

Guest Editors for 2011 Issues: Geotechnical Engineering: SEAGS/AGSSEA

March 2011: Geosynthetics: Prof. Jie Han: Special Editor

This special issue will focus on the design of geosynthetics for different applications ranging from walls, slopes, embankments, roads, landfills, and earth structures for coastal protection and land reclamation. Seven technical papers will be contributed by a combination of internationally well-known experts and young, energetic researchers and/or engineers in this area from China, Japan, Malaysia, Singapore, and the United States.

- (1) **Prof. Dov Leshchinsky** at the University of Delaware in USA, an internationally well-known expert in geosynthetics, will offer his broad and in-depth views on the issues in design of mechanically-stabilized earth (MSE) walls and slopes. He will discuss about the issues including but not limited to: division between slopes and walls, peak vs. residual strength, misinterpretation of field data, implication on long-term strength, and conflicts existing with implementing Load Resistance Factor Design (LRFD) codes.
- (2) **Dr. Teik Aun Ooi** and **Mr. C.H. Tee** have many years' practical experience in design and construction of MSE walls and geosynthetic-reinforced steep slopes in Malaysia. They will share their rich experience and knowledge accumulated through years in terms of design and construction of geosynthetic-reinforced earth structures in Malaysia. Several interesting case histories will be presented and discussed.
- (3) **Prof. Jian Chu** at Nanyang Technological University in Singapore is well-known for his research in ground improvement and land reclamation. He will contribute a technical paper on recent advances in the research and practice using geosynthetics for coastal applications including coastal protection and land reclamation. Several interesting case studies will be presented and discussed.
- (4) **Prof. Jinchun Chai** at Saga University in Japan has developed a number of design methods for ground improvement, which are commonly adopted in practice. In this paper, Prof. Chai will propose a method for predicting undrained shear strength (S_u) of saturated clayey backfill in embankments reinforced by dual function (reinforcement and drainage) geocomposites. The proposed method considers the effects of discharge capacity of the geocomposite, spacing between geocomposite layers, construction speed, and the coefficient of consolidation of the backfill. With the predicted S_u values of the backfill material and the tensile strength of the geocomposite, the factor of safety of an embankment can be calculated by Bishop's slip circle method.
- (5) **Prof. Yumin Chen** at Zhejiang University is a leading geotechnical researcher in China. He has been involved in the research and consulting of several major landfills in China. His technical paper will describe the development of landfills, the current practice, and the use of geosynthetics for separation, filtration, drainage, containment, and reinforcement in the landfill system in China.
- (6) **Dr. Jie Huang**, an assistant professor at the University of Texas at San Antonio, **Dr. Anil Bhandari**, a project manager at Terracon (a major geotechnical firm in the USA), and **Dr. Xiaoming Yang**, a research associate at Louisiana Transportation Research Centre, are three active young researchers and/or engineers in geotechnical engineering. They will jointly contribute a technical paper to review and discuss different numerical methods (FEM, FDM, and DEM) used to model and analyse geosynthetic-reinforced earth structures including MSE walls, reinforced slopes and embankments, and reinforced unpaved and paved roads.
- (7) **Prof. Jie Han** at the University of Kansas in USA is the guest editor of this special issue. He will also contribute a technical paper on the recent advances in geosynthetic-reinforced column-supported embankments. His paper will discuss different column technologies, address design issues, and shed light on recent research and developments related to the geosynthetic-reinforced column-supported embankments over soft soils including load transfer mechanisms, settlement, consolidation, and stability. A couple of case studies will also be presented in this paper.

Tentative titles of the technical papers to be included in this special issue are:

1. Issues in design of MSE Walls and slopes, Dov Leshchinsky
2. Case studies of geosynthetic-reinforced earth structures in Malaysia, T.A. Ooi and C.H. Tee
3. Geosynthetics for coastal applications, Jian Chu
4. Embankment construction with saturated clayey fill material using geocomposite, Jinchun Chai
5. Geosynthetics for landfill applications in China, Yunmin Chen
6. Numerical modelling of geosynthetic-reinforced earth structures, Jie Huang, Anil Bhandari, and Xiaoming Yang
7. Recent advances in geosynthetic-reinforced column-support embankments, Jie Han

