Zachary B. Haber, Ph.D., P.E.

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GOOGLE SCHOLAR METRICS

Citations	1104
h-index	15
i10-index	22

EDUCATION

Ph.D. in Civil Engineering (Structures Concentration) May 2013
University of Nevada, Reno
Advisor: M. Saiid Saiidi, PhD, P.E.; Co-Advisor: David Sanders, PhD
Dissertation Title: *Precast Column-Footing Connections for Accelerated Bridge Construction in Seismic Zones.*

M.S. in Civil Engineering (Structures Concentration) May 2010
University of Central Florida
Advisor: Kevin R. Mackie, PhD, P.E.
Thesis Title: *On the Use of Polyurethane Matrix Carbon Fiber Composites for Strengthening Concrete Structures.*

Bachelor of Science in Mathematics (Engineering and Physics Concentration) August 2008
University of Central Florida

Bachelor of Science in Civil Engineering August 2007
University of Central Florida
Advisor: Lei Zhao, PhD, P.E.
Honors Thesis Title: *A Preliminary Study on New Anchorage Designs for Strengthening Reinforced Concrete (RC) Beams with Externally Bonded FRP Composite Materials.*

ENGINEERING WORK EXPERIENCE

Assistant Professor (Tenue-Track) December 2022 – Present
University of South Florida, Tampa, FL
Civil & Environmental Engineering Department

Research Civil Engineer (Structural, GS-14) October 2017 – November 2022
EDC-6 Innovation Lead, UHPC for Bridge Preservation and Repair September 2020 – November 2022
Federal Highway Administration (FHWA)
FHWA Turner-Fairbank Highway Research Center (TFHRC), McLean, VA

Structural Engineering Laboratory Manager May 2018 – November 2021
Federal Highway Administration (FHWA)
FHWA Turner-Fairbank Highway Research Center (TFHRC), McLean, VA

Lead Concrete Bridge Research Engineer April 2016 – September 2017
Genex Systems, LLC
FHWA Turner-Fairbank Highway Research Center, McLean, VA

Bridge Research Engineer May 2014 – April 2016
Professional Service Industries (PSI)
FHWA Turner-Fairbank Highway Research Center, McLean, VA

Associate Bridge Engineer August 2013 – April 2014
Parsons Transportation Group
Bridge and Tunnel Division, Orlando, FL

Post-Doctoral Fellow May 2013 – July 2013

Department of Civil Engineering
University of Nevada, Reno, Reno, NV

Graduate Research Assistant August 2010 – May 2013
Department of Civil Engineering
University of Nevada, Reno, Reno, NV

Visiting Research Assistant July 2012 – August 2012
National Center for Research on Earthquake Engineering (NCREE)
Taipei, Taiwan, Republic of China

Public Service Intern II May 2011 – August 2011
Nevada Department of Transportation
Structures Division, Carson City, NV

Graduate Research Assistant August 2007 – May 2010
Department of Civil, Environmental and Construction Engineering
University of Central Florida, Orlando, FL

Undergraduate Research Assistant May 2005 – July 2007
Department of Civil, Environmental and Construction Engineering
University of Central Florida, Orlando, FL

TEACHING EXPERIENCE

Adjunct Professor

Department of Civil, Environmental, and Infrastructure Engineering 2016-Present
George Mason University, Fairfax, VA
Courses:
- CEIE 210 Statics
- CEIE 403 Experimental Methods in Civil Engineering
- CEIE 413/513 Reinforced Concrete Design
- CEIE 498 Independent Study (at FHWA TFHRC)

Department of Civil, Environmental and Construction Engineering Spring 2014
University of Central Florida, Orlando, FL
Course:
- EGN3310 Engineering Mechanics - Statics

Instructor

Department of Civil, Environmental and Construction Engineering
University of Central Florida, Orlando, FL
Course: EGN3331 Mechanics of Materials Summer Semester 2010
Course: EGN3310 Engineering Mechanics – Statics Summer Semester 2009

