

# PETROS SIDERIS, Ph.D.

## Assistant Professor

Department of Civil, Environmental Architectural Engineering

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## EDUCATIONAL BACKGROUND

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- 2008-2012      Doctor of Philosophy (**Ph.D.**) in Civil Engineering (Structural and Earthquake Engineering Program)  
University at Buffalo, The State University of New York, Buffalo, NY, U.S.A.  
Dissertation Title: **“Seismic Analysis and Design of Precast Concrete Segmental Bridges”**  
Advisors: Professor Amjad J. Aref and Professor Andre Filiatrault      **GPA: 4.0/4.0**
- 2005-2008      Master of Science (**M.S.**) in Civil Engineering (Structural and Earthquake Engineering Program)  
University at Buffalo, The State University of New York, Buffalo, NY, U.S.A.  
Thesis Title: **“Seismic Behavior of Palletized Merchandise in Steel Storage Racks”**  
Advisor: Professor Andre Filiatrault      **GPA: 4.0/4.0**
- 2000-2005      Diploma in Civil Engineering (5-year program, Structural and Earthquake Engineering Cycle)  
National Technical University of Athens (NTUA), Athens, Greece  
Diploma Thesis Title: **“Nonlinear Inelastic Analysis of Bridges”**  
Advisor: Professor Vlasios Koumoussis      **GPA: 9.16/10**

## ACADEMIC EMPLOYMENT HISTORY

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- 2013–Present      **Assistant Professor**  
Department of Civil, Environmental and Architectural Engineering,  
University of Colorado – Boulder, Boulder, CO, U.S.A.
- 2012-2013      **Post-doctoral Research Fellow & Adjunct Lecturer**  
Department of Civil, Structural and Environmental Engineering,  
University at Buffalo, The State University of New York, Buffalo, NY, U.S.A.
- Summer 2012 &  
Fall 2012      **Adjunct Lecturer**  
Department of Mechanical and Aerospace Engineering,  
University at Buffalo, The State University of New York, Buffalo, NY, U.S.A.
- 2008-2012      **Graduate Research Assistant**  
Department of Civil, Structural and Environmental Engineering, University at Buffalo, The  
State University of New York, Buffalo, NY, U.S.A.
- Fall 2006      **Visiting Researcher**  
Department of Civil, Geological and Mining Engineering, Ecole Polytechnique, University of  
Montreal, Canada
- 2005-2007      **Teaching Assistant**  
Department of Civil, Structural and Environmental Engineering, University at Buffalo, The  
State University of New York, Buffalo, NY, U.S.A.
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## AWARDS AND HONORS

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- 2015            **2014 Outstanding Reviewer**, Journal of Structural Engineering, American Society of Civil Engineers (ASCE)
- 2014            **Travel Grant**, 10<sup>th</sup> US National Conference on Earthquake Engineering: Frontiers of Earthquake Engineering, Anchorage, AK, U.S.A. (July 21 – 25, 2014), U.S. Federal Emergency Management Agency (FEMA), U.S. Geological Survey (USGS), Pankow Foundation and Earthquake Engineering Research Institute (EERI)
- 2013            **Chair's Recognition Award**  
Academic achievements and significant contribution to the Department of CSEE.  
Department of Civil, Structural and Environmental Engineering (CSEE), University at Buffalo, The State University of New York
- 2011            **1<sup>st</sup> place Award**, 2011 CSEE Graduate Student Poster Competition  
Department of Civil, Structural and Environmental Engineering (CSEE), University at Buffalo, The State University of New York
- 2010            **Liu Huixian Earthquake Engineering Scholarship Award**  
Academic accomplishments in the field of earthquake engineering, The US-China Earthquake Engineering Foundation, USA, and The Huixian Earthquake Engineering Foundation, China
- 2010-2012     **Alexander S. Onassis Public Benefit Foundation Scholarship**  
Excellent academic performance and accomplishments, Ariona Hellas S.A. representing the Alexander S. Onassis Public Benefit Foundation, Athens, Greece
- 2010            **"2010 Paul J. Koessler Memorial Scholarship" Award**  
Outstanding academic achievement and active participation in student organizations and activities, Peace Bridge Authority and ASCE Buffalo Section
- 2010            **Travel Grant**, 9<sup>th</sup> US and 10<sup>th</sup> Canadian Conference on Earthquake Engineering: Reaching Beyond Borders, Toronto, Canada (July 25–29, 2010), Earthquake Engineering Research Institute and National Science Foundation
- 2009            **Travel Award**, 2009 EERI/WSSPC Annual Meeting, Salt Lake City (February 11–14, 2009), Earthquake Engineering Research Institute and Federal Emergency Management Agency
- 2008 and 2011   **Honorable Mention**, UB Engineering Graduate Student Poster Competition  
University at Buffalo, The State University of New York.
- 2008            **2<sup>nd</sup> place Award**, 2008 CSEE Graduate Student Poster Competition  
Department of Civil, Structural and Environmental Engineering (CSEE), University at Buffalo, The State University of New York
- 2007-2008     **SEESL Fellowship**, Structural Engineering and Earthquake Simulation Laboratory (SEESL)  
University at Buffalo, The State University of New York
- 2006-2010     **Bodossaki Foundation Scholarship**  
Excellent academic performance and accomplishments, Bodossaki Foundation, Athens, Greece
- 2005            **"Dimitrios, Konstantinos and Vasileios Kontodimos" Award**  
1<sup>st</sup> out of 300 students at the final (5<sup>th</sup>) year of studies (2004-2005)  
Department of Civil Engineering, National Technical University of Athens, Greece

- 2005                    **“Dimitrios Thomaidis” Award**  
Highest GPA (9.71/10) at the 9<sup>th</sup> semester of studies (Fall 2004)  
Department of Civil Engineering, National Technical University of Athens, Greece
- 2005                    Awarded with **Silver Medal of Prometheus Porfyros** – Official Symbol of NTUA  
Graduated 2<sup>nd</sup> out of 300 students  
Department of Civil Engineering, National Technical University of Athens, Greece
- 2005                    **“Ippokleidis Voyiatzopoulos” Award**  
Graduated with 2<sup>nd</sup> highest GPA (9.16/10)  
Department of Civil Engineering, National Technical University of Athens, Greece
- 2002-2004            **Excellent Academic Performance Awards (2)**  
Technical Chamber of Greece, Athens, Greece – Awarded for two consecutive academic years
- 2001-2004            **“Evaggelos Apergis” Scholarships (3)**  
Excellent Academic Performance, Awarded for three consecutive academic years  
Department of Civil Engineering, National Technical University of Athens, Greece
- 2000-2004            **Greek State Scholarships Foundation Scholarships (4)**  
Excellent Academic Performance during all years of his studies  
This scholarship was not available to students at the last year of their studies

