

**MARIOS PANAGIOTOU, PhD, PE**  
**Senior Consultant at Nabih Youssef Associates**  
**Founder of the [Online School of Earthquake Resilient Design](#)**  
**[My YouTube page](#), [My Google Scholar](#)**

Email address: [mp@school-of-earthquake-resilient-design.com](mailto:mp@school-of-earthquake-resilient-design.com)

**Citizenship:** U.S., Greek

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## BIOSKETCH

Dr. Marios Panagiotou (PhD, PE) is a Senior Consultant at Nabih Youssef Associates in Los Angeles and founder of the [Online School of Earthquake Resilient Design](#). His engineering practice work focuses on the advanced nonlinear seismic analysis and design of large, complex, earthquake resilient, and seismically isolated structures including high-rise buildings, and stadiums. Between 2008 and 2015 he was an Assistant Professor of Structural Engineering at UC Berkeley (UCB) conducting research on the seismic analysis, design, and experimental testing of RC structures, as well as on earthquake-resilient buildings and bridges that use seismic isolation, rocking components, and high-performance materials. His PhD studies on the seismic design, analysis, and shake-table testing (at UCSD) of a full-scale 7-story building received the 2012 **ASCE Alfred Noble prize**. As UCB faculty, he led a major research project that included the largest shake-table tests of soil-rocking foundation-superstructure systems ever conducted in US. He also worked on large-scale experimental seismic testing programs of RC components and earthquake-resilient bridge columns. He has published 21 journal papers and 60 conference papers and technical reports. He has taught graduate courses at UCB, UCLA, and USC. He was a member of the NIST-FEMA Functional Recovery Project Review Panel. He is co-developer of the computational framework BTM-shell FE-MultiPhys for the advanced seismic analysis of RC wall buildings.

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## EXPERTISE, SKILLS, AND RESEARCH INTERESTS

Earthquake Structural Engineering; Earthquake Resilient Structural Design; Nonlinear Dynamic Analysis; Advanced Seismic Design; Experimental Seismic Testing; Seismic Isolation; Rocking Structural Systems; High-fidelity Modeling of RC Structures; Soil Structure Interaction; Characterization of Earthquake Ground Motions.

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## EDUCATION

- **Ph.D. in Structural Engineering**, University of California, San Diego, U.S., 2008. Dissertation: Seismic Design, Testing, and Analysis of Reinforced Concrete Wall Buildings (Advisor: Prof. J.I. Restrepo). Full-scale shake table test of the **tallest building specimen ever tested in US**.
- M.S. in Structural Engineering, University of California, San Diego, U.S., 2005.
- Diploma in Civil Engineering, National Technical University of Athens, Greece, 2003

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## PROFESSIONAL LICENSES

**Professional Civil Engineer, California** (License number: 88501, Issue date: 12/19/2017)

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## AWARDS

- **2012 Alfred Noble Prize** (ASCE, ASME, AIM, IEEE)
- NEESINC Awards: UCSD/PCA/NEESinc Blind Prediction Competition Group, 2006.

## PROFESSIONAL SOCIETIES MEMBERSHIP

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ASCE, ACI, EERI, SEAOSC

## PROFESSIONAL AND ACADEMIC EXPERIENCE

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- **Founder of the Online School of Earthquake Resilient Design, July 2018 - present**
- **Senior Consultant at Nabih Youssef Associates (NYA), June 2015 – present.** Leading advanced nonlinear analysis and performance-based seismic design (PBSD) of tall buildings, complex and large structures, and seismic isolation. Advanced seismic assessment and retrofits. Peer reviews of PBSD of tall buildings and seismic isolation.
- **Adjunct Lecturer (part-time), University of Southern California, 2017/08 – 2018/06.**
- **Lecturer (part-time), University of California Los Angeles, 2017/04 – 2017/06**
- **Assistant Professor, Civil and Environmental Engineering, University of California, Berkeley (UCB), 2008/07 – 2015/08.** Teaching and research on earthquake structural engineering: Analytical and experimental development of earthquake resilient tall buildings and bridges using isolation devices, rocking components and high-performance materials; Large-scale testing; High-fidelity computational modeling of RC structures; Soil-structure interaction; Characterization of ground motions.

## SOFTWARE DEVELOPMENT

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Panagiotou M. and Koutromanos I. (2020). Advanced and Practical Seismic Analysis of Reinforced Concrete Walls and Building Systems Using the BTM-Shell Methodology in the Program FE-MultiPhys. Online School of Earthquake Resilient Design, Los Angeles, CA, 80 pages, in press.

## HIGHLIGHTS PROFESSIONAL PRACTICE EXPERIENCE (NYA, Earthquake Structural Engineering)

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1. ***The Renovation of the Los Angeles Coliseum (constructed):*** Seismic analysis (3D nonlinear response history) and design of a new tower structure, using buckling restrained braced steel frames, on the south side of the stadium that will include suites, loge boxes, club seats, a new concourse, and a new press box. 09/2015-12/2017. <http://coliseumrenovation.com/overview>
2. ***Long Beach Civic Center (constructed):*** Review and consulting on the seismic analysis (3D nonlinear response history) and performance based seismic design of RC core-wall building to achieve prompt re-occupancy and minimal earthquake-induced damage. 09/2015-09/2016 <http://www.pecplongbeach.com/>
3. ***Vallco Town Center, Cupertino, CA:*** Lead of seismic analysis (3D nonlinear response history) and design of a seismically base-isolated town center (10 million square feet of residential, office and retail space) including high-rise towers and an integrated roof park. 2015-2020. <http://revitalizevallco.com/>
4. ***Omega Tower, Los Angeles:*** Seismic analysis (3D nonlinear response history) and performance-based seismic design of a 38-story RC building. 2020-present
5. ***The Lizard Hotel, Los Angeles:*** Seismic analysis (3D nonlinear response history) and performance-based seismic design of a 28-story hotel.
6. ***The Gayley at Wilshire, Los Angeles:*** Nonlinear seismic analysis and performance based seismic design of a 32-story tower.
7. ***Tribune Tower, Los Angeles:*** Conceptual design using nonlinear response history analysis of a 30-story tower above a new subway station.
8. ***6922 Hollywood Blvd:*** Seismic evaluation and retrofit development using nonlinear response history analysis.
9. ***9460 Wilshire Blvd:*** Seismic evaluation and retrofit development using nonlinear response history analysis.
10. ***Getty Museum, Exhibition Hall, Los Angeles:*** Nonlinear dynamic analysis for seismic isolation of exhibits.
11. ***Petrochemical structure in Trinidad:*** Consulting on base isolation retrofit

