

SAN-SHYAN LIN

Personal Details

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Education

1988 - 1992 Ph.D., Washington University in St. Louis, MO, USA.
1983 - 1985 M.S., Utah State University, Logan, UT, USA.
1977 - 1981 B.S., Chung Yuan University, Chung-li, TAIWAN.

Career to Date

Aug. 2000-date Professor, Dept. of Harbor and River Eng., National Taiwan Ocean University
Mar. 2013-April 2013 Visiting Professor, Ocean University of China, China
Mar. 2006-July 2012 Vice President, National Taiwan Ocean University (NTOU)
Mar. 2007-Jun. 2007 Acting Dean, College of Engineering, NTOU
Aug. 2006-Nov. 2006 Acting Dean, College of Electrical Engineering and Computer Science, NTOU
Aug. 2005-Mar. 2006 Chairman, Dept. of Harbor and River Eng., NTOU
Aug. 2001-Mar. 2003 Director of Secretariat, NTOU
Feb. 1994-July 2000 Associate Professor, Dept. of Harbor and River Eng., NTOU
Mar. 1992-Feb. 1994 Engineer, National Expressway Engineering Bureau

Professional Organizations

Member, International Society of Soil Mechanics and Geotechnical Engineering
Member, International Geosynthetics Society (IGS)
Life Member, Southeast Asia Geotechnical Society
Life Member, Chinese Institute of Civil and Hydraulic Engineering
Life Member, Chinese Taipei Tunneling Association
Member, Taiwan EPS Association
Member, Taiwan Geotechnical Society

Honors and Awards

- Listed in Marqui's Who's Who in Science and Engineering, 1997
- Member of ATC-1 "Mitigation and Adaptation to Climate Change Induced Geo-disasters", ISSMGE, 2013- date
- Member of International Organizing Committee, 7th Asian Young Geotechnical Engineer Conference, Tokushima, Japan, 2012.
- Member of International Advisory Committee and Technical Committee, Geosynthetics Asia 2012, Bangkok, Thailand, 2012.
- Member of Conference Advisory Committee, 18th Southeast Asian Geotechnical Conference, Singapore, 2013.
- Member of International Advisory Committee, The 2014 World Congress on Advances in Civil, Environmental and Materials (ASEM 14), Busan, Korea.
- Excellent Paper Award, Journal of GeoEngineering, 2006 and 2007.
- Distinguish Engineering Professor, Taiwan Pavement Engineering Society, 2011.
- Chairman of Organization Committee, 5th Taiwan-Japan Workshop of Earthquake and Heavy Rainfall, Tainan, Taiwan, 2012.
- Member of International Advisory Committee, International Symposium on Advances in Foundation Engineering, Singapore, 2013.
- Touring Lecturer, Vientiane, Laos (Nov. 19)

Other Experiences

- President, Taiwan Geotechnical Society, (2011-2013)
- Managing Supervisor, Taiwan Geotechnical Society, (2013-date)
- President, Taiwan Geosynthetics Association, (2002- 2004)
- Council Member, Association of Geotechnical Society in South Eastern Asia (2011-date)