## RESEARCH GRANTS

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### Awarded Grants

1. Hybrid Sliding-Rocking Bridges for Resilient Accelerated Bridge Construction (CMMI #1538585)  
PI: P. Sideris (CU-Boulder); Co-PI: A. Liel (CU-Boulder); Sponsor: National Science Foundation; Total Award Amount: \$394,531 (My share: \$255,000, 65%); Project Period: 9/1/2015 – 8/31/2018;
2. PSI Lab, Inc. – Large Pipe Connection Testing at Structures and Materials Testing Laboratory (SMTL)  
PI: P. Sideris (CU-Boulder); Sponsor: PSI Lab, Inc.; Total Amount: \$3,000; Project Period: 3/1/2015 – 03/01/2016
3. Structures and Materials Testing Laboratory (SMTL) Beautification Proposal  
by: P. Sideris (lead), Mija Hubler, Victor Saouma and Yunping Xi; Sponsor: CU’s College of Engineering and Applied Science; Total Amount: \$975; Project Period: Summer 2016
4. SMTL Green Initiative  
PI: D. Carpenter (SMTL engineer/manager) – Under the supervision of P. Sideris; Sponsor: Sustainable CU; Total Amount: \$1900; Project Period: AY 2014-15

## RESEARCH EXPERIENCE

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### University of Colorado at Boulder

#### **Thrust Area 1: Hybrid Sliding-Rocking (HSR) Bridges for Seismic Resilience and Sustainability (2013-Present) (NSF – CMMI #1538585)**

- Nonlinear modeling of HSR bridge members accounting for combined sliding-rocking joint responses and interactions between tendons and concrete segments; Gradient inelastic beam formulation to simulate damage; Integration of geometric nonlinearities; Upcoming dynamic laboratory tests on large-scale HSR columns (M. Salehi, Ongoing Ph.D. Dissertation, since Fall 2014)
- Life-cycle assessment of HSR bridge designs (J. Valigura, Ongoing Ph.D. Dissertation, since Fall 2016; Primary Advisor: A.B. Liel, Co-Advisor: P. Sideris)
- Capacity spectrum seismic design methodology for HSR bridge columns (S. Madhusudhanan, M.Sc., 2016); Effects of premature fracture of unbonded tendons on the seismic performance of bridges with rocking columns (B.

Bowman, M.Sc. Thesis, 2016); Performance assessment of HSR bridge columns under vehicular collisions via lumped mass-spring-dashpot vehicle models and finite element analyses (A. Sutherland, M.Sc., 2015)

Publications from Thrust Area 1: J4, J9, J10, 0, C3, C5, C6, C16, I1, I2, I3 (Based on past work, but completed at CU: J11, J12, J13, C7, C24, C25)

***Thrust Area 2: Seismic Damage Mitigation in Bridges using Novel Polymeric Materials (2014-Present)***

- Investigation of the mechanical properties of various polyurethanes via uniaxial testing under various strain rates, strain amplitudes and loading paths; Creep and relaxation testing; 3D visco-plastic material modeling; New uniaxial *visco-elastic softening visco-plastic* material model; Upcoming testing and modeling for temperature and humidity effects (M. Nikoukalam, Ongoing Ph.D. Dissertation, since Fall 2014)
- Development of bridge columns with polymeric damage-resistant segments; optimization of geometric and material segment properties via finite element analyses; Ongoing nonlinear dynamic analysis studies for entire bridges; Upcoming larger-scale tests of column designs (M. Nikoukalam, Ongoing Ph.D. Dissertation, since Fall 2014)

Publications from Thrust Area 2: J2, J7, C4, C15, C17, C21, C22

***Thrust Area 3: Mechanics-based Modeling of Softening Structural Systems (2014-Present)***

- Gradient inelastic beam theory and flexibility-based frame element formulation to eliminate strain localization phenomena and provide robust collapse predictions; Geometric nonlinearities within the element length; Collapse analysis of bridges and multi-story framed structures. (M. Salehi, Ongoing Ph.D. Dissertation, since Fall 2014)
- New predictor-corrector numerical continuation algorithm, entitled *Generalized Normal Flow Method with Online Step Control*, to improve accuracy and prevent overshooting and backward path-tracing of the numerical solution for systems exhibiting “snap-through” and “snap-back” response. Extension to path-following time-integration algorithms for dynamic analysis of nonlinear structures (M. Nikoukalam and M. Salehi, Ongoing Ph.D. Dissertations, since Fall 2014)

Publications from Thrust Area 3: J1, J3, J5, J8, 0, 0, C1, C18, C19, C20, C23

***Thrust Area 4: Energy Harvesting from Structural Vibrations in Civil Infrastructure Systems (2015-Present)***

- Novel strategy for structural design combining vibration mitigation and *energy harvesting* utilizing energy harvesting damping elements; Application for tall buildings; Existing work has resulted in a pending NSF proposal (G. Conroy, Ongoing M.Sc. Thesis, since Spring 2016)

***Other Research Work***

- Seismic performance assessment of reinforced concrete (RC) columns with partially debonded longitudinal reinforcement in the location of the plastic hinge as a means of reducing damage and increasing the deformation capacity of RC columns (M. Nikoukalam, Ongoing Ph.D. Dissertation, since Fall 2014)
- Investigation of large shake table designs in SMTL accounting for shake table dynamics, actuator control and hydraulics constraints (H. McElroy, M.Sc., 2015)
- Fragmentation theories for concrete damage in structural members (since Spring 2016, in collaboration with M. Hubler, Dept. of CEAE at CU-Boulder)
- Effects of aging and environmental conditions in the mechanical and damage properties of concrete and steel, and age-/environment-based seismic performance assessment of RC structures; Pending proposal to NIST and the Department of Commerce

Publications from Other Research Work: J6, 0, C2

**University at Buffalo – The State University of New York**

- Introduction of Hybrid Sliding-Rocking (HSR) Post-tensioned Segmental Concrete Bridges (P. Sideris, Ph.D. Dissertation, 2012)
- Seismic Behavior of Palletized Merchandise in Steel Storage Racks (P. Sideris, M.Sc., 2008)
- Dynamics and Control of Electromagnetically Actuated Harmonic Drives (In collaboration with T. Singh, Professor at Dept. of Mechanical and Aerospace Engineering at University at Buffalo, 2008-2010)

**PUBLICATIONS** (\* my advisees)

**Refereed Journal Papers**

- J1. Salehi, M.\* and Sideris, P. (2017), “A finite Strain Gradient inelastic Beam theory and a Corresponding Flexibility-Based Frame Element Formulation for Slender Softening Members”, *Computers and Structures* (Under Review).

