

**MLADEN VUCETIC, Ph.D.**

**Curriculum Vitae**

Updated February 2014

**PRESENT POSITION**

**Professor**

Henry Samueli School of Engineering and Applied Science  
Civil and Environmental Engineering Department  
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**EDUCATION**

**Ph.D., Civil Engineering** (Geotechnical Engineering)  
Rensselaer Polytechnic Institute - RPI, Troy, NY, 1986

**M.S., Civil Engineering** (Geotechnical Engineering)  
Department of Civil Engineering, University of Zagreb, Croatia, 1981

**B.S., Civil Engineering** (Civil Engineering/Geotechnical Engineering)  
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 **Assistant Professor**, Civil and Env. Engr. Dept., UCLA

1986 – 1987 **Assistant Professor**, 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

## **PROFESSIONAL AND RESEARCH EXPERIENCE PRIOR TO Ph.D. IN 1986**

1977-1981 **Research Engineer, Geotechnical Division, Civil Engineering Institute, Univ. of Zagreb, Croatia.** Design of large earth dams, design of foundations, cyclic laboratory testing, field supervision of geotechnical projects.

1980(Feb-Sep) and 1981(Feb-Apr) **Research Fellow** (on leave from Univ. of Zagreb).  
**Norwegian Geotech. Institute, Oslo, Norway.** Laboratory testing of offshore soils.

1984-1985 **Supervisor**

**Rensselaer Polytechnic Institute Class of 1933 Earthquake Engineering and Cyclic Loading Laboratory.** Two-year assignment while research assistant at RPI; developed procedures and supervised soil testing using cyclic triaxial, cyclic direct simple shear, cyclic hollow cylinder and liquefaction flow failure apparatuses.

## **CONSULTING**

Institute "Geoexpert" Zagreb, Croatia	Jun 1975	-	Sep 1975
INTEVEP, Venezuela	1982	-	1984
Woodward-Clyde Consultants, Clifton Park, New Jersey	Jan 1983	-	Dec 1983
STS-D'Appolonia	Apr 1985	-	Jun 1985
WYLE Laboratories, El Segundo, CA	Jun 1992	-	Jul 1992
UC Davis/California Dept. of Transportation, Davis, CA	Jun 1992	-	Dec 1994
Fugro-McClelland, Houston, TX	Jun 1993	-	Jul 1993
Dames & More, Portland, OR	May 1995	-	Sep 1995
HARZA Consulting Eng. And Scientists, Chicago, IL	Apr 1996	-	Jun 1996
Converse Consultants, Redlands, CA	Jun 1996	-	Aug 1996
Bing Yen & Assoc., Irvine, CA	Jan 1997	-	May 1997
Earth Mechanics, Inc., Fountain Valley, CA	May 1997	-	Aug 1997
Agbabian & Assoc., Pasadena, CA	Feb 1999	-	Mar 1999
Univ. of Rome "La Sapienza", Rome, Italy	Jun 1999	-	Nov 1999
Bing Yen & Assoc., Irvine, CA	Sep 1999	-	Jan 2000
Geo-Vision, Geophysical Services	Nov 1999	-	Nov 2000
Shannon & Wilson, Inc.	June 2004	-	Oct 2004
Fugro West, Inc., Ventura, CA	Apr 2009	-	Apr 2009
California State University, Los Angeles	Sept 2010	-	Oct 2010
Fugro West, Inc., Ventura, CA	Sept 2011	-	Oct 2011

## **PROFESSIONAL SOCIETIES ACTIVITIES**

ASCE American Society of Civil Engineers	Member 1984 – Present
EERI Earthquake Engineering research Institute	Member 1986 – Present
National Society of Geotechnical Engineers	Member 1996 – Present
CUREe California Universities for Research in Earthquake Engineering	Member 1988 - Present
ASCE, Los Angeles Section – Geotechnical Division	Task Committee on Soil Nailing 1989 - 1992
ASTM American Society for Testing and Materials	Dynamic Properties of Soils Subcommittee 1989 - 1994
ASTM American Society for Testing and Materials	Structural Properties of Soils Subcommittee 1989 - 1994
ASCE American Society of Civil Engineers	Soil Dynamics Committee 1989 - Present
ASCE American Society of Civil Engineers	Geotechnical Group Directors, Los Angeles Section 1990-1995; Chairman 1994 – 1995
ASTM American Society for Testing and Materials	Simple Shear testing Subcommittee 1990 - 1995
SEAOC Structural Engineers Association of California	Ground Motions Committee 1991 - 1994
CUREe California Universities for Research in Earthquake Engineering	Member of the Board of Directors 1995 - 1999
ASCE, Los Angeles Section – Geotechnical Division	Task Committee on Soil Nailing 1999 - 2002
The United States Universities Council on Geotechnical Education and Research (USUCGER)	1987 - Present
International Association of Foundation Drilling	2002 – Present
Seismological Society of America	2005 - 2008

