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 the early 1970s, over 650 stations, including 430 ground-response stations, 150 buildings, 20 dams and 54 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 in cooperation with the City of Los Angeles and other agencies, collected and archived 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 SMIP98 Seminar is the ninth in a series of annual events designed to transfer recent interpretation findings on strong-motion data to practicing seismic design professionals and earth scientists. The purpose of the Seminar is to increase the utilization of strong-motion data in improving seismic design and practices. In the presentations, investigators of the CSMIP-funded data interpretation projects will present the results from their studies on the near fault ground motions and on four concrete moment frame buildings. In addition, five invited experts who have utilized strong-motion data in specific studies will discuss the applications of strong-motion data to a variety of areas including rapid earthquake response by utilities, prediction of earthquake impacts, seismic building code improvements, development of TriNet shaking maps, bridge instrumentation and post-earthquake evaluations of bridges. Professor Hiroo Kanamori of Caltech and Chris Poland, President of Degenkolb Engineers will present a luncheon address on the seismological and engineering perspectives on the TriNet project.

The papers in this Proceedings volume presented by the investigators of the 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.

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