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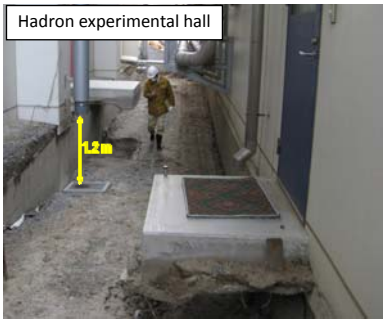
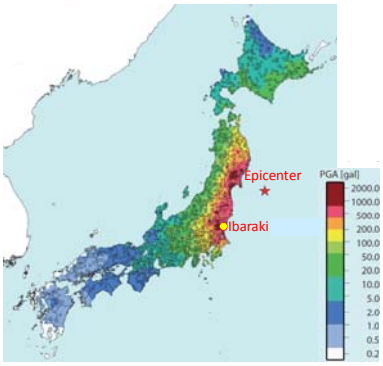
Editors: Prof Tatsunori Matsumoto, Prof Jurgen Grabe & Prof Der Wen Chang

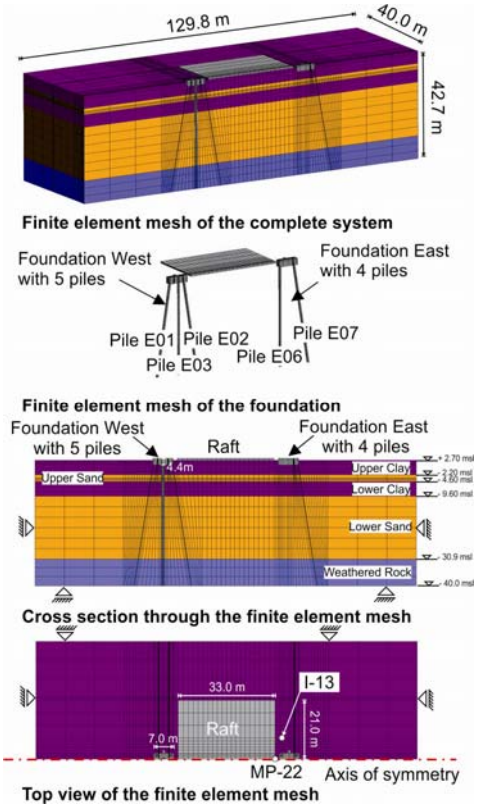


(a) Ground subsidence along building



(b) PGA map derived from strong motion records (Kunugi et al., 2012)

Piled Raft Foundation subjected to Strong Seismic Motion (After K. Yamashita *et al*, 2014)



Numerical study on pile groups subjected to lateral soil movements (After O. Reul *et al, 2014)*

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FORWARD

The theme of the 2014 June issue is Deep Foundations. Prof. Tatsunori Matsumoto at Kanazawa University, Japan and Prof. Jurgen Grabe at Hamburg University of Technology, Germany are the guest editors while Prof. Der-Wen Chang at Tamkang University, Taiwan is the in-house editor. Prof. Der Wen Chang also undertook all the administrative works related to the review of the articles and co-coordinating with the Guest Editors, Authors and Reviewers. After 18-month of preparations, thirteen papers were finally selected and are published in this Issue.

The content of this issue covers up mainly the task force studies 1~5 of ISSMGE TC212. More than half of the technical papers are based on observations of the experimental works. Axial Bearing Capacity and Static Cyclic Loading Behaviours of the Model Piles and/or Pile Group are respectively examined by Aoyama *et al.,* Hwang *et al.* and Ünsever *et al.* Case studies on Response of Laterally Loaded Nonlinear Piles are shown by Wei Dong Guo. Seismic Performance of the Piles from Field Measurements is discussed by Yamashita *et al.* Seismic Soil-structure-foundation Behaviours with Liquefaction concerns from the Shaking Table Test with Numerical Comparisons are discussed in the study made by Zhang *et al.*. An Overview of the Deep Foundation Systems of the High-rise Buildings can be found by Katzenbach and Dr. Leppla.

On the other hand, a number of numerical studies can be found on simulating the pile foundation behaviors. The topics include: Energy Pile with Feasible Material Modeling by Ma *et al.*, Passive Loading Effects on Piles by Moormann and Aschrafi, Dynamic Load Testing on Pipe Piles Compared to Case Study by Phan Ta *et al.*, Laterally Loaded Nonlinear Piles by Wei Dong Guo, Seismic Performance of the Piles using Reliability Method by Chang *et al.*, and Bearing Behaviours of Pile Group and/or Piles respectively discussed by Wu and Yamamoto, Reul *et al.* and Ünsever *et al.*

It is the sincere wish of the editors that this issue can provide a good record for the advanced works on deep foundation research. Sincere gratitude is expressed by the editors to the delegates and the reviewers who have contributed tremendous time and efforts in making this Remarkable Issue feasible and to complete the work within very strict timelines.

