

CURRICULUM VITAE

Hannah, Wan-Huan ZHOU, Professor



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ACADEMIC BACKGROUND

- 2008 Ph.D. in Geotechnical Engineering, Department of Civil & Structural Engineering, The Hong Kong Polytechnic University, Hong Kong
Supervisor: Chair Professor Jian-Hua Yin
- 2005 MSc. in Geotechnical Engineering, Zhejiang University, China
Supervisor: Prof. Renpeng Chen, Prof. Yunmin Chen
- 2002 B.Eng in Civil Engineering, Zhejiang University, China
Minor diploma on “High-tech Innovation Management” Chu Kechen Honors College, Zhejiang University

WORKING EXPERIENCE

- 08/2021 ~ Present: **Professor**
Faculty of Science and Technology, University of Macau, Macau
- 09/2015 ~ 08/2021: **Associate Professor**
Faculty of Science and Technology, University of Macau, Macau
- 09/2009 ~ 08/2015: **Assistant Professor**
Faculty of Science and Technology, University of Macau, Macau
- 12/2008 – 06/2009: **Lecturer**
Department of Civil and Structural Engineering,
The Hong Kong Polytechnic University, Hong Kong

HONORS AND AWARDS

- Oct 2011 2011 R. M. Quigley Award – Honourable Mention for paper published in Canadian Geotechnical Journal in 2010.
Presented by **Canadian Geotechnical Society**, for paper entitled "*New mixed boundary, true triaxial loading device for testing three-dimensional stress–strain–strength behaviour of geomaterials*" by Jian-Hua Yin, Chun-Man Cheng, Md. Kumruzzaman, and **Wan-Huan Zhou**.
- May 2011 Award for Excellent Paper 2011 to **Wan-Huan Zhou**
Presented by **International Association for Computer Methods and Advances in Geomechanics (IACMAG)** for the following paper published in ASCE "*Influence of Grouting Pressure and Overburden Stress on the Interface Resistance of a Soil Nail*", Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 135, No. 9, 2009, by Jian-Hua Yin and **Wan-Huan Zhou**.

PROFESSIONAL MEMBERSHIPS

- | | |
|-----------------------------|--|
| Vice Director | Macau Association of Geotechnical Engineering (MAGE) |
| Member-at-Large | Hong Kong Society of Theoretical and Applied Mechanics (HKSTAM) |
| Committee Member | Risk and Insurance Research Branch of China Civil Engineering Society (CCES) |
| Nominated Member | 11 th Committee of Engineering Geology Professional Committee, Geological Society of China |
| Corresponding Member | Technical Committee 204 Geotechnical Aspects of Underground Construction in Soft Ground (ISSMGE) |
| Nominated Member | Technical Committee 202 Transportation Geotechnics (ISSMGE) |
| Nominated Member | Technical Committee 219 System Performance of Geotechnical Structures (ISSMGE) |
| Member | American Society of Civil Engineers (ASCE), Geo-Institute |
| Member | International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) |
| Member | Hong Kong Geotechnical Society (HKGES) |
| Member | 6 th Committee of Chinese Association of Young Scientists and Technologists |

PROFESSIONAL SERVICES

Associate Editor	International Journal of Geomechanics , Since 2021
Editorial Board Member	Canadian Geotechnical Journal , Since 2021
Early Career Editorial Board Members	Transportation Geotechnics , Since 2021
Scientific Editor	Journal of Mountain Science , Since 2020