- Chairman, International Geosynthetics Society - West Pacific Regional Chapter, (2002-2004)
- Committee Member, Committee AFS 30 (formerly A2K03)- Foundations of Bridges and Other Structures, Transportation Research Board, USA, (1995-2004)
- Board Member, Sino-Geotechnics Foundation, (2005- date)
- Chairman, Academic Activity Committee, Sino Geotechnics Foundation (2008-2011)
- Board Member, Taiwan Geotechnical Society, (2003- 2011)
- Vice Chairman, Engineering Education Committee, Chinese Institute of Civil and Hydraulic Engineering, (2001-2003)
- Chairman, Geotechnical Engineering Committee, Chinese Institute of Civil and Hydraulic Engineering (2012-date)
- Committee Member, Geotechnical Engineering Committee, Chinese Institute of Civil and Hydraulic Engineering, (2003-2012)
- CEO, Sino-Geotechnics Foundation (2011-date)
- Chief Editor, Sino-Geotechnics Journal (in Chinese), (2005-2008)
- Editorial Board Member, Journal of Civil Engineering and Architecture (2010- date)
- Editorial Board Member, Geotechnical Engineering Journal (Journal of Southeast Asia Geotechnical Society), (2002-date)
- Editorial Board Member, Journal of GeoEngineering, (2005-2013)
- Editorial Board Member, Chinese Journal of Geotechnical Engineering (2012-date)
- Editorial Board Member, Coupled System Mechanics International Journal (2012 – date)
- Reviewer, Journal of Geotechnical and Geoenvironmental Engineering, ASCE; International Journal for Numerical and Analytical Methods in Geomechanics; Geotechnical Engineering Journal; Transportation Research Record; Geotextiles and Geomembranes; Journal of Mechanics; Journal of GeoEngineering; Soil Dynamics and Earthquake Engineering Journal of Performance of Constructed Facilities, Computers and Concrete, Geosynthetics International, Soils and Foundations, Engineering Geology, Applied Mathematical Modelling, Journal of Construction Engineering and Management, Advanced in Concrete Construction, Structural Engineering and Mechanics etc.

Selected Publications

Selected Journal Papers

1. Lu, C.W., Lin, S.S., Lin, J.S., Kung, G.T.C., Chien, C.J., Lee, H.Y. (2014) "Single Pile Responses due to Lateral Spreading in Two- and Three-layered Slopped Ground" *Disaster Journals*, (accepted)
2. Liao, J.C., Lin, S.S., and Yang, S.D. (2013) "Failure Investigation of a Drilled Shaft Stabilized Slope" *Proceedings of ICE: Forensic Engineering*, 166(1), 17-26.
3. Chien, C.J., Lin, S.S., Yang, C.C., and Liao, J.C. (2013) "Lateral Performance of Drilled Shafts due to Combined Lateral and Axial Loading" *Journal of Mechanics*, 29(4), 685-693.
4. Li, L.Y., Xia, J., and Lin, S.S. (2012) "A Multi-phase Model for Predicting the Effective Diffusion Coefficient of Chlorides in Concrete". *Construction and Build Materials* 26, (1), 295-301.
5. Lin, S.S., Lai, C.H., Chen, C.H., and Ueng, T.S. (2010) "Derivation of Cyclic p-y Curves from Instrumented Dynamic Lateral Load Tests" *Journal of Mechanics*, 26(2), 123-133.
6. Lin, S.S., Liao, J.C., Wang, K.J., and Chang, Y.H. (2008) "Effects of Tip Grouting on Capacity of Shafts Socket in Gravel Layer" *Geotechnical Engineering Journal*, 39(1), 13-18.
7. Lin, S.S., Chien, C.J., and Liao, J.C. (2008) "Ground Improvement of a Coal Ash Storage Pond using Sand Compaction Piles" *Journal of Lowland Technology International*, 10(2), 21-29.
8. Lin, S.S., Wang, K.J., Hsieh, H.S., Chang, Y.H., and Huang, C.S. (2007) "Field Testing of Axially Loaded Drilled Shafts in Clay/Gravel Layer" *Journal of GeoEngineering*, 2(3), 123-128. (Excellent paper award)
9. Lin, S.S., and Liao, J.C. (2006) "Lateral Response Evaluation of Single Piles Using Inclinator Data" *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 132(12), 1566-1573.
10. Lin, S.S., and Shen, Y.C. (2005) "Stress Fields of a Half Plane Caused by moving Loads- Resolved using Doublet Mechanics" *Soil Dynamics and Earthquake Engineering*, 25(12), pp. 893-904.
11. Lin, S.S., Tseng, Y.J., Liao, J.C., Wang, C.H. and Lee, W.F. (2006) "Ground Lateral Spreading Effects on Single Pile Using Uncoupled Analysis Method" *Journal of GeoEngineering*, 1(2), 51-62. (Excellent paper award)