## PEER REVIEWS AND PLANCHECKS FOR NYA

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Main Bowl of the Hollywood Park Stadium (Plancheck); (2) Academy Museum of Motion Pictures (seismically isolated) Los Angeles, CA; (3) Lucas Museum, Los Angeles; (4) 970 Denny Way, 40-story RC tower, Seattle, WA; (5) APEX II, 28-story RC tower, Los Angeles, CA; (6) Potala Tower, 41-story RC tower, Seattle, WA; (7) 15<sup>th</sup> and Island, two 45-story RC towers, San Diego, CA; (8) California Science Center, Seismic Isolation of a Supporting Structure of a Space Shuttle; (9) Seismic Retrofit of NPI UCLA Building

## PROFESSIONAL SERVICE

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**Technical Committees and Review Panels:** Voting member of ACI Committee 374. Associate member of the ACI Committee 447. U.S. Resiliency Council TAC member. EERI Functional Recovery Working Group. **NIST-FEMA Functional Recovery Project Review Panel.**

**Reviewer for Journals:** Editorial Board member of Frontiers in Built Environment. Reviewer for ASCE Journal of Structural Engineering; ASCE Journal of Bridge Engineering; Earthquake Engineering & Structural Dynamics; Journal of Earthquake Engineering; Earthquake Spectra; Engineering Structures ; Bulletin of Earthquake Engineering; Bulletin of Seismological Society of America; Journal of Advanced Concrete Technology; Journal of Earthquake Engineering and Engineering Vibration; Frontiers in The Built Environment; Computers and Concrete; Mathematical Problems in Engineering; Advances in Mechanical Engineering; Earthquakes and Structures;

**Funding Agency Service:** Proposal panel reviewer for NSF's CMMI Division (April 2010). External evaluator for the Greek research program "Aristeia", as well as for the co-funded by the European Commission programs: 'Archimedes III', 'Thalis'.

## PROPOSALS TO NATIONAL SCIENCE FOUNDATION HIGHLY RECOMMENDED FOR FUNDING

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Proposal Number 1208201 (NEESR: Earthquake Resilient Tall Buildings Using Isolation and Re-centering Walls, budget: \$998,740, PI: Panagiotou M., Program solicitation: NSF 11-566, panel of six reviewers).

## TEACHING EXPERIENCE

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- CEE 537 – “Advanced Reinforced Concrete” (USC graduate course, Fall 2017)
- CEE 599 – “Seismic Protective Systems” (USC graduate course, Spring 2018)
- CEE 247 – “Earthquake Hazard Mitigation” (UCLA, graduate course, Spring 2017)
- CE 223 – “Earthquake Protective Systems” (UCB, graduate course)
- CE 245 – “Behavior of Reinforced Concrete” (UCB, graduate course)
- CE 120 – “Structural Engineering” (UCB, undergraduate course)
- CE 123 – “Design of Reinforced Concrete Structures” (UCB, undergraduate course)

## ONLINE COURSES ON EARTHQUAKE STRUCTURAL ENGINEERING

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21-hour Online + Live + Interactive [Course on Earthquake Resilient Buildings](#)

## PH.D. RESEARCH SUPERVISION (PHD)

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5. **Dr. G. Antonellis**, Spring 2015. “Numerical and Experimental Investigation of Bridges with Columns on Rocking Foundations.”

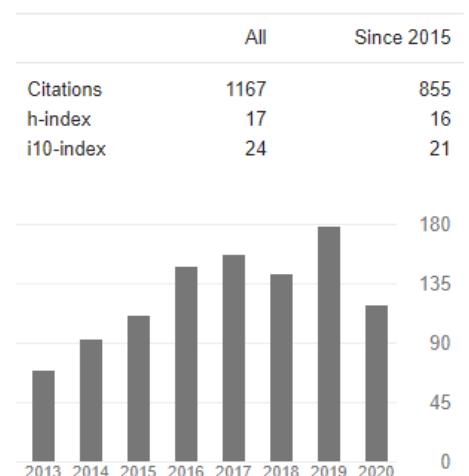
4. **Dr. Y. Lu**, Fall 2014, “Three-dimensional Seismic Analysis of Reinforced Concrete Wall Buildings at Near-fault Sites.”

3. **Dr. T. Visnjic**, Fall 2014, “Design Considerations for Earthquake-Resistant Special Moment Frames,” (Chair of the Ph.D. dissertation committee: Panagiotou; co-advised with Professor J. Moehle).
2. **Dr. W. Trono**, Spring 2014, “Earthquake Resilient Bridge Columns Utilizing Damage Resistant Hybrid Fiber Reinforced Concrete,” (co-advised with Professor C. Ostertag).
1. **Dr. V. Calugaru**, Fall 2013, “Earthquake Resilient Tall Reinforced Concrete Buildings at Near-Fault Sites Using Base Isolation and Rocking Core Walls.”