Keynote/Invited Speech

Invited Speaker	“A flexible and generalizable method for predicting subsea immersed tunnel settlement”, International Symposium on Innovations in Geotechnical Engineering towards Sustainability (IGES2023), The Hong Kong Polytechnic University, Hong Kong, 30 Nov-04 Dec, 2023.
Invited Speaker	Tongji University, Shanghai, China, 9 November 2023.
Keynote Speaker	“Physics-informed machine learning for settlement prediction of immersed tunnels”, 16th International Conference of the International Association for Computer Methods and Advances in Geomechanics, Politecnico di Torino, Italy, September 1, 2022.
Keynote Speaker	“澳門構建韌性城市的機遇與挑戰”，澳門都市建設的前瞻與展望研討會，澳門，17 June 2022.
Invited Speaker	“Urban Underground Space and Big Data”, UM Scholar Research Forum, University of Macau, Macau, April 22, 2022.
Invited Speaker	“Deformation Analysis of Immersed Tunnel”, The 1 st Macao Conference on Smart City Technologies - Towards Smart Guangdong-Hong Kong-Macao Greater Bay Area. University of Macau, Macau. December 13, 2021.
Invited Speaker	“Deformation Analysis of Immersed Tunnel”, International Workshop of Smart Infrastructure Development towards Smart City, China Shantou & Hong Kong. Nov 20, 2021,
Invited Speaker	“Micro to Macro Characteristics of Interface Shearing Behavior between Granular Soil and Structure” Tianjin University, Tianjin, China, October 9, 2020.
Keynote Speaker	“Micro to Macro Characteristics of Interface Shearing Behavior between Granular Soil and Structure”, The 17 th Chinese Society for Rock Mechanics and Engineering (CSRME) annual conference, Beijing, China, October 25,

2020.

- Invited speaker “Uncertainty analysis in geotechnical engineering”, the 2nd Zhuhai Civil Engineering forum, Zhuhai, China, November 16, 2019.
- Keynote speaker “Creep model selection for soft soils”, 2nd International Symposium on Marine Engineering Geology, ISMEG2019, Dailian, China, October 19, 2019.
- Keynote speaker “Sand-Structure interface shearing characteristics and multi-scale analysis”, The 1st Academic Conference on Calculation and Simulation Technologies for Civil Engineering, Wuhan, China, May 25, 2019.
- Invited speaker “Silty sand – structure interface shearing behavior”, Changsha, China, November 10, 2018.
- Invited speaker “Engineering properties of Pb contaminated soil after nZVI treatment”, "Beijing-Tianjin-Hebei-Hong Kong, Macao and Taiwan" Energy Green Development and Low-Carbon City Construction Forum, Beijing, China, August 05, 2018.
- Keynote speaker “An efficient probabilistic back-analysis method for braced excavations”, 2nd International Symposium on Asia Urban GeoEngineering (2nd ISAUG), Changsha, China, November 26, 2017.
- Invited speaker “On the interface shearing behavior between granular soil and artificial rough surfaces”, 7th International Symposium on Environmental Vibration and Transportation Geodynamics (ISEV2016), Hangzhou, China, October 30, 2016.

RESEARCH

Recent Research Grants

1. **Principal Investigator:** “Long-term deformation of shield tunnels crossing land-sea transitional zones and development of an intelligent health monitoring platform”, Science and Technology Development Fund (FDCT), Macau SAR. Grant No.: 0056/2023/RIB2, Duration: 04/01/2023-3/7/2024, Status: Ongoing.
2. **Principal Investigator:** “Intelligent safety monitoring and emergency management of major cross-sea traffic cluster projects”, Department of Science and Technology of Guangdong Province. Grant No.: 2019B111106001, Duration: 01/01/2023-31/12/2024, Status: Ongoing.
3. **Principal Investigator:** “High-performance sensing and monitoring technology and platform for safe operation of urban underground pipelines”, Department of Science and Technology of Guangdong Province. Grant No.: 2022A0505030019, Duration: 01/09/2022-31/08/2025, Status: Ongoing.

