## Contents

**Keynote Paper**

File Group Settlement Estimation—Research to Practice ....................................................... 1  
H. D. Pratloe

**Limit State Design in Geotechnical Engineering Practice**

A Probabilistic Model for Liquefaction Triggering Analysis Using SPT .................................. 23  

Optimization of Composite Piled Raft Foundation with Varied Rigidity of Cushion ...................... 29  
F. Long, J. Li, and L. Chen

Sensitivity Analysis of Settlement of Single Piles ................................................................. 35  
Y. Xu, L. M. Zhang, and W. H. Tang

Case-Based Reasoning System for Optimal Decision of Pile Foundation .................................... 42  
Y. Ying

Establishing Serviceability Limit State in the Design of Bridge Foundations ............................ 49  
S. G. Parkowsky and Y. Lu

Progress Towards Harmonized Geotechnical Design in Europe ............................................... 59  
T. L. L. Orr

Statistical Analysis of Kwangyang Marine Clay for Compression Index ................................. 67  
G. L. Yoon, B. T. Kim, Y. W. Yoon, and J. S. Shin

A Statistical Method to Determine Sample Size to Estimate Characteristic Value of Soil Parameters ................................................................. 76  
Y. Horijo, B. Setiawan, and M. Suzuki

Characterization of Model Uncertainties for Augered Cast-In-Place (ACIP) Piles under Axial Compression ........................................................................ 82  
K. K. Phoon, J. R. Chen, and F. H. Kulhawy

Cost-Benefit Analysis of Routine Quality Assurance for Bored Piles .................................... 90  
D. Q. Li, L. M. Zhang, and W. H. Tang

A New Narrow-Bound Method for Computing System Failure Probability .................................. 98  
Z. Wu, J. Chen, and B. Wen

Code Calibration of Designing Open-Type Wharf on Vertical Steel Pipe Piles based on the Partial Factor Approach ................................................................. 103  
Y. Kikuchi, M. Suzuki, and Y. Yoshinami

Variance of the Subgrade Reaction for Estimating the Resistance of a Pile Perpendicular to Pile Axis ................................................................. III  
Y. Kikuchi and M. Suzuki
Bebavior of Vibrato, Energy,
A Study on the Interaction Law between Squeezed Branch of Eva lu atioo of Lateral Response of Drilled Metbodology for Design of An Numerica!

Centrifuge Method Study on Pile Responses due to Adjacent Excavation

A New Hyperbolic p-y Curve Model for Laterally Loaded Piles in Soft Clay

An ANFIS Based Approach for Predicting the Ultimate Bearing Capacity of Single Piles

Vibration, Energy, and Pile Embedment Relationships during Driven Pile Installation

Field Studies on Effect of Jacked Pile on Adjacent Buildings and Roads in Clay

Effects of Drilling Tools on Rock Socket Roughness in Soft Clay Shale

Observed and Predicted Skin Friction Capacity of Anchor Cast-in-Place Piles

Study on the Interaction Law between Squeezed Branch Pile and Soil

Methodology for Design of Piled Raft for 5-Storey Buildings on Very Soft Clay

Experimental Study on Behavior of Pile Foundation in Lacustrine Deposits Area

Experimental Study on Bearing Capacity of Doubled Steel Tubular Piles

Evaluation of Lateral Response of Drilled Shafts in Rock

The Role of Favourable and Unfavourable Actions in the Design of Shallow Foundations according to Eurocode 7

K. Lensy

Serviceability Considerations in Reliability-Based Foundation Design

L. M. Zhang and K. K. Phoon

Pile Foundations and Drilled Shafts

W. Zheng and M. M. Petersen

Liquefaction Effects on Lateral Pile Behavior for Bridges

W. Zheng and R. Luo

Analysis of Soft Soils Due to Pile-Sinking in Soft Clay

F. Zhou, J. Zai, G. Mei, and G. Zhou

Development of Negative Skin Friction of Piles on Soft Ground

W. Zhou, R. Chen, and Y. Chen

The Origin, Application, and Development of Piles in China

P. Shi, S. Hao, and H. Yin

Prediction of Ground Displacement and Deformation Induced by Large Diameter Piles

S. Guo, L. Feng, and B. Liu

Examining Productivity of Foundation Construction

W. R. Cheng and J. S. Zhou

Stress and Safety Analysis of Pile Based on the Unified Strength Theory

L. Cao, J. Zhou, X. Wei, and L. H.

Analysis of Settlement of Pile Foundations for the High-Speed Rail

Z. Lin and Z. Zhou

Lateral Capacity Design of Prestressed High Strength Concrete Piles in Soft Clay

Shallow Foundations

A New Method for Calculating the Final Settlement of Soft Clay Ground—The Geometric Progression Method

L. H. Kuang, Kang Li, J. D. Nie, and L. R. Xu

Optimization Forecasting Model of Foundation Settlement Based on Grey Model Groups

J. Sun and Q. Guo

Parameter Estimation for Settlement Prediction Model Using Bayesian Inference Approach

Y. P. Zhang

Subject Index

Author Index