: Seismic Risk Analysis, Assessment and Management <i>Chairs: Mr. John M. Eidinger and Mr. Toru Tomioka</i>	
14:30-14:45	Estimation of seismic resistivity and earthquake-resistant measures of water distribution facilities in the Hachinohe Regional Water Supply Authority <i>Mr. Noboru Murakami, Hachinohe Regional Water Supply Authority, Japan</i>
14:45-15:00	Hydraulic performance analysis of water systems under major earthquakes <i>Dr. Gee-Yu Liu, National Center for Research on Earthquake Engineering, Taiwan</i>
15:00-15:15	Simulation of Los Angeles water supply and distribution in response to M7.8 San Andreas earthquake <i>Dr. Craig A. Davis, Los Angeles Department of Water and Power, US</i>
15:15-15:30	Simulation of the restoration process based on estimation of seismic damage to distribution pipes <i>Mr. Yuki Sagara, Osaka Municipal Waterworks Bureau, Japan</i>
15:30-15:45	The quantitative risk analysis of water pipe bridge on earthquake disaster - case study of Sindian Water Pipe Bridge <i>Dr. Siao-Syun Ke, National Science and Technology Center for Disaster Reduction, Taiwan</i>
15:45-16:00	A reasonable approach to the seismic assessment of water supply facilities <i>Mr. Hayato Yokono, Kobe Municipal Waterworks Bureau, Japan</i>
16:00-16:15	Break

Session 4: Emergency Response and Recovery <i>Chairs: Prof. Masakatsu Miyajima and Mr. Yang-Long Wu</i>	
16:15-16:30	Influence of organizational structure on effectiveness of post-disaster management <i>Prof. Jiin-Song Tsai, National Cheng Kung University, Taiwan</i>
16:30-16:45	A regional water supplier's seismic response plan as part of the organization's overall emergency management plan <i>Mr. Wally Lieu, Metropolitan Water District of Southern California, US</i>
16:45-17:00	Introduction of emergency water supply facilities in Taipei metropolitan <i>Mr. K.P. Chang, Taipei Water Department, Taiwan</i>
17:00-17:15	Practical reinforcement action of risk and crisis management with participatory planning using a workshop method - emergency response to natural disasters <i>Mr. Masao Kadowaki, Hanshin Water Supply Authority, Japan</i>
17:15-17:30	Earthquake disaster response project for water facility at Yilan area <i>Mr. Bing-Xin Wang, Taiwan Water Corporation, Taiwan</i>
18:30-21:00	Conference Dinner (hosted by National Science and Technology Center for Disaster Reduction and National Center for Research on Earthquake Engineering)

October 15 (Thursday)	
Session 5: Seismic Mitigation Measures (II) <i>Chairs: Prof. Masanobu Shinozuka and Mr. Chin-Tse Cheng</i>	
09:00-09:15	Continuous earthquake preparedness – strategic investment of resources for optimal earthquake response <i>Mr. Steve Welch, Contra Costa Water District, US</i>
09:15-09:30	Anti-seismic measures of water supply utility in great Taipei area <i>Ms. Yu-Chih Chou, Chinese Taiwan Water Works Association, Taiwan</i>
09:35-09:45	The present status, problems and promoting procedures for the measures against earthquake of water supply facilities <i>Mr. Munetaka Abe, Japan Water Works Association, Japan</i>
09:45-10:00	A strong community outreach plan will facilitate the implementation of complex seismic upgrade programs <i>Mr. David L. Pratt, East Bay Municipal Utility District, US</i>
10:00-10:15	Activities related to earthquake-proofing of drinking-water infrastructure in the Japan Water Research Center <i>Mr. Mikita Amano, Japan Water Research Center, Japan</i>

10:15-10:30	San Francisco Public Utilities Commission water system improvement program and its seismic requirements <i>Mr. Luke Cheng, San Francisco Public Utilities Commission, US</i>
10:30-10:50	Break
Session 6: Seismic Analysis, Design and Retrofit (II) <i>Chairs: Mr. Steve Welch and Dr. Gee-Yu Liu</i>	
10:50-11:05	Evaluation of effects of recent strong motion records on water supply facilities <i>Dr. Kimiyasu Ohtake, Nippon Jagesuido Sekkei Co., Ltd. Japan</i>
11:05-11:20	Study on the response of joint of large diameter pipes caused by earthquake <i>Dr. Jwo-Ran Jerry Chen, CECI Engineering Consultants, Inc., Taiwan</i>
11:20-11:35	Development of high seismic performance pipe for crossing active faults <i>Mr. Nobuhiro Hasegawa, JFE Engineering Corporation, Japan</i>
11:35-11:50	Seismic upgrades of Portland Water Bureau's water supply system <i>Mr. Keith Walker, Portland Water Bureau, US</i>
11:50-12:05	Replacement of ductile iron pipes installed in early days <i>Mr. Kazuhiko Fujimura, Tokyo Waterworks Service Co., Ltd., Japan</i>
12:05-12:20	Seismic response of San Pablo Reservoir drain intake <i>Mr. David Lee, East Bay Municipal Utility District, US</i>
12:20-13:00	Lunch
13:00-13:10	Group Photos (outside NCREE lobby)
13:10-13:30	NCREE Laboratory Tour (for US and Japanese Participants, in English)
Panel Discussion Topic: Business continuity management of water supply facilities after disaster <i>Chairs: Prof. Ban-Jwu Shih, Dr. Craig A. Davis and Prof. Tatsuo Ohmachi</i>	
13:30-14:30	Discussion I
14:30-14:50	Break
14:50-16:00	Discussion II
16:00-16:20	Concluding Remarks <i>Dr. Tsung-Shen Liao, President, Chinese Taiwan Water Works Association, Taiwan</i>
17:00-18:00	Tour: Museum of Drinking Water (at Taipei Water Park)
18:30-20:30	Reception Dinner (hosted by Taipei Water Department)

October 16 (Friday)

08:00	Departure for the Shih-Kang Dam
10:00-10:30	Field visit to the Dam
10:30-11:00	Briefing & visit at the Exhibition Hall
11:00	Departure for the Feng-Yuan Purification Plant
11:10-11:40	Field visit to the Plant
11:40-12:00	Briefing of the Plant
12:00-12:30	Discussion
12:30-14:00	Lunch (hosted by Taiwan Water Corporation)
14:00	Departure for the 921 Earthquake Museum of Taiwan
14:30-16:00	Organized tour of the Museum
16:00	Departure for Taipei

October 17 (Saturday)

08:00	Departure for the Fei-Tsui Reservoir
08:40-09:10	Briefing of the Reservoir
09:10-10:00	Field visit to the Dam
10:00	Departure for the Zhi-Tan Purification Plant
10:30-11:00	Briefing of water purification process and auto control system
11:00-11:20	Field visit to the 5 th rapid filter system
11:20-11:40	Field visit to the sludge treatment station
11:40	Departure for lunch (hosted by Chinese Taiwan Water Works Association)