## RESEARCH GRANTS (RG)

9. “Seismic Demand Model of Bridge Piers Supported on Rocking Shallow Foundations,” Pacific Earthquake Engineering Research Center (PEER), 09/15/2013 – 06/30/2014, \$55,466, PI: M. Panagiotou
8. “Experimental Response and Analytical Modeling of Rocking Foundations under Seismic Loading,” California Department of Transportation (CALTRANS), 02/01/2013 to 07/31/2015, \$741,479, Principal Investigator (PI): Panagiotou, M., co-PIs: Kutter B. (UCD), Fox P., and Restrepo, J.I. (UCSD), Mahin A. S. (UCB). Videos of the test response: <http://www.youtube.com/watch?v=LO9ffdJ258A&feature=youtu.be>.
7. “Shaking table test of pre-cast post-tensioned HyFRC bridge column,” Pacific Earthquake Engineering Research Center (PEER), 10/01/2012 – 09/30/2013, \$64,414, PI: C. Ostertag, co-PI: M. Panagiotou. Video of test response: <http://www.youtube.com/watch?v=Hqft2d8JMKc>
6. “High Performance Modeling of Seismic Soil-Foundation-Structure Interaction in Tall Buildings,” France-Berkeley Fund, 06/2010 to 07/31/2013, \$10,000, co-PIs: Panagiotou M., Grange S.
5. “Beam Hoop Reinforcement for Large SMRF Beams,” Pankow Foundation, Webcor Builders, ACI Foundation’s Concrete Research Council, 08/01/10 – 10/31/11, \$108,445, PI: Moehle J.P, co-PI: Panagiotou M. Video of test response: <http://www.youtube.com/watch?v=JHI6TsbJTh0&feature=youtu.be>
4. Seismic Response of Reinforced Concrete Buildings with Self-Centering Walls, UC-MEXUS 08/01/09 – 01/31/11, \$25,000, PI: Panagiotou M., co-PI: Rodriguez M.
3. Self-Compacted Hybrid Fiber Reinforced Concrete Composites for Bridge Columns, Pacific Earthquake Engineering Research Center (PEER), 01/01/09 – 12/31/10, \$138,771, PI: Ostertag C.P., co-PI: Panagiotou M.
2. California Institute of Energy Efficiency – California Energy Commission (CIEE-CEC), Analysis of the Seismic Performance of Substation, Post Insulators, 10/01/08 – 09/30/11, \$349,997, Co-PI.
1. Performance-based Evaluation of the Seismic Response of Bridges with Foundation Uplift, Pacific Earthquake Engineering Research Center (PEER), 09/01/09 – 08/31/10, \$69420, PI.

## PUBLICATIONS (My Google Scholar)



## Journal Publications (JP)

24	Deng X., Murcia-Delso J., Koutromanos I., Panagiotou M. (2020). Strain-based Seismic Performance Evaluation of RC Structural Walls. <i>in review</i>	NA
23	Alvarez R., Restrepo JI, Panagiotou M. (2020). Plastic Hinge Out-of-Plane Buckling in Structural Walls - Analysis Using the Beam-Truss Model. <i>ASCE Journal of Structural Engineering</i> . <i>in press</i>	NA
22	Alvarez R., Restrepo JI, Panagiotou M., Godinez S. (2020). Analysis of Reinforced Concrete Coupled Structural Walls Via the Beam-Truss Model, <i>Engineering Structures</i> . <a href="#">Link</a>	NA
21	Alvarez R., Restrepo JI, Panagiotou M. (2019). Nonlinear Cyclic Beam Truss Model for Analysis of Reinforced Concrete Coupled Structural Walls, <i>Bulletin of Earthquake Engineering</i> . <a href="#">Link</a>	3
20	Nguyen W., Trono W., Panagiotou M., Ostertag C.P, (2017), "Seismic Response of a Rocking Bridge Column using a Precast-Hybrid-Fiber-Reinforced-Concrete (HYFRC) Tube," <i>Composite Structures</i> . <a href="#">Link</a>	16
19	Lu Y. and Panagiotou M. (2016). Three-dimensional beam-truss model for RC walls and slabs, Part II: Model Description and Validation for Coupled Walls and Slabs," <i>Earthquake Engineering and Structural Dynamics</i> . <a href="#">Link</a>	7
18	Lu. Y, Panagiotou M, and Koutromanos I. (2016). "Three-dimensional beam-truss model for RC walls and slabs, Part I: Model Description and Validation for Individual Walls," <i>Earthquake Engineering and Structural Dynamics</i> . <a href="#">Link</a>	13
17	Visnjic, T., Antonellis G., Panagiotou, M., and Moehle, J. P. (2016). "Experimental Cyclic Response of Large Reinforced Concrete Special Moment Frame Beams," <i>ACI Structural Journal</i> , Vol. 113, Issue 3.	7
16	Antonellis G., Gavras A., Panagiotou M., Kutter B., Guerrini G., Sander A., Fox P. (2015). "Shake Table Test of Bridge Columns Supported on Rocking Shallow Foundations," <i>ASCE Journal of Geotechnical and Geoenvironmental Engineering</i> . <a href="#">Link</a>	50
15	Moharrami M., Koutromanos I., Panagiotou M., and Girgin S. C. (2014). "Analysis of Shear-Dominated RC Columns Using the Nonlinear Truss Analogy," <i>Earthquake Engineering &amp; Structural Dynamics</i> , published online. <a href="#">Link</a>	23
14	Trono W., Jen, G. Panagiotou, M., Schoettler M., and Ostertag, C. P. (2014). "Seismic Response of a Damage-resistant Recentering Post-tensioned HyFRC Bridge Column," <i>ASCE Journal of Bridge Engineering</i> , published online. <a href="#">Link</a>	49
13	Panagiotou, M., Trono W., Jen G., Kumar P., and Ostertag, C.P. (2014). "Experimental Response of HyFRC Bridge Columns with Novel Longitudinal Reinforcement Detailing," <i>ASCE Journal of Bridge Engineering</i> , published online. <a href="#">Link</a>	26
12	Antonellis, G., and Panagiotou, M. (2014). "Seismic Response of Bridges with Rocking Foundations Compared to that of Fixed-base Bridges at a Near-Fault Site," <i>Journal of Bridge Engineering (ASCE)</i> , Vol 19, Issue 5. <a href="#">Link</a>	54

