

# CURRICULUM VITAE

## 1. Personal Details

**Name:** Professor Shui-Long Shen (Fellow EurASc)

**Position:** Dean, Chair & Distinguished Professor in Civil Engineering;

**Address:** College of Engineering, Shantou University, 243 Da Xue Road, Shantou, Guangdong 515063, P.R. China;

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## 2. Education Background

- ◆ PhD (Oct. 1995 – Sept. 1998): Saga University, Saga, Japan;  
Direction: Social System Engineering, Graduate School of Science and Engineering  
Topic: Geotechnical Engineering;
- ◆ MSc (Sept 1986 – Mar. 1989): Tongji University, Shanghai, P.R. China;  
Direction: Structural Engineering, College of Civil Engineering  
Topic: Tunnel Structures;
- ◆ BSc (Sept. 1982 – July 1986): Tongji University, Shanghai, P.R. China;  
Department: Geotechnical Engineering, College of Civil Engineering;  
Topic: Tunnelling and Underground Space Technology.

## 3. Career Experiences

- Distinguished Chair Professor, “Pearl River Talent Program” Leading Talent, Guangdong Province, China, May 2020-date;
- Tenured Leading Professor, Department of Civil Engineering, School of Ocean and Civil Engineering, Shanghai Jiao Tong University (SJTU), January 2017-April, 2019.
- Professor, Department of Civil Engineering, Shanghai Jiao Tong University (SJTU), September 2004-December 2016.
- Lecturer, Department of Civil Engineering, Shanghai Jiao Tong University (SJTU), March 2003 – August, 2004.
- Post-doctoral Research Fellow, National Institute for Environmental Studies (NIES), Japan, July 2001-February, 2003, Tsukuba, Japan.
- Lecturer (Part time), Institute of Lowland Technology, Saga University, Japan, October 1998-June, 2001.
- Senior Research Engineer for Software Development, Shinwa Techno Consultant Co. Ltd., Japan, October 1998-June, 2001 (part time).
- Civil Consultant Engineer, Shanghai Urban Construction Design Institute, Shanghai, P.R. China, March 1989 - September 1995.

## 4. Honor Positions

- Fellow, European Academy of Sciences, September 2024-Data;
- Adjunct Professor, Department of Civil Engineering, Shanghai Jiao Tong University (SJTU), September 1, 2019 – date.
- Adjunct Professor, School of Engineering, RMIT University, Melbourne, Australia, January 1, 2019 – date.

- Adjunct Professor, Department of Civil and Construction Engineering, Swinburne University of Technology, Australia, August 15, 2017 – date.
- Distinguished Fellow in Geotechnical Engineering (Visiting Professor), Department of Civil and Environmental Engineering, Swinburne University of Technology, Australia, January - July 2017.
- INTERWEAVE scholarship (Erasmus Mundus Action 2 funded by the European Commission) to serve as a visiting Professor (Academic Staff), Ecole Centrale de Nantes, France, July - August 2014.
- Adjunct Faculty (Visiting Professor), The Via Department of Civil and Environmental Engineering, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 24061, USA, January - February 2012.
- Visiting Professor, Department of Civil Engineering, The University of Hong Kong, April -May 2009.
- Guest Professor, Saga University, Japan, March - July 2006.

### 5. Management/Administrative Experiences

- May 2019 – present: Dean, College of Engineering, Shantou University, Shantou University (STU), May 2019-date.
- October 2010 – October 2018, Department Head, Department of Civil Engineering, Shanghai Jiao Tong University (SJTU).

### 6. Editorial Board Roles/Professional Affiliations

- Editorial Board Member, *Acta Geotechnica*, *Springer Nature*, 2024-date;
- Funding Editor and Editor-in-Chief, *Smart Construction and Sustainable Cities*, *Springer Nature*, 2023-date;
- Associate Editor, *Geotextiles and Geomembranes*, *IGS*, *Elsevier*, 2007-date;
- Editorial Board Member, *Tunnelling and Underground Space Technology*, *Elsevier*, 2020-date;
- Editorial Board Member, *Computers and Geotechnics*, *Elsevier*, 2016-date;
- Editorial Board Member, *Canadian Geotechnical Journal*, 2016-date;
- Editorial Board Member, *Marine Georesources and Geotechnology*, *Taylor & Francis*, 2015-date;
- Editorial Board Member, *Frontiers of Structural and Civil Engineering*, *Springer Nature*, 2010-date;
- Editorial Board Member, *Suranaree Journal of Science and Technology*, 2009-date, ISSN: 0858-849X.
- Member: American Society of Civil Engineers (ASCE), 2018-date;
- Member: International Association of Soil Mechanics and Geotechnics, 2002-
- Life Time Member: International Association of Lowland Technology (IALT), 1998-date.

