

Ben Leshchinsky

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Ben Leshchinsky is an assistant professor in Geotechnical Engineering. His research interests include slope stability analysis and landslide prediction; use of soil reinforcement in earth retention, subgrade improvement, and slope stability; unpaved road behavior; vegetation-soil interaction; and management of water-sediment transport. His investigative approach involves an array of tools including numerical modeling, laboratory work and full-scale field testing. Ben's research is based in a variety of disciplines, broadly encompassing geotechnical engineering, water resources, agriculture and forestry.

Education

- B.S. in Civil Engineering, University of Delaware, 2007.
- M.S. in Civil Engineering, Columbia University, 2008.
- Ph.D. in Civil Engineering, Columbia University, 2012.

Publications

- Ben Leshchinsky and Spencer Ambauen. "Limit Equilibrium and Limit Analysis: Comparison of Collapse Mechanisms for Complex Slopes." Soils and Foundations. Under Review.
- Ben Leshchinsky, John Sessions, Jeffrey Wimer. "Analytical Design Tool for Mobile Guyline Anchors." International Journal of Forest Engineering. Under review.
- Ben Leshchinsky. "Limit Analysis Optimization of Design Factors for Mechanically Stabilized Earth Wall-Supported Footings." Journal of Transportation and Infrastructure Geotechnology. (Accepted March 2014).
- Farshid Vahedifard, Ben Leshchinsky, and Dov Leshchinsky. "Impact of Cohesion on Seismic Design of Geosynthetic-Reinforced Earth Structures." ASCE Journal of Geotechnical and Geoenvironmental Engineering. (Accepted February 2014)
- Dov Leshchinsky, Farshid Vahedifard and Ben Leshchinsky (2014). "Revisiting Bearing Capacity Analysis of MSE Walls: Is It Relevant?" Geotextiles and Geomembranes.
- Ben Leshchinsky and Hoe Ling (2013). "Numerical modeling of behavior of railway ballasted structure with geocell confinement." Geotext. and Geomembranes, Vol. 36, 33-43.
- Ben Leshchinsky and Hoe Ling (2013). "Effects of Geocell Confinement on Strength and Deformation Behavior of Ballast." ASCE Journal of Geotechnical and Geoenvironmental Engineering. Volume 139, pp. 340-352.

- Hoe I. Ling, Min-Hao Wu, Dov Leshchinsky, and Ben Leshchinsky (2009). "Centrifuge Modeling of Slope Instability." ASCE Journal of Geotechnical and Geoenvironmental Engineering. Pp. 135, 758 (2009).

Presentations

- Ben Leshchinsky. "Aggregate Management: Evaluating Sediment Transport Impacts from Varying Unpaved Road Designs." Oregon State University. February 2014.
- Ben Leshchinsky. "Limit Analysis Optimization of Design for Mechanically Stabilized Earth Wall-Supported Footings." Kobe University, Kobe, Japan. December 2013.
- Ben Leshchinsky. "Mechanically Stabilized Earth Walls: Parametric Study of Reinforcement Tensile Loads under Limit State." International Symposium on Geosynthetic Structures: Bologna, Italy. October 2013.
- Ben Leshchinsky. "Tools for Establishing Bearing Capacity of Complex Structures." NHI Short Course – Shallow Foundations Workshop. Salem, Oregon. February 2013.
- Ben Leshchinsky. "Limit State Analysis: A Novel Tool for Evaluating Stability of Reinforced Earth Structures." GeoCongress 2013 – Short Course: Geosynthetics Reinforced Slopes and Embankments Design and Construction. San Diego, California. March 2013.
- Ben Leshchinsky. "New Tools for Ultimate Limit State Bearing Capacity Design." Oregon Department of Transportation, February 1, 2013.
- Ben Leshchinsky. "Use of Discontinuity Layout Optimization (DLO) in Stability Analyses". Oregon State University, October 4, 2012.
- Ben Leshchinsky and Dov Leshchinsky. "New Tools for Ultimate Limit State Design." Delaware Valley Geo-Institute, May 15, 2012.
- Ben Leshchinsky. "Department Seminar: Finite Element Modeling of Geocell-Confined Ballast." Tokyo University of Science, August 15, 2010.
- Ben Leshchinsky. "Department Seminar: Improvement and Modeling of Railroad Foundations through Geocell Confinement." University of Sheffield. October 7, 2011.