Tatsunori Matsumoto
Jurgen Grabe &
Der Wen Chang

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ACKNOWLEDGEMENT

This special Issue on Deep Foundations as edited by Prof. Tatsunori Matsumoto, Prof. Jurgen Grabe and Prof. Der Wen Chang have thirteen excellent papers. Each paper being reviewed by at least two reviewers and some by more than two. The authors of the papers as per the Table of Contents and in that order are: C. Moormann and J. Aschrafi; Xiaolong Ma, Gang Qiu and Jürgen Grabe; L. Phan Ta , T. Matsumoto and H. Nguyen Hoang; K. Yamashita, T. Hashiba, H. Ito and T. Tanikawa; Y.S. Unsever, T. Matsumoto, S. Shimono and M.Y. Özkan; J.H. Hwang, Z.X. Fu, P.Y. Yeh and D.W. Chang; D.W. Chang, Y.H. Lin, H.C. Chao, S.C. Chu and C.H. Liu; Wei Dong Guo; Y. Wu and H. Yamamoto; F. Zhang, R. Oka, Y. Morikawa, Y. Mitsui, T. Osada, M. Kato and Y. Wabiko; S. Aoyama, L. Danardi, L. Bangan, W. Mao, S. Goto and I. Towhata; O. Reul, J. Bauer and C. Niemann; and R. Katzenbach and S. Leppla

Indeed the papers are excellent and deal with: Numerical Investigation of Passive Loads on Piles in Soft Soils; Simulation of an Energy Pile using Thermo-hydro-mechanical Coupling and a Visco-hypoplastic Model; Studies on Dynamic Load Testing of an Open-ended Pipe Pile with a Case Study; Performance of Piled Raft Foundation Subjected to Strong Seismic Motion; Static Cyclic Load Tests on Model Foundations in Dry Sand; Axial Bearing Behaviour of a Model Pile in Sand under Multiple Static Cycles; Seismic PBD of Piles from Monte Carlo Simulation using EQWEAP Analysis with Weighted Intensities; Case Studies on Response of Laterally Loaded Nonlinear Piles; Analysis of the Effect of Pile Tip Shape on Soil Behaviour Around Pile; Shaking Table Test on Superstructure-foundation-ground System in Liquefiable Soil and its Numerical Verification; Model Loading Tests on the Bearing Behaviour of a Group Pile and Ground Deformation; the Bearing Behaviour of Pile Groups Subjected to Lateral Pressure due to Horizontal Soil Movements; Deep Foundation Systems for High-rise Buildings in Difficult Soil Conditions.

Thus this Issue is unique in its own way in covering, theory, and practice via laboratory and field tests on model piles and under full scale conditions. Both static and dynamic loading conditions as well as earthquake type of loading; also the laboratory tests also include shaking table tests.

The authors of the papers and the editors are to be congratulated for this master-piece of work . Both Prof Tatsunori Matsumoto and Prof Der Wen Chang are also the guest editors of our June 2011 Issue of the journal and this Issue have seen the contributions of Prof. Jurgen Grabe as well as a Guest Editor.

We hope this Issue of the Journal will be of immense value to researchers and practitioners.

K. Y. Yong
N . Phienwej
T. A. Ooi
A. S. Balasubramaniam

GEOTECHNICAL ENGINEERING

. JUNE 2014 SPECIAL ISSUE ON DEEP FOUNDATION

Editors: Tatsunori Matsumoto, Jurgen Grabe & Der Wen Chang

Prof. Tatsunori Matsumoto

Prof. Matsumoto is now with Kanazawa University in Japan for nearly 34 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. 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.

Univ.-Prof. Dr.-Ing. Jürgen Grabe

Prof. Grabe was educated in civil engineering at Hannover University/Germany and received his Doctoral Degree from Karlsruhe University/Germany for his work “Experimental and theoretical investigation of entire area compaction control using vibratory rollers” in 1992. Afterwards he worked in geotechnical consulting and construction companies for six years. In 1998 he became head of the Institute of Geotechnical Engineering and Construction Management at Hamburg University of Technology in Germany. He has extensive research and practical experience in physical, theoretical and numerical modelling in geotechnical engineering, especially in pile foundations, and marine geotechnics. Prof. Grabe has a complete soil mechanics laboratory and worked also on physical modelling in centrifuge in collaboration with University of Western Australia.

