

## 4<sup>TH</sup> U.S. - JAPAN WORKSHOP ON SOIL - STRUCTURE INTERACTION

The 4<sup>th</sup> U.S.-Japan Workshop on Soil-Structure Interaction was held during 28 - 30 March 2007 in Tsukuba, Japan. The meeting was hosted by the Building Research Institute (BRI) of Japan and was organized by Drs. Izuru Okawa and Masanori Iida from BRI, Dr. Mehmet Celebi from U.S. Geological Survey (USGS), and Professor Maria Todorovska from the University of Southern California (USC). This sequel of Workshops started in 1998.

Fifty-five individuals participated in this meeting from four countries: Japan (39), U.S. (12), Greece (3), and China (1). Thirty nine technical papers were presented, including four special presentations, and three brief reports on the Noto Hanto Earthquake of 25 March 2007 ( $M=6.9$ ), which occurred three days before the workshop. Special presentations were made by Professor Kausel, who presented his perspective on the past and future of research on soil-structure interaction, Professor Tokimatsu on soil-structure interaction behavior in large shaking table experiments, conducted on the E-Defence shaking table, Professor Fukuwa made a presentation on educational tools for soil and structural dynamics he developed and demonstrated some of these tools, and Dr. Celebi - on the variations of the fundamental frequency of undamaged buildings. The other technical presentations were on a variety of topics, including: methods for linear and nonlinear numerical simulations of seismic response of soil-foundation-structure systems, laboratory (centrifuge and shake table) and field experiments, performance of foundations during past earthquakes, interpretation of seismic response data, practical methods for soil-structure interaction analyses, and regulatory guidance for assessing the effects of soil-structure interaction on nuclear power plant facilities. The proceedings of this workshop, the technical papers, and the workshop summary and recommendations will be published on a CD Rom, which is being prepared.

The financial support from the Building Research Institute of Japan – the sponsor of this workshop, and the travel grant from the U.S. National Science Foundation are gratefully acknowledged.

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Group Photo. Participants at the 4<sup>th</sup> U.S.-Japan Workshop on Soil-Structure Interaction

## THE 4<sup>TH</sup> U.S. - JAPAN WORKSHOP ON ADVANCED RESEARCH ON DAMS

The 4<sup>th</sup> U.S.-Japan Workshop on Advanced Research on Dams was held under the sponsorship of the U.S. Army Engineer Research and Development Center (ERDC) and the Public Works Research Institute of Japan (PWRI) under the auspices of the UJNR Panel on Wind and Seismic Effects' Task Committee on Dams conducted at the PWRI in Tsukuba, Japan, on 17 May 2007. The Japan Commission on Large Dams and the Japan Dam Engineering Center co-sponsor this Workshop.

The Workshop provided a valuable forum for exchanging technical information related to non-linear response analyses and shaking table tests for concrete dams. The workshop was attended by 3 U.S. participants and 25 Japanese participants. Seven technical papers were presented, including one keynote presentation by Professor Victor E. Saouma, University of Colorado, Boulder.

Workshop participants recognized the importance of continued exchange of research personnel, technical data and information, and the joint use of available research facilities in both countries, such as the Network for Earthquake Engineering Simulation (NEES) and the 3-D Full-Scale Earthquake Testing Facility (E-Defense). The participants agreed to the need to develop new methods to effectively transfer technology working in collaboration with other engineering societies with similar interests.

Six dam earthquake engineering topics were identified for the further cooperative research programs:

- a. *Non-linear response analysis of concrete dams (joints, dynamic tensile strength);*
- b. *Earthquake ground motions;*
- c. *Criteria for seismic analysis progression with explicit modeling guidelines;*
- d. *Risk assessment of dams and dam systems;*
- e. *Dam-foundation interaction;* and
- f. *Validation of numerical procedures.*

The proceedings of this workshop, the technical papers, and the workshop resolutions are being prepared for publication.

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Group Photo. Participants at the 4<sup>th</sup> U.S.-Japan Workshop on Advanced Research on Dams