

Geotechnical Engineering State of the Art and Practice

Keynote Lectures from
GeoCongress 2012



ASCE

EDITED BY
Kyle Rollins, Ph.D.
Dimitrios Zekkos, Ph.D., P.E.



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GEOTECHNICAL ENGINEERING STATE OF THE ART AND PRACTICE

KEYNOTE LECTURES FROM GEOCONGRESS 2012

SPONSORED BY
The Geo-Institute of the American Society of Civil Engineers

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Preface

The Geo-Congress 2012 “State of the Art and Practice in Geotechnical Engineering” conference was held on March 25 – 29 2012 in Oakland, California, and was organized by the Geo-Institute of ASCE.

This event served as the annual Geo-Institute event of the ASCE, but also had a broader scope and different conference program. Geo-Congress 2012 aimed to provide a forum for the interaction among geotechnical engineers and the integration of research and practice. The conference aimed to attract an increased number of geotechnical engineers with emphasis in engineering practice. The program included the honorary Terzaghi Lecture, Seed Lecture, and Peck Lectures, technical sessions, panel sessions as well as a large range of student activities, half-day and full-day short courses, the United States Universities Council on Geotechnical Education and Research (USUCGER) bi-annual workshop as well as a US-Russia Workshop. A major highlight of the conference, and a deviation from previous Geo-Congress programs, was the 16 keynote State of the Art and 14 keynote State of the Practice Lectures. The topics and keynote lecturers were selected primarily based on the recommendations of the Geo-Institute Technical Committees. State of the Art Keynote lecturers were primarily researchers/academicians, while the State of Practice lecturers were primarily practicing engineers. The value of the conference was significantly enhanced by the contribution of time and effort provided by these excellent keynote speakers. During the conference, two keynote lectures were held concurrently on different topics so that each attendee could attend at least half of the lectures.

The conference proceedings include:

A printed volume published as Geotechnical Special Publication #226 with the Keynote State of the Art and State of the Practice Lectures and edited by Prof. Kyle Rollins and Prof. Dimitrios Zekkos. All keynote lecturers submitted a keynote paper. Each paper was anonymously reviewed by at least two reviewers selected by the Geo-Institute Technical Committees.

A cd-rom was published as Geotechnical Special Publication #225, with technical papers spanning the entire range of geotechnical engineering practice and edited by Prof. Roman Hryciw (Chair), Prof. Nazli Yesiller and Prof. Adda Athanasopoulos-Zekkos. These papers were presented orally or in posters during the conference. Each paper published in this ASCE Geotechnical Special Publication (GSP) received positive reviews from at least two peer-reviewers.

It is envisioned that this conference theme and format (with any necessary modification) will be recurrent every decade allowing for improved interaction among geotechnical engineers in practice and research as well as providing an opportunity to summarize the State of the Art and the State of the Practice of our profession.

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Acknowledgments

We express our sincere appreciation to the Geo-Institute Technical Committees who nominated State of the Art and State of the Practice Speakers and topics, then coordinated the review of the papers. We also thank those committee members who conducted the reviews, but whose names are not listed to preserve their anonymity. Lastly, we are indebted to Helen Cook and Robert Schweinfurth for their continual guidance, patience and insight throughout the organization of this congress.

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Underground Construction – Elizabeth Dwyre

Unsaturated Soils - Sandra Houston

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State of the Art