Prof. Grabe’s main research topics are geotechnical engineering in general, and marine geotechnics in particular. His methodical background covers physical modelling (1g model tests and ng model tests in collaboration with UWA), theoretical modelling (single and multiphase models for saturated and unsaturated soils based on continuum approach), numerical modelling (grid and mesh-based methods like FDM, FVM and FEM for continuum approach; meshfree methods like SPH for continuum approach, and DEM for discontinuum approach). Prof. Grabe and his research group produced 257 publications in national and international journals and conferences since 1998. From 2011 Prof. Grabe is vice president of Hamburg University of Technology, and is responsible for research in this function.

Prof. Der-Wen Chang

Prof. Chang has been the Geotechnical faculty member at The Department of Civil Engineering of Tamkang University (TKU), Taipei, Taiwan for over 22 years. He received Ph.D. in Civil Engineering at The University of Texas at Austin in 1991 and MS in Civil Engineering at Michigan State University in 1987. Prof. Chang has supervised the research work of over 60 Master Thesis and 3 Ph.D. Thesis at TKU, and published more than 190 articles as the Journal, Conf. papers and reports. Nearly all his research studies are related to numerical modeling and dynamic analyses for the geotechnical structures. His research experiences include NDT methods on pavements, seismic behaviors of the pile foundation, constitutive modeling of the soils, and recent study on the performance based design for the earth structures. Prof. Chang is also the visiting Professor at University of Washington at Seattle, US in 2008 and LN Gumilyov Eurasian National University at Astana, Kazakhstan for research studies in 2010 and 2011. Other than the research works, Prof. Chang devotes himself a great deal to serve the communities. He involves heavily and indeed shows his good performance in the public works related to education and constructions. Prof. Chang is currently serving as the Int. Secretary General of Chinese Taipei Geotechnical Society, GC member at SEAGS and Editorial Panel for SEAGS/AGSSEA J. of Geotechnical Engineering, and TC212 member at ISSMGE.

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JUNE 2014: SPECIAL ISSUE ON DEEP FOUNDATION

Editors: Tatsunori Matsumoto, Jurgen Grabe & Der Wen Chang

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Paper Contribution, Technical notes and Discussions

SEAGS & AGSSEA encourage the submission of scholarly and practice-oriented articles to its journal. The journal is published quarterly. Both sponsors of the journal, the Southeast Asian Geotechnical Society and the Association of Geotechnical Societies in Southeast Asia, promote the ideals and goals of the International Society of Soil Mechanics and Geotechhnical Engineering in fostering communications, developing insights and enabling the advancement of the geotechnical engineering discipline. Thus the publishing ethics followed is similar to other leading geotechnical journals.Standard ethical behaviour of the authors, the editor and his editorial panel, the reviewers and the publishers is followed.

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Geotechnical Engineering Journal accepts submissions via electronic. The manuscript file (text, tables and figures) in both words and pdf format together with the submission letter should be submitted to the Secretariat and copied to the Editor-in-Chief, Geotechnical Engineering Journal, c/o School of Engineering and Technology, Asian Institute of Technology, Room no. 211, AIT Library, Asian Institute of Technology, P.O. Box 4, Klong Luang, Pathumthani 12120, Thailand. Email: seags@ait.ac.th. Papers under review, accepted for publication or published elsewhere are not accepted. The guidelines for author are as follows:-

1. The manuscript including abstract of not more than 150 words and references must be typed in Times New Roman 9 on one side of A4 paper with a margin of 25 mm on each side. The abstract should be written clearly stating the purpose, scope of work and procedure adopted together with the major findings including a summary of the conclusions.
2. The paper title must not exceed 70 characters including spaces.
3. The maximum length of papers in the print format of the Journal is 12 two-column pages in single-spaced in Tines New Roman 9 including figures and tables. A Journal page contains approximately 1,040 words. Authors can approximate manuscript length by counting the number of words on a typical manuscript page and multiplying that by the number of total pages (except for tables and figures). Add word-equivalents for figures and tables by estimating the portion of the journal page each will occupy when reduced to fit on a 160 mm x 240 mm journal page. A figure reduced to one-quarter of a page would be 260 word-equivalents. When reduced, the figure must be legible and its type size no smaller than 6 point font (after reduction).
4. Figures: Line art should be submitted in black ink or laser printed; halftones and color should be original glossy art. Figures should be submitted at final width i.e. 90 mm for one column and 185 mm for two columns. The font of the legends should be in Times New Roman and should use capital letters for the first letter of the first word only and use lower case for the rest of the words. Background screening and grids are not acceptable.
5. Each table must be typed on one side of a single sheet of paper.
6. All mathematics must be typewritten and special symbols identified. Letter symbols should be defined when they first appear.
7. The paper must have an introduction and end with a set of conclusions.
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14. REFERENCES

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