- J2. Nikoukalam, M.T.\* and **Sideris, P.** (2017), “Sustainable Bridge Rocking Columns with Polyurethane Damage-Resistant End Joints and Replaceable Energy Dissipating Links”, *ASCE Journal of Bridge Engineering* (Under Review, completed 1<sup>st</sup> cycle).
- J3. **Sideris, P.**, Nikoukalam, M.T.\* and Salehi, M.T.\* (2017), “A Generalized Normal Flow Method with Online Step Controls for Pushover Analysis of Nonlinear Softening Structures”, *Engineering Structures Journal* (Under Review, completed 1<sup>st</sup> cycle).
- J4. Salehi, M.\* , **Sideris, P.** and Liel, A.B. (2017), “Numerical Simulation of Hybrid Sliding-Rocking (HSR) Columns subjected to Earthquake Excitation”, *ASCE Journal of Structural Engineering* (Under Review, completed 1<sup>st</sup> cycle).
- J5. Salehi, M.\* and **Sideris, P.** (2017), “A Refined Gradient Inelastic Flexibility-Based Frame Element Formulation for Members Subjected to Arbitrary Loading”, *ASCE Journal of Engineering Mechanics* (Under Review, completed 1<sup>st</sup> cycle).
- J6. Nikoukalam M.T.\* and **Sideris, P.** (2016), “Experimental Performance Assessment of Nearly Full-Scale Reinforced Concrete Columns with Partially Debonded Longitudinal Reinforcement”, *ASCE Journal of Structural Engineering* (In press).
- J7. Nikoukalam M.T.\* and **Sideris, P.** (2016), “Low-Damage Post-Tensioned Segmental Bridge Columns with Flexible End Joints for Seismic Accelerated Bridge Construction”, *TRR - Journal of the Transportation Research Board* (In press, DOI:10.3141/2592-17).
- J8. **Sideris, P.** and Salehi, M.\* (2016), “A Gradient Inelastic Flexibility-Based Frame Element Formulation”, *ASCE Journal of Engineering Mechanics*, 142(7), 04016039.
- J9. **Sideris, P.** (2015), “Nonlinear Quasi-static Analysis of Hybrid Sliding-Rocking Bridge Columns Subjected to Lateral Loading”, *Engineering Structures Journal*, 101, 125-137.
- J10. **Sideris, P.**, Aref, A. and Filiatrault, A. (2015), “Experimental Seismic Performance of a Hybrid Sliding-Rocking Bridge for Various Specimen Configurations and Seismic Loading Conditions”, *ASCE Journal of Bridge Engineering*, 20(11), 04015009.
- J11. **Sideris, P.**, Aref, A. and Filiatrault, A. (2014), “Effects of Anchorage Hardware on the Cyclic Tensile Response of Unbonded Monostrands”, *PCI Journal*, 59(6), 60-77.
- J12. **Sideris, P.**, Aref, A. and Filiatrault, A. (2014), “Quasi-Static Cyclic Testing of a Large-Scale Hybrid Sliding-Rocking Segmental Column with Slip-Dominant Joints”, *ASCE Journal of Bridge Engineering*, 19(10), 04014036.
- J13. **Sideris, P.**, Aref, A. and Filiatrault, A. (2014), “Large-scale Seismic Testing of a Hybrid Sliding-Rocking Post-Tensioned Segmental Bridge System”, *ASCE Journal of Structural Engineering*, 140(6), 04014025.
- J14. **Sideris, P.** and Filiatrault, A. (2014), “Seismic Response of Squat Rigid Bodies on Inclined Planes with Rigid Boundaries”, *ASCE Journal of Engineering Mechanics*, 140(1): 149–158.
- J15. **Sideris, P.** and Filiatrault, A., Leclerc, M. and Tremblay, R. (2010), “Experimental Investigation on the Seismic Behavior of Palletized Merchandise in Steel Storage Racks”, *Earthquake Spectra*, 26 (1): 209–233.

#### Conference Papers (‡ presenter) (§ refereed paper)

- C1. Salehi, M.\* , **Sideris, P.‡** and Liel, A. B. (2017), “Seismic Collapse Analysis of RC Framed Structures using the Gradient Inelastic Force-Based Element Formulation”, *16<sup>th</sup> World Conference on Earthquake Engineering*, January 9 – 13, Santiago, Chile.§.
- C2. Nikoukalam, M.T.\* and **Sideris, P.‡** (2017), “Experimental Performance Assessment of Nearly Full-Scale Reinforced Concrete Columns with Partially Debonded Longitudinal Reinforcement”, *16<sup>th</sup> World Conference on Earthquake Engineering*, January 9 – 13, Santiago, Chile.§.
- C3. Salehi, M.\* and **Sideris, P.‡** (2016), “Nonlinear Dynamic Analysis Of Hybrid Sliding-Rocking Bridges”, *2016 ASCE Geotechnical and Structural Engineering Congress*, American Society of Civil Engineers, February 14 – 17, 2016, Phoenix, Arizona, U.S.A.
- C4. Nikoukalam, M.T.\* , and **Sideris, P.‡** (2016), “Low-Damage Post-Tensioned Segmental Bridge Columns with Flexible End Joints for Seismic Accelerated Bridge Construction”, *2016 TRB Meeting*, Transportation Research Board of the National Academies, January 10 – 14, 2016, Washington, DC. U.S.A.
- C5. Madhusudhanan, S.\* , and **Sideris, P.‡** (2015), “Direct Displacement-based Seismic Design and Validation for Hybrid Sliding-Rocking Bridge Substructure Systems”, *2015 Structures Congress*, American Society of Civil Engineers (ASCE), April 23 – 25, 2015, Portland, OR, U.S.A.
- C6. Madhusudhanan, S.\* and **Sideris, P.‡**. (2015), “A Capacity Spectrum Design Approach For Hybrid Sliding-rocking post-tensioned Segmental Bridges”, *2015 (94<sup>th</sup>)TRB Annual Meeting*, Transportation Research Board of the National Academies, January 11 – 15, 2015, Washington, DC. U.S.A. §

