

# **Luis A. Montejo Valencia, Ph.D.**

## **Associate Professor**

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## **Professional Experience**

- 2009-Present, Assistant Professor, Department of Engineering Science and Materials, University of Puerto Rico at Mayaguez
- 2008-2009, Structural Engineer, Bechtel Power Corporation, Frederick, MD
- Summer 2008, Teaching Assistant (Seismic Design of Concrete Buildings), Centre for Post-Graduate Training and Research in Earthquake Engineering and Engineering Seismology (ROSE School), Pavia, Italy
- 2004 – 2008, Research and Teaching Assistant (Statics, Dynamics, Solid Mechanics and Materials Laboratory) North Carolina State University
- 2002 – 2004, Research Assistant, Puerto Rico Strong Motion Network

## **Professional Preparation**

- PhD. Structural Engineering, 2008, North Carolina State University.
- MS. Structural Engineering, 2004, University of Puerto Rico at Mayaguez
- BS. Civil Engineering, 2001, Universidad del Valle, Cali – Colombia

## **Publications**

- Montejo, L.A., Marx, E. and Kowalsky, M. J. “Seismic Design of Reinforced Concrete Bridge Columns at Sub-Freezing Temperatures.” ACI Structural Journal, Accepted for publication.
- Montejo, L. A., Kowalsky, M. J. and Hassan, T. “Seismic Behavior of Shear Dominated Reinforced Concrete Columns at Low Temperatures.” ACI Structural Journal, Vol. 106, No. 4, July 2009, pp. 445-454
- Montejo, L. A., Kowalsky, M. J. and Hassan, T. “Seismic Behavior of Flexural Dominated Reinforced Concrete Bridge Columns at Low Temperatures.” ASCE Journal of Cold Regions Engineering, Vol. 23, No. 1, March 2009, pp. 18-42
- Montejo, L. A., Sloan, J. E., Kowalsky, M. J. and Hassan, T. “Cyclic Response of Reinforced Concrete Members at Low Temperatures.” ASCE Journal of Cold Regions Engineering, Vol. 22, No. 3, Sept. 2008, pp. 79-102
- Montejo, L. A. and Kowalsky, M. J. “Estimation of Frequency Dependent Strong Motion Duration via Wavelets and its Influence in Nonlinear Seismic Response.” Computer Aided Civil and Infrastructure Engineering, Vol. 23, No. 4, May 2008, pp. 253-264

- Suarez, L. E. and Montejo, L. A. “Applications of the Wavelet Transform in the Analysis and Generation of Artificial Accelerograms.” *Journal of Structural Engineering and Mechanics*, Vol. 27, No. 2, Sept. 2007, pp. 173-197
- Montejo, L. A. and Suarez, L. E. “Wavelet Based Identification of Site Frequencies from Earthquake Records.” *Journal of Earthquake Engineering*, Vol. 10, No. 3, July 2006, pp. 565-594
- Suarez, L. E. and Montejo, L. A. “Generation of Artificial Earthquakes Via the Wavelet Transform.” *International Journal of Solids and Structures*, No. 42, Oct. 2005, pp. 5905-5919

### **Proceedings in referred conferences**

- Pando, M., Cano, L., Suarez, L. Ritta, R. and Montejo, L.A. “Comparison of Site Fundamental Period Estimates Using Weak-Motion Earthquakes and Microtremors.” 14th World Conference on Earthquake Engineering, Beijing, China, October 2008
- Montejo, L. A., Kowalsky, M. J. and Hassan, T. “Seismic Performance of Reinforced Concrete Bridge Columns at Low Temperatures.” 6th National Seismic Conference on Bridges and Highways, Charleston, SC, July 2008
- Montejo, L. A. “A Wavelet Procedure for Estimation of Frequency Dependent Strong Motion Duration.” XIII Southeastern Conference on Theoretical and Applied Mechanics, Mayaguez, PR, May 2006
- Montejo, L. A. and Suarez, L. E. “Site Frequencies Identification and Calibration of Soil Profiles using Historic Earthquake Records.” VIII U.S. National Conference in Earthquake Engineering, San Francisco, CA, April 2006
- Suarez, L. E. and Montejo, L. A. “Applications of the Wavelet Transform in Earthquake Engineering.” International Symposium on Smart Structures Technologies and Earthquake Engineering, Osaka, Japan, July 2004
- Suarez, L. E. and Montejo, L. A. “Generation of Artificial Earthquakes Via the Wavelet Transform.” Eight PanAmerican Congress of Applied Mechanics, Havana, January 2, 2004

### **Posters and technical presentations**

- Montejo, L. A., Kowalsky, M. J. and Hassan, T. “Seismic Behavior of Reinforced Concrete Columns
- at Sub-Freezing Temperatures.” EERI Annual Meeting (Poster Section), New Orleans, LA, February 2008
- Suarez, L.E and Montejo, L.A., “Applications of the Wavelet Transform in Structural Engineering” (in Spanish), XVI Congreso sobre Métodos Numéricos y sus Aplicaciones, Córdoba, Argentina, October 2007

- Montejo, L. A. and Kowalsky, M. J. “Development of Computational Tools in Support of Displacement Based Design.” Structural Engineering and Mechanics Symposium, Raleigh, NC, March, 2007
- Montejo, L. A. and Kowalsky, M. J. “Frequency Dependent Strong Motion Duration.” Structural Engineering and Mechanics Symposium, Raleigh, NC, September, 2006
- Montejo, L.A and Suarez, L.E., “Applications of the Wavelet Transform in the Generation of Artificial Earthquakes and Analysis of Earthquake Records.” EERI Annual Meeting (Poster Section), Los Angeles, CA, February 2004
- Suarez, L.E and Montejo, L.A., “Generation of Artificial Earthquakes via the Wavelet Transform” (in Spanish), II Congreso Nacional de Ingeniería Sísmica, Medellin, Colombia, November 2003
- Montejo, L.A, Cundumi, O, and Suarez, L.E., “Applications of Synthetic Earthquake Accelerograms in Ground Response Analysis.” Sigma Xi – VII Poster Day, Mayaguez, PR, April 2003