### 7. Professional Activities

- Over 30 Keynote Speech and invited speech in International and Domestic Conference Since 2005;
- Involved in Organization of over 20 International and Domestic Conference Since 2005

### 8. Selected Prizes/Awards

- Best Teaching Award for Graduate Students, Shantou University, 2021;
- National Patent Excellence Award: ZL201610805301.0, National Intellectual Property Office, 2020.7;

- “The Pearl River Talent Recruitment Program” in 2019 for Dr. Shui-Long Shen (Grant No. 2019CX01G338), Guangdong Province.
- Second Prize of Natural Science of Chinese Universities, 2019, Leading author;
- Best Dissertation Award for PhD of Shanghai Jiao Tong University as Supervisor, 2020: Dr. Hai-Min Lyu under my supervision;
- Best Dissertation Award for PhD of Shanghai Jiao Tong University, as Supervisor, 2015: Dr. Yong-Xia Wu under my supervision;
- Best Teaching Award for Graduate Students, Shanghai Jiao Tong University, 2015;
- Best Dissertation Award for PhD of Shanghai as Supervisor, 2015: Dr. Zhi-Feng Wang under my supervision;
- Best Dissertation Award for PhD of Shanghai as Supervisor, 2014: Dr. Lei Ma under my supervision;
- Best Dissertation Award for PhD (nomination) of Chinese University as Supervisor, 2012: Dr. Ye-Shuang Xu under my supervision;
- Best Dissertation Award for PhD of Shanghai as Supervisor, 2011: Dr. Ye-Shuang Xu under my supervision;
- Best Thesis Award for Master of Shanghai as Supervisor, 2007: Dr. Ye-Shuang Xu under my supervision.
- Excellent Reviewer, 2017, 2018 Tunneling and Underground Space Technology;
- Outstanding Reviewer, 2016, Canadian Geotechnical Journal;
- Excellent Reviewer, 2015, 2016, 2017, 2018 Computers and Geotechnics;

## 9. Selected Publications

### *Books*

1. Han, J., Puppala, A.J., **Shen, S.L.**, Oztoprak, S. and Huang, J. (2014). Ground Improvement and Geosyntheticss, **Geotechnical Special Publication No. 238, ASCE**, Reston, Virginia. ISBN: 978-0-7844-1337-1.
2. He, Q., **Shen, S.L.** (2010). Geoenvironmental Engineering and Geotechnics: Progress in Modeling and Applications, **Geotechnical Special Publication No. 204, ASCE**, Reston, Virginia. (Ei indexed book), ISBN: 9-780784-411056.
3. Shen, S.L., Sun, W.J. (2009). Groundwater: In Handbook of Excavation Engineering, Architecture Industrial Press, Beijing. ISBN: 978-7-112-11552-5. (in Chinese)
4. Ge, J.K., **Shen, S.L.**, and Xu, Y.S. (2009). Contemporary Development of Pipe-Jacking Technology and Case Histories. Architecture Industrial Press, Beijing. ISBN: 978-7-112-11214-2. (in Chinese)
5. Bai, Y. and **Shen, S.L.** (Editor) (2006). Movement Technology of Structures, China Architecture Industrial Press, Beijing. (in Chinese)
6. Porbaha, A., **Shen, S.L.**, Wartman, J., and Chai, J.C. (2006). Ground Modification and Seismic Mitigation, **Geotechnical Special Publication No. 152, ASCE**, Reston, Virginia.

### *Selected Peer Reviewed Journal Publications [\* corresponding author]*

1. Yan, T., Shen, S.L.\*, Zhou, A. (2023). GFII: a new index to identify geological features during shield tunnelling. *Tunnelling and Underground Space Technology*, 142(2023), 105440.
2. Shen, S.L.\*, Zhang, N., Zhou, A. (2023). Investigation of disc cutter wear during shield tunnelling in weathered granite: A case study. *Tunnelling and Underground Space Technology*, 140(2023), 105323.