- C7. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2014), “Nonlinear Analysis of Hybrid Sliding-Rocking Post-Tensioned Segmental Bridges”, *Tenth U.S. National Conference on Earthquake Engineering (10<sup>th</sup> NCEE) – Frontiers of Earthquake Engineering*, July 21 – 25, 2014, Anchorage, AK, U.S.A.<sup>§</sup>
- C8. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2013), “Experimental Investigation of the Seismic Performance of Hybrid Sliding-Rocking Post-Tensioned Segmental Bridges”, *Seventh National Seismic Conference on Bridges & Highways*, May 20 – 22, 2013, Oakland, CA, U.S.A.
- C9. **Sideris, P.**, Aref, A. and Filiatrault, A.<sup>‡</sup> (2012), “Hybrid Sliding-Rocking Post-Tensioned Segmental Bridges: Large-Scale Quasi-Static and Shake Table Testing”, *15<sup>th</sup> World Conference on Earthquake Engineering*, September 24 – 28, 2012, Lisbon, Portugal.<sup>§</sup>
- C10. **Sideris, P.**<sup>‡</sup>, Anagnostopoulou, M., Aref, A. and Filiatrault, A. (2010), “Investigation of the Seismic Response of Precast Segmental Bridges”, *8<sup>th</sup> International Conference on Short & Medium Span Bridges 2010*, August 3 – 6, 2010, Niagara Falls, Ontario, Canada.
- C11. **Sideris, P.**<sup>‡</sup>, Anagnostopoulou, M., Aref, A. and Filiatrault, A. (2010), “Seismic Performance of Precast Segmental Bridges”, *9<sup>th</sup> US National and 10<sup>th</sup> Canadian Conference on Earthquake Engineering: Reaching Beyond Borders*, July 25 – 29, 2010, Toronto, Canada.<sup>§</sup>
- C12. **Sideris, P.**<sup>‡</sup> and Filiatrault, A. (2009), “Dynamic Analysis of Rigid Bodies on Inclined Plane Surfaces: Application to Prediction of Merchandise Response in Steel Storage Racks under Earthquake Excitation”, *COMPDYN 2009, ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering*, M. Papadrakakis, N.D. Lagaros, M. Fragiadakis (eds.), June 22–24, 2009, Rhodes, Greece.
- C13. **Sideris, P.**<sup>‡</sup> and Filiatrault, A., Leclerc, M. and Tremblay, R. (2008), “Experimental Performance Evaluation of Inclined Shelving for Steel Pallet Type Storage Racks”, *14<sup>th</sup> World Conference on Earthquake Engineering*, October 12 – 17, 2008, Beijing, China.<sup>§</sup>
- C14. Aref, A.J.<sup>‡</sup>, Warn, G.P., **Sideris, P.** and Filiatrault, A. (2008), “Pre-Fabricated Bridge Superstructures”, *The 6<sup>th</sup> National Conference on Bridges & Highways*, July 27 – 30, 2008, Charleston, South Carolina, U.S.A.

#### Conference Presentations (<sup>‡</sup> presenter)

- C15. Nikoukalam, M.T.<sup>\*\*</sup> and **Sideris, P.** (2017), “Performance Assessment of Bridges with Polyurethane Damage-Resistant End Column Segments under Extreme Seismic Effects”, *EMI 2017 Engineering Mechanics Conference*, June 4 – 7, 2017, University of California at San Diego (UCSD), U.S.A (Abstract submitted).
- C16. Salehi, M.<sup>\*\*</sup>, **Sideris, P.** and Liel, A.B. (2017), “Seismic Performance Assessment of Hybrid Sliding-Rocking Bridges of Various Designs under Different Loading Conditions”, *EMI 2017 Engineering Mechanics Conference*, June 4 – 7, 2017, University of California at San Diego (UCSD), U.S.A (Abstract submitted).
- C17. Nikoukalam, M.T.<sup>\*\*</sup> and **Sideris, P.** (2017), “Softening Visco-elasto-plastic Response of Polyurethanes for Damage-Resistant Structures: Experimental Characterization and Constitutive Modeling”, *EMI 2017 Engineering Mechanics Conference*, June 4 – 7, 2017, University of California at San Diego (UCSD), U.S.A (Abstract submitted).
- C18. Salehi, M.\* and **Sideris, P.**<sup>‡</sup> (2017), “Simulation of Structural Softening and Collapse in Reinforced Concrete Structures using a Finite-Strain Gradient-Inelastic Force-Based Element Formulation”, *EMI 2017 Engineering Mechanics Conference*, June 4 – 7, 2017, University of California at San Diego (UCSD), U.S.A (Abstract submitted).
- C19. Salehi, M.<sup>\*\*</sup> and **Sideris, P.** (2017), “A Path-Following Variable-time-step Implicit Time Integration Method for Dynamic Analysis of Nonlinear Structures”, *EMI 2017 Engineering Mechanics Conference*, June 4 – 7, 2017, University of California at San Diego (UCSD), U.S.A (Abstract submitted).
- C20. Salehi, M.\*, **Sideris, P.**<sup>‡</sup> and Liel, A. B. (2017), “Robust Modeling of Strain Softening and Collapse of RC Frames and Bridges using the Gradient Inelastic Beam-Column Element Formulation”, *2017 Structures Congress*, American Society of Civil Engineers (ASCE), April 6 – 8, 2017, Denver, CO, U.S.A (Abstract accepted).
- C21. Nikoukalam, M.T.<sup>\*\*</sup> and **Sideris, P.** (2015), “Seismic Accelerated Bridge Construction with Low-Damage Segmental Bridge Columns incorporating Damage-Resistant Joints”, *2015 National Accelerated Bridge Construction Conference*, December 7 – 8, 2015, Miami, FL, U.S.A.
- C22. Nikoukalam, M.T.<sup>\*\*</sup> and **Sideris, P.** (2015), “Low-Damage Post-Tensioned Segmental Bridge Columns with Flexible End Joints for Seismic Accelerated Bridge Construction and Retrofit”, *2015 ACI Meeting*, American Concrete Institute (ACI), November 8 – 12, 2015, Denver, CO, U.S.A. (Invited Presentation by Prof. M. Elgawady).

- C23. Salehi, M.<sup>\*\*</sup> and **Sideris, P.** (2015), “A Nonlocal Flexibility-Based Frame Element for Seismic Analysis of Reinforced Concrete Structures”, *2015 ACI Meeting*, American Concrete Institute (ACI), November 8 – 12, 2015, Denver, CO, U.S.A.
- C24. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2014), “Experimental Seismic Performance Evaluation of a Large-Scale Hybrid Sliding-Rocking Post-Tensioned Segmental Bridge”, *2014 Structures Congress*, American Society of Civil Engineers (ASCE), April 3 – 5, 2014, Boston, MA, U.S.A.
- C25. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2014), “Seismic Design of Hybrid Sliding-Rocking (HSR) Bridges”, *2014 (93<sup>rd</sup>) TRB Annual Meeting*, Transportation Research Board, Washington, DC, U.S.A. (Invited presentation by Dr. M. Lee Marsh, Session Moderator).
- C26. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2013), “Quasi-Static Cyclic Testing of Hybrid Post-Tensioned Segmental Bridge Piers with Slip-Critical Joints”, *2013 Structures Congress – Bridging Your Passion with Your Profession*, American Society of Civil Engineers (ASCE), May 2 – 4, 2013, Pittsburgh, PA, U.S.A.
- C27. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2011), “Hybrid Post-tensioned Segmental Bridges: Large-scale Quasi-Static and Shake Table Testing”, *NEES & MCEER Annual Meeting – Quake Summit – Earthquake & Multi-Hazards Resilience: Progress & Challenges*, June 9 – 11, 2011, Buffalo, NY, U.S.A.
- C28. **Sideris, P.**<sup>‡</sup>, Aref, A. and Filiatrault, A. (2010), “A Robust Algorithm for Tracing Equilibrium Paths in Nonlinear Structural Analysis Problems: Generalized Normal Flow Method with Direct Step-Size Control”, *EMI 2010 Engineering Mechanics Conference*, August 8 – 11, 2010, Los Angeles, U.S.A.

