

Foreword

These proceedings document the various papers delivered and partially presented at the International Conference “From experimental evidence towards numerical modeling of unsaturated soils,” which was held in Weimar (Germany) during 18-19 September 2003. The conference was organized under the auspices of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and the National German Geotechnical Society (DGGT).

The need to understand the behavior of unsaturated soils is becoming exclusively essential for the geotechnical engineers and designers. In the last three decades many researchers have made significant contribution to the understanding of the unsaturated soil mechanics. Nevertheless, application of the subject to variety of new problems still requires our attention. This International conference is a mere attempt to unite researchers and engineers in geotechnical engineering and to discuss about the problems associated with the unsaturated soils. Doing so the objectives of these lecture notes are as follows:

- to promote unsaturated soil mechanics for practical application,
- to exchange experiences in experimental unsaturated soil mechanics and numerical modeling,
- to discuss application of unsaturated soil mechanics to variety of problems.

In other words, we could also name these two volumes as “From theory to daily practice”.

I would like to extend my deep sense of appreciation as the editor and the Head of the organizing committee, to many persons who have contributed either directly or indirectly to organize the International conference and to finalize these proceedings. Firstly, I acknowledge the support provided by the German National research fund. I would like to mention specifically the involvement of the TC 6 (“Unsaturated Soils”) Committee of the International Society. Secondly, I appreciate the effort of the members of the Technical committee, who have spent their valuable time to suggest the changes, improvement to the papers submitted. Finally I wish to convey my thanks to all the keynote and invited speakers, authors and delegates attending the conference.

I would like to express my deep sense of gratitude for the outstanding work performed by those involved in the technical and administrative organization of these proceedings. Special thanks go to my co-workers Ms. Yvonne Lins, Mr. S. S. Agus and Dr. S. Tripathy, who helped in guaranteeing the international standard of the scientific program and shaping the proceedings itself.

I would like to congratulate the authors for their very interesting presentations and the reported results and advances in the topics of this conference. Ms. Sandra Michael did significant contributions while incorporating the corrections in the papers as suggested by the Editor. Special thanks go to Dr. Thomas Ditzinger at Springer Publisher for the fruitful and personal co-operation so guaranteeing the high quality of these two volumes. I myself believe that this conference has meant another significant step towards the advancement and understanding of unsaturated soils. Studying the presented papers carefully we will learn about current international work in the field of: experimental unsaturated geotechnics, constitutive modeling in unsaturated geotechnics, the microstructure and its importance to soil behavior and further about environmental issues.

Weimar, January 2004

Tom Schanz



International Conference Weimar 2003

From experimental evidence towards numerical modelling of unsaturated soils

Unsaturated Soils: Numerical and Theoretical
Approaches

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Schanz, T. (Ed.)

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