11	Lu, Y., and Panagiotou, M. (2014). "Characterization and Representation of Near-fault Ground Motions Using Cumulative Pulse Extraction with Wavelet Analysis," <i>Bulletin of the Seismological Society of America</i> , 104:410-426. <a href="#">Link</a>	29
10	Calugaru, V., and Panagiotou, M. (2014) "Seismic Response of 20-story Base-isolated and Fixed-base RC Structural Wall Buildings at a Near-fault Site," <i>Earthquake Engineering and Structural Dynamics</i> , Vol. 43, Issue 6, pp. 927-948. <a href="#">Link</a>	39
9	Visnjic, T., Panagiotou, M., and Moehle J.P. (2015). "Seismic Response of 20-Story Reinforced Concrete Special Moment Resisting Frame Buildings Designed with Current Code Provisions," <i>Earthquake Spectra</i> , Vol. 31, No. 2. <a href="#">Link</a>	13
8	Lu, Y., and Panagiotou, M. (2014). "Three-Dimensional Nonlinear Cyclic Beam-Truss Model for Reinforced Concrete Non-Planar Walls," <i>ASCE Journal of Struct.Eng.</i> , Vol. 140, No. 3. <a href="#">Link</a>	68
7	Calugaru, V., and Panagiotou, M. (2012). "Response of Tall Cantilever Wall Buildings Subjected to Strong Pulse -Type Ground Motion," <i>Earthquake Engineering and Structural Dynamics</i> , Vol. 41, pp. 1301-1318. <a href="#">Link</a>	42
6	Panagiotou, M., Restrepo, J.I., Schoettler, M., and Geonwoo, K. (2012). "Nonlinear Truss Model for Reinforced Concrete Walls," <i>ACI Structural Journal</i> , Vol. 109, No. 2, pp. 205-214. <a href="#">Link</a>	84
5	Moaveni, B., He, X., Conte, J.P., Restrepo, J.I., and Panagiotou M. (2011). "System Identification Study of a Seven-Story Full-Scale Building Slice Tested on the UCSD-NEES Shake Table", <i>ASCE Journal of Structural Engineering</i> , Vol. 137, No. 6. <a href="#">Link</a>	122
4	Panagiotou, M., Restrepo, J.I. (2011). "A Displacement-Based Method of Analysis for Regular Reinforced Concrete Wall Buildings: Application to a Full-Scale 7-Story Building Slice Tested at UC San Diego." <i>ASCE Journal of Struct. Eng.</i> , Vol. 137, No. 6. <b>2012 Alfred Noble Prize</b> . <a href="#">Link</a>	49
3	Panagiotou, M., Restrepo, J.I., and Conte J.P. (2011). "Shake Table Test of a 7-Story Full Scale Reinforced Concrete Wall Building Slice, Phase I: Rectangular Wall." <i>ASCE Journal of Struct. Engineering</i> , Vol. 137, No. 6. <a href="#">Link</a>	151
2	Panagiotou, M., and Restrepo, J.I. (2009). "Dual-Plastic Hinge Design Concept for Reducing Higher-Mode Effects on High-Rise Cantilever Wall Buildings." <i>Earthquake Engineering and Structural Dynamics</i> , Volume 38, Issue 12, pp. 1359-1380. <a href="#">Link</a>	84
1	Hoehler, M.S., Panagiotou, M., Restrepo, J.I., Silva, J.F, Floriani, L., Bourgund, U., and Gassner, H. (2009). "Performance of Anchored Pipes in a 7 Story Building During Full-Scale Shake Table Tests." <i>Earthquake Spectra</i> , Vol 25, Issue 1, pp. 71-91. <a href="#">Link</a>	32

### Articles and Papers of the Online School of Earthquake Resilient Design

1. Panagiotou M. (2019). "Earthquake Resilience and Functional Recovery of Buildings in the United States: Problem Statement and Technical Solutions." Online School of Earthquake Resilient Design, Los Angeles, CA. [Link](#)

### Magazine Publications

1. Veletzos M.J., Panagiotou M., Van Den Einde, L., Restrepo, J.I., and Sahs, S. "On-Site Post Seismic Inspection and Capacity Assessment of Reinforced Concrete Bridge Columns." Concrete International, March 2008.

### Conference Papers (CP)

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33. Panagiotou M, (2017), "Seismic Response of Medium-rise and Tall RC Core-Wall Buildings at Near-fault Regions and Simplified Calculation of Design Demands," Proceeding of Annual Conference of Los Angeles Tall Buildings Seismic Design Council. [Link](#)

32. Visnjic T., Panagiotou M, Moehle J.P. (2017). "Estimating Seismic Shear in Columns of RC Special Moment Frames," 14<sup>th</sup> World Conference on Earthquake Engineering, Chile.

31. Moharrami M., Koutromanos I., and Panagiotou M., and Girgin S. (2017). "Analysis of Shear-Dominated Columns Using the Nonlinear Truss Analogy," 14<sup>th</sup> World Conference on Earthquake Engineering, Chile.

30. Moharrami M., Koutromanos I., and Panagiotou M. (2015). "Nonlinear Truss Modeling Method for the Analysis of Shear Failures in Reinforced Concrete and Masonry Structures. ATC&SEI 2<sup>nd</sup> Conference on Improving the Seismic Performance of Existing Buildings and Other Structures, December, San Francisco.

29. Lu. Y., and Panagiotou M. (2015). "Earthquake Damage Resistant Tall Buildings at Near Fault Regions Using Base Isolation and Rocking Core Walls," Structures Congress, Portland, Oregon.

28. Antonellis G., Gavras G., Panagiotou M., Kutter B., Sander A., Guerrini G., Fox P. (2014). "Shake Table Test Response of Large Scale Bridge Columns Supported on Rocking Shallow Foundations," 10<sup>th</sup> National Conference on Earthquake Engineering (10NCEE), Anchorage, Alaska.

27. Lu Y. and Panagiotou M. (2014). "Characterization and Representation of Strong Near-Fault Ground Motions Using Wavelet-Based Cumulative Pulse Extraction," 10<sup>th</sup> National Conference on Earthquake Engineering (10NCEE), Anchorage, Alaska.

26. Lu. Y., and Panagiotou M. (2014). "Earthquake Damage Resistant Multistory Buildings Using Combination of Base Isolation and Rocking Core Walls," 1<sup>st</sup> Huixian International Forum on Earthquake Engineering, Harbin, China, August 16-19.