### Workshops

- W1. **Sideris, P.**, Anagnostopoulou, M., Aref, A. and Filiatrault, A. (2009), “Analytical and Experimental Investigation of Precast Bridge Systems”, *Proceedings of the Special International Workshop on Seismic Connection Details for Segmental Bridge Construction – Technical Report MCEER-09-0012*, July 22-24, 2009, Seattle, Washington, U.S.A.

### Book Chapters

- B1. **Sideris, P.**, Aref, A. and Filiatrault, A. (2009), “Development of a Simplified Element for Seismic Analysis of Segmental Bridges”, Book Chapter in *Trends in Civil and Structural Engineering Computing*, 10:209–223, B.H.V. Topping, L.F. Costa Neves, R.C. Barros, (eds.), Saxe-Coburg Publications, Stirlingshire, U.K. DOI: 10.4203/csets.22.10.

### Books / Book Chapters in Preparation

- B2. Aref, A, Lee, G.C., Filiatrault, A, Chen, S. and **Sideris, P.**, (2017), “Precast Concrete Segmental Components and Systems for Accelerated Bridge Construction in Seismic Regions, Part 1: Bridge Structural Systems Developed at MCEER”, Technical Monograph, ordered by the Federal Highway Administration of the U.S. Department of Transportation (Research Contract #: DTFH61-07-R-00121), Washington DC 20590, U.S.A.

#### Individual Chapters:

- **Sideris, P.**, Aref, A. and Filiatrault, A. (2017), “Chapter 2: Precast Concrete Components and Systems in ABC”
  - **Sideris, P.**, Aref, A. and Filiatrault, A. (2017), “Chapter 3: Seismic Analysis and Design Principles”
  - **Sideris, P.**, Aref, A. and Filiatrault, A. (2017), “Chapter 4: Proposed Hybrid Sliding-Rocking Post-Tensioned Segmental Bridge Systems”
- B3. Aref, A, Lee, G.C., Filiatrault, A, Chen, S. and **Sideris, P.**, (2017), “Precast Concrete Segmental Components and Systems for Accelerated Bridge Construction in Seismic Regions, Part 2: Review of Bridge Structural Systems in Literature and Bridge Information System developed at MCEER”, Technical Monograph, ordered by the Federal Highway Administration of the U.S. Department of Transportation (Research Contract #: DTFH61-07-R-00121), Washington DC 20590, U.S.A.
- #### Individual Chapters:
- **Sideris, P.**, Aref, A. and Filiatrault, A. (2017), “Chapter 3: Connections in Precast Concrete Bridge Construction”

**Poster Presentations**

- P1. **Sideris, P.**, Aref, A. and Filiatrault, A. (2011), “Seismic Performance of Precast Concrete Bridges Incorporating Hybrid Post-Tensioned Segmental Members”, Poster Presentation, *2011 EERI Annual Meeting: Earthquakes without Borders*, Earthquake Engineering Research Institute, February 9–12, 2011, San Diego, CA, U.S.A.
- P2. **Sideris, P.**, Aref, A. and Filiatrault, A. (2011), “Hybrid Post-Tensioned Precast Concrete Segmental Bridges”, Poster Presentation, *2011 CSEE Graduate Poster Competition*, Department of Civil, Structural and Environmental Engineering, University at Buffalo, The State University of New York, Buffalo, U.S.A.
- P3. **Sideris, P.** and Filiatrault, A. (2008), “Seismic Analysis of Palletized Merchandise in Steel Storage Racks”, Poster Presentation at the UB Engineering Graduate Student Poster Competition, University at Buffalo, The State University of New York Buffalo, U.S.A.
- P4. **Sideris, P.** and Filiatrault, A. (2009), “Investigation of Seismic Response of Palletized Merchandise in Steel Storage Racks”, Poster Presentation, 2009 EERI/WSSPC Annual Meeting, Earthquake Engineering Research Institute and Federal Emergency Management Agency, February 11–14, 2009, Salt Lake City, UT, U.S.A.

**Technical Reports**

- R1. **Sideris, P.** and Filiatrault, A. (2014), “Seismic Collapse Analysis of Cantilever Rack Systems”, Technical Report, Prepared for MHI, 8720 Red Oak Blvd. Suite 201, Charlotte, NC 28217.
- R2. **Sideris, P.** (2012), “Seismic Analysis and Design of Precast Concrete Segmental Bridges”, *Ph.D. Dissertation in Civil Engineering*, University at Buffalo, The State University of New York, Buffalo, U.S.A.
- R3. Brown, B., **Sideris, P.**, Singh, T., (2009), “CoDE Lab: WARP Motor Dynamic Modeling”, *Technical Report*, Control, Dynamics & Estimation Laboratory (CoDE Lab), University at Buffalo, The State University of New York, Buffalo, U.S.A.
- R4. **Sideris, P.** (2008), “Seismic Behavior of Palletized Merchandise in Steel Storage Racks”, *Master of Science Thesis in Civil Engineering*, University at Buffalo, The State University of New York, Buffalo, U.S.A.
- R5. **Sideris, P.** (2005), “Nonlinear Inelastic Analysis of Bridges”, *Diploma Thesis in Civil Engineering*, Department of Civil Engineering, National Technical University of Athens, Athens, Greece (in Greek).