Graduate Teaching Assistant

Department of Civil, Environmental and Construction Engineering
University of Central Florida, Orlando, FL
Course: CES4100C Structural Analysis I Spring Semester 2010
Course: EGN3310 Engineering Mechanics - Statics Fall Semester 2007

AWARDS

1. November 2019 Office of Infrastructure Research & Development Achievement of the Month 2019
2. FHWA Administrator's Award: FIU Pedestrian Bridge Collapse Investigation 2019
3. FHWA Administrator's Award: Research Showcase 2019
4. July 2019 Office of Infrastructure Research & Development Achievement of the Month 2019
5. September 2018 Office of Infrastructure Research & Development Achievement of the Month 2018
6. Research Assistantship, UNR, Funded by Caltrans 2010 - 2013

7. James D. Cooper Student Paper Award, International Bridge Conference 2012
8. East Asia and Pacific Summer Institutes (EAPSI) Fellowship, National Science Foundation (NSF) 2012
9. Research Assistantship, UCF, Funded by Florida Department of Transportation, 2007 - 2010
10. Research and Mentoring Program (RAMP) Graduate Fellowship, UCF 2007 - 2009
11. Summer Mentoring Fellowship, UCF College of Graduate Studies 2007
12. Geotechnical and Environmental Consultants, UCF College of Engineering and Computer Science 2007
13. ASCE East Branch Scholarship, UCF College of Engineering and Computer Science 2006
14. ASCE Transportation Scholarship, UCF College of Engineering and Computer Science 2006
15. Florida Merit Scholar 2002 - 2006
16. Honors in the Major Research Scholarship, UCF College of Engineering and Computer Science 2005
17. Dr. Paul J. Hartman Endowed Scholarship, UCF College of Engineering and Computer Science 2005

CERTIFICATIONS & TRAINING

1. Professional Engineer, State of Florida, #94457
2. Leadership Development Academy (LDA), Federal Highway Administration, Completed June 2019.
3. Federal Acquisition Certification (FAC), Contracting Officer Representative (COR) II
4. Engineering Intern, State of Alabama, #14917
5. Certification: Level 1 Field Fundamentals Certified for Unbonded Post-Tensioning, Post-Tensioning Institute # 72609012
6. Short Course: Introduction to Scanning Electron Microscopy (SEM), UCF Advanced Materials Processing and Analysis Center (AMPAC) / Materials Characterization Facility (MCF)

EFFORTS SUPPORTING THE ENGINEERING COMMUNITY

Committee Membership and Support

1. ACI Subcommittee 408-A0 – Mechanical Reinforcing Bar Anchorages and Splices (*Voting Member*)
2. ACI Committee 341 – Earthquake-Resistant Concrete Bridges (*Associate Member*)
3. Joint ACI-ASCE Committee 408 – Development and Splicing of Deformed Bars (*Associate Member*)
4. ACI Committee 440 – Fiber-Reinforced Polymer Reinforcement (*Associate Member*)
5. TRB AFF10(3) - Accelerated Bridge Construction Subcommittee (*Friend of the Committee*)

Peer-Reviewer

1. ASCE Journal of Bridge Engineering
2. ASCE Journal of Structural Engineering
3. ASCE Journal of Constructed Facilities
4. ACI Structural Journal
5. ACI Materials Journal
6. Engineering Structures
7. Earthquake Spectra
8. Construction and Building Materials
9. Structural Concrete (*fib*)
10. Cement and Concrete Composites

National Cooperative Highway Research Program (NCHRP)

1. NCHRP 20-30/IDEA 235: High Bond Steel Fibers for Ultra High Performance Concrete (UHPC) – *Technical Panel Member*
2. NCHRP 12-121 Guidelines for the Design of Prestressed Concrete Bridge Girders Using FRP Auxiliary Reinforcement - *FHWA Liaison*.
3. NCHRP 18-18 Design and Construction of Deck Bulb Tee Girder Bridges with UHPC – *Former Panel Member*
4. NCHRP 12-105 Proposed AASHTO Seismic Specifications for ABC Column Connections – *Former Panel Member*

