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GERALDINE SØRUM

Norwegian Geotechnical Institute, Oslo, Norway

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Preface

The importance of field instrumentation can only grow in years to come with ever increasing demands on engineers' skills within geomechanics. It is therefore necessary to give those interested in instrumentation an opportunity to meet regularly to exchange ideas and experiences and to stimulate further advancement within field instrumentation. The international symposia are organized to serve this purpose.

The previous symposia were held in Zurich, Switzerland in 1983 and in Kobe, Japan in 1987. This publication covers the 3rd International Symposium on Field Measurements in Geomechanics held in Oslo, Norway, September 8-11, 1991. As with the earlier meetings the main aims of the symposium were to review advances within field measurements in geomechanics and provide an international forum for the presentation and discussion of new developments and ideas.

In the engineering world, knowledge is based on information derived from theoretical concepts, experimental methods, measurements and visual observations. Reliable and adequate information is therefore a prerequisite to any successful engineering venture. The role of field measurements is to get information which is otherwise unobtainable.

Field measurements and instrumentation can provide information which can make the difference between a right and a wrong decision. Similarly, the proper use of instrumentation to monitor construction activities or to document the performance of a completed structure can contribute to significantly reduced costs. Numerical data, the end product of instrumentation, provides a check on and a means of possible improvement of the methods and assumptions used in design. Instrumentation can also help to detect unforeseen problems thus allowing corrective measures to be taken in time.

All categories of field measurement programs benefit by a continued improvement and advancement of the instruments and measurement techniques used. The first theme of the symposium covers this aspect and the papers presented indicate a high level of innovation around the world. We are all dependent on someone trying something new in order to achieve the advancement necessary to meet the ever increasing demands of the engineering world.