## **MAJOR AREAS OF RESEARCH**

- Stress-strain conditions in the NGI type direct simple shear test
- Fundamental aspects of the cyclic and dynamic behavior of clays, silts and sands under uniform and irregular cyclic loads
- 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 using centrifuge modeling
- Development of geotechnical site data bases and their utilization in seismic microzoning using GIS

## **MAJOR RESEARCH GRANTS**

### **National Center for Earthquake Engineering Research:**

**"Undrained Cyclic Shear and Liquefaction Flow Failure Behavior of Silty Soils" – 50% effort**  
\$68,000            09/01/86 - 08/31/87

### **National Science Foundation (CES):**

**"Research Initiation: Response of Saturated Silty Soils to Irregular Seismic Loads"**  
\$70,000            08/15/88 - 07/31/91

### **National Science Foundation (BCS):**

**"Post Earthquake Behavior of Soil Nailed Walls in the San Francisco Bay Area - Collection of Perishable Data"**  
\$20,000            01/01/90 - 12/31/90

### **National Science Foundation (SGER MSS):**

**"Small Strain and Dynamic/Cyclic Characterization by Static DSS Test"**  
\$20,000            03/15/90 - 02/28/92

### **National Science Foundation (BCS):**

**"Seismic Behavior of Soil Nailed Walls in the San Francisco Bay Area during the 1989 Loma Prieta Earthquake"**  
\$51,356 + Supplement \$5,766            06/01/90 - 10/31/92

### **National Science Foundation (MSS):**

**"Fundamental Aspects of the Behavior of Saturated Soils under Cyclic Loads"**  
\$127,806 + Supplement Research Experience for Undergraduates \$5,000  
08/15/90 - 07/31/93

### **Southern California Earthquake Center:**

**"Geotechnical Site Data Base for Southern California"**  
\$225,000      04/15/92 - 04/14/95

**National Science Foundation (BCS):**

**"Seismic Analysis of Soil Nailed Retaining Structure"**  
\$188,989      08/01/93 - 09/30/96

**California Universities for Research in Earthquake Engineering - CUREe:**

**"Methodologies for Evaluating Socioeconomic Consequences of Large Earthquakes"**  
\$60,000      09/01/93 - 08/31/96

**National Science Foundation (BCS):**

**"Evaluation of Local Site Effects Using GIS, SCEC Geotechnical Database, and Nonlinear Site Response Model - 1994 Northridge Earthquake"**  
\$60,000      09/15/94 - 08/31/95

**US-Croatian Joint Commission:**

**"Joint Research on Application of Soil Nailing Technology to Clayey Soils" (30% effort)**  
\$40,000      05/01/1995 - 05/01/98

**Southern California Earthquake center -SCEC:**

**"Enhancement of the SCEC Geotechnical Database to Accommodate Nonlinear Site-response Analysis"**  
\$50,000      07/1/95 – 01/10/97

**University of California Office of the President / DOE:**

**Campus-Laboratory Collaboration (CLC) Program Research Project "Estimation of the Ground Motion Exposure from Large Earthquakes at Four UC Campuses in Southern California"**  
\$132,773      01/11/96 – 02/29/2000

**Lawrence Livermore National Laboratory:**

**"Estimation of the Ground Motion Exposure from Large Earthquakes at Four UC Campuses in Southern California – Support for Research Collaborator from LLNL"**  
\$62,706      03/10/96 – 02/28/99

**NSF/Caltrans sponsored– ROSRINE Research Project managed through Southern California Earthquake Center (SCEC):**

**"Laboratory Dynamic Testing – 1994 Northridge Earthquake"**  
\$95,000      07/01/96 – 06/30/99

**Southern California Earthquake center -SCEC:**

**"Densification of the SCEC Geotechnical Database and Its Integration with a Nonlinear Site Response Model into a GIS"**  
\$70,000      01/11/97 – 01/10/2000

**Pacific Earthquake Engineering Research Center – PEER:**

**“Dynamic and Cyclic Behavior of Natural Soils due to Large Near-field Pulses”,**  
\$55,000            04/25/98 – 12/31/99

**Pacific Earthquake Engineering Research Center – PEER:**  
**“Dynamic and Cyclic Behavior of Natural and Man-made Soils due to Large Near-field Pulses”,**  
\$53,000            05/01/99 – 10/30/2000