12. Lin, S.S., Liao, J.C., Chen, J.T., and Chen, L. (2005) "Lateral Performance of Piles Evaluated via Inclinator Data" *Computers and Geotechnics*, 32(6), pp. 411-421.
13. Lin, S.S. et al. (2004) "Capacity Evaluation of Statnamic Tested Long Shafts" *Soil Dynamics and Earthquake Engineering*, 24(11), pp. 829-838.
14. Chang, Y.L., Chu, B.L., and Lin, S.S. (2003) "Numerical Simulation of Gravel Deposits Using Multi-Circle Granule Model" *J. of the Chinese Institute of Engineers*, 26(5), pp. 581-694.
15. Lin, S.S., and Chang, W.K. (2002) "Buckling of Piles in Layered Elastic Medium", *Journal of the Chinese Institute of Engineers*, 25(2), pp. 157-169.
16. Lin, S.S., Liao, J.C., Yang, T.S., and Juang, C.H. (2001) "Nonlinear Analysis of Single Concrete Piles", *Geotechnical Engineering Journal*, 32(3), pp. 165-176.
17. Lin, S.S., Yeh, S.C., Juang, C.H., and Chang, Y.H. (2001) "Segmental Unloading Point Method for Interpretation of Some Statnamic Tested Shafts", *Geotechnical Engineering Journal*, 32(1), pp. 15-22.
18. Chen, T.C., Chen, R.H., and Lin, S.S. (2000) "A Nonlinear Homogenized Model Applied to Reinforced Soil Analysis", *Geotextiles and Geomembranes*, 18(6), pp. 349-366.
19. Chen, R.H., Chen, T.C., and Lin, S.S. (2000) "A Homogenized Transversely Isotropic Model for Cyclic Behaviors of Reinforced Soils", *Journal of the Chinese Institute of Engineers*, 23(1), pp. 31-40.
20. Lin, S.S., and Liao, J.C. (1999) "Permanent Strains of Piles in Sand due to Cyclic Lateral Loads", *Journal of Geotechnical and Geoenvironmental Engineering*, 125(9), ASCE, pp. 798-802.
21. Lin, S.S. and Hoe, E. (1998) "Quality Control of Pile Foundations Using Nondestructive Tests- Case Studies in Taiwan", *Transportation Research Record No. 1633*, TRB, USA, pp. 102-107.
22. Lin, S.S. (1997) "Use of Filamented Beam Elements for Bored Pile Analysis", *Journal of Structural Engineering*, ASCE, 123(9), pp. 1236-1244.
23. Lin, S.S. and Al-Khaleefi, A.L. (1996) "Torsional Analysis of Cracked Reinforced Concrete Piles in Sand", *Journal of the Chinese Institute of Engineers*, 19(6), pp. 689-696.