4. **Principal Investigator:** “Safety monitoring, Smart IOT technology, Instrument and equipment, and Industrialization for Urban Infrastructure”, University of Macau-Huafa Group Joint Laboratory, Duration: 16/03/2022-15/03/2025, Status: Ongoing.
5. **Principal Investigator:** “Disaster prevention in geotechnical engineering”, 2020 Excellent Young Scientists Fund (Hong Kong and Macao) from NSFC, Grant No. 52022001, Duration: 01/01/2021-31/12/2023, Status: Completed.
6. **Principal Investigator:** “Seepage and Durability of Deep Buried Immersed Tunnel in Marine Backfill and Water Environment”, NSFC-FDCT Joint Project, Project Reference Number: 0026/2020/AFJ, Period: 01/09/2020-31/08/2023, Status: Completed.
7. **Principal Investigator:** “Development of intelligent optical fiber sensors for building safety monitoring”, FDCT Smart City Applications and Solutions of Macao, Project Reference Number: 0025/2020/ASC, Period: 04/01/2021-03/01/2022, Completed.
8. **Principal Investigator (UM):** “Integrated application of intelligent operation and maintenance technology for Hong Kong-Zhuhai-Macao Bridge”, Ministry of Science and Technology (MOST), China. Grant No.: 2019YFB1600700, Duration: 01/12/2019-30/11/2022, Status: Completed.
9. **Principal Investigator (ZUMRI):** “Integrated application of intelligent operation and maintenance technology for Hong Kong-Zhuhai-Macao Bridge”, Ministry of Science and Technology (MOST), China. Grant No.: 2019YFB1600700, Duration: 01/12/2019-30/11/2022, Status: Completed.
10. **Principal Investigator (UM):** “Intelligent safety monitoring and emergency management of major cross-sea traffic cluster projects”, Department of Science and Technology of Guangdong Province. Grant No.: 2019B111106001, Duration: 01/2020-12/2022, Status: Completed.
11. **Principal Investigator:** “Research and Development of Advanced Optical Fiber Sensing Technology for Marine Environment”, The Center for Ocean Research in Hong Kong and Macau. Grant No.: CORE, Duration: 01/04/2022-31/03/2023, Status: Completed.
12. **Principal Investigator:** “Study of face stability technology for slurry shield tunneling”, Science and Technology Development Fund (FDCT), Macau SAR. Grant No.: FDCT/0035/2019/A1, Duration: 07/2019-06/2022, Status: Completed.
13. **Principal Investigator:** “Characteristics and micro-mechanism of the shearing behavior between silty sand and 3D complex rough interfaces”, Science and Technology Development Fund (FDCT) of Macau SAR. Grant No.: FDCT/193/2017/A3, Duration: 25/05/2018-24/05/2021, Status: Completed.

Publications:

Book

Zhou, Wan-Huan, Yin, Zhen-Yu (2022). Practice of Discrete Element Method in Soil-Structure Interface Modelling. Springer Nature, ISBN: 978-981-19-0046-4, 260 pages.

Zhou, Wan-Huan, Yin, Zhen-Yu, Yuen Ka-Veng (2021). Practice of Bayesian Probability Theory in Geotechnical Engineering. Springer Singapore, ISBN: 978-981-15-9104-4, 324 pages.

Selected Journal papers (Student Name is underlined):

1. He, S. Y., Tang, C., & **Zhou, W. H.** (2024). Settlement prediction of immersed tunnel considering time-dependent foundation modulus. Tunnelling and Underground Space Technology, 144, 105562.
2. He, S. Y., **Zhou, W. H.**, & Tang, C. (2024). Physics-Informed Neural Networks for Settlement Analysis of the Immersed Tunnel of the Hong Kong–Zhuhai–Macau Bridge. International Journal of Geomechanics, 24(1), 04023241.
3. He, S. Y., Kuok, S. C., Tang, C., & **Zhou, W. H.** (2023). Efficient Bayesian Model Updating for Settlement Prediction of the Immersed Tunnel of HZMB. Transportation Geotechnics, 101179.
4. Shen, P., Wei, S., Shi, H., Gao, L., & **Zhou, W. H.** (2023). Coastal flood risk and smart resilience evaluation under changing climate. Ocean-Land-Atmosphere Research, 2, 0029.
5. Qin, S., Cheng, Y., & **Zhou, W. H.** (2023). State-of-the-art review on pressure infiltration behavior of bentonite slurry into saturated sand for TBM tunneling. Smart Construction and Sustainable Cities, 1(1), 14.
6. Tang, C., He, S. Y., Guan, Z., **Zhou, W. H.**, & Yin, Z. Y. (2023). Enhanced elastic beam model with BADS integrated for settlement assessment of immersed tunnels. Underground Space, 12, 79-88.
7. Yan, W., Shen, P., **Zhou, W. H.**, & Ma, G. (2023). A rigorous random field-based framework for 3D stratigraphic uncertainty modelling. Engineering Geology, 323, 107235.
8. Zhao, L. S., **Zhou, W. H.**, & Shen, S. L. (2023). Semianalytical Solution for Dissipation Process of Partially Saturated Soils Considering Nonsmooth Boundary and Stress Level. Journal of Engineering Mechanics, 149(9), 04023057.
9. Wang, D., Zhu, H., Zhou, G., Yu, W., Wang, B., & **Zhou, W. H.** (2023). Monitoring shear deformation of sliding zone via fiber Bragg grating and particle image velocimetry. Journal of Rock Mechanics and Geotechnical Engineering.
10. Cheng, Z., Kannangara, K. K. P. M., Su, L.J., **Zhou, W.H.** (2023). Mathematical model for approximating shield tunneling-induced surface settlement via multi-gene genetic programming. Acta Geotechnica, 0123456789.
11. Qin, S., Xu, T., **Zhou, W.H.**, & Bezuijen, A. (2023). Infiltration behaviour and microstructure of filter cake from sand-modified bentonite slurry. Transportation Geotechnics, 40, 100963.