**INVITED TALKS**

- I1. **Sideris, P.** (2015), “Seismically Resilient Systems for Accelerated Bridge Construction”, (Invited by Prof. John McCartney), Department of Structural Engineering, University of California – San Diego, San Diego, U.S.A. (November 2, 2015).
- I2. **Sideris, P.** (2014), “Development of Innovative Seismic-Resistant Bridge Systems for Accelerated Construction”, Class of “Prestressed Concrete” (Invited by Prof. Pinar Okumus), Department of Civil, Structural and Environmental Engineering, University at Buffalo, The State University of New York, Buffalo, U.S.A. (April 17, 2014).
- I3. **Sideris, P.** (2014), “Development of Innovative Seismic-Resistant Bridge Systems for Accelerated Construction”, Student Chapter of Earthquake Engineering Research Institute at University of Colorado at Boulder, Boulder, CO, U.S.A. (March 14, 2014).
- I4. **Sideris, P.** (2013), “Hybrid Sliding-Rocking Post-tensioned Segmental Bridges in Seismic Regions”, School of Civil and Construction Engineering, Oregon State University, Corvallis, OR, U.S.A. (April 2, 2013).
- I5. **Sideris, P.** (2013), “Hybrid Sliding-Rocking Post-tensioned Segmental Bridges in Seismic Regions”, Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder, Boulder, CO, U.S.A. (March 19, 2013).
- I6. **Sideris, P.** (2012), “Hybrid Sliding-Rocking Precast Concrete Segmental Bridges in Seismic Regions”, *Bridge Engineering Guest Speaker Series*, Multidisciplinary Center for Earthquake Engineering Research (MCEER) and Department of Civil, Structural and Environmental Engineering, University at Buffalo, The State University of New York, Buffalo, U.S.A. (September 17, 2012).
- I7. **Sideris, P.** (2011), “Hybrid Sliding-Rocking Post-Tensioned Segmental Bridges in Seismic Regions”, *Canadian Society for Civil Engineering Special Seminar*, Department of Civil Engineering and Applied Mechanics, McGill University, Montreal, Canada (November 25, 2011).
- I8. **Sideris, P.** (2011), “Hybrid Sliding-Rocking Post-Tensioned Segmental Bridges for Seismic Applications”, *Dean’s Advisory Council*, School of Engineering and Applied Sciences, University at Buffalo, The State University of New York, Buffalo, U.S.A. (September 23, 2011).



## TEACHING EXPERIENCE

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### Courses taught at the University of Colorado at Boulder:

**CVEN 2121 – Analytical Mechanics (Statics)** (Spr. '14, Spr. '15, Fall '15, Spr. '16, Fall '16)

Undergraduate course that focuses on the fundamentals of static equilibrium for two- and three-dimensional configurations.

Enrollment: 105 (Fall '16), 38 (Spr. '16), 120 (Fall '15), 52 (Spr. '15), 45 (Spr. '14)

**CVEN 5111 – Structural Dynamics** (Fall '13, Fall '15, Fall '16)

Graduate course that focuses on the response of single- and multi-degree of freedom structures subjected to harmonic, impulsive and arbitrary loads (including earthquake excitation).

Major contributions: Developed electronic notes/presentations; introduced topics on supplemental (non-classical) damping of structures, uniaxial plasticity modeling, computer programming and advanced numerical methods for applications in structural dynamics; Integrated large-specimen testing using the Structures and Materials Testing Laboratory.

Enrollment: 22 (Fall '16), 20 (Fall '20), 21 (Fall '13)

**CVEN 5835 – Special Topics: Experimental Methods in Structural Engineering** (Fall '14, Spr. '17)

New graduate course introduced by P. Sideris. This course focuses on the design and execution of experimental studies as well as interpretation of the experimental data. This is an *interdisciplinary* course that combines hands-on experimental work with structural mechanics and dynamics, control theory, signal processing, electrical circuits, and system identification techniques. Topics covered include similitude analysis (modeling and dimensional analysis), measurement systems and instrumentation, test planning (design and implementation, test protocols), loading systems (actuators, shake tables), data acquisition, testing techniques (quasi-static, dynamic, pseudo-dynamic, hybrid), data processing (filtering in time/frequency domain, error analysis), and structural system identification (time- and frequency-domain methods).

Enrollment: 14 (Fall '14)

**CVEN 4899 – Civil Engineering Senior Project Design** (Spr. '17)

Undergraduate course that provides students the opportunity to “practice their profession” in a simulated real world setting. focuses on the fundamentals of static equilibrium for two- and three-dimensional configurations.

Co-instructed with Dr. M. Morris, Dr. S. Dashti and Dr. R. Balaji

### Courses taught at the University at Buffalo – The State University of New York:

**EAS 207 – Statics** (Spr. '13)

Undergraduate course that focuses on the fundamentals of static equilibrium for two- and three-dimensional configurations. Enrollment: 133 students (co-instructed with *Dr. Stuart Chen, Head Instructor*)

**ADV 101 – Engineering Advisement for Statics** (Spr. '13 – Jan/Feb)

Review seminar course of the EAS 207 – Statics. All topics included in the original EAS 207 course are covered in a single-month period. Enrollment: 170 students (co-instructed with *Dr. Gary Dargush*)

**EAS 209 – Mechanics of Solids** (Fall. '12)

Undergraduate course that focuses on the mechanical behavior of deformable bodies under various types of loading. Enrollment: 87 students

**MAE 376 – Applied Mathematics for Mechanical and Aerospace Engineers** (Summer '12 & Fall. '12)

Undergraduate course that focuses on formulating and solving engineering problems using computational methods. Enrollment: 27 students (Summer 2012) and 187 (Fall 2012, co-instructed with *Dr. Ehsan T. Esfahani*)

### Teaching Assistant at the University at Buffalo – The State University of New York:

Spring 2009, 2010	<b>CIE 619 – Earthquake Engineering and Structural Dynamics II</b> (Graduate Course)
Spring 2009	<b>CIE 626 – Structural Control</b> (Graduate Course)
Spring 2007	<b>EAS 209 – Mechanics of Solids</b> (Undergraduate Course)
Fall 2006	<b>CIE 429 – Reinforced Concrete Design</b> (Undergraduate Course)
Spring 2006	<b>EAS 208 – Dynamics</b> (Undergraduate Course)
Fall 2005	<b>EAS 207 – Statics</b> (Undergraduate Course)

**Other Teaching Experiences:**

- Fall 2015      **Faculty Teaching Excellence Program**, University of Colorado – Boulder
- Summer 2012      **Strategies for Effective Teaching** (August 17, 2012), 2012 Conference for Future Faculty and Teaching Assistants, *Part of the 2012 Future Faculty Workshop*, Sponsored by the Office of the Vice Provost for Faculty Affairs & the Teaching and Learning Center, University at Buffalo – The State University of New York
- Specific sections included:
- Common classroom problems
  - Ten commandments of effective teaching
  - Active learning techniques
  - The power of syllabus
  - Tips for teaching large classes
  - How to talk in class: Discussion and dialogue techniques that support learning in university classroom
  - The four Es of teaching: How to jump-start learning in your classroom

**STUDENT MENTORING****Ongoing Dissertation Primary Advisor, University of Colorado at Boulder**

- Fall 2014 – Present      **Mohammad Nikoukalam**, “Developing Low-damage Segmental Bridge Columns with Polyurethane End Segments and Replaceable Energy Dissipating Links via Advanced Modeling Techniques and Large-scale Experimental Explorations”, Ph.D. Dissertation.
- Fall 2014 – Present      **Mohammad Salehi**, “Nonlinear Simulation and Experimental Assessment of Hybrid Sliding-Rocking Bridges under Seismic Hazards”, Ph.D. Dissertation.

