

# COSMOS

## Accomplishments

### 2004

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## Workshops

### COSMOS INVITED WORKSHOP ON STRONG-MOTION RECORD PROCESSING WORKSHOP

On 26-27 May 2004, an invited workshop was held sponsored by the COSMOS, the University of California at Santa Barbara (UCSB), with funding provided by the U.S. National Science Foundation (NSF) and the Southern California Earthquake Center (SCEC) and teamed with the U.S. Geological Survey's Advanced National Seismic System (ANSS), and the California Geological Survey's Strong-Motion Instrumentation Program (CSMIP) to enhance the COSMOS Strong-Motion Virtual Data Center (VDC). This workshop supported the COSMOS VDC development activities by providing documentation of current international practices and procedures for processing strong-motion recordings, by the identification of special record processing issues, and by the development of recommendations for uniform routine and for special record processing guidelines that can be adopted by data by all providers. The workshop recommendations will be the basis for a COSMOS guideline for strong-motion record processing. The guideline will address: 1) current and anticipated future applications of strong-motion recordings, 2) processing issues related to near-filed recordings, and 3) the trend toward deploying wide-dynamic-range digital recording instruments. The guideline will be drafted based on the recommendations of the workshop and circulated broadly for review and comment. Following comment resolution the guideline will be issued as a COSMOS Guideline for Strong-Motion Record Processing. A major benefit of uniform record processing procedures is to facilitate international exchange and use of strong-motion recordings, especially the dissemination of strong-motion data through central hubs such as the COSMOS VDC, that link multiple databases.

### COSMOS INVITED WORKSHOP ON ARCHIVING AND WEB DISSEMINATION FOR GEOTECHNICAL DATA

COSMOS, the PEER Lifelines Program, and the Federal Highway Administration (FHWA) hosted an invited workshop on archiving and web dissemination of geotechnical data on 21-23 June 2004. The goals of the workshop were to: 1) demonstrate the COSMOS-PEER LL Pilot Geotechnical Virtual Data Center (GVDC) and obtain user input, and 2) review FHWA needs for a geotechnical archiving and dissemination system to serve the needs for FHWA and state highway agencies. Additional purposes were to review relevant current research and other development projects and develop recommendations for implementation of the GVDC that will serve the general needs of the geotechnical community.

## Upcoming

### COSMOS INTERNATIONAL WORKSHOP FOR SITE SELECTION, INSTALLATION AND OPERATION OF GEOTECHNICAL STRONG-MOTION ARRAYS: WORKSHOP 1, INVENTORY OF CURRENT AND PLANNED ARRAYS

This workshop will take place on The workshop will be held on 14-15 October 2004 at the Davidson Conference Center, University of Southern California. The assessment of response of the local geotechnical environment to dynamic seismic motions strongly contributes to the uncertainty in ground motion hazard estimation at any specific location. The strong potential exists to more confidently quantify and reduce uncertainty in site response assessments by gaining a fuller understanding of the response of geologic materials to dynamic seismic loading, particularly in the range of non-linear stress-strain behavior, and by appropriate calibration and validation of site response computational models. The purpose of this workshop, the first of two that we are planning, is two fold: 1) to inventory the current strong-motion geotechnical arrays and document their purpose and design, and 2) to identify any gaps in strong-motion geotechnical monitoring needed to address the broad issues of geotechnical design and to set priorities for addressing them.