PREFACE

The California Strong Motion Instrumentation Program (CSMIP) in the Division of Mines and Geology of the California Department of Conservation promotes and facilitates the improvement of seismic codes through the Data Interpretation Project. The objective of this project is to increase the understanding of earthquake strong ground shaking and its effects on structures through interpretation and analysis studies of CSMIP and other applicable strong-motion data. The ultimate goal is to accelerate the process by which lessons learned from earthquake data are incorporated into seismic code provisions and seismic design practices.

Since the establishment of CSMIP in early 1970s, over 600 stations, including 400 ground-response stations, 140 buildings, 20 dams and 35 bridges, have been installed. Significant strong-motion records have been obtained from many of these stations. One of the most important sets of strong-motion records is from the 1994 Northridge earthquake. During this earthquake strong-motion records were obtained from 116 ground-response stations and 77 extensively-instrumented structures. In addition to these records, CSMIP is cooperating with the City of Los Angeles and other agencies to collect and process accelerograms recorded at over 300 high-rise buildings during the Northridge earthquake. These buildings were instrumented by the building owners as required by the City's Building Code. The strong-motion records from the Northridge earthquake have been and will be the subject of CSMIP data interpretation projects.

The SMIP95 Seminar is the seventh in a series of annual events designed to transfer recent interpretation findings on strong-motion data to practicing seismic design professionals and earth scientists. In both oral presentations and poster sessions, investigators of four CSMIP-funded data interpretation projects presented the results from interpretation studies of CSMIP data during the past year. In addition, CSMIP staff presented a study on near-real-time strong-motion monitoring, and three invited speakers presented topics related to strong-motion data. One paper was on strong-motion records from the 1995 Kobe, Japan earthquake, and two were on analysis of the response of steel frame buildings during the Northridge earthquake. Professor Bruce Bolt of UC Berkeley presented a keynote address at the luncheon on the prediction of seismic ground motion.

The papers in this Proceedings volume presented by the investigators of four CSMIP-funded data interpretation projects represent interim results. Following this seminar the investigators will be preparing final reports with their final conclusions. These reports will be more detailed and will update the results presented here. CSMIP will make these reports available after the completion of the studies.