American Association of State Highway and Transportation Officials (AASHTO) Support

1. TC3 Technical Panel Member, Subject Matter Expert: Hydrodemolition Best Practices

MENTORSHIP OF INTERNS, GRADUATE STUDENTS, STAFF-LEVEL ENGINEERS

1. **Maral Dorri**, Pathways Intern, Ph.D. Student (University of Connecticut) May 2020 – February 2022
   Supervised Maral's research on UHPC link slabs, UHPC composite connections using headed studs, and seismic behavior of rebar couplers during her participation in FHWA's Pathways Intern Program; Maral was considered a Federal Employee, GS-7.

2. **Eric Reca**, BSCE Student, George Mason University June 2021 – August 2021
   USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC

3. **Ronnique Bishop**, FHWA Professional Development Program (PDP) February 2021 – May 2021

4. **Phillip Clark**, FHWA Professional Development Program (PDP) November 2020 – April 2021

5. **Ally Israel**, MS Student, Columbia University July 2020 – August 2020
   Supervised Ally's research on UHPC overlays for bridge decks under service limit-state loading during her participation in the USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC

6. **Hibba Niaz**, MS Student, George Mason University June 2019 – August 2019
   Supervised Hibba's research on composite steel-UHPC beams during her participation in the USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC

7. **Kevin McMullen**, PhD Student, University of Connecticut June 2018 – August 2018
   Supervised Kevin's research on bond strength of steel reinforcing bars to ultra-high performance concrete during his participation in the USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC.

8. **Ariana Fay**, BSCE Student, University of Buffalo June 2017 – August 2017
   Supervised Ariana's research on horizontal shear between steel girders and precast concrete bridge decks during her participation in the USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC.

9. **Haider Al-Jelawy**, MS, Ph.D Student, University of Central Florida January 2014 – December 2016
   Co-advised (along with K. R. Mackie) Haider with his PhD research on large-scale structural testing of prefabricated concrete bridge column connections.

10. **Jay Wegner**, BSCE Student, University of Maine June 2015 – August 2015
    Co-supervised Jay's research on bond of cementitious materials to precast concrete and prefabricated bridge deck connections during his participation in the USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC.

11. **Jonathan Mize**, BSCE Student, Villanova University June 2014 – August 2014
    Supervised Jonathan's research on post-peak compressive strength of ultra-high performance concrete during his participation in the USDOT Summer Transportation Internship Program for Diverse Groups (STIPDG intern) at FHWA-TFHRC.

12. **Cara Johnson**, BSCE Student, University of Central Florida January 2009 - July 2010
    Supervised Cara's work on durability of polyurethane carbon composites while she was an undergraduate research assistant. Also, provided guidance to Cara while co-authoring related papers.

13. **Robert Slade**, BSCE student, University of Central Florida January 2008 - July 2010
Supervised Robert's work on specimen shop drawings while he was an undergraduate research assistant. Also, helped guide Robert with his independent research on GFRP bridge decks and authorship of a related conference paper.

ORGANIZATIONAL MEMBERSHIP

American Concrete Institute (ACI)
Member #1205582

FEDERAL CONTRACT MANAGEMENT

1. Task Order Contracting Officer's Representative (TOCOR), "Research-to-Practice Technology Transfer Support for UHPC Maintenance and Repair of Bridges: Design Guidance Development and Technical Assistance," Awardee: Engineering Software Consultants, Contract No. 693JJ320F000186, Value: $1,372,384.25, Period of Performance: 06/2020 – 05/2023.

2. Task Order Contracting Officer's Representative (TOCOR), "Support Services for the Structures Laboratory," Awardee: Genex Systems, LLC., Contract No. 693JJ319F000472, Value: $6,959,295.67, Period of Performance: 09/2019 – 03/2022.

