

PREFACE

Communication of design risk within a transparent and rational framework is necessary in view of increasing interest in code harmonization, public involvement in defining acceptable risk levels, and risk-sharing among client, consultant, insurer, and financier. Activities in code harmonization in particular are noteworthy. The advent of the World Trade Organization (WTO) has added impetus to the formation of trading groups that result in multilateral free trade areas or bilateral free trade agreements. Traditionally, geotechnical engineering practice has always been viewed as a localized activity under the purview of the relevant federal and/or state authorities. However, the move towards greater economic cooperation and integration will require the elimination of some technical obstacles that exist as a consequence of differences in national codes and standards, and harmonization of technical specifications.

For the geotechnical engineering profession, there is added pressure to undergo significant revamp because structural and geotechnical design are increasingly incompatible. The structural engineering design community has adopted limit state design and probability-based design since the seventies and appears to be gradually evolving towards a performance-based design philosophy. The structural engineering community is also the main driving force behind international standardization activities, such as ISO2394 on “General Principles on Reliability for Structures”.

Engineers and regulators in many countries are struggling to accommodate the complex and multi-faceted changes occurring at the international scene. The status of local design codes in view of globalization and their compatibility in view of evolving design philosophies, are issues of major concern that do not admit simple solutions. A large number of countries do not have the scale of economy, organizational structures, political support, and perhaps financial resources to solve these complex problems on their own. This conference intends to follow the spirit of IWS Kamakura (2002) and LSD2003 to promote greater awareness, to facilitate debate and information exchange, and to accelerate research and practice on important issues relating to new generation geotechnical design codes. The bottom-line is to move geotechnical engineers forward together as a community in response to significant changes occurring globally.

The idea behind this symposium grew out of a discussion between Chung-Tien Chin, Jie-Ru Chen, Yusuke Honjo, and Kok-Kwang Phoon during the 16th ICSMGE in Osaka last year. Subsequent discussion between Meei-Ling Lin and Kok-Kwang Phoon during the GEDMR05 conference in Singapore helped set the path in commencing the organization of this event. Given the gathering pace of geotechnical design code developments, there is a compelling reason to consider a follow-up symposium to LSD2003. It is also timely to discuss the possibilities of establishing a more regular series of symposiums and a joint working group to coordinate these activities.

Thirty-five abstracts from thirteen countries were received during the initial call for paper. Thirty-one papers were accepted for publication after review. Topics covered include

geohazards, geotechnical uncertainty and variability, probabilistic and reliability analysis, design code concept and harmonization, and performance-based engineering practice. In addition to the submitted papers, special invitations were extended for contribution as keynote lectures, invited lectures, and Taiwan special project lectures. A total of 11 papers were obtained for these lectures. This publication contains extended summaries of 42 papers. Complete contributions are available in the accompanying CD-ROM.

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