Faculty Bio Format:

Dr. Ling is a professor of Geotechnical Engineering at Columbia University. He obtained his bachelor's degree in civil engineering from Kyoto University, Japan, and his master's and doctoral degrees from the University of Tokyo. He became a visiting/research assistant professor, and subsequently assistant professor at the University of Delaware (1994-1998). He joined Columbia University in 1998 and was promoted to full professor in 2007. He was a visiting associate professor at Harvard University in spring 2006. Dr. Ling holds visiting positions in several universities in China and Kazakhstan.

His major fields of research include geosynthetic-reinforced soil structures, soil constitutive modeling, geotechnical earthquake engineering, numerical and centrifuge modeling. He has also looked into rainfall-induced slope instability (geotechnical failures due to typhoons), in addition to earthquake induced deformation and failure of geosystems. Ground deformation due to deep excavation is one of his most recent research topics. He collaborates actively with international institutions/ agencies. He has made several reconnaissance trips related to the typhoon and earthquake disasters.

Dr. Ling received the Career Award from the National Science Foundation in 2001. He was a recipient of the IGS Award (given every 4 years) from the International Geosynthetics Society in 2014, and the Aitalyev Medal from the Kazakhstan Geotechnical Society in 2013. Dr. Ling has also been conferred honoraries from international institutions: Honorary Professorship from Shijiazhuang Railway Institute (China) in 2014, University Honorary Medal from Eurasian National University (Kazakhstan) in 2015.

Dr. Ling is the Editor-In-Chief for Transportation Infrastructure Geotechnology, Associate Editor for the ASCE Journal of Geotechnical and Geoenvironmental Engineering as well as the editorial board member for a few other journals. He serves on several technical committees in the International Society of Soil Mechanics and Geotechnical Engineering, ASCE Engineering Mechanics Institute and ASCE Geo-Institute. Dr. Ling has published extensively in major journals and conferences, with over 100 journal papers and 120 conference publications. He has also organized several major conferences in New York City (Biot 2009) and abroad (such as Rome 2006 and Bologna 2013).

Research interests:

Soil mechanics, geosynthetics, geotechnical engineering, geotechnical earthquake engineering, soil constitutive models, centrifuge modeling, numerical modeling

Research areas:

Sensing, imaging, visualization, modeling, simulation, materials, devices

Research Experience:

Research Fellow, Institute of Industrial Science, University of Tokyo (April 1, 1993 - December 31, 1993)

Professional Experience:

Professor, Columbia University (July 1, 2007 -)
Visiting Professor, Fuzhou University, China (2016-2019)

Visiting Seasky Professor, Dalian University of Technology, China (2016-2019)
Associate Professor, Columbia University (January 1, 2000 – June 30, 2007)
Visiting Associate Professor, Harvard University (January 1-June 30, 2006)
Assistant Professor, Columbia University (September 1, 1998 -December 31, 1999)
Visiting Assistant Professor, Research Assistant Professor, Assistant Professor, University of Delaware (January 1 1994 – December 31, 1998)
External Advisory Council, Department of Civil and Environmental Engineering, University of Delaware (2017-)

Professional Affiliations:

Editor-In-Chief: Transportation Infrastructure Geotechnology (2013-, with Jonathan Wu)
Associate Editor, *ASCE Journal of Geotechnical and Geoenvironmnetal Engineering* (2011-)
Member of Editorial Board, *Journal of Earthquake and Tsunami* (2006-)
Member of Editorial Board, *Journal of Geoengineering*, Taiwan Geotechnical Society (2011-)
Geosynthetics Committee, Geo-Institute, American Society of Civil Engineers (1998-)
Poromechanics Committee, Engineering Mechanics Institute, ASCE (2002-)
Secretary, ASCE Met Section Engineering Mechanics Committee (2011-)
Public Relation Committee, International Society of Soil Mechanics and Geotechnical Engineering (2011-)
Technical Committee 101, ISSMGE-Laboratory Stress Strength Testing of Geomaterials (2011-)
Technical Committee 305, ISSMGE-Geotechnical Infrastructure for Megacities and New Capitals (2014-)
Committee of Inelastic Behavior, Engineering Mechanics Institute, ASCE (2002-)
Member, American Society of Civil Engineers, ASCE (ID No. 289040)
Member, International Society of Soil Mechanics and Geotechnical Engineering
Member, International Geosynthetics Society (membership #8856)

