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 SMIP20 Seminar is the twenty-ninth in this series of annual seminars.

The SMIP20 Seminar is divided into two sessions in the morning and two sessions in the afternoon. There are seven presentations on the results from CSMIP-funded projects and two invited presentations. The sessions in the morning include four presentations. The first session will focus on ground motion issues. Professor Stewart of UCLA will present on the application of HVSR parameters in ergodic site response modeling. He will be followed by a presentation from Professor Bozorgnia of UCLA on ground motions recorded during the 2019 Ridgecrest earthquake sequence. The second session will also focus on ground motion issues. Professor Taciroglu of UCLA will present on nonlinear dynamic soil properties characterized from geotechnical array data. Doctor Roten of San Diego State University will then present on site amplification estimates from geotechnical array data.

The two sessions in the afternoon include five presentations which focus on structural response topics. In the third session, Professor Kunnath of UC Davis will present on ASCE-41 acceptance criteria for linear and nonlinear procedures. He will be followed by a presentation from Professor Zareian of UC Irvine on code torsional provisions for semi-rigid diaphragms. The last session will include a presentation on bridge health monitoring by Professor Mosalam of UC Berkeley, and two invited presentations on structural health monitoring topics by Doctor Farrar of Los Alamos National Laboratory and Professor McCallen of the University of Nevada Reno. Individual papers and the proceedings are available for download by the SMIP20 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

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