12. Qin, S., **Zhou, W.H.**, & Xu, T. (2023). Effects of seawater on the infiltration behavior of bentonite slurry into sand. *Construction and Building Materials*, 371, 130759.
13. Yan, W., **Zhou, W.H.**, & Shen, P. (2023). An Uncertainty-driven Peak-integration (UP) Strategy for 3D Borehole Layout Planning. *Computers and Geotechnics*, 156, 105280.
14. Tang, C., He, S. Y., & **Zhou, W.H.** (2023). A beam on elastic foundation method for predicting deflection of braced excavations considering uncertainties. *International Journal for Numerical and Analytical Methods in Geomechanics*, 47(4), 533 – 548.
15. Yan, W., Shen, P., & **Zhou, W.H.** (2023). A hybrid physical data informed DNN in axial displacement prediction of immersed tunnel joint. *Georisk : Assessment and Management of Risk for Engineered Systems and Geohazards*, 1-12.
16. Cheng, Z. L., Kannangara, K. K. P. M., Su, L. J., **Zhou, W.H.**, & Tian, C. (2023). Physics-guided genetic programming for predicting field-monitored suction variation with effects of vegetation and atmosphere. *Engineering Geology*, 315, 107031.
17. Li, Y., **Zhou, W.H.**, & Shen, P. (2023). Flood risk assessment of loss of life for a coastal city under the compound effect of storm surge and rainfall. *Urban Climate*, 47, 101396.
18. Chen, W.B., **Zhou, W.H.**, & Yin, Z.Y. (2022). Recent Development on Macro – Micro Mechanism of Soil-Structure Interface Shearing Through DEM. *Archives of Computational Methods in Engineering*, 1-20.
19. Li, Y., Shen, P., Yan, Y., & **Zhou, W.H.** (2022). Flood risk assessment of artificial islands under compound rain-tide-wind effects during tropical cyclones. *Journal of Hydrology*, 615, 128736.
20. Tang, C., He, S.Y., & **Zhou, W.H.** (2022). Settlement-based framework for long-term serviceability assessment of immersed tunnels. *Reliability Engineering & System Safety*, 228, 108801.
21. Zhou, Z., Lok, T. M. H., **Zhou, W. H.**, & Zhao, L.S. (2022). An Analytical Solution for the Deformation of Soft Ground Reinforced by Columnar Inclusions under Equal Stress Conditions. *Applied Sciences (Switzerland)*, 12 (22).
22. Qin, S., Xu T., Cheng Z.L., & **Zhou, W.H.** (2022). Analysis of spatiotemporal variations of excess pore water pressure during mechanized tunneling using genetic programming. *Acta Geotechnica*. 1-18.
23. Xu, T., **Zhou, W.H.**, Bezuijen, A., & Qin, S. (2022). Effects of sand and slurry characteristics on pressure infiltration of bentonite slurry into sand. *Géotechnique*, 0 (0), 1-34.
24. Cheng, Y., **Zhou, W.H.**, & Xu, T. (2022). Tunneling-induced settlement prediction using the hybrid feature selection method for feature optimization. *Transportation Geotechnics*, 36, 100808.
25. Lu, Z., **Zhou, W.H.**, Asce, M., & Yin, Z.Y. (2022). Effect of Viscosity on Slurry Infiltration in Granular Media. *22(9)*, 1-14.