Prof. Jie Han, the Guest Editor is a Professor at Department of Civil, Environmental, and Architectural Engineering at the University of Kansas in the United States. He received his Ph.D. degree in Civil Engineering from the Georgia Institute of Technology in 1997 and has been a professional engineer in Georgia since 1998. Dr. Han was a senior engineer and manager of technology development at Tensar Earth Technologies, Inc., a leading geosynthetic manufacturer in the world, from 1997 to 2001. Prof. Han's research and practical experiences have dealt with geosynthetics-reinforced earth structures, ground improvement, pile foundations, and pavement applications. Prof. Han has coauthored three technical books, edited two ASCE Geotechnical Special Publications, and published more than 150 peer-reviewed journal papers and conference papers (a large portion on geosynthetics). Prof. Han is currently serving as the Technical and Proceedings Co-chair for the GeoFrontiers 2011 Conference to be held in Dallas, Texas, USA from March 13 to 16, 2011, which is jointly organized by the ASCE Geo-Institute, the Industrial Fabrics Association International, the North American Geosynthetic Society, and the geosynthetic industry. Prof. Han serves as a member on the editorial boards for four major international journals in geotechnical engineering, the ASCE Geosynthetic and Ground Improvement Committees, and TRB A2K07 Committee on Geosynthetics.

June 2011: Deep Foundations: Prof. Tatsunori Matsumoto: Guest Editor

A special issue on Deep Foundations is also planned and to be edited by Prof. Tatsunori Matsumoto with the assistance of Dr. Der-Wen Chang and this is expected in June 2011. Professor Harry G. Poulos, Prof. Bengt Fellenius and several others are expected to contribute in this issue together with Prof. Tatsunori Matsuoka.

Prof. Matsumoto is now with Kanazawa University in Japan for nearly 32 years. He was educated at the Kanazawa University and received his Doctoral Degree from Kyoto University for his work on steel pipe piles in 1989. He has extensive research and practical experience on piled foundations and piled raft foundations. Prof. Matsumoto has a Shake Table Facility for the study of dynamic and earthquake type of behaviour of piled foundations. He has also worked on the centrifuge with pile groups and piled raft foundations in collaboration with Taisei Corporation. His research work on piled raft foundations range from the simplified calculation methods of Poulos - Davis and Randolph (PDR Method), Burland's method to approximate computer based methods such as the strip on spring and plate on spring approaches and hybrid methods. He has also worked on more rigorous method using boundary elements and finite elements. Prof. Matsumoto also has wide experience in the seismic design of raft and piled raft foundations. Prof. Matsumoto is one of the authors of the computer software PRAB—Piled Raft Analysis with Batter Piles. With this software piled raft foundation can be analyzed with vertical and horizontal loads as well as moment.

September 2011: Deep Excavations: Prof. Chang-Yu Ou: Guest Editor

This special issue will have papers from China, Taiwan, Bangkok, Hong Kong, Singapore etc

Prof. Chang-Yu Ou received his Bachelor's Degree in Engineering in 1977 from National Cheng-Kung University in Taiwan and his Masters and Doctoral Degrees from Stanford University in 1984 and 1987 respectively. He has focused on studies of soil behavior and excavation problems since beginning to teach in a university and has published many journal and conference papers concerning the subjects. At the same time, working with industrial builders, he has also taken part in many large-scale excavation projects and accumulated experience in analysis and design. Supported by study results and analysis experience, he has opened a course on deep excavation at the university. He is currently the Dean of engineering at the National Taiwan University of Science and Technology, Taipei, Taiwan. He was also the Director of Ecological and Hazard Mitigation Engineering Research Center of the National Taiwan University of

Science and Technology, Taipei, Taiwan. He was also a Visiting Professor at University of California, Berkeley. His areas of interest are deep excavations, soil behaviour, soft ground tunnelling and ground improvement.

December 2011: Soil Behaviour: Dr. Dariusz Wanatowski: Guest Editor

This issue will have articles from researchers in Nottingham, UK, Singapore, Bangkok, Australia, Japan and many other countries. From Japan, Prof. Satoru Shibuya's group will make contributions.

Dr Dariusz Wanatowski is a Lecturer in Geomechanics in the Department of Civil Engineering at the University of Nottingham. He graduated in Civil Engineering from Poznan University of Technology, Poland in 1999. Between 1999 and 2001 he worked as a teaching and research assistant at the same university where he was lecturing soil mechanics and foundation engineering courses. He was also involved in several research projects, including effects of various improvements of subgrade on its bearing capacity and experimental investigation of engineering properties of various organic soils. He obtained his PhD from Nanyang Technological University in 2006. Prior to joining the Nottingham Centre for Geomechanics in February 2006 Dr Wanatowski also worked as a researcher at NTU on effects of strength and stiffness anisotropy of geomaterials on the stability and deformation of tunnels. Dr Wanatowski's general research interests are focused on experimental geomechanics, particularly strain softening and instability behaviour of granular soils, strain localization in sands, strength and stiffness anisotropy of geomaterials, and effects of intermediate principal stress on the strength and deformation characteristics of soils. He has consulting experience in the areas of laboratory and in situ testing of soils. He is also an Honorary Secretary for East Midlands Geotechnical Group in the UK.