**CH2M Hill Company through Pacific Earthquake Engineering Research Center – PEER; Prime funding Sources are CALTRANS, PG&E Company, and California Energy Commission:**  
**“Laboratory Testing of Nonlinear Soil Properties”,**  
\$60,000        6/01/2000 – 11/30/2002

**US Geological Survey-NEHRP Program – funded through CENS at UCLA Supplement to project “Towards a Prototype High Rise Seismic Monitoring System”, PI P. Davis; CoPI M. Kohler, Co-Pi M. Vucetic**  
\$10,000 for Vucetic    2003 – 04/30/2006

**Caterpillar Inc.**  
**Project : “Meshfree Method for Earth Moving simulation”**  
**PI J.S. Chen, Co-Pi M. Vucetic**  
\$20,000 for Vucetic    01/01/2008 –12/31/2009

## **AWARDS**

Norwegian Government Scholarship for research work at the Norwegian Geotechnical Institute, Oslo, Norway, Jan. 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

## **RECOGNITIOS and INVITATIONS**

Invited Panelist and Speaker, "The Second U.S.-Japan Workshop on Liquefaction, Large Ground Deformation, and Their Effects on Lifeline Facilities" organized by the National Center for Earthquake Eng. Research, (NCEER), SUNY, Buffalo and Cornell University, Sep. 1989.

Invited Panelist, the NSF/EPRI Workshop on the State-of-the-Art and Directions in "Dynamic Soil Properties and Site Characterization for Earthquake Resistant Design and Analysis", Nov 1989.

Invited Panelist, Second Workshop on Standard Reference Site Condition, organized by USGS and NCEER, Rensselaer Polytechnic Institute, Troy, N.Y., Apr. 1990.

Guest Speaker, "The Third U.S.-Japan Workshop on Liquefaction, Large Ground Deformation and their Effects on Lifeline Facilities", San Francisco, organized by the National Center for Earthquake Eng. Research (NCEER), SUNY, Buffalo, NY, Dec. 1990.

General Reporter of the Session "Model Testing in Cyclic Loading", Second International Conf. on Recent Advances in Geotechnical Earthquake Eng. and Soil Dynamics, St. Louis, Missouri, March 1991.

Invited Panelist and Speaker, International Symposium on Building Technology and Earthquake Hazard Mitigation, organized by Natl. Center for Earthquake Eng. Research, (NCEER) and China Academy of Building Research in conjunction with the International Council for Building Research Studies and Documentation (CIB) Working Group 73, and in Cooperation with NSF, National Institute of Standards and Technology (NIST) and the World Bank; Kunming, PRC, March 1991.

Invited Speaker, ASCE Los Angeles Geotechnical Eng. Group Seminar, Los Angeles, Dec. 1991.

Member of the Advisory Committee of the CURE-e US-Japan Loma Prieta Earthquake Research Cooperation project, May 1991.

Invited Speaker, International Workshop on Technology for Hong Kong's Infrastructure Development, "Infrastructure '91", Hong Kong, Dec. 1991.

Guest Speaker, The Fourth U.S.-Japan Workshop on Liquefaction, Large Ground Deformation and their Effects on Lifeline Facilities," Honolulu, HI, organized by the National Center for Earthquake Eng. Research (NCEER), SUNY, Buffalo, May 1992.

Member of Advisory Panel, for \$600,000 research project for development of a special cyclic loading in-situ tool, conducted at UC Davis and UC Berkeley, and funded by CALTRANS, March 1993.

Steering Committee Member, ASTM Symposium "Dynamic Geotechnical Testing II", Reno, Nevada, Jan. 1994.

Invited Speaker, The Fifth U.S. - Japan Workshop on Earthquake Resistant Design of Lifeline Facilities and Countermeasures Against Soil Liquefaction, sponsored by the National Center for Earthquake Engr. Research (NCEER), SUNY, Buffalo and Japanese Association for the Development of Earthquake Predictions (ADEP), Snowbird, Utah, Sep. 1994.

Invited Speaker, NSF sponsored workshop on "Scientific Supercomputing, Visualization and Animation in Geotechnical Earthquake Engineering and Engineering Seismology," Carnegie Mellon University, Pittsburgh, PA, Nov. 1994.

Invited Member of Applied Technology Council (ATC) Working Group at the Workshop on National Ground Motion Mapping, Organized by the ATC and U.S. Geological Survey, Sep. 1995.

Invited Panelist, First International Conference on Earthquake Engineering, Tokyo, Japan, Nov. 1995.

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.

Member of the Paper Review Committee, Eleventh World Conference on Earthquake Engineering, Acapulco, Mexico, June 1996.

Invited Panelist at the workshop, "Exploring Options for Seismic Zonation in the City of Los Angeles", organized by the City of Los Angeles, Oct. 1996.