**Ongoing Dissertation Co-Advisor, University of Colorado at Boulder**

- Fall 2016 – Present      **Jakub Valigura**, “Life-cycle Assessment of Hybrid Sliding-Rocking Bridges”, Ph.D. Dissertation. Primary Advisor: Abbie Liel; Co-Advisor: Petros Sideris

**Ongoing Thesis Primary Advisor, University of Colorado at Boulder**

- Fall 2015 – Present      **Gregory Conroy**, “Design of Tall Buildings for Energy Harvesting and Vibration Mitigation”, M.Sc. Thesis.

**Completed Dissertation/Thesis/Project Primary Advisor, University of Colorado at Boulder**

- Summer 2016      **Sreenivas Madhusudhanan**, “Capacity Spectrum Design Approach for Hybrid Sliding-Rocking Post-tensioned Segmental Bridges”, M.Sc. Thesis.
- Spring 2016      **Brandon Bowman**, “Modeling of Post-tensioned Rocking Bridge Columns”, M.Sc. Thesis. (now at *KL&A, Inc.*)
- Fall 2015      **Harold McElroy**, “Design of a Large-scale Earthquake Simulator at the University of Colorado – Boulder”, M.Sc. Report (now at *CTL Group*)
- Fall 2015      **Alexander Sutherland**, “Effects of Vehicular Collision on Hybrid Sliding-Rocking (HSR) Bridge Columns”, M.Sc. Report. (now at *CH2M*)
- Summer 2015      **Michael Kania**, “Incremental Dynamic Analyses on a Highway Overcrossing”, M.Sc. Report. (now at *Parsons*)

**Other Advising Work, University of Colorado at Boulder**

- 2014-Present      **Earn-Learn Apprenticeship Program Supervisor**, Structures and Materials Testing Laboratory, University of Colorado at Boulder
- Supervised:
- Joseph Coulombe, Undergraduate student (Fall 2016)
  - Jon Schneck, Undergraduate student (Spring & Summer 2016)

- Tushar Jain, Graduate student (Fall 2015)
- Felipe Raso Jamel Edim, Undergraduate student (Summer 2015, exchange Brazilian student)
- Alexander Sutherland, Graduate student (Fall 2014 – Spring 2015)
- Jessica Scanlon, Undergraduate student (Spring 2014)
- Casey Jongewaard, Undergraduate student (Spring 2014)
- Vishwa Beesam, Graduate student (Spring 2014)
- Sreenivas Madhusudhanan, Graduate student (Spring 2014)

2014 &amp; 2017

**Advising via International Student Exchange Programs**

- *Miquel Angel Serra Moll* (Spring 2017)  
3<sup>rd</sup> year Undergraduate student from UPC - Polytechnic University of Catalonia, Spain.  
Received fellowship from the **Balsells Mobility Program** of the University of Colorado – Boulder.
- *Eloy Asensio De Lucas* (Spring 2014)  
Doctoral Visiting Scholar from Eduardo Torroja Institute for Construction Sciences, Spain.  
Received fellowship from the **Spanish Personnel Research Training Program** of the Ministry of Economy and Competitiveness.  
Co-advised with Prof. Y. Xi

Fall 2015

**Mentored undergraduate students to develop video on Earthquake Effects for Curiosity Machine**

University of Colorado – Boulder

Curiosity Machine ([www.curiositymachine.org](http://www.curiositymachine.org)) is a forum for scientists and engineers to teach students how to create and learn through hands on challenges and experiments. In this video, undergraduate students explain earthquake effects using wave propagation concepts.

**PROFESSIONAL SERVICE outside the UNIVERSITY OF COLORADO – BOULDER****Journal Paper Reviewer**

2016-Present	<i>Journal of Building Engineering (Elsevier)</i>
2016-Present	<i>Transportation Research Record (TRR), Journal of the Transportation Research Board</i>
2016-Present	<i>Journal of Earthquake Engineering (Taylor &amp; Francis)</i>
2016-Present	<i>ASCE Natural Hazards Review</i>
2015-Present	<i>Earthquake Engineering and Engineering Vibration (Springer)</i>
2013-Present	<i>ASCE Journal of Bridge Engineering</i>
2013-Present	<i>ASCE Journal of Engineering Mechanics</i>
2013-Present	<i>Engineering Structures Journal</i>
2012-Present	<i>ASCE Journal of Structural Engineering</i>

**Proposal Reviewer**

2015	<i>U.S. National Science Foundation</i>
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**Professional Committee Work**

2016-Present	<i>ASCE/SEI Performance-Based Design for Structures</i> (currently chaired by Oh-Sung Kwon), American Society of Civil Engineers (ASCE), U.S.A. (Committee Member)
2014-Present	<i>TRB Committee on Seismic Design and Performance of Bridges (AFF50)</i> Transportation Research Board <ul style="list-style-type: none"> <li>• Committee Member, 2015 – Present (currently chaired by Elmer Marx, Alaska DOT&amp;PF)</li> <li>• Committee Friend, 2014 – 2015 (chaired by Michael D. Keever, California DOT)</li> </ul>
2013-Present	<i>ASCE/SEI Seismic Effects Committee</i> (currently chaired by Kevin Mackie), American Society

of Civil Engineers (ASCE), U.S.A. (Committee Member)

### Technical Sessions in Conferences – Organizer/Moderator

- 2017 ***Challenges in Modeling Collapse of Reinforced Concrete Structures*** (Accepted)  
 2017 Structures Congress, April 6-8, 2017, Denver CO, U.S.A.  
 Sponsored by: *Seismic Effects Committee & Joint ACI-ASCE Committee on Finite Element Analysis of RC Structures*  
 Organized by: Petros Sideris (Chair) and Sashi Kunnath (Co-chair, UC-Davis)
- 2015 ***Innovative Low-Damage Bridge Systems for Accelerated Construction in Seismic Regions***,  
 2015 Structures Congress, April 23 – 25, 2015, Portland, OR, U.S.A  
 Sponsored by: *Seismic Effects Committee & Performance-Based Design of Structures Committee*  
 Organized by: Petros Sideris (Chair)

### Committee Work at University at Buffalo – SUNY

- 2009-2010 Grievance Committee, School of Engineering and Applied Sciences, University at Buffalo, The State University of New York

## PROFESSIONAL SERVICE at the UNIVERSITY OF COLORADO – BOULDER

### Structures and Materials Testing Laboratory (SMTL)

- 2013-Present ***Director***, Structures and Materials Testing Laboratory, Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder

