

ABET FACULTY VITAE (2 Page)

Name: Matthew Whelan

Education:

- Ph.D., Civil and Environmental Engineering, Clarkson University, 2009
- M.S., Civil Engineering, Clarkson University, 2005
- B.S., Civil and Environmental Engineering, Clarkson University, 2004

Academic Experience:

- UNC Charlotte, Associate Professor, May 2016 – Present, Full-Time
- UNC Charlotte, Assistant Professor, 2010 – May 2016, Full-Time
- Clarkson University, Postdoctoral Research Associate, 2009 – 2010, Full-Time

Non-Academic Experience:

- Timbre, Inc., Chief Executive Officer and Founder, 2009 – 2010, Full-Time

Certifications or Professional Registrations:

- E.I., State of New York

Current Membership in Professional Organizations:

- American Society of Civil Engineers (ASCE)
- Society for Experimental Mechanics (SEM)
- International Society for Structural Health Monitoring of Intelligent Infrastructure (ISHMII)
- American Society for Nondestructive Testing (ASNT)
- International Association for Bridge Maintenance and Safety (IABMAS)
- American Institute of Steel Construction (AISC)
- Precast/Prestressed Concrete Institute (PCI)
- The Structural Engineers Association of North Carolina (SEA of NC)
- Structural Engineering Institute (SEI)

Honors and Awards:

- Chi Epsilon - National Civil Engineering Honor Society
- William States Lee College of Engineering Graduate Award in Teaching Excellence, Recipient, 2013-2014
- William States Lee College of Engineering Undergraduate Award in Teaching Excellence, Nominee, 2012-2013

Service Activities (Within and Outside of the Institution):

- Editorial Board, Journal of Sensors, 2015-Present
- Faculty Advisor to the ASCE Student Steel Bridge Competition Team, 2011 – Present
- Graduate Academic Appeals Committee - Committee Chair, 2012 – Present
- Undergraduate Academic Appeals Committee, 2012 – Present - Committee Chair, 2014 – Present
- Computing Committee, 2011 – Present
- Search Committee for Department Chair, 2013 – 2014
- Workload Committee, 2014 – Present
- Master's Thesis Award Committee, 2012 – 2013
- EPIC Search Committee for Structural Engineering Faculty, 2013 – 2014, 2015 – 2016

- Society for Experimental Mechanics – Technical Division on Dynamics of Civil Structures

Select Publications and Presentations (Last Five Years):

1. Whelan, M.J., Ralston, A., and Weggel, D. (2016) "Blast Testing of Cold-Formed Steel Stud Wall Panels," *Journal of Performance of Constructed Facilities*, Vol. 30, No. 2, 04015008.
2. Ralston, A.D., Weggel, D.C., Whelan, M.J., and Fang, H. (2015) "Experimental and Numerical Investigations of Glass Curtain Walls Subjected to Low-Level Blast Loads," *International Journal of Computational Methods and Experimental Measurements*, Vol. 3, No. 2, 121-138.
3. Whelan, M.J. and Gangone, M.V. (2015) "Effect of Measurement Uncertainties on Strain-Based Damage Diagnostics for Highway Bridges," *Journal of Civil Structural Health Monitoring*, Vol. 5, No. 3, 321-335.
4. Kernicky, T., Whelan, M.J., Weggel, D., and Rice, C. (2015) "Structural Identification and Damage Characterization of a Masonry Infill Wall in a Full-Scale Industrial Building Subjected to Internal Blast Load," *Journal of Structural Engineering* Vol. 141, No. 1.
5. Whelan, M.J., Tempest, B., and Scott, D. (2015) "Post-Fire Nondestructive Evaluation of a Prestressed Concrete Double-Tee Joist Roof," *Journal of Performance of Constructed Facilities*, Vol. 29, No. 2, 04014055.
6. Whelan, M.J., Tempest, B., and Scott, D. (2014) "Influence of Fire Damage on the Modal Parameters of a Prestressed Concrete Double-Tee Joist Roof," *Structural Control and Health Monitoring* Vol. 21, No. 11, 1335-1346.
7. Gangone, M.V., Whelan, M.J., Janoyan, K.D., and Minnetyan, L. (2014) "Development of performance assessment tools for a highway bridge resulting from controlled progressive monitoring," *Structure and Infrastructure Engineering*, Vol. 10, No. 5, 551-567.
8. Kunwar, A., Jha, R., Whelan, M.J., and Janoyan, K.D. (2013) "Damage Detection in an Experimental Bridge Model using Hilbert-Huang Transform of Transient Vibrations," *Structural Control and Health Monitoring*, Vol. 20, No. 1, 1-15.
9. Gangone, M.V., Whelan, M.J., Janoyan, K.D., and Minnetyan, L. (2013) "Experimental Characterization and Diagnostics of the Early-Age Behaviour of a Semi-Integral Abutment FRP Deck Bridge," *Sensor Review*, Vol. 32, No. 4, 296-309.
10. Whelan, M.J. and Janoyan, K.D (2012) "Assessment of Simplified Linear Dynamic Analysis of a Multi-Span Skew Bridge on Steel-Reinforced Elastomeric Bearings," *Journal of Bridge Engineering*, Vol. 17, No. 1, 151-160.
11. Gangone, M.V., Whelan, M.J., and Janoyan, K.D. (2011). "Wireless Monitoring of a Multi-Span Bridge Superstructure for Diagnostic Load Rating and System Identification," *Computer-Aided Civil and Infrastructure Engineering*, Vol. 26, No. 7, 560-579.

Recent Professional Development Activities:

- PI, Guidelines for Prioritization of Bridge Replacement, Rehabilitation, and Preservation Projects, NCDOT, August 2015 – July 2017
- PI, Post-Blast Investigative Tools for Structural Forensics by 3D Scene Reconstruction and Advanced Simulation, National Institute of Justice, January 2015 – December 2016
- PI, First Phase Development of a Low-Cost, Portable, and Rapid Nondestructive Inspection Tool for Wood Distribution Poles, Duke Energy, January 2015 – May 2016
- Co-PI, Enabling Sustainable Civil Infrastructure Using Interactive Formal Analytics for Structural Health Diagnosis, National Science Foundation, October 2013 – September 2016
- Co-PI, Determination of Vertical Resistance for Sheet Pile Abutments, NCDOT, August 2013- August 2016