Honors and Awards:

IGS Award, Highest Award from International Geosynthetics Society (2014; Berlin, Germany)
Career Award, National Science Foundation (2001-2006)
L.N. Gumilyov Honorary Medal, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan (July 14, 2015).
2016 Best Paper Award (with Toshinori Kawabata), Transportation Infrastructure Geotechnology.
2014 Best Paper Award (with Dov Leshchinsky), Transportation Infrastructure Geotechnology.
Honorary Professor, Shijiazhuang Tiedao University, Shijiazhuang, China (June 27, 2014)
Aitalyev Medal, Kazakhstan Geotechnical Society (2013)
Best Paper Award (one of top 3 papers), Geotextiles and Geomembranes, Official Journal of International Geosynthetics Society (2011)

Grant Support:

National Science Foundation, Federal Railway Administration, Private Industries.

Publications: up to 10 listings

1. Ling, H.I., Hung, C., and Kaliakin, V.N. (2016) "Application of an enhanced anisotropic bounding surface model in simulating deep excavations in soft clays." *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 142(11), 04016065-1 to 04016065-12.
2. H. Ling, H.I. Ling, and T. Kawabata (2014). "Revisiting Nigawa landslide of the 1995 Kobe earthquake." *Geotechnique*, 64(5), 400-404.
3. Leshchinsky, B. and Ling, H.I. (2013). "Effects of geocell confinement on strength and deformation behavior of gravel." *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 139(2), 340-352.
4. Ling, H. and Ling, H.I. (2012). "Centrifuge model simulations of rainfall-induced slope instability." *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 138(9), 1151-1157.
5. Jiang, J., Ling, H.I., and Kaliakin, V.N. (2012). "An Associative and Non-Associative Anisotropic Bounding Surface Model for Clay." *Journal of Applied Mechanics*, 79(3), 031010-1:10.
6. Ling, H.I., Leshchinsky, D., Mohri, Y., and Wang, J-P. (2012). "Earthquake response of reinforced segmental retaining walls backfilled with substantial percentage of fines." *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 138(8), 934-944.
7. Ling, H.I., Yang, S., Leshchinsky, D., Liu, H., and Burke, C. (2010). Finite element simulations of full-scale modular block reinforced soil retaining walls under earthquake loading, *Journal of Engineering Mechanics*, ASCE, 136(5), 653-661.
8. Ling, H.I., Wu, M-H., Leshchinsky, D., and Leshchinsky, B. (2009). "Centrifuge modeling of slope instability." *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 135(6), 758-767.
9. Ling, H.I., Leshchinsky, D., Wang, J-P., and Rosen, A. (2009). Seismic response of geocell retaining walls: Experimental studies. *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, 135(4), 515-524.
10. Ling, H.I. and Yang, S. (2006). "A unified sand model based on the critical state and generalized plasticity." ASCE *Journal of Engineering Mechanics*. 132(12), 1380-1391.
11. Ling, H.I. and Liu, H. (2003). "Pressure-level dependency and densification behavior of sand in a generalized plasticity model." *Journal of Engineering Mechanics*, 129(8), ASCE, 851-860.
12. Ling, H.I., Yue, D., Kaliakin, V., and Themelis, N.J. (2002) "An Anisotropic Elasto-Plastic Bounding Surface Model for Cohesive Soils." *Journal of Engineering Mechanics*, ASCE, 128(7), 748-758.

13. Ling, H.I., Cardany, C., Sun, L-X., and Hashimoto, H. (2000). "Finite Element Analysis of a Geosynthetic-Reinforced Soil Retaining Wall with Concrete-Block Facing." *Geosynthetics International*, 7(3), 163-188.

14. Ling, H.I. and Leshchinsky, D. (1998). "Effects of Vertical Acceleration on Seismic Design of Geosynthetic-Reinforced Soil Structures." *Geotechnique*, 48(3), 347-373.

15. Ling, H.I., Leshchinsky, D., and Perry, E.B. (1997). "Seismic Design and Performance of Geosynthetic-Reinforced Soil Structures." *Geotechnique*, 47(5), 933-952.