25. Schoettler M., Eberhard M., Mahin S., Mosalam K., Ostertag C., Panagiotou M., Restrepo J., Stanton J., and Terzic V. (2013). "Advancing the Performance of Bridge Columns: Overview of a Shake Table Test Program," 7<sup>th</sup> National Seismic Conference on Bridges and Highways, Oakland, California.

24. Girgin S., Lu Y., Panagiotou M. (2013). "Nonlinear Cyclic Truss Model for Shear-Critical Reinforced Concrete Columns," 2<sup>nd</sup> Turkish Conference on Earthquake Engineering and Seismology – TDMSK -2013 September 25-27, 2013, Antakya, Hatay/Turkey

23. Visnjic T., Panagiotou M., Moehle J.P., Antonellis G. (2013). "Experimental Investigation of Large Reinforced Concrete Special Moment Resisting Frame Beams," 10<sup>th</sup> International Conference on Urban Earthquake Engineering, Tokyo Japan (**Best Presentation Award for Young Researchers - Ms. T. Visnjic – in the Area of Structural Engineering-Concrete**).

22. Trono W., Jen G., Ostertag C., Panagiotou M. (2013). "Seismic Response of a Rocking, Post-Tensioned HyFRC Bridge Column," 10<sup>th</sup> International Conference on Urban Earthquake Engineering, Tokyo Japan.

21. Lu Y., Panagiotou M. (2013). "Three-Dimensional Nonlinear Beam-Truss Model for Non-Planar Reinforced Concrete Walls," 10<sup>th</sup> International Conference on Urban Earthquake Engineering, Tokyo Japan.

20. Visnjic T., Panagiotou M., Moehle J.P. (2012). "Seismic Response of Two 20-Story Reinforced Concrete Special Moment Frames Designed with Current Code Provisions," 15<sup>th</sup> World Conference on Earthquake Engineering, Lisbon, Portugal.

19. Trono W., Jen G., Ostertag C., Panagiotou M. (2013). "Tested and Modeled Seismic Response of a Rocking, Post-tensioned HyFRC Bridge Column," 7<sup>th</sup> National Seismic Conference on Bridges and Highways, Oakland, California.
18. Calugaru, V., and Panagiotou, M. (2011). "Earthquake-Resistant Tall Reinforced Concrete Buildings Using Seismic Isolation and Rocking Core-Walls" The 4<sup>th</sup> Japan – Greece Workshop, Seismic Design, of Foundations, Innovations in Seismic Design, and Protection of Cultural Heritage, Kobe, Japan, October 6-7, 2011.
17. Calugaru, V., and Panagiotou, M. (2011). "Seismic Isolation of Tall Cantilever Wall Buildings Using One or More Isolation Planes" 8th International Conference on Urban Earthquake Engineering, March 7-8, 2011, Tokyo Institute of Technology, Tokyo, Japan.
16. Calugaru, V., and Panagiotou, M. (2010). "Seismic Isolation Using Single and Dual Shear Hinging of Tall Cantilever Wall Buildings Subjected to Near Fault Ground Motions." 9<sup>th</sup> US National and 10<sup>th</sup> Canadian Conference on Earthquake Engineering, Toronto, July 25-29.
15. Panagiotou, M., Calugaru, V., and Visnjic, T. (2009). "Higher Mode Effects on the Seismic Response of Tall Cantilever Wall Buildings Subjected to Near Fault Ground Motions." 78<sup>th</sup> SEAOC Annual Convention, September 23-26, San Diego, CA.
14. Barbosa, A.R., Panagiotou, M., Conte, J.P., and Restrepo, J.I. "Comparison of Dynamic Strut-and-Tie and Fiber Beam-Column Models for the UCSD Seven-Story Full-scale Building Slice Test." in Proceedings of the Sixth International Conference on Urban Earthquake Engineering, Tokyo, Japan, March 2009.
13. Moaveni, B., Barbosa, A.R., Panagiotou, M., Conte, J.P., Restrepo, J.I. "Uncertainty Analysis of Identified Damping Ratios in Nonlinear Dynamic Systems." In Proceedings of the 27th International Modal Analysis Conference (IMAC-XXVII), Orlando, Florida, USA, February 2009. Society for Experimental Mechanics.
12. Panagiotou, M., and Restrepo, J.I., "Lessons Learnt from the UCSD Full-scale Shake Table Testing on a 7-Story Residential Building Slice." SEAOC convention, Lake Tahoe, September 26-29, 2007.
11. Panagiotou, M., and Restrepo, J.I., "A modification of the equivalent lateral force procedure for use in performance based seismic design of high rise buildings". 12th U.S.-Japan Workshop on Structural design and Construction Practices, September 10 - 12, Hawaii, 2007.
10. Hoehler, M.S., Silva, J.F., Floriani, L., Bourgund, U., Gassner, H., Restrepo, J.I., Panagiotou, M., "Full-scale shake table test of pipes anchored in a 7-story RC building." FIP Symposium on "Connections between Steel and Concrete." Stuttgart, Germany, September 2007.
9. Panagiotou, M., Restrepo, J.I., "Model Calibration for the UCSD 7-Story Building Slice." NEES/UCSD Seminar on Analytical Modeling of Reinforced Concrete Walls for Earthquake Resistance, La Jolla, California, USA, December, 2006.
8. Panagiotou, M., Restrepo, J.I., Conte, J.P., and Englekirk, R.E., "Shake Table Response of a Full Scale Reinforced Concrete Wall Building Slice." Structural Engineering Association of California Convention, Long Beach, CA, USA, September, 2006.
7. Panagiotou, M., Restrepo, J.I., and Englekirk, R.E., "Experimental Seismic Response of a Full Scale Reinforced Concrete Wall Building." First European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, 3-8 September, 2006.
6. Yang, F., Panagiotou, M., Bock, Y., Conte, J.P., and Restrepo, J.I., "Shake Table Tests of a Full Scale Reinforced Concrete Wall Building: Integration of Real Time 50 Hz GPS Displacements and Accelerometer Data." 4th World Conference on Structural Control and Monitoring, San Diego, California, USA, July, 2006.
5. Panagiotou, M., Restrepo, J.I., and Englekirk, R.E., "Seismic Response of Reinforced Concrete Wall Buildings." 2nd International fib Congress, Naples, Italy, June, 2006.

