PREFACE

The Strong Motion Instrumentation Program (SMIP) in the Division of Mines and Geology of the California Department of Conservation promotes and facilitates the improvement of seismic codes through the Directed Research 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 SMIP 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.

The Loma Prieta earthquake of October 17, 1989 produced a large set of strong-motion data from a magnitude 7.1 earthquake. This data set is very important because most previous strong-motion data are from earthquakes of lower magnitude. SMIP obtained records from a total of 94 stations, including 53 ground-response stations and 41 extensively-instrumented structures. These records have been the subject of SMIP directed research projects in the past year.

The SMIP91 Seminar is the third in a series of planned annual events designed to transfer recent research findings on strong-motion data to practicing seismic design professionals and earth scientists. In both oral presentation and poster sessions, sixteen investigators will provide state-of-the-art data and analysis results from recent research studies of SMIP data during the past year.

The papers in this volume represent interim results obtained by the investigators. 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. SMIP will make these reports available after the completion of the studies.