3. Shen, S.L.\*, Atangana Njock, P.G.\*, Zhou, A., (2023). Influence of nozzle structure on effectiveness of jet grouting operations and its optimal design. *Geoenergy Science and Engineering*, 226(2023), 211788.
4. Shen, S.L.\*, Yan, T.\*, Zhou, A., (2023). Estimating locations of soil-rock interfaces based on vibration data during shield tunnelling. *Automation in Construction*, 150(2023), 104813.
5. Shen, S.L.\*, Lin, S.S., Zhou, A., (2023). A cloud model-based approach for risk analysis of excavation system. *Reliability Engineering and System Safety*, 231(2023), 108984.
6. Zhang, N., Shen, S.L.\*, Zhou, A. (2023). A new index for cutter life evaluation and ensemble model for prediction of cutter wear. *Tunnelling and Underground Space Technology*, 131(2023), 104830.
7. Atangana Njock, P.G., Shen, S.L.\*, Zhou, A., Lin, S.S. (2022). A VIKOR-based approach to evaluate river contamination risks caused by wastewater treatment plant discharges. *Water Research*, 226(2022), 119288.
8. Yan, T., Shen, S.L.\*, Zhou, A., Chen, X.S. (2022). Prediction of geological characteristics from shield operational parameters using integrating grid search and K-fold cross validation into stacking classification algorithm. *Journal of Rock Mechanics and Geotechnical Engineering*, 14(2022), 1292-1303.
9. Shen, S.L.\*, Zhang, N.\*, Zhou, A., Yin, Z.Y. (2022). Enhancement of neural networks with an alternative activation function tanhLU. *Expert Systems with Applications*, 199(2022), 117181.
10. Shen, S.L.\*, Elbaz, K., Shaban, W.M., Zhou, A. (2022). Real-time prediction of shield moving trajectory during tunnelling. *Acta Geotechnica*, 2022, 17(4), 1533-1549. <https://doi.org/10.1007/s11440-022-01461-4>.
11. Shen, S.L.\*, Lyu, H.M.\*, Zhou, A., Lu, L.H., Li, G., Hu, B.B. (2021). Automatic control of groundwater balance to combat dewatering during construction of a metro system. *Automation in Construction*, 123(2021), 103536.
12. Lin, S.S., Shen, S.L.\*, Zhou, A., Xu, Y.S., (2020). Approach based on TOPSIS and Monte Carlo simulation methods to evaluate lake eutrophication levels. *Water Research*, 187(2020), 116437.
13. Lyu, H.M., Zhou, W.H., Shen, S.L.\*, Zhou, A. (2020). Inundation risk assessment of metro system using AHP and TFN-AHP in Shenzhen. *Sustainable Cities and Society*, 56(2020), 102103.
14. Lyu, H.M., Sun, W.J., Shen, S.L.\*, Zhou, A. (2020). Risk assessment using a new consulting process in fuzzy AHP. *Journal of Construction Engineering and Management*, ASCE, 146(3), 04019112.
15. Lyu, H.M., Shen, S.L.\*, Zhou, A.N., Yang, J. (2019). Perspectives for flood risk assessment and management for mega-city metro system. *Tunnelling and Underground Space Technology*, 84(2019), 31-44.
16. Liu, X.X., Shen, S.L.\*, Zhou, A., and Xu, Y.S. (2019). Evaluation of foam conditioning effect on groundwater inflow at tunnel cutting face. *International Journal for Numerical and Analytical Methods in Geomechanics*, 43(2), 463-481.
17. Ren, D.J., Shen, S.L.\*, Arulrajah, A., Cheng, W.C. (2018). Prediction model of TBM disc cutter wear during tunnelling in heterogeneous ground, *Rock Mechanics and Rock Engineering*, 51(11), 3599-3611.
18. Shen, S.L., Wang, Z.F., Cheng, W.C. (2017). Estimation of lateral displacement induced by jet grouting in clayey soils, *Geotechnique*, 67(7), 621-630.
19. Shen, S.L., Wu, Y.X., Misra, A. (2017). Calculation of head difference at two sides of a