4. Panagiotou, M., Restrepo, J.I., Conte, J.P., and Englekirk, R.E., "Seismic Response of Reinforced Concrete Wall Buildings." 8th National Conference of Earthquake Engineering, San Francisco, CA, USA, April, 2006.
3. Psarropoulos, P., Panagiotou, M., Gantes, C.J., Gazetas, G., "Dynamic Interaction between Soil and Wind Turbines." 5th National Conference of Geotechnical and Geoenvironmental Mechanics, Ksanthi, Greece, May, 2006.
2. Panagiotou, M., Psarropoulos, P., Gantes, C.J., Gazetas, G., "The role of Dynamic Soil-Foundation-Structure Interaction in the Design of Wind Turbine Towers." 5th National Conference of Steel Structures, Ksanthi, Greece, September, 2005.
1. Gantes, C.J., Panagiotou, M., and Fragopoulos, T. "Influence of Initial Imperfections for the Design of Buckling-Prone Structures." ICES'03: International Conference on Computational & Experimental Engineering and Sciences, Corfu, Greece, July, 2003.

## Technical Reports

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26. Gavras Andreas, Antonellis Grigorios, Panagiotou Marios, and Kutter, Bruce L. (2015). "Analytical and Experimental Development of Bridges with Foundations Allowed to Uplift- Part II: Analytical Studies" Report to California Department of Transportation.
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22. Co-author of Chapter 1 (Strong Motion Records) of the report: "PEER Preliminary Notes and Observations on the August 24, 2014, South Napa Earthquake," Editors: G. S. Kang and S. A. Mahin, Pacific Earthquake Engineering Research Center, Report No. 2014/13.
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20. Panagiotou M., Visnjic T., Antonellis G., Galanis P., Moehle J.P. (2013). "Effect of Hoop Reinforcement Spacing on the Cyclic Response of Large Reinforced Concrete Special Moment Frame Beams," Pacific Earthquake Engineering Research Center, PEER report 2013/16.
19. Antonellis, G., and Panagiotou, M. (2013). "Seismic Design and Performance of Bridges with Columns Supported on Rocking Foundations," Pacific Earthquake Engineering Research Center, PEER report 2013/21.
18. Antonellis, G., and Panagiotou, M. (2013). "Seismic Responses of Bridges with Rocking Foundations at a Near-Fault Site," UCB/SEMM-2013/04, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.
17. Zimmerman R. B., Panagiotou M., and Mahin S. (2013). "Numerical modeling and seismic retrofit for shear failure in reinforced concrete columns Report No. UCB/SEMM-2013/03, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.

16. Trono W., Jen, G. Ostertag, C. P., and Panagiotou, M. (2013). "Shake-table Test Response of a Rocking Post-tensioned HyFRC Bridge Column," Report No. UCB/SEMM-2013/02, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.
15. Lu, Y., and Panagiotou, M. (2013). "Characterization and Representation of Pulse-like Ground Motions Using Cumulative Pulse Extraction via Wavelet Analysis," Report No. UCB/SEMM-2013/01, CEE Department, UC Berkeley, Berkeley, USA.
14. Calugaru, V., and Panagiotou, M. (2012). "Seismic Response of 20-story Base-isolated and Fixed-base RC structural wall buildings subjected to near-fault ground shaking," Report No. UCB/SEMM-2012/03, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.
13. Visnjic, T., Panagiotou, M., and Moehle J.P. (2012). "Seismic Response of four 20-Story Reinforced Concrete Special Moment Resisting Frames Designed with Current Code Provisions," Report No. UCB/SEMM-2012/02, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.
12. Lu, Y., and Panagiotou, M. (2012). "Three-Dimensional Cyclic Beam-Truss Model for Non-Planar Reinforced Concrete Walls," Report No. UCB/SEMM-2012/01, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.
11. Calugaru, V., and Panagiotou, M. (2011). "Earthquake-resistant and Resilient Tall Reinforced Concrete Buildings Using Base Isolation and Rocking Core-walls," Report No. UCB/SEMM-2011/09, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, USA.
10. Calugaru, V., and Panagiotou, M. "Response of Tall Cantilever Wall Buildings to Strong Pulse – Type Seismic Excitation" Report No. UCB/SEMM-2011/05, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, 2011.
9. Panagiotou, M., Restrepo, J. I., "Nonlinear Cyclic Truss Model for Strength Degrading Plane Stress Reinforced Concrete Elements," Report No. UCB/SEMM-2011/01, Department of Civil and Environmental Engineering, UC Berkeley, Berkeley, 2011.
8. Kumar, P., Jen, G., Trono, W., Lallemand, D., Panagiotou, M., Ostertag, C.P., "Self Compacting Hybrid Fiber Reinforced Concrete Composites for Bridge Columns" Pacific Earthquake Engineering Research Center, PEER report 2011/106, September 2011.
7. Panagiotou, M., Genwoo, K., Barbosa, A.R., and Restrepo, J.I., "Response Verification of a Reinforced Concrete Bearing Wall Building Located in an Area of High Seismic Hazard." Portland Cement Association Research and Development, Serial No. SN2961, Illinois, 2009.
6. Panagiotou, M., Genwoo, K., Barbosa, A.R., and Restrepo, J.I., "Response Verification of a Reinforced Concrete Bearing Wall Building Located in an Area of High Seismic Hazard." SSRP Report 2008/05. UCSD - Department of Structural Engineering, La Jolla, California, 2008.
5. Panagiotou, M., Geonwoo, K., Barbosa, A., Restrepo, J.I., "Response Verification of a Reinforced Concrete Bearing Wall Building Located in an Area of High Seismic Hazard." Report to PCA, September, 2007.
4. Panagiotou, M., Restrepo, J.I., and Conte, J.P., "Shake table test of a 7-story full scale reinforced concrete structural wall building slice – Phase II: T-wall section." Report No SSRP-07/08, University of California, San Diego, 2007.
3. Panagiotou, M., Restrepo, J.I. and Conte, J.P., "Shake table test of a 7-story full scale reinforced concrete structural wall building slice – Phase I: Rectangular wall." Report No SSRP-07/07, University of California, San Diego, 2007.
2. Veletzos, M.J., Panagiotou, M., and Restrepo, J.I., "Post Seismic Inspection and Capacity Assessment of Reinforced Concrete Bridges." University of California San Diego, Structural Systems Research Project, La Jolla,

CA, July, 2006.