26. Cheng, Z.L., **Zhou, W.H.**, and Tian, C., (2022) Multi-perspective analysis on rainfall-induced spatial response of soil suction in a vegetated soil. *Journal of Rock Mechanics and Geotechnical Engineering*. 14 (4), 1280-1291.
27. Kannangara K.K.P.M., **Zhou, W.H.**, Ding, Z., & Hong, Z.H. (2022) Investigation of feature contribution to shield tunneling-induced settlement using shapley additive explanations method. *Journal of Rock Mechanics and Geotechnical Engineering*. 14 (4), 1052-1063.
28. Li, Y., **Zhou, W.H.**, & Shen, P. (2022). Pedestrian danger assessment under rainstorm-induced flood disaster for an artificial island. *International Journal of Disaster Risk Reduction*, 78, 103133.
29. Lu, Z., **Zhou, W.H.**, Yin, Z.Y., & Yang, J. (2022). Numerical modeling of viscous slurry infiltration in sand. *Computers and Geotechnics*, 146, 104745.
30. Ding, Z., Zhao, L.S., **Zhou, W.H.**, & Bezuijen, A. (2022). Intelligent Prediction of Multi-Factor-Oriented Ground Settlement During TBM Tunneling in Soft Soil. *Frontiers in Built Environment*, 8.
31. Kannangara, K.K.P.M., Ding, Z., & **Zhou, W.H.** (2022). Surface settlements induced by twin tunneling in silty sand. *Underground Space*, 7 (1), 58-75
32. Ding, Z., He, S.Y., **Zhou, W.H.**, Xu, T., He, S.H., & Zhang, X. (2021). Analysis of ground deformation induced by shield tunneling considering the effects of muck discharge and grouting. *Transportation Geotechnics*, 30, 100629.
33. Xiong, L., Guo, Y.X., **Zhou, W.H.**, Chen, M., & Zhou, X.L. (2021). Fiber Bragg Grating-Based Three-Axis Vibration Sensor. *IEEE Sensors Journal*, 21(22), 25749 – 25757.
34. Wang, P., Yin, Z.Y., **Zhou, W.H.**, & Chen, W.B. (2021). Micro-mechanical analysis of soil – structure interface behavior under constant normal stiffness condition with DEM. *Acta Geotechnica*, 17(7), 2711 – 2733.
35. Guo, Y.X., **Zhou, W.H.**, Xiong, L., Zhou, X.L., & Li, L.T. (2021). A Fiber Bragg Grating Sensor for Positive and Negative Displacement Measurement. *IEEE Sensors Journal*, 21(19), 21564-21571.
36. Guo, Y.X., Xiong, L., Wu, H., **Zhou, W.H.**, Zhou, X.L., & Liu, H.H. (2021). A FBG Inclinator for Simultaneous Measurement of Horizontal Deformation and Sudden Deformation. *IEEE Transactions on Instrumentation and Measurement*, 70.
37. Wang, A.Q., Hu, Y.Y., **Zhou, W.H.**, & Liu, X.W. (2021). Analysis of one-dimensional nonlinear consolidation of a saturated lumpy porous clay layer. *Computers and Geotechnics*, 140, 104458.
38. Qin, S., Xu, T., & **Zhou, W.H.** (2021). Predicting Pore-Water Pressure in Front of a TBM Using a Deep Learning Approach. *International Journal of Geomechanics*, 21(8), 04021140.
39. Chen, W.B., **Zhou, W.H.**, Sadowski, Ł., & Yin, Z.Y. (2021). Metaheuristic model for the interface shear strength between granular soil and structure considering surface morphology. *Computers and Geotechnics*, 135, 104141.
40. Cheng, Z.L., Yang, S., Zhao, L.S., Tian, C., & **Zhou, W.H.** (2021). Multivariate modeling of soil suction response to various rainfall by multi-gene genetic programming. *Acta Geotechnica*. 16 (11), 3601-3616.