- cut-off barrier during excavation dewatering, *Computers and Geotechnics*, 91(2017), 192-202.
20. Shen, S.L.\*, Cui, Q.L., Ho, C.E., Xu, Y.S. (2016). Ground response to multiple parallel microtunneling operations in cemented silty clay and sand, *Journal of Geotechnical and Geoenvironmental Engineering*, 142(5), 04016001.
  21. Wu, H.N., Shen, S.L., Liao, S.M., and Yin, Z.Y. (2015). Longitudinal structural modelling of shield tunnels considering shearing dislocation between segmental rings. *Tunneling and Underground Space Technology*, 50(2015), 317-323.
  22. Shen, S.L., Wu, H.N., Cui, Y.J., and Yin, Z.Y. (2014). Long-term settlement behavior of metro tunnels in the soft deposits of Shanghai. *Tunneling and Underground Space Technology*, 40(2014), 309-323.
  23. Shen, S.L.\*, and Xu, Y.S., (2011). Numerical evaluation of land subsidence induced by groundwater pumping in Shanghai, *Canadian Geotechnical Journal*, 48(9), 1378-1392.
  24. Shen, S.L., Wang, Z.F., Yang, J., and Ho, C.E. (2013). Generalized approach for prediction of jet grout column diameter, *Journal of Geotechnical and Geoenvironmental Engineering*, 139(12), 2060-2069.
  25. Shen, S.L.\*, Ma, L., Xu, Y.S., and Yin, Z.Y. (2013). Interpretation of increased deformation rate in aquifer IV due to groundwater pumping in Shanghai, *Canadian Geotechnical Journal*, 50(11), 1129-1142.
  26. Shen, S.L.\*, and Xu, Y.S., (2011). Numerical evaluation of land subsidence induced by groundwater pumping in Shanghai, *Canadian Geotechnical Journal*, 48(9), 1378-1392.
  27. Shen, S.L.\*, Du, Y.J., and Luo, C.Y. (2010). Evaluation of the effect of rolling correction of double-o-tunnel shields via one-side loading, *Canadian Geotechnical Journal*, 47(10), 1060-1070.
  28. Shen, S.L.\*, Horpibulsuk, S., Liao, S.-M., and Peng, F.-L. (2009). Analysis of the behavior of DOT tunnel lining caused by rolling correction operation. *Tunneling and Underground Space Technology*, 24(1), 84-90;
  29. Shen, S.L.\*, Han, J., and Du, Y.J. (2008). Deep mixing induced property changes in surrounding sensitive marine clays. *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 134(6): 845-854.
  30. Shen, S.L.\*, Chai, J.C., Hong, Z.-S., and Cai, F.X. (2005). Analysis of field performance of embankments on soft clay deposit with and without PVD-improvement, Geotextiles and Geomembranes, 23(6), 463-485.
  31. Chai, J.C.\*, Shen, S.L., Miura, N. and Bergado, D.T. (2001). A simple method of modeling PVD improved subsoil, *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol.127, No.11, pp.965-972.

## 10. Selected Grant

**Governmental Fundings: There are totally 18 governmental fundings. [Shen as PI or co-PI]**

- 1) Guangdong Provincial Basic and Applied Basic Research Fund Committee: Offshore Wind Power Joint Fund - General Project (Grant No. 2022A1515240073); 2022 to 2025;
- 2) The Pearl River Talent Recruitment Program” in 2019 (Grant No. 2019CX01G338), Guangdong Province, 2020-2025,
- 3) Science and Technology Committee of Shanghai Municipality (Grant No. 18DZ1201102), 2018-2021. [Co-PI]
- 4) National Science and Foundation of China (NSFC) (Grant No: 41672259), 2017-2020.
- 5) National Basic Research Foundation of China 973 Program Sub-project (Grant No: 2015CB057806), 2015-2019.

- 6) National Science and Foundation of China (NSFC) (Grant No: 41372283), 2014-2017.
- 7) National Science and Foundation of China (NSFC) (Grant No. 41072209), 2011-2013.
- 8) Joint project between National Science and Foundation of China (NSFC) and Japanese Science Promotion Society (JSPS) (Grant No. 50911140105), 2009-2011.
- 9) National Science and Foundation of China (NSFC) (Grant No. 50779035), 2008-2010.

**Industrial Fundings: There are totally 43 industrial fundings [Shen as PI]**

1. Key intelligent techniques for Chunfeng Shield Tunneling in Shenzhen Urban region, 2019-2023.
2. Key intelligent techniques for Shield Tunneling of inter-city railway in Guangzhou. 2019-2023.
3. Intelligent management method for Metro line No. 10, Guangzhou. China Railway Southern Inc., Ltd., 2020-2023.
4. Key techniques for Shield construction in mixed ground. China Railway 16th Bureau Group Co., Ltd., 2019-2022.
5. Key techniques for both Shield and Mining Tunnels in Zhuhai. China Railway 16th Bureau Group Co., Ltd., Enterprise cooperation project, 2019-2023.
6. Key techniques for Shield construction in Luoyang. China Railway 16th Bureau Group Co., Ltd., Enterprise cooperation project, 2019-2023.