### University Committee Work

- 2014-Present ***Facilities Committee*** (chaired by Prof. Ron Pak), Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder
- 2013-2014 ***Graduate Committee*** (chaired by Prof. John Crimaldi), Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder
- 2013-2016 ***SESM Faculty Search Committee***, Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder

### Dissertation/Thesis/Comprehensive Exam Committee Member

- Fall 2016 ***Cody Harrington***, “Advancement of Performance-Based Earthquake Engineering for RC Frame Buildings: Application to Retrofit Design and Consideration of Vertical Ground Motions”, Ph.D. Dissertation, *Served as Ph.D. Dissertation Committee Member*.  
 Primary Advisor: Prof. A.B. Liel
- Spring 2016 ***Matthew Rankins***, “Mechanical and Physical Property Characterization of Ordinary Portland Cement Stabilized Sand”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
 Primary Advisor: Prof. W. Srubar
- Spring 2016 ***Carson Brown***, “Physical And Mechanical Characterization of Fly Ash- and Metakaolin-Based Alkali-Activated Cement-Stabilized Sand”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
 Primary Advisor: Prof. W. Srubar
- Spring 2016 ***Shahlaa Al Wakeel***, “Impact of material microstructure on macro-scale fracture behaviour”, Ph.D. Dissertation in progress, *Served as Comprehensive Examination Committee Member*.  
 Primary Advisor: Prof. M. Hubler

- Summer 2015 **Mahmud M. Shanina**, “Assessment of Anisotropy Effects on the Thermal Volume Change of Unsaturated Bonny Silt Using a Thermo-Hydro-Mechanical True-Triaxial Cell”, Ph.D. Dissertation, *Served as Ph.D. Dissertation Committee Member*.  
Primary Advisor: Prof. J. McCartney
- Spring 2015 **Travis A. Marcilla**, “Techniques for Modeling and an Interaction Study of Shear-Wall Frame Systems”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. A. Liel
- Spring 2015 **Kyle Prusinski**, “Automated Non-Linear Pushover Analyses of Reinforced Concrete Structures”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. V. Saouma
- Spring 2015 **Sean A. Hinchcliffe**, “Feasibility Study of Prestressed Natural Fiber-Reinforced Polylactic Acid (PLA) Composite Materials”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. W. Srubar
- Spring 2015 **Kristen Hess**, “Mechanical and Moisture Absorption Properties of Biobased Gelatin Films and Composites for Construction Applications”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. W. Srubar
- Spring 2015 **Cody Harrington**, “Assessment of Seismic Risk Reductions to Reinforced Concrete Moment Frame Structures through Retrofit Design”, Ph.D. Dissertation in progress, *Served as Comprehensive Examination Committee Member*.  
Primary Advisor: Prof. A. Liel
- Fall 2014 **Dania Hussain**, “Reliability-based Determination of Snow Loads”, M.Sc. Report, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. A. Liel
- Summer 2014 **Emily D. Elwood**, “Fuzzy Classification and Fuzzy Pattern Recognition of Seismic Damage to Concrete Structures”, Ph.D. Dissertation, *Served as Ph.D. Dissertation Committee Member*.  
Primary Advisor: Prof. R. Corotis
- Summer 2014 **Julio Cesar Morelos III**, “Nonlinear Seismic Modeling and Sensitivity Analysis based on the 2010 University of California, San Diego Full-Scale Bridge Bent Experiment”, M.Sc. Report, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. A. Liel
- Summer 2014 **David Bretl**, “Relationship between the Collapse Fragility and Collapse Risk in Existing Buildings in Regions of High and Moderate Seismicity”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. K. Porter
- Spring 2014 **Yao Wang**, “The Effect of Temperature on Moisture Transfer in Concrete”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. Y. Xi
- Spring 2014 **Lan Nguyen**, “Confined Masonry: Theoretical Fundamentals, Experimental Test, Finite Element Models, and Future Uses”, Ph.D. Dissertation, *Served as Ph.D. Dissertation Committee Member*.  
Primary Advisor: Prof. R. Corotis

- Spring 2014      **Yolanda Chia-Yi Lin**, “Development and Illustration of a Risk-Based Framework for use by the Colorado Department of Transportation’s Built Facilities”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. R. Corotis and Prof. A. Liel
- Fall 2013      **Benjamin L. Gallaher**, “Evaluation of Thin Bonded Overlays as a Protective System for Highway Bridge Decks”, M.Sc. Thesis, *Served as M.Sc. Thesis Committee Member*.  
Primary Advisor: Prof. Y. Xi
- Fall 2013      **Mohammad Amin Hariri-Ardebili**, “Nonlinear Performance-Based Structural Assessment of Concrete Dams”, Ph.D. Dissertation, *Served as Comprehensive Examination Committee Member*.  
Primary Advisor: Prof. V. Saouma

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## PROFESSIONAL MEMBERSHIP AND AFFILIATIONS

- 2015-Present      American Concrete Institute (ACI)  
Individual Member (2015 – Present)
- 2011-Present      American Society of Civil Engineers (ASCE), U.S.A.  
Associate Member (2013 – Present)  
Student Member (2011 – 2012)
- 2013-Present      Transportation Research Board of the National Academies  
Young Affiliate Member
- 2007-Present      Earthquake Engineering Research Institute (EERI), U.S.A.  
Young Professional Member (2013 – Present)  
Student Member (2007 – 2012)

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## PROFESSIONAL LICENSURE

- 2013-Present      Engineer in Training (E.I.T), Michigan (April 2013)
- 2009-Present      Licensed Engineer and Member, Technical Chamber of Greece, Athens, Greece

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## OTHER LEADERSHIP AND PROFESSIONAL DEVELOPMENT ACTIVITIES

- 2009-2010      **Student Leadership Council (SLC) of Earthquake Engineering Research Institute (EERI)**  
Member, as President of the UB-EERI Student Chapter
- 2007-2012      **Student Chapter of Earthquake Engineering Research Institute (EERI) at the University at Buffalo (UB-EERI Student Chapter)**  
Member (2007-2012); Past-President (2010-2011); President (2009-2010); Treasurer (2008-2009); Senator (2007-2008)
- 2005-2012      **Graduate Student Association of the Department of Civil, Structural and Environmental Engineering (CSEE-GSA), University at Buffalo**  
Member (2005-2012); President (2008-2009); Alternate Senator (2009-2010)
- 2005-2012      **Hellenic Graduate Student Association (HGSA), University at Buffalo**  
Member (2005-2012); President (2007-2008); Vice President (2008-2009); Senator (2006-2007)
- Spring 2011 &  
Spring 2012      **Future Faculty Workshop**, School of Engineering and Applied Sciences, University at Buffalo, The State University of New York, Buffalo, NY (May 16, 2011 and May 7, 2012)