Invited Panelist, Central U.S. NEHRP Panel for evaluation of USGS research proposals, Memphis, TN, May 1997.

Invited Speaker and Panelist, Anchored Earth Retention Seminar by the International Association of Foundation Drilling, Glendale, CA, Nov. 1997.

Invited Speaker, Southern California Earthquake Center - SCEC, Workshop and Seminar on Nonlinear Site Response, Los Angeles, CA, Jan. 1998.

Invited Panelist, XI Danube - European Conference on Soil Mechanics and Geotechnical Engineering, Porec, Croatia, May 1998.

Invited Panelist, Pacific Earthquake Engineering Research Center - PEER, Workshop on the Seismic Vulnerability of Port Facilities, San Pedro, CA, July 1998.

Chairman of Technical Session, GEO-Institute Specialty Conference, Geotechnical Earthquake Engineering and Soil Dynamics III, Seattle, WA, Aug. 1998.

Invited Reviewer of Papers, for the 12th World Conference on Earthquake Engineering, Auckland, New Zealand, Jan. 2000.

Recognition Plaque for service on the Board of Directors of nonprofit organization California Universities for Research in Earthquake Engineering – CUREe, Dec. 1999.

Invited Panelist, International Workshop on Uncertainties in Nonlinear Soil Properties and their Impact on Modeling Dynamic Soil Response, Sponsored by the National Science Foundation and PEER-Lifelines Program, PEER Headquarters, UC Berkeley, March 18-19, 2004

Invited Panelist and Speaker, First workshop of the project "M.E.E.T.I.N.G."-- Mitigation of the Earthquakes Effects in Towns and in INdustrial reGional districts, Dubrovnik, Croatia, March 3 and 4, 2008.

Member of the Organizing Committee, Conference to commemorate the legacy of Ralph B. Peck, Seventh International Conference on Case Histories in Geotechnical Engineering, and Symposium in honor of Clyde Baker, Wheeling, Illinois, April 29 – May 4, 2013.

Keynote Speaker – “Mechanism of seismic failure of soil nailed walls”, 12<sup>th</sup> Geotechnical Engineering Workshop of the *North-American Chinese Geotechnical Engineers Association (NACGEA)*, LADWP Headquarters, Los Angeles, CA, Friday, June 1, 2012.

Invited Lecturer – “Cyclic threshold strains in clays and sands”, 14<sup>th</sup> University of Rijeka Scientific Colloquium in 2011/2012 academic year, *University of Rijeka, Croatia*, June 18, 2012.

## **PUBLICATIONS**

### **State-of-the-Art Papers and Invited Papers**

1. 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, Editors: Mendoza, M.J. and Montanez, L, Publisher: Sociedad Mexicana de Mecanica de Suelos, Mexico City, August, Vol. 2, pp. 51-87.
2. Dobry, R., Vasquez-Herrera, A., Mohamad, R., and Vucetic, M., (1985). "Liquefaction Flow Failure of Silty Sand by Torsional Cyclic Test," *Proceedings of a session of ASCE Convention in Detroit, Michigan: “Advances in the Art of Testing Soils under Cyclic Conditions”*, Editor: Khosla, V., Publisher: American Society of Civil Engineers, New York, pp. 29-50.
3. Vucetic, M., (1991). General Report on Session II: "Model Testing in Cyclic loading," *Proceedings of the Second International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, St. Louis, Missouri, Editor: Prakash, S., Publisher: University of Missouri-Rolla, Rolla, MO, Vol. III, pp. 1985-1990.
4. Vucetic, M., (1991). "Relation Between the Basic Soil Properties and Seismic Response of Natural Soil Deposits," *Proceedings, International Symposium on Building Technology and Earthquake Hazard Mitigation*, Kunming, China; Coordinator: Lin, A.N., Publisher: International Council for Building Research Studies and Documentation – CIB, CIB Publication 142, pp.326-341.

### **Journal Papers and Other Refereed Publications**

1. Szavits-Nossan, A. and Vucetic, M., (1979). "A Review of Laboratory Methods for Dynamic Soil Testing," *Civil Engineer*, Zagreb, Dec., pp.515-522, (in Croatian).
2. Vucetic, M. and Lacasse, S., (1982). "Specimen Size Effect in Simple Shear Test," *Journal of the Geotechnical Engineering Division, ASCE*, Vol. 108, No. GT12, pp.1567-1585.
3. 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.