Selected GSP of ASCE

1. Lin, S.S., Hsu, S.Y., Liao, J.C., and Lin, J.G. (2012) "Effects of Scouring on Performance of Caisson Foundation" *GeoCongress 2012*, GSP 225, ASCE, 693-700.
2. Lin, S.S., Liao, J.C., Wang, K.J., and Lin, Y.K. (2010) "Load Capacity of Drilled Shafts Socketed in Andesite Rock" in *The Art of Foundation Engineering Practice*, GSP No. 198, ASCE, 359-370.
3. Lin, S.S., Liao, J.C., and Yang, S.D. (2010) "A Case Study of Drilled Shaft Performance due to Excavation Induced Slope Movements" in *GeoFlorida 2010- Advances in Analysis, Modeling & Design*, GSP 199, ASCE, 1876-1884.
4. Lin, S.S., Tseng, Y.J., Chiagn, C.C., and Hung, C.L. (2005) "Damage of Piles Caused by Lateral Spreading- Back Study of Three Cases" in *Seismic Performance and Simulation of Pile Foundations in Liquefied and Laterally Spreading Ground*, GSP No. 145, ASCE, pp. 121-133.
5. Lin, S.S., Hong, J.L., Lee, W.F., and Chang, Y.H. (2004) "Structural Damping Concept for Interpretation of Statnamic Pile Load Test Results" in *Geo-Support 2004*, GSP. 124, ASCE, pp. 790-799.
6. Lin, S.S. et al. (2002) "Use of Bouc-Wen Model for Seismic Analysis of Concrete Piles", in *Deep Foundations 2002*, GSP 116, ASCE, pp. 372-384.
7. Lin, S.S., Lin, T., and Chang, L.T. (2000) "A Case Study for Drilled Shafts Base Mud Treatment", in *New Technological and Design Developments in Deep Foundations*, GSP No. 100, ASCE, pp. 46-58.

Selected Conference Papers

1. Lin, S.S., and Liao, J.C. (2013) "Lateral Load Resistance between Pile-Group and Cap" *International Symposium on Advances in Foundation Engineering*, Singapore, 205-210.
2. Liao, J.C., Lin, S.S., Mulouayi, E., and Lin, Y.K. (2013) "Axial Capacity of A Rectangular Pile Socket in Gravel Layer" *International Symposium on Advances in Foundation Engineering*, Singapore, 467-471.
3. Lin, S.S., Chien, C.J., Yang, C.C., and Liao, J.C. (2013) "Lateral Performance of Drilled Shafts Embedded in A Hydraulic Filled Coal Ash Storage Pond" *18th Southeast Asia Geotechnical Conference*, Singapore.
4. Bergado, D.T., Nualkiang, M., Chen, C.T., and Lin, S.S. (2012) "Behavior of Wall/Embankment with Geogrid and Metallic Reinforcements and Verification of K-Stiffness Working Stress Method" *International Symposium on Sustainable Geosynthetics and Green Technology for Climate Change*, Bangkok, Thailand. (Invited Lecture)
5. Lin, S.S., Chien, C.J., Yang, C.C., and Liao, J.C. (2012) "Performance of Drilled Shafts due to Combined Lateral and Axial Loading" *The 9th International Conference on Testing and Design Methods for Deep Foundations*, Kanazawa, Japan.
6. Lin, S.S., Hsu, S.Y., Lin, J.G., Liao, J.C., and Chiu, Y.F. (2011) "Stability Analysis of Caisson Foundation subjected to Scouring" *The 14th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering*, Hong Kong, China.
7. Wu, W.J., Dong, J.J., Wu, J.H., and Lin, S.S. (2011) "Estimating the Porosity-depth Relation of Sedimentary Rocks from an Effective Stress/Stress History-dependent Porosity Model" *12th International Congress on Rock Mechanics*, Beijing, China.
8. Li, L.Y., Xia, J., and Lin, S.S. (2011) "Multi-phase Modeling of Ionic Diffusion in Porous Materials" *2011 International Conference on Civil Engineering and Building Materials*, Kunming, China.
9. Lin, S.S., Hsu, S.Y., Liao, J.C., Lin, J.G., and Chiu, Y.F. (2010) "Effect of Erosion on Stability of Bridge Foundations" *International Symposium and Exhibition on Geotechnical and Geosynthetics Engineering: Challenges and Opportunities in Climate Change*, Bangkok, Thailand, 234-244. (Invited Speaker)
10. Lin, S.S., and Lee, W.F. (2009) "The Study on Correlation Between Design Factors and Seismic Performance of MSE Retaining Walls and Slopes" *International Symposium on Geotechnical Engineering, Ground Improvement and Geosynthetics for Sustainable Mitigation and Adaptation to Climate Change including Global Warming*, Bangkok, Thailand. (Invited Lecture)
11. Bergado, D.T., Phienweij, N., Jamsawang, P., Lin, S.S., and Abuel-Naga, H.M. (2009) "Settlement Characteristics of Full Scale Test Embankment on Soft Bangkok Clay Improved with Thermo-PVD and Stiffened Deep Cement Mixing Piles" *17th Conference of International Society of Soil Mechanics and Geotechnical Engineering*, Egypt.
12. Lin, S.S., Chiou, K.J., Liao, J.C., Chen, C.H., and Ueng, T.S. (2009) "Derivation of Cyclic p-y Curves from Shaking Table Tests" *IS-Tokyo 2009 International Conference on Performance-Based Design in Earthquake Geotechnical Engineering*, Tokyo, Japan.
13. Lee, W.F., Chen, C.H., Lin, S.S., and Ishihara, K. (2008) "Applications of 3D Resistivity Image Profiling Method on Detecting Defects and Repairing Performance of Diaphragm Walls for Deep Excavation" *International Geotechnical Conference on Development of Urban Areas and Geotechnical Engineering*, Saint-Petersburg, Russia, Vol. Two, 603-608.
14. Lin, S.S., Liao, J.C., Hsueh, C.K. and Huang, A.B. (2008) "Bearing Capacity Estimation of a Drilled Shaft and A Driven Pile using CPT Data" *3rd International Conference on Site Characterization*, Taipei, Taiwan, CD-ROM, 1081-1086.
15. Lin, S.S., Liao, J.C., Wang, K.J., and Chang, Y.H. (2008) "Capacity of Tip Grouted Piles Socketed in a Gravel Layer" *Proceedings of the Second British Geotechnical Association International Conference on Foundations, ICOF 2008*, Vol. One, 193-200.
16. Lin, S.S., Chien, C.R., Liao, J.C., and Lee, W.F. (2007) "Ground Improvement of Coal Ash Storage Pond- A Case History" *International Symposium on Geotechnical Engineering, Ground Improvement and Geosynthetics for Human Security and Environmental Preservation*, Bangkok, Thailand. (Invited Lecture).
17. Lin, S.S., Tseng, Y.J., Liao, J.C., Wang, C.H., and Lee, W.F. (2007) "Uncoupled numerical analysis for ground lateral spread effects on single pile" *4th International Conference on Earthquake Geotechnical Engineering*, Greece.