41. Wang, H. L., **Zhou, W. H.**, Yin, Z. Y., & Jie, X. X. (2021). Closure to “Effect of Grain Size Distribution of Sandy Soil on Shearing Behaviors at Soil – Structure Interface” by Han-Lin Wang, Wan-Huan Zhou, Zhen-Yu Yin, and Xi-Xi Jie. *Journal of Materials in Civil Engineering*, 33(3), 07020009.
42. Chen W.B., Tao Xu, **W.H. Zhou** (2021) Microanalysis of smooth Geomembrane–Sand interface using FDM–DEM coupling simulation. *Geotextiles and Geomembranes*, Vol.49(1), 276-288.
43. Ding, P., Hu, Y., **Zhou, W.H.**, Liu, X., & Xu, R. (2020). An elastic-viscoplastic constitutive model incorporating shear dilation characteristic. *Arabian Journal of Geosciences*, 13(19).
44. Liu, X., Yang, B., Zhao, L. S., & **Zhou, W. H.** (2020). Experimental Investigation of Water Flow through Vesicular Fractures in Volcanic Rock. *International Journal of Geomechanics*, 20(10), 1–10.
45. He, S. H., Ding, Z., Xia, T. D., **Zhou, W. H.**, Gan, X. L., Chen, Y. Z., & Xia, F. (2020). Long-term behaviour and degradation of calcareous sand under cyclic loading. *Engineering Geology*, 276 (November 2019), 105756.
46. Chen, W. B., **Zhou, W. H.***, & dos Santos, J. A. (2020). Analysis of consistent soil–structure interface response in multi–directional shear tests by discrete element modeling. *Transportation Geotechnics*, 24(June), 100379.
47. Lyu H.M., **Zhou W.H.***, Shen S.L. *, Zhou A.N. (2020). Inundation risk assessment of metro system using AHP and TFN-AHP in Shenzhen, *Sustainable Cities and Society*, 56, 102103.
48. Jin, Y.F., Yin, Z.Y., **Zhou, W.H.**, Liu, X.F. (2020) Intelligent model selection with updating parameters during staged excavation using optimization method. *Acta Geotechnica*, 1-19.
49. Cheng, Z.L., **Zhou, W.H.***, Ding, Z., Guo, Y.X. (2020) Estimation of spatiotemporal response of rooted soil using a machine learning approach. *Journal of Zhejiang University-SCIENCE A (Applied Physics & Engineering)*, 2020 21(6):462-477.
50. Liu, F., Yi, S., **Zhou, W.-H.***, Chen, Y.-Z., & Wong, M. H. (2020). Amendment additions and their potential effect on soil geotechnical properties: A perspective review. *Critical Reviews in Environmental Science and Technology*, 0(0), 1-42. <https://doi.org/10.1080/10643389.2020.1729066>
51. Cheng Z.L., **Zhou W.H.***, Garg A. (2020) Genetic programming model for estimating soil suction in shallow soil layers in the vicinity of a tree, *Engineering Geology*, 268:105506, Doi: 10.1016/j.enggeo.2020.105506
52. Jin, Y.F., Yin, Z.Y., **Zhou, W.H.**, & Horpibulsuk, S. (2019). Identifying parameters of advanced soil models using an enhanced transitional Markov chain Monte Carlo method. *Acta Geotechnica*, 14(6), 1925-1947.
53. Zhu, H. X., **Zhou, W. H.***, Jing, X. Y., & Yin, Z. Y. (2019). Observations on fabric evolution to a common micromechanical state at the soil-structure interface. *International Journal for Numerical and Analytical Methods in Geomechanics*, 43(15), 2449–2470. <https://doi.org/10.1002/nag.2989>