4. Vucetic, M. and Dobry, R., (1988). "Cyclic Triaxial Strain-Controlled Testing of Liquefiable Sands," *ASTM Special Technical Publication 977, Advanced Methods for Triaxial Testing of Soil and Rock*, pp. 475-485.
5. Vucetic, M., (1988). "Normalized Behavior of Offshore Clay Under Uniform Cyclic Loading," *Canadian Geotechnical Journal*, Vol. 25, No. 1, pp. 33-41.
6. Vucetic, M., (1990). "Normalized Behavior of Clay Under Irregular Cyclic Loading," *Canadian Geotechnical Journal*, Vol. 27, No. 1, pp. 29-46.
7. 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.
8. Chu, H.H. and Vucetic, M., (1992). "Settlement of Compacted Clay in a Cyclic Direct Simple Shear Device," *ASTM Geotechnical Testing Journal*, Vol.15, No. 4, pp. 371-379.
9. Matasovic, N. and Vucetic, M., (1992). "A Pore Pressure Model for Cyclic Straining of Clay," *Soils and Foundations*, Vol. 32, No. 3, pp. 156-173.
10. 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.
11. Matasovic, N. and Vucetic, M., (1993). "Cyclic Characterization of Liquefiable Sands," *ASCE Journal of Geotechnical Engineering*, Vol. 119, No. 11, pp. 1805- 1822.
12. Vucetic, M., (1994). "Cyclic Characterization for Seismic Regions Based on PI," *Proceedings of the XIII International (World) Conference on Soil Mechanics and Foundation Engineering*, New Delhi, India, Vol. 1, pp. 329-332.
13. Zorapapel, G.T. and Vucetic, M., (1994). "The Effects of Seismic Pore Water Pressure on Ground Surface Motion," *Earthquake Spectra: The Professional Journal of Earthquake Engineering Research Institute (EERI)*, Vol. 10, No.2, May, pp. 403-437.
14. Vucetic, M., (1994). "Cyclic Threshold Shear Strains in Soils," *ASCE Journal of Geotechnical Engineering*, Vol. 120, No. 12, pp. 2208-2228.
15. Matasovic, N. and Vucetic, M., (1995). "Generalized Cyclic Degradation-Pore Pressure Generation Model for Clays," *ASCE Journal of Geotechnical Engineering*, Vol. 121, No. 1, pp. 33-42.
16. 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.
17. Lanzo, G., Vucetic, M. and Doroudian, M. (1997): "Reduction of Shear Modulus at Small Strains in Simple Shear", *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 123, No. 11, pp.1035-1042.
18. King, S.A., Kiremidjian, A.S., Basoz, N., Law, K., Vucetic, M., Doroudian, M., Olson, R.A., Eidinger, J.M., Goettel, K.A., and Horner, G. (1997) "Methodologies for

- Evaluating the Socio-Economic Consequences of Large Earthquakes”, *Earthquake Spectra*, Vol. 13, No. 4, pp. 565-584.
19. 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.
  20. Vucetic, M., Lanzo, G., and Doroudian, M. (1998): “Damping at Small Strains in Cyclic Simple Shear Test”, *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 124, No.7, pp.585-594.
  21. 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.
  22. 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.
  23. 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.
  24. Matesic, L. and Vucetic, M. (2003): “Strain-rate Effects on Soil Secant Shear Modulus at Small Cyclic Strains”, *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 129, No. 6, pp. 536-549.
  25. 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.
  26. 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.
  27. Heuze, F., Archuleta, R., Bonilla, F., Day, D., Doroudian, M., Elgamal, A., Gonzales, S. Hoehler, M., Lai, T., Lavallee, D., Lawrence B. Liu P-C., Martin, A., Matesic, L., Minster, B., Mellors, R. Oglesby, D., Park, S., Riemer, M., Steidl, J., Vernon, F., Vucetic, M., Wagoner, J., and Yang, Z. (2004) “Estimating Site-Specific Strong Earthquake Motions “, *Soil Dynamics and Earthquake Engineering*, Vol. 24, pp. 199-223.
  28. Hsu, C-C. and Vucetic, M. (2006): “Threshold Shear Strain for Cyclic Pore-Water Pressure in Cohesive Soils”, *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Vol. 132, No. 10, pp. 1325-1335.
  29. 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.
  30. 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.

31. Vucetic, M and Mortezaie A-R. (2014). "Cyclic Secant Shear Modulus versus Pore Water Pressure in Sands at Small Cyclic Strains", submitted to *Soil Dynamics and Earthquake Engineering*, December 2013