18. Lee, W.F., Lin, S.S., and Chen, J.W. (2007) "Seismic performance analyses of geosynthetic reinforced slopes" *4th International Conference on Earthquake Engineering*, Greece.
19. Lin, S.S., Liao, J.C., Wang, K.R., and Chang, Y.H. (2007) "Comparison on axial capacity by static and Statnamic tests for two drilled shafts" *16th Southeast Asia Geotechnical Engineering Conference*, Malaysia.
20. Lin, S.S., Tseng, Y.J., Wang, C.H., and Lee, W.F. (2006) "Uncoupled Numerical Analysis for Ground Lateral Spread Effects on Single Piles" *4th International Conference on Earthquake Engineering*, Taipei, Taiwan.
21. Kuo, C., Lin, S.S., Lee, W.F., and Huang, Y.M. (2006) "Geosynthetics applications for heavy railway mitigation" *8th International Conference on Geosynthetics*, Yokohama, Japan.
22. Bergado, D.T., Lorenzo, G.A., Phien-wej, N., Lin, S.S., and Voottipruex, P. (2005) "Compression mechanism of DMM pile in subsiding soft ground under embankment loading with application to bridge approach embankment " *Proceedings of 16th International Conference of Soil Mechanics and Geotechnical Engineering*, Osaka, Japan.
23. Lin, S.S. et al. (2004) "Analysis of Pile Stabilized Slopes" *15th Southeast Asia Geotechnical Engineering Conference*, Bangkok, Thailand.