

Hua Yu, Ph.D.

Research Fellow

School of Civil and Environmental Engineering

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EDUCATION

- **Ph.D.** in Civil Engineering, University of Wyoming, 2018
- **M.S.** in Geological Engineering, University of Wisconsin-Madison, 2014
- **B.S.** in Geological Engineering, Hunan University of Science and Technology, 2011

RESEARCH INTERESTS

- Rock and Soil Mechanics
- Geologic Carbon Sequestration
- Cementitious Materials
- Industrial Byproduct and Waste Utilization
- Soil Stabilization and Soft Ground Improvement

APPOINTMENTS

- Research Fellow, Nanyang Technological University, 2018 – present
- Graduate Research Assistant, University of Wyoming, 2015 – 2018
- Graduate Research Assistant, University of Wisconsin-Madison, 2013 – 2014

JOURNAL ARTICLES

- Yu, H., Yi, Y., Yao, K., Romagnoli, A., Tan, W. L., & Chang, A. B. P. (2021). Effect of water/cement ratio on properties of cement-stabilized Singapore soft marine clay for wet deep mixing application. *International Journal of Geotechnical Engineering*.
- Yu, H., & Ng, K. (2021). New systematic method to determine elastic constants and crack propagation thresholds of brittle rocks under triaxial compression. *Geotechnical and Geological Engineering*.
- Yu, H., Yi, Y., & Puppala, A. (2020). Effects of oven temperature and addition of ethanol on the measurement of water content and specific gravity of cement-stabilized soft clay. *Geotechnical Testing Journal*, 44.
- Yu, H., Yi, Y., & Unluer, C. (2020). Heat of hydration, bleeding, viscosity, and setting properties of Ca(OH)₂-GGBS and MgO-GGBS grouts. *Construction and Building Materials*, 270, 121839.

Hua Yu
Curriculum Vitae

- Yu, H., Ng, K., Grana, D., Alvarado, V., Kaszuba, J., & Campbell, E. (2020). A generalized power-law failure criterion for rocks based on Mohr failure theory. *International Journal of Rock Mechanics and Mining Sciences*, 128, 104274.
- Yu, H., Ng, K., Grana, D., Kaszuba, J., Alvarado, V., & Campbell, E. (2018). Experimental investigation of the effect of compliant pores on reservoir rocks under hydrostatic and triaxial compression stress states. *Canadian Geotechnical Journal*, 56(7), 983–991.
- Yu, H., Yin, J., Soleimanbeigi, A., & Likos, W. J. (2017). Effects of curing time and fly ash content on properties of stabilized dredged material. *Journal of Materials in Civil Engineering*, 29(10), 04017199.

CONFERENCE PAPERS

- Yu, H., Liu, R., Yi, Y., & Jiang, N. (2020). Stabilization of Singapore soft marine clay using a novel sustainable binder for underground construction. The 10th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, Cambridge, UK (in press).
- Ng, K., Yu, H., Wang, H., Kaszuba, J., Alvarado, V., Grana, D., & Campbell, E. (2019). Geomechanical investigation of the carbon sequestration reservoir at Rock Springs Uplift, Wyoming, USA. Paper presented at the 53rd U.S. Rock Mechanics/Geomechanics Symposium, New York City, NY, USA.
- Ng, K., Yu, H., Wang, H., Kaszuba, J., Alvarado, V., Grana, D., & Campbell, E. (2018). The effect of CO₂ on the mechanical properties of the reservoir sandstone under a low differential pressure. Paper presented at the 52nd U.S. Rock Mechanics/Geomechanics Symposium, Seattle, WA, USA.
- Yu, H., Ng, K., Yin, S., & Mukai, D. (2017). Experimental analysis of geomechanical and fracture mechanical rock properties. Paper presented at the 51st U.S. Rock Mechanics/Geomechanics Symposium, San Francisco, CA, USA.
- Yu, H., Yin, J., Soleimanbeigi, A., Likos, W. J., & Edil, T. (2016). Engineering properties of dredged materials stabilized with fly ash. Paper presented at the 4th International Conference on Sustainable Construction Materials and Technologies, Las Vegas, NV.

TECHNICAL REPORTS

- Kaszuba, J., Alvarado, V., Campbell, E., Grana, D., Ng, K., Stoesz, E., Wang, H., & Yu, H. (2019). Integrated characterization of CO₂ storage reservoirs on the Rock Springs Uplift combining geomechanics, geochemistry, and flow modeling (Report No. DOE-UW-FE23328-3). USA: Department of Energy Office of Scientific and Technical Information.

Hua Yu
Curriculum Vitae

- Yu, H., & Likos, W. J. (2014). Beneficial use of dredged materials in Great Lakes commercial ports for transportation projects (Report No. CFIRE 07-06). USA: National Center for Freight and Infrastructure Research and Education.

PROFESSIONAL AFFILIATIONS

- Member, American Society of Civil Engineers (ASCE)
- Member, American Society for Testing and Materials (ASTM)
- Member, American Geophysical Union (AGU)

SELECTED SERVICE

- Committee Member of ASCE Geo-Institute
 - Rock Mechanics Committee, 2019 – present
 - Soil Properties and Modeling Committee, 2020 – present
- Committee Member of ASTM
 - Committee D18 on Soil and Rock, 2019 – present
- Ad Hoc Reviewer for Journals: *Chemical Engineering Communications*; *Construction and Building Materials*; *Geofluids*; *International Journal of Geotechnical Engineering*; *Journal of Materials in Civil Engineering*; *Marine Georesources and Geotechnology*; *Proceedings of the Institution of Civil Engineers - Ground Improvement*; *Vadose Zone Journal*

CONFERENCES & WORKSHOPS ATTENDED

- International Conference on Case Histories & Soil Properties, Singapore, 2019
- Society for Rock Mechanics & Engineering Geology (Singapore) Workshop on Geology Engineering, Singapore, 2019
- 51st U.S. Rock Mechanics/Geomechanics Symposium, San Francisco, CA, USA, 2017
- Mid-Continent Transportation Research Symposium, Madison, WI, USA, 2014
- Logistics, Trade, and Transportation Symposium, Gulfport, MS, USA, 2014
- Beneficial Use of Dredged Materials Summit, Louisville, KY, USA, 2013