### **Conference Proceedings**

1. Szavits-Nossan, A. and Vucetic, M., (1978). "Ko Tests in Axially Symmetric State of Stresses," *Society of the Yugoslav Laboratories for Testing Materials and Structures, Proceedings, XVI Congress*, Vrnjacka Banja, June, pp. 1-7, (in Croatian).
2. Vucetic, M., (1980). "A Review of Geotechnical Problems Related to the Foundation Design of Gravity Platforms in the North Sea," *Proceedings, 5th Symposium of the Yugoslav Society for Rock Mechanics and Underground Engineering*, Split, Vol. 2, pp.88-90, (in Croatian).
3. Vucetic, M., Dobry, R., Petrakis, E., and Thomas, G.E., (1985). "Cyclic Simple Shear Behavior of Overconsolidated Offshore Clay," *Proceedings, Second International Conference on Soil Dynamics and Earthquake Engineering*, Editors: Brebia, C.A, Cakmak, A.S., and Abdel-Ghaffar, A.M., Publisher: Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, Held on board the Liner Queen Elizabeth 2 from New York to Southampton, pp.2-107 to 2-116.
4. Vasquez-Herrera, A., Mohamad, R., Vucetic, M., and Dobry, R., (1985). "Liquefaction Flow Failure Characteristics of Some Silty Sands," *Proceedings, Second International Conference on Soil Dynamics and Earthquake Engineering*, Editors: Brebia, C.A, Cakmak, A.S., and Abdel-Ghaffar, A.M., Publisher: Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, Held on board the Liner Queen Elizabeth 2 from New York to Southampton, pp. 3-85 to 3-96.
5. Vucetic, M., Dobry, R., Stokoe, K.H., Ladd, R.S., and Youd, T.L., (1986). "Evaluation of Liquefaction Case History: Heber Road Site, 1979 Imperial Valley Earthquake," *Proceedings of the 8th European Conference on Earthquake Engineering*, Lisbon, Portugal, , Publisher: Laboratorio Nacional de Engenharia Civil, 1986, Vol. 2, Session 5.3, pp. 5.3/57 – 5.3/64.
6. Vucetic, M. and Thilakaratne, V., (1987). "Degradation of Clay Stiffness under Irregular Cyclic Loading," *Proceedings of the International Symposium on Geotechnical Engineering of Soft Soils*, Mexico City, Editors: Mendoza, M.J. and Montanez, L, Publisher: Sociedad Mexicana de Mecanica de Suelos, Mexico City, August, pp. Vol. 1, 155-162.
7. Vucetic, M. and Thilakaratne, V., (1989). "Liquefaction at the Wildlife Site - Effect of Soil Stiffness on Seismic Response," *Proceedings of the 4th International Conference on Soil Dynamics and Earthquake Engineering*, Mexico City, Volume: Soil Dynamics and Liquefaction, Editors: Cakmak, A.S. and Herrera, I., Publisher: Computational Mechanics Publications, Southampton-Boston, pp. 37-52.

8. Tan, K. and Vucetic, M., (1989). "Behavior of Medium and Low Plasticity Clays Under Cyclic Simple Shear Conditions," *Proceedings of the 4th International Conference on Soil Dynamics and Earthquake Engineering*, Mexico City, Volume: 'Soil Dynamics and Liquefaction', Editors: Cakmak, A.S. and Herrera, I., Publisher: Computational Mechanics Publications, Sothampton-Boston, pp.131-142.
9. Dobry, R., Elgamal, A.W., Baziar, M., and Vucetic, M., (1989). "Pore Pressure and Acceleration Response of Wildlife Site during the 1987 Earthquake," *Proceedings of the 2nd U.S. - Japan Workshop on Liquefaction, Large Deformation and their Effects on Lifelines*, Grand Island, NY, Editors: O'Rourke, T.D. and Hamada, M., Publisher: NCEER, SUNY Buffalo, Buffalo, NY, NCEER Technical Report 89-0032, pp.145-160.
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### **Lectures, Seminars, Poster Sessions and Other Contributions**

Poster Session "Cyclic Strain-Controlled Testing", ASTM Symposium on Advanced Triaxial Testing of Soil and Rock, Louisville, Kentucky, 1986.

Lecture - Clarkson University Lecture Series, Potsdam, NY, "Liquefaction of Soils During Earthquakes," April 1987.

Lecture - University of Colorado, Boulder, CO. "Liquefaction Case History studies," April 1987.

Poster Session - International Symposium on Geotechnical Eng. of Soft Soils, Mexico City, Poster Session: 'Cyclic Behavior of Soils', August 1987.

Lecture - University of Southern California, Civil Engineering Seminar: "Liquefaction Case History Studies", May 1988.

Lecture - National Center for Earthquake Engineering Research, state University of New York at Buffalo, Seminars on Earthquake Series: "Correlation Between the Response of Soils to Earthquake Loads and Standard Soil Characteristics," January 1989.

Lecture - Syracuse University Seminar, Syracuse, NY: "Correlation Between the Response of Soils to Earthquake Loads and Standard Soil Characteristics," January 1989.

