

Lingyun Gou

Personal Web.: lygou.com

Google Scholar: lygougougle.com

Email: lgou4@wisc.edu

Mobile: +1 814 862 8175

EDUCATION

- Hunan University** Changsha, China
• *Bachelor of Civil Engineering; GPA: 3.88/4.00* September 2017 - June 2021
Courses: Advanced Mathematics, Soil Mechanics, Theoretical Mechanics, Material Mechanics, Structural Mechanics, Hydrodynamics
- Hunan University** Changsha, China
• *Master of Civil Engineering; GPA: 3.69/4.00* September 2021 - June 2024
Courses: Numerical Analysis, Rock and Soil Dynamics, Advanced Soil Mechanics, Dynamics of Structure
- University of Wisconsin-Madison** Madison, United States of America
• *PhD Student of Civil Engineering* September 2025 -

EXPERIENCE

- The Pennsylvania State University** State College, United States of America
• *PhD student (Research Assistant)* September 2024 - July 2025
 - **Digital Twin:** Digital Twin Development and Application in Permafrost Systems
 - **Permafrost Landslide:** Failure Mechanisms of Permafrost Bluff in Utqiagvik, Alaska
 - **Courses:** Mathematical and Research Aspects of AI/ML, Permafrost Landscape Processes

PUBLICATIONS

- [1] **Gou, L.***, M. Xiao, M. Hallissey, C. Park, M. Dogan, D. Nicolsky, A. Garland, and C. Wright. 2025. Failure Mechanisms of Permafrost Bluff in Utqiagvik, Alaska. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 151(11).
- [2] **Gou, L.**, N. Lu, S. Hu, A. R. A. Calderon, and C. Zhang*. 2024. Suction Stress of Soil in Slurry State. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 151(2).
- [3] **Gou, L.**, and C. Zhang*. 2024. A Closed-Form Solution for Film Flow in Nanoscale Pores with Spatially Varying Viscosity. *ASCE Journal of Engineering Mechanics*, 150(9).
- [4] **Gou, L.**, C. Zhang*, N. Lu, and S. Hu. 2023. A Soil Hydraulic Conductivity Equation Incorporating Adsorption and Capillarity. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 149(8).
- [5] **Gou, L.**, C. Zhang*, S. Hu, R. Chen, and Y. Dong. 2023. Semi-Analytical Solutions for Soil Consolidation Induced by Drying. *Acta Geotechnica*, 18.
- [6] Zhang C., **L. Gou**, S. Hu*, and N. Lu. 2022. A Thermodynamic Formulation of Water Potential in Soil. *Water Resources Research*, 58(9).
- [7] Zhang Y., **L. Gou***, C. Zhang*, Z. Qiu and R. Chen. 2024. Role of Iron Oxide Content in Mechanical Properties of Granite Residual Soil in Full Suction Range. *Acta Geotechnica*, 19.
- [8] Lu, N., **L. Gou**, C. Zhang, A. R. A. Calderon, and A. Wayllace. 2023. Closure to “Uniqueness of suction stress value at liquid limit of soil”. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 149(11).
- [9] Yang Y., C. Zhang*, **L. Gou**, R. Chen, and Y. Dong. 2023. Role of Substrate Roughness in Soil Desiccation Cracking. *Canadian Geotechnical Journal*, 61.
- [10] Hu, S., C. Zhang*, Y. Dong, **L. Gou**, and R. Chen. 2025. Water Vapor Sorption Isotherms of Salt-Affected Soils. *Canadian Geotechnical Journal*, 62.
- [11] Zhang, C., L. Li, S. Hu*, **L. Gou**, and R. Chen. 2024. Physical Origin of Adsorption Heat and Its Significance in the Isotherm Equation. *International Journal of Heat and Mass Transfer*, 220.

* Corresponding author.

UNDER REVIEW PAPER

- [1] **Gou, L.**, M. Xiao*, T. Zhu, E. Martin, Z. Wang, G. Santos, D. Nicolsky, and X. Ji. 2025. Physics-Informed Digital Twins for Predicting Arctic Permafrost Thermodynamics. *Journal of Geophysical Research: Earth Surface*, Under Review.
- [2] **Gou, L.**, W. J. Likos, and N. Lu. 2025. Water Potential in Frozen Soil. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Under Review.
- [3] **Gou, L.***, and W. J. Likos. 2025. δ HT4P: A Differentiable Physical Modeling Framework for Thermal Evolution of Permafrost. *Computers and Geotechnics*, Under Review.

- [4] Ren Y., **L. Gou***, M. Xiao, Z. Liu and C. Shen. 2025. DMFS: Differentiable Modeling for Frozen Soil Thermodynamic Characteristics. *Canadian Geotechnical Journal*, Under Review.

* Corresponding author.

SERVED AS TECHNICAL REVIEWERS

- Canadian Geotechnical Journal
- Vadose Zone Journal
- Applied Clay Science
- Journal of Cold Regions Engineering
- Cold Regions Science and Technology

PROFESSIONAL MEMBERSHIP

- Student Member, American Society of Civil Engineers (ASCE)
- Student Member, American Geophysical Union (AGU)
- Student Member, United States Permafrost Association (USPA)

HONORS AND AWARDS

- Fund for Excellence in Graduate Recruitment (FEGR), Penn State, 2024
- Chinese National Scholarship, Ministry of Education of the People's Republic of China, 2019, 2020, 2023
- Outstanding Graduate Students of Hunan Province, Department of Education of the Hunan Province, 2024
- Outstanding Undergraduate Graduates of Hunan Province, Department of Education of the Hunan Province, 2021