# Resume

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Education Background			
2012.09-2016.06	Chang' an University	Bachelor's degree	Bridge Engineering
2017.09-2020.03	Southeast University	Master's degree <b>Supervisor:</b> Guojun Cai	Geotechnical Engineering
2020.03-Present	Southeast University	Ph.D. <b>Supervisor:</b> Guojun Cai	Geotechnical Engineering
2022.02-Present	University of Natural Resources and Life Sciences, Vienna	CSC Joint Doctoral  Training Program <b>Supervisor:</b> Wei Wu	Geotechnical Engineering

Research Focus: In-Situ Testing, Pressuremeter testing, Piezocone testing

## **Participated Research Projects**

- National Natural Science Foundation of China for Distinguished Young Scholars (Grant No. 42225206) (Key member)
- 2. National Key R&D Program of China (Grant No.2020YFC1807200) (Key member)
- 3. National Natural Science Foundation of China (Grant No. 42072299) (Key member)
- 4. National Natural Science Foundation of China (Grant No. 41877231) (Participated member)

## **Research Achievements**

### **Published Paper:**

- Wu, M., Cai, G., Liu, L., Jiang, Z., Wang, C., & Sun, Z. (2021). Quantitative identification of cutoff wall construction defects using Bayesian approach based on excess pore water pressure. Acta Geotechnica, 1-19. (Q1)
- **Wu, M.**, Cai, G., Wang, C., & Liu, S. (2022). Mapping constrained modulus differences in a highway widening project based on CPTU data and two-dimensional anisotropic geostatistics. Transportation Geotechnics, 32, 100686.(Q1)
- **Wu, M.**, Zhao, Z., Cai, G., Duan, W., Wang, C., Cheng, G., Wang, X. (2022). In-situ evaluation of soil contaminated by total petroleum hydrocarbons using membrane interface probe: A case study from Nanjing, China. Bulletin of engineering geology and the environment. (Q1)
- **Wu, M.**, Congress, S. S. C., Liu, L., Cai, G., Duan, W., & Chen, R. (2021). Prediction of limit pressure and pressuremeter modulus using artificial neural network analysis based on CPTU data. Arabian Journal of Geosciences, 14(1), 1-18. (O4)
- **Wu, M.**, Zhao, Z., Cai, G., Wang, C., Cheng, G., Wang, X. (2022). Adsorption behaviour and mechanism of benzene, toluene and m-xylene (BTX) solution onto kaolinite: Experimental and molecular dynamics simulation studies. Separation and purification technology. 291, 120940. (Q1)
- **Wu**, **M.**, Zhao, Z., Rong, Q., Cai, G., Duan, W., Wang, C., (2023). Estimation of in-situ undrained shear strength using hemispherical and T shape free-fall penetrometer in soft clay. Georisk. (Q1)
- **Wu, M.,** Cai, G., Liu, S., Li X., Wang S., Zhong D, & Dai J. (2019). Review of membrane interface probe for in-situ investigation of volatile organic compounds-contaminated sites. Chinese Journal of Geotechnical Engineering, 41(S1), 29-32.
- **Wu, M.,** Cai, G., Wang, C., Duan, W., Liu, S., Qiao, H., Hong, Y. (2022). Reliability identification of subsurface shallow gas based on resistivity piezocone penetration tests. Rock and Soil Mechanics, 43(12): 3463-3473.
- **Wu, M.,** Zhao, Z., Wang, C., Cai, G., (2023). In-situ evaluation of barrier performance of cutoff wall based on BayesianParticle swarm optimization using piezocone penetration test. Chinese Journal of Rock Mechanics and Engineering. 42(2): 483-496.
- Wang, C., Cai, G., **Wu, M.,** Liu X., Liu S. (2022). Prediction of thermal conductivity of soils based on artificial intelligence algorithm. Chinese Journal of Geotechnical Engineering. 44(10):1899-1907.
- **Wu, M.**, Cai, G., Liu, S., Zou, H. (2020) Evaluation of horizontal permeability coefficient of saturated soil based on CPTU tests. Proceeding of 6<sup>th</sup> international conference on geotechnical and geophysical site characterization.
- Wang, C., Cai, G., Wu, M., & Zhao, Z. (2022). Prediction of soil thermal conductivity based on multivariate probability distribution models. International Communications in Heat and Mass Transfer, 138, 106355.(Q1)
- Zhao, Z., Duan, W., Cai, G., **Wu, M.**, & Liu, S. (2022). CPT-based fully probabilistic seismic liquefaction potential assessment to reduce uncertainty: Integrating XGBoost algorithm with Bayesian theorem. Computers and Geotechnics, 149, 104868.(Q1)
- Wang, C., Feng, H., Cai, G., & Wu, M. (2022). Multivariate distribution models of soil electrical resistivity. Cold Regions Science and Technology, 201, 103584. (Q1)
- Duan, W., Zhao, Z., Cai, G., Wang, A., **Wu, M.**, Dong, X., & Liu, S. (2023). V s-based assessment of soil liquefaction potential using ensembling of GWO-KLEM and Bayesian theorem: a full probabilistic design perspective. Acta Geotechnica, 18(4), 1863-1881. (Q1)
- Duan, W., Congress, S. S. C., Cai, G., Zhao, Z., Pu, S., Liu, S., Dong, X, **Meng W** & Chen, R. (2023). Characterizing the in-situ state of sandy soils for liquefaction analysis using resistivity piezocone penetration test. Soil Dynamics and Earthquake Engineering, 164, 107529. (Q1)

#### Patent:

**Wu, M.,** Cai, G., Rong, Q., Liu D. A geotechnical testing device for cryogenic frozen soil undisturbed samples. (Authorized)