Lecture - Rensselaer Polytechnic Institute, Troy, NY: "Correlation between the Response of Soils to Earthquake Loads and Standard Soil Characteristics," February, 1989.

Lecture - California Institute of Technology, Pasadena, CA: "The Mechanism of Liquefaction at Level Grounds," October 1989.

Lecture - University of Zagreb, Croatia: "Liquefaction at Level Ground and Analysis of a Case Study," November 1989.

Seminar Lecture - University of California, Los Angeles, Civil Engineering Dept.: "San Francisco Earthquake," November 1989.

Lecture - Arizona State University, Tempe, AZ: "A Liquefaction Case History study," March 1990.

Lecture - Institute of Industrial Science, Tokyo University, Tokyo, Japan: "Correlation Between the Response of Soils to Earthquake Loads and Standard Soil Characteristics," June 1990.

Lecture - Public Works Research Institute, Soil Dynamics Division, Tsukuba Science City, Japan: "A Liquefaction Case History Study," June 1990.

Lecture - Tokai University, Faculty of Marine Science and Technology, Shimizu, Japan: "A Liquefaction Case History Study," June 1990.

Lecture - University of Tokyo, Japan: "Correlation Between the Response of Soils to Earthquake Loads and Standard Soil Characteristics," June 1990.

Two Lectures - Kajima Institute of Construction Technology, Kajima Corporation, Tokyo, Japan: "A Liquefaction Case History Study" and "Correlation Between the Response of Soils to Earthquake Loads and Standard Soil Characteristics," June 1990.

Lecture - ASCE LA Geotechnical Group Seminar, Los Angeles, "Soil Properties and Cyclic Response," May 1991.

Lecture - University of California at Irvine, Civil Engineering Department Seminar Lecture: "Soil Classification Properties and Earthquake Ground Response," May 1991.

Lecture - National Center for Earthquake Engineering Research, State University of New York at Buffalo, Seminars on Earthquake Series: "Seismic Stability of Soils Nailed Excavations and Slopes," July 1991.

Contribution - 1992 NSF Structures, Geomechanics and Building Systems Grantees Conference: "Soil Classification Properties and Earthquake Response of Horizontally Layered Deposits," San Juan, Puerto Rico, June 1992.

Lecture - Public Works Research Institute of the Japanese Government, Soil Dynamics Division, Tsukuba Science City: "Seismic Stability of Soil Nailed Excavations," Nov. 1992.

Lecture - Kiso-Jiban Consultants Co., LTD., Tokyo, Japan: "Seismic Stability of Soil Nailed Excavations," Nov. 1992.

Lecture - Tokai University, Faculty of Marine Science and Technology, Shimizu, Japan: "Seismic Stability of Soil Nailed Excavations," Nov. 1992.

Seminar - University of California, Irvine, Civil Engineering Department, "Seismic Stability of Soil Nailed Excavations: Post-earthquake Observations and Cyclic Centrifuge Testing," January 1993.

Seminar - California Department of Transportation, Sacramento, CA, "Seismic Stability of Soil Nailed Excavations: Post-earthquake Observations and Cyclic Centrifuge Testing," April 1993.

Lecture - Fugro-McClelland, Inc., Houston, TX, "A Discussion on the Cyclic Characterization of Soils Using NGI Direct Simple Shear Device and Comparison with Triaxial Testing," June 1993.

Lecture - University of Zagreb, Croatia, "Seismic Stability of Soil Nailed Excavations using Centrifuge Testing," December 1993.

Seminar - Universita di Roma, "La Sapienza," Rome, Italy, "Soil Properties for Dynamic Analyses and Seismic Microzonation," July 1994.

Lecture (with M. Doroudian) - NSF Workshop on Scientific Supercomputing, Visualization, and Animation in Geotechnical Earthquake Engineering and Engineering Seismology, Carnegie Mellon University, "Geotechnical Database for Southern California," November 1994.

Lecture - Ibaraki University, Hitachi, Japan: "A Plausible Scenario of Site Response and Liquefaction Process at Wildlife Site during Two Consecutive Earthquakes in 1987," June 1995.

Lecture - Waseda University, Tokyo, Japan, "Development of a 3-Dimensional Data Base of Geotechnical Boring Logs for Los Angeles Area and its Potential for the Evaluation of Nonlinear Site Effects and Seismic Zonation," June 1995.

Two Lectures - Kiso-Jiban Consultants Co., Ltd., Tokyo, Japan: "A Plausible Scenario of Site Response and Liquefaction Process at Wildlife Site during Two Consecutive Earthquakes in 1987" and "Development of a 3-Dimensional Data Base of Geotechnical Boring Logs for Los Angeles Area and its Potential for the Evaluation of Nonlinear Site Effects and Seismic Zonation," June 1995.