1. Restrepo, J.I., Panagiotou, M., “Bart Aerial Guideway Shear Key Tests.” University of California San Diego, Department of Structural Engineering, La Jolla, CA, October, 2005.

## INVITED PRESENTATIONS

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48. Panagiotou M. “Improving the Earthquake Functional Recovery of RC Wall Buildings: Analysis, Design, and Large-scale Testing,” SEAOSC Webinar, 2020 Year-End Technical Summit - Part 2, June 17, 2020.

47. Harden C. and Panagiotou M. “Recent Seismic Design Guide Implementation for Spread Footings,” Workshop 1030, Increased Use of Spread Footings on Soils to Support Highway Bridge Projects, Presentation P19-20125, Transportation Research Board, TRB 98th Annual Meeting, January 13–17, 2019

46. Panagiotou M., Lu Y., Koutromanos I. (2017). Nonlinear Seismic Analysis of RC Wall Buildings Using the Beam-truss Model, Technical Session of the ACI 447 Committee, ACI Convention.

45. Panagiotou M, (2017), “Seismic Response of Medium-rise and Tall RC Core-Wall Buildings at Near-fault Regions and Simplified Calculation of Design Demands,” Proceeding of Annual Conference of Los Angeles Tall Buildings Seismic Design Council.

44. Mohammadreza Moharrami (presenter), Ioannis Koutromanos, Marios Panagiotou Analysis of shear-dominated reinforced concrete columns and masonry walls using nonlinear truss models

43. Yuan Lu (presenter), Marios Panagiotou. Three-dimensional seismic analysis and design of damage resistant tall rocking core wall buildings. EMI Conference, Stanford, CA, June 2015.

42. Andreas G. Gavras, (presenter) Grigorios Antonellis, Marios Panagiotou, Bruce L. Kutter. “Displacement-based design and nonlinear analysis of bridges with rocking foundations and plastic hinges at the top of the columns.” EMI Conference, Stanford, CA, June 2015.

41. Grigorios Antonellis, Andreas Gerasimos Gavras (presenter), Marios Panagiotou, Bruce Lloyd Kutter. “Shake table test of large-scale bridge columns with rocking foundations.” EMI Conference, Stanford, CA, June 2015.

40. Earthquake-resilient Tall Buildings and Highway Bridges at Near-fault Regions Using Isolation and Rocking Components, Nabih Youssef and Associates, Los Angeles, April 2015.

39. Earthquake-resilient Tall Buildings and Highway Bridges at Near-fault Regions Using Isolation and Rocking Components, Thornton Tomasetti, San Francisco, April 2015.

38. Earthquake-resilient Tall Buildings and Highway Bridges Using Isolation and Rocking Components, Izmir Technical Chamber of Civil Engineering, Izmir, Turkey, January, 2015.

37. Earthquake-resilient Multistory Buildings Using Base Isolation and Rocking Core-walls, 6<sup>th</sup> Kwang-Hua Forum, Shanghai, China, December 2014.

36. Three-dimensional Seismic Analysis of 20-story Tall RC Wall Buildings with Conventional or Rocking Core-Walls, presentation to ACI 374 Committee, ACI Fall 2014 Convention, Washington DC.

35. “Characterization and Representation of Near-fault Pulse-like Ground Motions and their Effect on Nonlinear Structural Response: Implications for Damage-Resistant Design of Structures in Cephalonia,” International Workshop on Seismic Hazard and Earthquake Engineering, September 24-25, 2014, Cephalonia, Greece.

34. “Earthquake Damage Resistant Multistory Buildings Using Combination of Base Isolation and Rocking Core Walls,” 1<sup>st</sup> Huixian International Forum on Earthquake Engineering, Harbin, China, August 16-19, 2014.

33. “Earthquake Resilient Design of Reinforced Concrete Tall Buildings and Highway Bridges at Near Fault Regions,” Macau University, Macau, China, March 28<sup>th</sup>, 2014.

