L. Sebastian Bryson, Ph.D., P.E., D.GE, F. ASCE
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Professional Preparation

Florida A&M University 5/1987	Tallahassee, FL	Civil Engineering	B.S.
Howard University 5/1992	Washington, DC	Civil Engineering	M.Eng.
Northwestern University 12/2002	Evanston, IL	Civil Engineering	Ph.D.

Academic and Professional Appointments

Professor	University of Kentucky	7/2021 – Present
Associate Professor	University of Kentucky	7/2012 – 7/2021
Assistant Professor	University of Kentucky	8/2006 – 7/2012
Assistant Professor	Ohio University	11/2001 – 8/2006
GE Faculty Intern	Northwestern University	9/2000 – 9/2001
Teaching and Research Assistant	Northwestern University	9/1998 – 9/2000
Geotechnical Engineer	CH2M HILL, Inc.	1/1992 – 9/1998
Research Engineer	Federal Highway Administration	1/1990 – 1/1992
Research Engineer	Los Alamos National Laboratory	1/1989 – 1/1990

Registrations

Registered Professional Engineer: Wisconsin, Illinois, Ohio, Indiana, Michigan, Kentucky

Closely Related Products

1. Adama, D., Bryson, L.S., and Wang, A. (2023). "Airfield suitability assessment from geophysical methods," *Transportation Geotechnics*, 42, (2023), 101059. https://doi.org/10.1016/j.trgeo.2023.101059
2. Francis, D.M.[1], and Bryson, L.S. (2023). "Proposed Methodology for Site Specific Soil Moisture Obtainment Utilizing Coarse Satellite-Based Data," *Environmental Earth Sciences*, 82(15), 377. https://doi.org/10.1007/s12665-023-11057-0.
3. Johnson, S.E.[1], Haneberg, W.C., Bryson, L.S., and Crawford, M.M. (2023). "Measuring ground surface elevation changes in a slow-moving colluvial

landslide using combinations of regional airborne lidar, UAV lidar, and UAV photogrammetric surveys," *Quarterly Journal of Engineering Geology and Hydrogeology*, 56(2), qjegh2022-078.
4. Dashbold, B.[1], Bryson, L.S., and Crawford, M.M. (2023). "Landslide Hazard and Susceptibility Maps Derived from Satellite and Remote Sensing Data Using Limit Equilibrium Analysis and Machine Learning Model," *Natural Hazards*, 116(1), 235-265.
5. Crawford, M.M., Dortch, J.M., Koch, H.J., Zhu, Y., Haneberg, W.C., Wang, Z., and Bryson, L.S. (2022). "Landslide Risk Assessment in Eastern Kentucky, USA: Developing a Regional Scale, Limited Resource Approach," *Remote Sensing*, 14(24), 6246.

Other Significant Products
1. Unluoglu, H.A.[1], Bryson, L.S., and Rose, J.G. (2024). "Predicting Dynamic Contact Stresses at Crosstie-Ballast Interface Based on Basic Train Characteristics," *Journal of Transportation Engineering, Part A: Systems*, 150(5), 04024014.
2. Bryson, L.S., Mahmoodabadi, M.[1], and Gomez-Gutierrez, I.C. (2023). "Mechanical Behavior of Weathered Compacted Shales," *Journal of Geotechnical and Geological Engineering*, Springer, 10.1007/s10706-023-02657-5.
3. Unluoglu, H.A.[1], Bryson, L.S., and Rose, J.G. (2023). "Stress Distribution in a Railroad Track at the Crosstie-Ballast Interface," *Journal of Transportation Engineering, Part A: Systems*, ASCE, 149(8), 04023074.
4. Romana Giraldo, J.[1], and Bryson, L.S. (2023). "Geophysics-based approach to predict triaxial undrained and drained compressive behavior in soft soils," *Journal of Applied Geophysics*, 213, 105022.
5. Mahmoodabadi, M.[1], and Bryson, L.S. (2021). "Prediction of Coupled Hydro-Mechanical Behavior of Unsaturated Soils Based on Seasonal Variations in Hydrologic Conditions," *Canadian Geotechnical Journal*, 58(6), 902-913.

Teaching and Synergistic Activities
Undergraduate Courses Taught:
- CE 579 Geotechnical Engineering
- EGR 199 Introduction to Research

Graduate Courses Taught:
- CE 671 Advanced Soil Mechanics
- CE 673 Stability of Earth Slopes

Invited Technical Presentations:
- "Mechanical Behavior of Weather Compacted Shale," Invited Speaker, Indiana Department of Transportation, Indianapolis, IN, 12 July 2023.
- "Using Satellite Data for Landslide Predictions," Invited Speaker, Case Western Reserve University, Cleveland, OH, 02 December 2022.
- "Using Remote Sensing Techniques for Landslide Studies in Kentucky," Invited Speaker, ORVSS LII, Lexington, KY, 02 November 2022.

Journals Reviewed:
- Reviewer for the ASCE Journal of Geotechnical and Geoenvironmental Engineering
- Reviewer for the ASCE International Journal of Geomechcanics

- Reviewer for the Engineering Geology Journal

Professional Affiliations
- American Society of Civil Engineers, Geo-Institute
- International Society of Soil Mechanics and Foundation Engineering
- American Geophysical Union, Life Member
- The Association of State Dam Safety Officials

Most Recent Thesis Advisees
- Historical and Forecasted Kentucky Specific Slope Stability Analyses using Remotely Retrieved Hydrologic and Geomorphologic Data, Daniel Marvin Francis (Ph.D., August 2023)
- Geophysics-Based Ground Control and Excavation Design Methodology Based on Acceptable Damage, Jorge Octavio Romana Giraldo (Ph.D., December 2022)
- Development of a Decision-Making Tool for Prediction of Rainfall-Induced Landslides, Faisal Shakib Ahmed (Ph.D., May 2022)
- Load and Pressure Distribution as a Function of Dynamic Contact Stress at the Railroad Crosstie-Ballast Interface, Habib Abdil Unluoglu (M.S. Thesis, December 2022)
- Geophysical Techniques used for the Analysis and Prediction of Soil Strength and Mechanical Behavior, Matthew Hurley (M.S. Thesis, August 2021)
- Landslide Site Assessment and Characterization Using Remote Sensing Techniques, Batmyagmar (Mega) Dashbold (M.S. Thesis, August 2021)
- Effects of Hydrologic Variations on Hydraulic and Deformational Characteristics of Unsaturated Soils, Majid Mahmoodabadi (Ph.D., December 2020)
- The Effect of Depositional Processes on the Strength and Compressibility of Sediments using Elastic Shear Wave Velocity, Wisam Razzaq Muttashar (Department of Earth and Environmental Sciences, Ph.D., May 2019)