

Biographical Sketch
Mariantonieta Gutierrez Soto, Ph.D.

(a) Professional Preparation

Lamar University, Beaumont, TX; Civil Engineering B.S., 2010
The Ohio State University, Columbus, OH; Civil Engineering M.S., 2012
The Ohio State University, Columbus, OH; Civil Engineering Ph.D., 2017

(b) Appointments

2017–present: **Assistant Professor**, University of Kentucky, Lexington, KY
2016–2017: **Presidential Fellow**, The Ohio State University, Columbus, OH
2014–2016: **Resident Director**, The Ohio State University, Columbus, OH
2011–2016: **Graduate Teaching Associate**, The Ohio State University, Columbus, OH
2010–2011: **University Graduate Fellow**, The Ohio State University, Columbus, OH

(c) Five Most Relevant Products:

1. **M. Gutierrez Soto** and H. Adeli (2018) “Vibration Control of Smart Base-Isolated Irregular Buildings using Neural Dynamic Optimization Model and Replicator Dynamics" *Engineering Structures* 156: 322-336 DOI: 10.1016/j.engstruct.2017.09.037
2. **M. Gutierrez Soto** and H. Adeli (2017), “Multi-Agent Replicator Controller for Sustainable Vibration Control of Structures" *Journal of Vibroengineering*, 19(6): 4300–4322 ISSN: 1392–8716
3. **M. Gutierrez Soto** and H. Adeli (2017), “Many-Objective Control Optimization of Highrise Building Structures using Replicator Dynamics and Neural Dynamics Model" *Structural and Multidisciplinary Optimization* 56(6), 1521-1537 DOI:10.1007/s00158-017-1835-9
4. **M. Gutierrez Soto** and H. Adeli (2017), “Recent Advances in Control Algorithms for Smart Structures and Machines" *Expert Systems*, 34(2) DOI: 10.1111/exsy.12205
5. **M. Gutierrez Soto** and H. Adeli (2014), “Optimum Tuning Parameters of Tuned Mass Dampers for Vibration Control of Irregular Highrise Building Structures" *Journal of Civil Engineering Management*, 20(5): 609-620 DOI:10.3846/13923730.2014.967287

(d) Other Significant Products

1. **M. Gutierrez Soto** (2018) “Bio-inspired hybrid vibration control methodology for intelligent isolated bridge structures" *Proc. SPIE 10595, Active and Passive Smart Structures and Integrated Systems XII, 1059511*. March 7. Denver, CO.
2. **M. Gutierrez Soto** and H. Adeli (2013), “Tuned Mass Dampers" *Archives of Computational Methods in Engineering*, 20(4): 419-431 DOI: 10.1007/s11831-013-9091-7
3. **M. Gutierrez Soto** and H. Adeli (2013), “Placement of Control Devices for Passive, Semi-active and Active Control of Structures" *Scientia Iranica, Transactions A: Civil Engineering*, 20(6): 1567-1578 ISSN:1026-3098
4. **M. Gutierrez Soto** and R. Dzwonczyk (2015) “Maximizing Service and Learning in an International Engineering Service Learning Program" *IEEE Global Humanitarian Technology Conference*, October 8. Seattle, WA

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5. C. Montoya Rodriguez, **Gutierrez Soto, M.**, Dzwonczyk, R., Merrill, J., Greene, H., Cater, M. (2014) "Application of Sustainable Solutions in International Service Learning" *American Society of Engineering Education Conference*, June 19. Indianapolis, IN DOI: 10.1117/12.2300393

(e) Synergistic Activities

1. **Professional service:** (i) Member of the Engineering Mechanics Institute Structural Control and Health Monitoring Technical committee. (ii) Chair of the Graduate Institute during the 2018 Society of Hispanic Professional Engineers (SHPE) National Convention. (iii) Grant reviewer for the US National Science Foundation (iv) Reviewer for archival journals including: Journal of Vibro-engineering, Computer-Aided Civil and Infrastructure Engineering, Journal of Intelligent Material Systems and Structures, Journal of Engineering Mechanics, Structural Control and Health Monitoring, Scientia Iranica.
2. **Community service:** (i) Co-organized and facilitated bi-annual STEM activities at Night of Science (Noche de Ciencias) events for K-12 students to broaden the participation of underrepresented groups. (ii) Promoted advancement in STEM education by hosting Graduate School Info Sessions during SHPE chapter meeting (iii) Volunteered for the annual STEM outreach event, UK E-day
3. **Mentoring:** (i) Faculty co-advisor for the SHPE UK student chapter. (ii) Provided mentoring to senior SHPE members in preparation for NSF Graduate Research Fellowship application. (iii) Provided mentoring as Resident Advisor for STEM fun activities for middle and High school students during the Women in Engineering Women in Engineering RISE summer camp
4. **Teaching:** (i) Develop curriculum for undergraduate and graduate courses focusing on structural analysis and smart structures for Department of Civil Engineering at University of Kentucky. (ii) Development of educational material for the International Engineering Service Learning handbook for the Department of Engineering Education at Ohio State University. (iii) Authored hundred of curriculum material and lab practicum for First-Year Engineering courses at Ohio State University. (iv) Created as multidisciplinary engineering service learning course with international study abroad component