54. Jin, Y. F., Yin, Z. Y., **Zhou, W. H.**, & Shao, J. F. (2019). Bayesian model selection for sand with generalization ability evaluation. *International Journal for Numerical and Analytical Methods in Geomechanics*, 43(14), 2305-2327.
55. Lyu, H. M., Shen, S. L., Zhou, A., & **Zhou, W.H.** (2019). Data in flood risk assessment of metro systems in a subsiding environment using the interval FAHP – FCA approach. *Data in Brief*, 26, 104468.
56. Liu, F., Yi, S., Ma, H., Huang, J., Tang, Y., Qin, J., & **Zhou, W.H.** (2019). Risk assessment of groundwater environmental contamination: a case study of a karst site for the construction of a fossil power plant. *Environmental Science and Pollution Research*, 26(30), 30561-30574.
57. **Zhou, W.H.**, He, S.Y., Garg, A., & Yin, Z.Y. (2019) Field monitoring of suction in the vicinity of an urban tree: exploring termite infestation and the shading effects of tree canopy. *Acta Geotechnica*, 15. pp.1341-1361.
58. Wang, H.L., **Zhou, W.H.***, Yin, Z.Y., and Jie, X.X. (2019). Effect of Grain Size Distribution of Sandy Soil on Shearing Behaviors at Soil–Structure Interface. *Journal of Materials in Civil Engineering*, 31(10), 04019238(1-10).
59. Zhao, L.S., **Zhou, W.H.***, Su, L.J., Garg, A., and Yuen K.V. (2019). Selection of Physical and Chemical Properties of Natural Fibers for Predicting Soil Reinforcement. *Journal of Materials in Civil Engineering*, 31(10), 04019212(1-13).
60. Lyu, H.M., Shen, S.L.* , Zhou, A.N., and **Zhou, W.H.** (2019). Flood risk assessment of metro systems in a subsiding environment using the interval FAHP–FCA approach. *Sustainable Cities and Society*, 50, 101682(1-14). (**Highly Cited Paper**)
61. Chen, Y.Z., **Zhou, W.H.***, Liu, F.M., Yi, S.P., and Geng, X.Y. (2019). Microstructure and morphological characterization of lead-contaminated clay with nanoscale zero-valent iron (nZVI) treatment. *Engineering Geology*, 256: 84-92.
62. Liu, F.M., Chen, Y.Z., Yi, S.P., **Zhou, W.H.**, Xie, L.S., and Ma, H.Y. Geoenvironmental characteristics of bisphenol A contaminated soil after persulfate treatment with different activation/enhancement methods. *PLoS ONE* 14(4): e0214024: 1-18.
63. **Zhou, W.H.**, Jing, X.Y.*, Yin, Z.Y., and Geng, X.Y. (2019). Effects of particle sphericity and initial fabric on the shearing behavior of soil–rough structural interface. *Acta Geotechnica*, 14(66): 1-18.
64. Zhao, L.S., **Zhou, W.H.***, Geng, X.Y., Yuen, K.V., and Fatahi, B. (2019). A closed-form solution for column-supported embankments with geosynthetic reinforcement. *Geotextiles and Geomembranes*, 47(3): 389-401.
65. Liu, F.M., **Zhou, W.H.**, Yi, S.P.* and Geng, X.Y. (2019) Morphological and mineral features of nZVI induced precipitation on quartz particles. *Environmental Geotechnics*, 1-8.
66. Chen, W.B., **Zhou, W.H.***, and Jing, X.Y. (2019). Modeling geogrid pullout behavior in sand using discrete-element method and effect of tensile stiffness. *International Journal of Geomechanics*, 19(5): 04019039(1-13).
67. Jin, Y.F., Yin, Z.Y.*, **Zhou, W.H.**, and Huang, H.W. (2019) Multi-objective optimization-based updating of predictions during excavation. *Engineering Applications of Artificial Intelligence*, 78:102-123.

68. Jin, Y.F., Yin, Z.Y.*, **Zhou, W.H.**, Yin, J.H., and Shao, J. F. (2019) A single-objective EPR based model for creep index of soft clays considering L2 regularization. *Engineering Geology*, 248: 242-255. Doi: 10.1016/j.enggeo.2018.12.006.
69. **Zhou, W.H.**, Liu, F.M., Yi, S.P. *, Chen, Y.Z., Geng, X.Y., and Zheng, C.M. (2019). Simultaneous stabilization of Pb and improvement of soil strength using nZVI. *Science of The Total Environment*, 651(Pt 1): 877-884. (**Highly Cited Paper**)
70. Chen, Y.Z., **Zhou, W.H.** *, Liu, F.M., and Yi, S.P. (2019). Exploring the effects of Nanoscale Zero-valent Iron (nZVI) on the Mechanical Properties of Lead-contaminated Clay. *Canadian Geotechnical Journal*. e-First Article: 1-11.
71. **Zhou, W.H.** and Qi, X.H.* (2018). Root cohesion estimation of riparian trees based on model uncertainty characterization. *Journal of Materials in Civil Engineering*, 31(2): 04018389(1-11).
72. Su, L.J., **Zhou, W.H.***, Chen, W.B., and Jie, X.X. (2018) Effects of relative roughness and mean particle size on the shear strength of sand-steel interface. *Measurement*, 122(2018): 339-346. Doi: 10.1016/j.measurement.2018.03.003.
73. **Zhou, W.H.**, Tan F., and Yuen, K.V.* (2018). Model updating and uncertainty analysis for creep behavior of soft soil. *Computers and Geotechnics*, 100(2018): 135-143.
74. Tan, F., **Zhou, W.H.**, and Yuen, K.V.* (2018). Effect of loading duration on uncertainty in creep analysis of clay. *International Journal for Numerical and Analytical Methods in Geomechanics*, 42(11): 1235-1254.
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