## Associate Professor of Civil Engineering - Geotechnical Tennessee Technological University

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Doctor of Philosophy Future Professoriate Graduate Certificate Master of Science Bachelor of Science	Virginia Polytechnic Institute Virginia Polytechnic Institute Michigan Technological Univers Michigan Technological Univers	
Associate Professor		since 2021
Assistant Professor		2015 - 2021
Postdoctoral Associate		2014 – 2015
Instructor of Record – CEE 3514		2013
Part-time Faculty		2009 - 2010
Graduate Teaching Assistant		2001 - 2003
Engineering Consultant		
Engineering Consultant Yeager Airport Runway 5 Failure		2015 – 2018
Lake Livingston Hydroelectric Plant		2014 – 2015
Lower Colorado River Authority		2013 - 2014
EDP Consultants, Inc. (staff engineer and project		
I-90 Innerbelt Bridge Stabilization Structure Monitoring, Cleveland, OH		2009 – 2010
SR-91 Embankment Failure Repair, Willoughby, OH		2006 - 2008 2004 - 2006
Steelyard Commons, Cleveland, OH		2004 - 2006

Soil Shear Strength Measurement and Characterization Slope Stability Analysis and Monitoring Finite Element Analysis Sustainability in Geotechnical Engineering Probabilistic Methods in Geotechnical Engineering

Note: boldface indicates undergraduate or graduate research assistant

- 1. and VandenBerge, D. R. (2023). "Rapid Drawdown Analysis Using Pore Pressures from BBM." Geotechnical and Geological Engineering, accepted for publication.
- 2. Mohr, B., and VandenBerge, D. R. (2022). "Performance of natural clinoptilolite zeolite in

- the cementitious materials: A comparative study with metakaolin, fly ash, and blast furnace slag." *Journal of Building Engineering*, 53, https://doi.org/10.1016/j.jobe.2022.104535.
- 3. Huff, T., and VandenBerge, D. R. (2021). "Modeling of Rayleigh Damping for the Elastic and Inelastic Dynamic Response of MDOF Structures." *Practice Periodical on Structural Design and Construction*, 26(3) https://doi.org/10.1061/(ASCE)SC.1943-5576.0000596.
- 4. VandenBerge, D. R., ..., and Steiakakis, C. (2021). "Case History: Rapid Drawdown Analyses of Sparmos Dam." *Journal of Geotechnical and Geoenvironmental Engineering*, 147(9), https://doi.org/10.1061/(ASCE)GT.1943-5606.0002593.
- 5. VandenBerge, D. R., , and Li, R. (2021). "Mobilized bearing capacity analysis of global stability for walls supported by rammed aggregate piers," *Journal of Geotechnical and Geoenvironmental Engineering*, 147(6), https://doi.org/10.1061/(ASCE)GT.1943-5606.0002540.
- 6. VandenBerge, D. R., Valentine, R. J., Brandon, T. L., and Wright, S. G. 2021. Failure of the 73-m tall reinforced soil slope at Yeager Airport, Charleston, WV. Journal of Geotechnical and Geoenvironmental Engineering. https://doi.org/10.1061/(ASCE)GT.1943-5606.0002430.
- 7. VandenBerge, D. R. and McGuire, M. P. 2019. "Practical use of modified Hoek Brown criterion to predict stability of soil slopes,"," *Geotechnical and Geological Engineering*, https://doi.org/10.1007/s10706-019-00991-1.
- 8. and VandenBerge, D. R. 2018. "Comparison of FEA and Analytical methods for determining stability of a RAP supported MSE wall," *DFI Journal*, https://doi.org/10.1080/19375247.2018.1562593.
- 9. VandenBerge, D. R., Castellanos

20. VandenBerge, D. R. 2014. "Total stress rapid drawdown analysis of the Pilarcitos Dam failure using the finite element method," *Frontiers of Structural and Civil Engineering*, DOI 10.1007/s11709-014-0249-7, 115-123.