Two Lectures - Institute of Industrial Science, Tokyo University, Tokyo, Japan: "Small-Strain Soil Properties and Testing in a Newly Developed Double-Specimen Direct Simple Shear Device," and "Stability of Soil Nailed Excavations During Earthquakes Based on the Post-Earthquake Inspection after the 1989 Loma Prieta Earthquake and Dynamic Centrifuge Testing," June 1995.

Two Lectures - Kajima Institute of Construction and Technology, Kajima Corporation, Tokyo, Japan: "Small-Strain Soil Properties and Testing in a Newly Developed Double-Specimen Direct Simple Shear Device," and "Stability of Soil Nailed Excavations During Earthquakes Based on the Post-Earthquake Inspection after the 1989 Loma Prieta Earthquake and Dynamic Centrifuge Testing," June 1995.

Geotechnical Seminar at UC Berkeley: "Development of Geotechnical Data Base for Los Angeles and Its Potential for Seismic Microzonation," October 1995.

Lecture (with M. Doroudian) - Taisei Corporation Technology Research Center, Yokohama, Japan: "Development of 3-Dimensional Geotechnical Database for Los Angeles and Its Utilization for Seismic Microzonation Using GIS", November 1996.

Lecture - Taisei Corporation Technology Research Center, Yokohama, Japan: "Seismic Stability and Failure Mechanism of Soil-Nailed Excavations as Observed in Dynamic Centrifuge Testing", November 1996.

Poster Session (with M. Doroudian)- Southern California Earthquake Center (SCEC) 1997 Annual Meeting: "Densification of the SCEC Geotechnical Data Base and its Integration with a Nonlinear Site Response Model in a GIS Environment," Costa Mesa, CA, Oct. 1997.

Seminar (with Barar, P.) - Southern California Anchored Earth Retention Seminar by ADSC-The International Association of Foundation Drilling: "Response of Soil-Nailed Excavation Models to Cyclic Shaking in Centrifuge," Nov. 13-14, 1997.

Seminar - Rensselaer Polytechnic Institute, Troy, N.Y.: "Dynamic Behavior of Soils at Small Strains in Simple Shear Test," March 1998.

Seminar – Faculty of Mining and Geology, University of Zagreb, Croatia, “New Findings about the Behavior of Soils Relevant for the Design in Seismic Regions,” February 2001.

Seminar – Rutgers University, Piscataway, NJ, “Small-strain Testing in an NGI-type Direct Simple Shear Device”, October, 2002.

Seminar - Columbia University, New York City, “Kinematics of Failure of Soil-nailed Excavation Models in Dynamic Centrifuge Tests”, November, 2002.

Seminar – Croatian Society for Soil Mechanics and Geotechnical Engineering, Zagreb, Croatia: “Kinematics and Pseudo-dynamic Analysis of Failure of Soil Nailed Excavation Models in Dynamic Centrifuge Tests”, December 11, 2003.

Lecture – International Workshop on Uncertainties in Nonlinear Soil Properties and their Impact on Modeling Dynamic Soil Response, Sponsored by the National Science Foundation and PEER-Lifelines Program, PEER Headquarters, UC Berkeley: “Emerging Trends in DSDSS Testing” March 18-19, 2004

Seminar- UCLA College of Letters and Sciences, Department of Earth and Space Sciences: “Kinematics of Failure of Soil Nailed Excavation Models in Dynamic Centrifuge Tests Simulating Earthquake Conditions”, March 3, 2004.

Lecture- UCLA, HSSEAS Research Review Presentation: “Small-strain Dynamic Simple Shear Testing at UCLA”, Session A "Improving the Performance and Reliability of Infrastructure”, May 5, 2006.

Keynote Lecture – First workshop of the project “M.E.E.T.I.N.G.”-- Mitigation of the Earthquakes Effects in Towns and in INDUSTRIAL reGIONAL districts, in Dubrovnik, Croatia, “Profound effects of the rate of shearing on the dynamic soil properties for local site response analyses”, March 3 and 4, 2008.

Seminar series – “Soil Dynamics Research at UCLA”, Civil Engineering Faculty, University of Rijeka, Croatia, Sept. 7-11, (September 2009).

Keynote Presentation – “Mechanism of seismic failure of soil nailed walls”, 12<sup>th</sup> Geotechnical Engineering Workshop of the North-American Chinese Geotechnical Engineers Association (NACGEA), LADWP Headquarters, Los Angeles, CA, Friday, June 1, 2012

Invited Lecture – “Cyclic threshold strains in clays and sands”, 14<sup>th</sup> University of Rijeka Scientific Colloquium in 2011/2012 academic year, University of Rijeka, Croatia, June 18, 2012.