32. "Seismic Analysis Design and Retrofitting of Multistory Buildings at Near Fault Regions," Hong Kong Architecture Services Department, Hong Kong, China, March 27<sup>th</sup>, 2014.
31. "Three-dimensional Seismic Analysis of Tall Reinforced Concrete Wall Buildings at Near Fault Regions and Seismic Design Implications," Hong Kong Institute of Steel Construction, Hong Kong, China, March 26<sup>th</sup>, 2014.
30. "Earthquake Resilient Design of Reinforced Concrete Tall Buildings and Highway Bridges at Near Fault Regions," Arup Hong Kong, Hong Kong, China, March 26<sup>th</sup>, 2014.
29. "Earthquake Resilient Design of Reinforced Concrete Tall Buildings and Highway Bridges at Near Fault Regions," Department of Civil Engineering, Hong Kong University of Science and Technology, Hong Kong, China, March 25<sup>th</sup>, 2014.
28. "Three-dimensional Seismic Analysis of Reinforced Concrete Wall Buildings and Seismic Design Implications," ACI 374 Committee, Reno, Nevada, March 24<sup>th</sup>, 2014. (Presentation given by Ms. Y. Lu)
27. "Earthquake Resilient Design of Reinforced Concrete Tall Buildings and Highway Bridges at Near Fault Regions," Department of Civil Engineering, Hong Kong University, Hong Kong, China, March 24<sup>th</sup>, 2014.
26. "Earthquake Resilient Design of Reinforced Concrete Tall Buildings and Highway Bridges at Near Fault Regions," Department of Civil and Environmental Engineering, Nanyang Technological University, Singapore, February 24<sup>th</sup>, 2014.
25. "Foundation Rocking as a Bridge Seismic Design Strategy," Northridge20 Symposium, January 16-17, Los Angeles, California.
24. "Using Base Isolation and Rocking for Earthquake Resilient Design of Structures in Near Fault Regions," 10<sup>th</sup> NEES/E-Defense meeting, December 11-13, 2013, Kyoto, Japan.
23. "Three Dimensional Beam Truss Model of Reinforced Concrete Core Walls Under Seismic Loading," ACI Committee 447, ACI Fall 2013 Convention, Phoenix.
22. "Experimental Shake Table Test Response of Bridge Columns Supported on Rocking Shallow Foundations," ACI Committee 341, ACI Fall 2013 Convention, Phoenix.
21. "Using Seismic Isolation and Rocking to Design Buildings and Bridges in Near-Fault Regions," FORELL/ELSESSER ENGINEERS INC., San Francisco, California, June 2012.
20. "Large-scale Shake Table Tests of Bridge Piers and Seismic Response of Bridges with Rocking Foundations," Workshop on design, analysis, and research related to highly nonlinear SSI including rocking foundations – an outcome of the NSF grant funded through the NEESR program. Workshop Steering Committee: B. Kutter, T. Hutchinson, L. Mejia, M. A. Moore. June 7-8, 2013, URS Corporation, Oakland, California.
19. "Using Base Isolation and Rocking for Earthquake Resilient Design of Structures in Near Fault Regions," Presentation to Advisory Council of CEE Department of University of California, Berkeley. Berkeley, April 2013.
18. "Displacement-Based Design and Experimental Results of a Full-Scale 7-Story Building Slice Tested at UC San Diego," ACI-374 Committee, ACI Spring 2012 Convention, Dallas, March 19<sup>th</sup>, 2011.
17. "Earthquake Resistant and Resilient Tall Buildings Using Seismic Isolation and Rocking Core Walls," SEMM seminar, Seismology & Structural Standards Committee of SEAONC, November 2011.
16. "Earthquake Resistant and Resilient Tall Buildings Using Seismic Isolation and Rocking Core-Walls," SEMM seminar, October 2011.
15. "Earthquake Resistant and Resilient Tall Buildings Using Seismic Isolation and Rocking Core-Walls," The 4<sup>th</sup> Japan – Greece Workshop, Seismic Design, of Foundations, Innovations in Seismic Design, and Protection of Cultural Heritage, Kobe, Japan, October 6-7, 2011.
14. "Seismic Performance of Bridges with Foundations Designed to Uplift," Pacific Earthquake Engineering

Research Center Annual Meeting, October 2011.

13. “Earthquake-Resistant and Resilient Tall Buildings Using Seismic Isolation and Rocking Core-Walls,” Pacific Earthquake Engineering Research Center Annual Meeting, October 2011.

12. “Inelastic Deformation, Shear Force Seismic Demands in Tall RC Wall Buildings and Dual Plastic Hinge Design Approach,” ACI 318-0H Subcommittee of ACI 318, ACI Fall 2011 Convention, Cincinnati, Ohio, October, 2011.

11. “Performance-based Evaluation of the Seismic Response of Bridges with Foundation Uplift.” NEES&PEER Annual Meeting, San Francisco, CA, October 8-9, 2010.

10. “Displacement-Based Design and Experimental Results of a Full-Scale 7-Story Building Slice Tested at UC San Diego.” ACES Workshop: Performance-Based Earthquake Engineering Corfu, Greece, July 4-7, 2009.

9. “Displacement-based Design and Experimental Results of a Full-Scale 7-Story Building Slice Tested at UC San Diego.” Earthquake engineering by the beach a relaxed workshop on performance-based earthquake engineering, Anacapri, Italy, July 2-4 2009.

8. “Seismic Design, Testing and Analysis of Tall Reinforced Concrete Wall Buildings.” Geotechnical Graduate Student Society at Department of Civil and Environmental Engineering at UC Davis, May 21, 2009.

7. “Seismic Response of Tall Buildings.” Structural Engineering Association of Northern California (SEAONC), 2009 Spring Seminar, San Francisco, March 4, 2009.

6. “Recent Experimental Data and its Relevance for Design.” Tall Building Modeling Guidelines and Design Criteria, Los Angeles Tall Buildings Structural Design Council, Los Angeles, May 9, 2008.

5. “Displacement Based Design of Multistory Structural Wall Buildings and Lessons Learnt from the UCSD 7-Story Building Shake Table Test.” Rutherford and Chekene Structural and Geotechnical Consulting Engineers, San Francisco, CA, USA, July 24, 2007.

4. “Displacement Based Design of Multistory Structural Wall Buildings and Lessons Learnt from the UCSD 7-Story Building Shake Table Test.” Degenkolb Engineers, San Francisco, CA, USA, July 25, 2007.

3. “Displacement Based Design of Multistory Structural Wall Buildings and Lessons Learnt from the UCSD 7-Story Building Shake Table Test.” KPFF Consulting Engineers, Los Angeles, CA, USA, July 10, 2007.

2. “Displacement Based Design of Multistory Structural Wall Buildings and Lessons Learnt from the UCSD 7-Story Building Shake Table Test.” National Technical University of Athens (NTUA), June 10, 2007.

1. “Shake Table Response of a Full-scale Reinforced Concrete Wall Building Slice.” University of Arizona, December, 2006.

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## **EDITOR OF WORKSHOP PROCEEDINGS**

“NEES/UCSD workshop and seminar on analytical modeling of reinforced concrete walls for earthquake resistance,” Restrepo J. I., Panagiotou M. (2006). UC San Diego, California, USA, December 15–16.

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## **ACADEMIC SERVICE AT UCB**

CEE Outreach Committee; CEE Curriculum Committee; Reviewer of Junior Transfer Applications; Advisor of CEE Steel Bridge Team; Undergraduate Student Advisor.

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## **EDUCATION AND OUTREACH ACTIVITIES**

Chair of the Organizing Committee of the Student Bridge Design Competition of the Seventh National Seismic Conference on Bridges & Highways, Oakland, California, May, 2013.