Note: boldface indicates undergraduate or graduate research assistant

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- 1. VandenBerge, D. R. and (2023). "Probability of Levee Instability Following Rapid Drawdown." *Proc. of GeoRisk 2023*.
- 2. VandenBerge, D. R. and (2023). "Building Critical Thinking Skills through Geotechnical CAT-Apps," *Proc. of GeoCongress 2023*.
- 3. VandenBerge, D. R., and Shiri, Y. (2023). "A Comparison of Approaches for the Determining the Virgin Compression Line of Remolded Saturated Soils," *Proc. of GeoCongress 2023*.
- 4. and VandenBerge, D. R. (2023). "Statistical Analysis of Undrained Strength as Linear Function of Depth." *Proc. of GeoCongress 2023.*
- 5. VandenBerge, D. R. and (2021). "Insights into Rapid Drawdown Stability and Rate from Infinite Slope Analysis." *Proc. Dam Safety 2021*, ASDSO.
- 6. Ohanian, O. J., Huang, Y., Zolfaghari, N., Bunger, A.P., and VandenBerge, D. R. (2021). "High-Resolution Distributed Fiber Optic Measurement of Borehole Fractures to Enable In-situ Stress Measurement." *Proc. 55th US Rock Mechanics/Geomechanics Symposium*, American Rock Mechanics Association.
- 7. McGuire, M. P., Loux, T. A., and VandenBerge, D. R. 2021. "Field-scale tests to evaluate foamed glass aggregate compaction." *Proc. IFCEE 2021.*
- 8. , VandenBerge, D. R., and 2020. "Unsaturated soil model effects on the propagation of the saturated zone in levees during flooding." *Proc. Dam Safety 2020*, ASDSO.
- 9. Boone, M. D., Thompson, M. J., and VandenBerge, D. R. 2020. "Practical guidelines for assessing undrained shear strength from triaxial compression with isotropic and anisotropic consolidation." *Proc. GeoCongress 2020.*
- 10. VandenBerge, D. R., McGuire, M. P., and Castellanos, B. A. 2020. "Effective stress failure envelope forms and parameter variability." *Proc. GeoCongress 2020.*
- 11. VandenBerge, D. R., Gregory, G. H., and 2019. "Case History: Rapid Drawdown Analysis of Village Creek Plant Levee," *GeoCongress 2019*.
- 12. , and VandenBerge, D. R. 2018. "Parametric study of levee saturation for undrained rapid drawdown analysis," *Proc. of USSD 2018*, 15 pp.
- 13. McGuire, M. P., Sloan, J. A., and VandenBerge, D. R. 2018. "Application of Reliability Analyses for Serviceability Design of Column-Supported Embankments," *Proc. of IFCEE 2018*, 10 pp.
- 14. VandenBerge, D. R. and McGuire, M. 2017. "Response surfaces for probabilistic analyses of slope stability," *Proc. of 19th Intl. Conf. Soil Mech. and Geotech. Eng.*, Seoul, 4 pp.
- 15. Zwetchkenbaum, J. D., Castellanos, B. A., VandenBerge, D. R., Brandon, T. L., and Pandey, U. 2017. "Potomac clay of Northern Virginia: Fully softened shear strengths," *29th Central Pennsylvania Geotechnical Conference*, Hershey, PA, 16 pp.
- 16. Thompson, M. J. and VandenBerge, D. R. 2017. "Shear strength of remolded and compacted Beaumont Clay," *GeoFrontiers 2017*.
- 17. VandenBerge D. R. 2017. "V-Shaped failure surfaces in bearing capacity type limit equilibrium analyses," *GeoFrontiers 2017*.
- 18. VandenBerge, D. R., Duncan, J. M., and Brandon, T. L. 2017. "Practical considerations for measuring the shear strength of compacted clay," *GeoFrontiers 2017*.
- 19. , VandenBerge, D. R. and Kalyanapu, A. K. 2016. "South Carolina flooding and dam failures," *ASDSO Dam Safety 2016*.
- 20. VandenBerge D. R. 2016. "Probabilistic analysis of rapid drawdown," *Proceedings of the 12th International Symposium on Landslides*, Napoli, Italy.

21. Thompson, M. J., Bentler, D. J., Brandon, T. L., and VandenBerge, D. R. 2016. "Shear strength of compacted Beaumont clay for consolidated-undrained conditions,"

13. Duncan, J. M., O'Neil, B., Brandon, T. L., and VandenBerge, D. R. 2011. *Evaluation of potential for erosion in levees and levee foundations*, CGPR #64, Center for Geotechnical Practice and

Embankment Dam Risk Yield Acceleration Study	since 2023
Chemical Subgrade Stabilization for Pavements in Tennessee	since 2022
Best Practices for Bridges with Pipe Piles	since 2022
Academic Review and Rewrite of NAVFAC DM 7.02 (N62470-19-D-5013)	

US Army Corps of Engineers (USACE) – 4-day Shear Strength Course