

## **MLADEN VUCETIC, Ph.D.**

### ***PRESENT POSITION***

Professor  
Henry Samueli School of Engineering and Applied Science  
Civil and Environmental Engineering Department, 5731-F Boelter Hall  
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### ***EDUCATION***

**Ph.D., C.E.**, Rensselaer Polytechnic Institute - RPI, Troy, NY, 1986  
**M.S., C.E.**, Department of Civil Engineering, University of Zagreb, Croatia, 1981  
**B.S., C.E.**, Department of Civil Engineering, University of Zagreb, Croatia, 1976

### ***ACADEMIC EXPERIENCE***

2000 – present **Professor**, Civil and Env. Engr. Dept., UCLA  
1993 – 2000 **Associate Professor**, Civil and Env. Engr. Dept., UCLA  
1987 – 1993 **Assist. Prof.**, Civil and Env. Engr. Dept., UCLA  
1986 – 1987 **Assist. Prof.**, Civil and Env. Engr. Dept., Clarkson Univ., Potsdam, N.Y.

**Undergraduate courses taught:** Strength of Materials, Soil Mechanics, Foundation Engineering, Soil Mechanics Laboratory

**Graduate courses taught:** Introduction to Structural and Soil Dynamics, Soil Dynamics, Advanced Foundations, Earth Pressures and Earth Retaining Structures, Advanced Soil Mechanics Laboratory, Advanced Cyclic and Monotonic Soil behavior, Geotechnical Earthquake Engineering

### ***MAJOR PROFESSIONAL SOCIETIES***

American Society of Civil Engineers, Member  
Earthquake Engineering Research Institute, Member  
American Society for Testing and Materials, Member

### ***MAJOR AREAS OF RESEARCH***

- Stress-strain conditions in the NGI type direct simple shear test
- Fundamental aspects of the cyclic and dynamic behavior of soils
- Small-strain behavior of soils under monotonic and cyclic loads
- Liquefaction mechanism using nonlinear computer models and case history studies
- Behavior of soil-nailed excavations during earthquakes
- Development of geotechnical site data bases and seismic microzoning using GIS

### ***SELECTED AWARDS, HONORS AND RECOGNITIONS***

- Norwegian Government Scholarship for research work at the Norwegian Geotechnical Institute, Oslo, Norway, Jan. – June 1980.
- The Thomas Archibald Bedford Prize, awarded to a graduate student in Civil Engineering who has demonstrated high scholastic ability and has made a substantial contribution to the field, Rensselaer Polytechnic Institute, Troy, New York, May 1986.
- Faculty Career Development Award, UCLA, May 1992
- Recognition Plaque for "Six Years of Service and Leadership on the Board of Directors of ASCE Geotechnical Engineering Technical Group of Los Angeles," April 1996.

## **PUBLICATIONS**

Author or coauthor of four state-of-the-art or invited papers, 30 refereed journal papers, 40 papers published in the proceedings of conferences and 42 research reports.

## **SELECTED PUBLICATIONS**

- Dobry, R. and Vucetic, M., (1987). "State-of-the-Art Report: Dynamic Properties and Response of Soft Clay Deposits," *Proceedings of the International Symposium on Geotechnical Engineering of Soft Soils*, Mexico City, Vol. 2, August, pp. 51-87.
- Vucetic, M. and Dobry, R., (1988). "Degradation of Marine Clays under Cyclic Loading," *ASCE Journal of Geotechnical Engineering*, Vol. 114, No. 2, pp. 133-149.
- Vucetic, M., (1990). "Normalized Behavior of Clay Under Irregular Cyclic Loading," *Canadian Geotechnical Journal*, Vol. 27, No. 1, pp. 29-46.
- Vucetic, M. and Dobry, R., (1991). "Effect of Soil Plasticity on Cyclic Response," *ASCE Journal of Geotechnical Engineering*, Vol. 117, No. 1, pp. 89-107.
- Vucetic, M., Tufenkjian, R.M., and Doroudian, M., (1993). "Dynamic Centrifuge Testing of Soil Nailed Excavations," *ASTM Geotechnical Testing Journal*, Vol.16, No. 2, pp. 172-187.
- Vucetic, M., (1994). "Cyclic Threshold Shear Strains in Soils," *ASCE Journal of Geotechnical Engineering*, Vol. 120, No. 12, pp. 2208-2228.
- Doroudian, M. and Vucetic, M., (1995). "A Direct Simple Shear Device for Measuring Small-Strain Behavior," *ASTM Geotechnical Testing Journal*, Vol. 18. No. 1, pp. 69-85.
- Lanzo, G., Vucetic, M. and Doroudian, M. (1997): "Reduction of Shear Modulus at Small Strains in Simple Shear", *ASCE Journal of Geotechnical and Geoenviron. Engineering*, Vol. 123, No. 11, pp.1035-1042.
- Vucetic, M., Lanzo, G., and Doroudian, M. (1998): "Effect of the Shape of Cyclic Loading on Damping Ratio at small Strains," *Soils and Foundations*, Vol. 38, No. 1, pp. 111-120.
- Vucetic, M., Lanzo, G., and Doroudian, M. (1998): "Damping at Small Strains in Cyclic Simple Shear Test", *ASCE Journal of Geotechnical and Geoenviron. Engineering*, Vol. 124, No.7, pp.585-594.
- Vucetic, M., Tufenkjian, R.M., Felio, G.Y., Barar, P. and Chapman, K.R. (1998) "Analysis of Soil-Nailed Excavations Stability during the 1989 Loma Prieta earthquake", *USGS Professional Paper 1552-D : "The Loma Prieta, California, Earthquake of October 17, 1989 – Performance of the Built Environment - Earth Structures and Engineering Characterization of Ground Motion"*, pp. D27-D45.
- Lanzo, G. and Vucetic, M.(1999): "Effect of Soil Plasticity on Damping Ratio at Small Cyclic Strains", *Soils and Foundations*, Vol 39, No. 4, pp. 131-141.
- Tufenkjian, R.M. and Vucetic, M. (2000) "Dynamic Failure Mechanism of Soil-Nailed Excavation Models in Centrifuge", *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 126, No. 3, pp. 227-235.
- Matesic, L. and Vucetic, M. (2003): "Strain-rate Effects on Soil Secant Shear Modulus at Small Cyclic Strains", *ASCE Journal of Geotechnical and Geoenviron.. Engineering*, Vol. 129, No. 6, pp. 536-549.
- Vucetic, M. and Tabata, K. (2003): "Influence of Soil Type on the Effect of Strain Rate on Small-strain Cyclic Shear Modulus", *Soils and Foundation*, Vol. 43, No. 5, pp. 161-173.
- Hsu, C-C. and Vucetic, M. (2004): "Volumetric Threshold Shear Strain for Cyclic Settlement", *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 130, No. 1, pp. 58-70.
- Mortezaie, A.R. and Vucetic, M. (2012). "Small-strain Cyclic Testing with Standard NGI Simple Shear Device", *ASTM Geotechnical Testing Journal*, Vol.35, No. 6, pp. 1-14.
- Mortezaie, A.R. and Vucetic, M. (2013). "Effect of frequency and vertical stress on cyclic degradation and pore water pressure in clay in NGI simple shear device", *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 139. No. 10, October, pp. 1727-1737.