

## PREFACE

The California Strong Motion Instrumentation Program (CSMIP) in the California Geological Survey of the California Department of Conservation established a Data Interpretation Project in 1989. Each year CSMIP funds several data interpretation contracts for the analysis and utilization of strong-motion data. The primary objectives of the Data Interpretation Project are to further the understanding of strong ground shaking and the response of structures, and to increase the utilization of strong-motion data in improving post-earthquake response, seismic code provisions and design practices.

As part of the Data Interpretation Project, CSMIP holds annual seminars to transfer recent research findings on strong-motion data to practicing seismic design professionals, earth scientists and post-earthquake response personnel. The purpose of the annual seminar is to provide information that will be useful immediately in seismic design practice and post-earthquake response, and in the longer term, useful in the improvement of seismic design codes and practices. Proceedings and individual papers for each of the previous annual seminars are available at <http://www.conservation.ca.gov/cgs/smip/seminar> in PDF format. Due to State budget constraints, CSMIP did not hold an annual seminar in 2010 or 2011. The SMIP22 Seminar is the thirty-first in this series of annual seminars.

The SMIP22 Seminar is divided into two sessions in the morning and two sessions in the afternoon. There are seven presentations in total; six are on the results of CSMIP-funded projects. The sessions in the morning include three presentations. The first session will commemorate the 50<sup>th</sup> anniversary of CSMIP. Farzad Naeim, SMIAC Chair, and Hamid Haddadi, CSMIP Program Manager, will present on the history, accomplishments, and future direction of CSMIP. The second session will focus on ground response topics. Professor Ziotopoulou of UC Davis will present on developing input motions for site response and nonlinear deformation analyses. She will be followed by a presentation from Professor Stewart of UCLA on horizontal-to-vertical spectral ratio peak protocols.

The two sessions in the afternoon include four presentations. The third session will focus on structural response topics. Professor Kunnath of UC Davis will present on ASCE-41 nonlinear modeling guidelines and acceptance criteria for reinforced concrete shear wall buildings. He will be followed by a presentation from Professor Tsampras of UC San Diego on diaphragm seismic design provisions and higher-mode responses of buildings. The last session will focus on lifeline response topics. Professor Olsen of San Diego State University will present on seismic hazard analysis of embankment dams. He will be followed by a presentation from Professor Athanasopoulos-Zekkos of UC Berkeley on dynamic response parameters of earth dams. Individual papers and the proceedings are available for download by the SMIP22 participants at the provided link and will be available at the CSMIP website in the future.

Daniel Swensen  
CSMIP Data Interpretation Project Manager

**Appreciation to Members of the  
Strong Motion Instrumentation Advisory Committee**

**Main Committee**

Farzad Naeim, Chair, Farzad Naeim, Inc.  
Norman Abrahamson, UC Berkeley  
Bruce Clark, Leighton & Associates  
Martin Eskijian, California State Lands Commission (retired)  
David Gutierrez, GEI Consultants  
Marshall Lew, Wood  
Bret Lizundia, Rutherford + Chekene  
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**Data Utilization Subcommittee**

Representatives from each Subcommittee