3. Contracting Officer's Representative (COR), "Hydraulic Power Distribution and Control System," Awardee: MTS Systems Corporation, Contract No. DTFH6117P00098, Value: $603,920.00, Period of Performance: 8/2017 – 6/2018.

PUBLICATIONS & PRESENTATIONS

Publications Currently Under Review or In Preparation

1. Muzenski, S., **Haber, Z. B.**, and Graybeal, B. A., "Monolithic and Non-Monolithic Interface Shear of Ultra-High Performance Concrete," *Engineering Structures*, Under Review. September 2022.

2. Saladi, N., Balachandran, C., Spragg, R., **Haber, Z.**, and Graybeal, B., "Performance of Corrosion Mitigation Strategies in Bridge Deck Reinforcement Applied Prior to UHPC Overlay Installation." *ACI Special Publication,* Under Review. August 2022.

3. **Haber, Z. B.**, and Graybeal, B. A., "Strengthening of Steel Thru-Girder Bridges using UHPC and Post-Tensioning," *ASCE Journal of Bridge Engineering*, Under Review. January 2023.

Refereed Journal Papers

1. Helsel, M. A, Munoz, J., **Haber, Z. B.**, De la Varga, I., "Effect of Bridge Deck Surface Preparation on the Consolidation and Bond of UHPC Overlays." *Construction and Building Materials,* Vol. 364, No. 18, January 2023. https://doi.org/10.1016/j.conbuildmat.2022.129860

2. Muzenski, S., **Haber, Z. B.**, and Graybeal, B. A., "Interface Shear Behavior of Ultra-High Performance Concrete," *ACI Structural Journal*, Vol. 119, No. 7, 2022. pp. 267-280. doi: 10.14359/51733008

3. Mohebbi, A., Graybeal, B. A., and **Haber, Z. B.**, "Time-Dependent Properties of Ultrahigh-Performance Concrete: Compressive Creep and Shrinkage," *ASCE Journal of Materials in Civil Engineering*, Vol. 34, No. 6, 2022. 10.1061/(ASCE)MT.1943-5533.0004219.

4. El-Helou, R. G., **Haber, Z. B.**, and Graybeal, B. A., "Mechanical Behavior and Design Properties of Ultra-High Performance Concrete," *ACI Materials Journal*, Vol. 119, No. 1, 2022. doi: 10.14359/51734194

5. **Haber, Z. B.**, Graybeal, B. A., and Nakashoji, B., "Ultimate Behavior of Deck-to-Girder Composite Connection Details using UHPC," *ASCE Journal of Bridge Engineering*, Vol. 25, No. 7, 2020. doi.org/10.1061/(ASCE)BE.1943-5592.0001574

6. Chan, T., Mackie, K. R., and **Haber, Z. B.**, "Precast Seismic Bridge Column Connection Utilizing Ultra-High Performance Concrete Lap Splice," *ACI Structural Journal*, Vol. 117, No. 1, 2020, pp. 217-229.

7. **Haber, Z. B.**, Munoz, J. F., De la Varga, I., and Graybeal, B. A., "Bond Characterization of UHPC Overlays for Concrete Bridge Decks: Laboratory and Field Testing," *Construction and Building Materials,* Vol. 190, 2018, pp. 1056-1068. doi.org/10.1016/j.conbuildmat.2018.09.167

8. Al-Jelawy, H. M., Mackie, K. R, and **Haber, Z. B.**, "Shifted Plastic Hinging for Grouted Sleeve Column Connections," *ACI Structural Journal,* Vol. 115, No. 4, 2018. pp. 1101 – 1114. doi.org/10.14359/51702233

9. **Haber, Z. B.** and Graybeal, B. A., "Lap-Spliced Rebar Connections with UHPC Closures," *ASCE Journal of Bridge Engineering*, Vol. 23, No. 6, 2018. doi.org/10.1061/(ASCE)BE.1943-5592.0001239

10. De la Varga, I., **Haber, Z. B.** and Graybeal, B. A., "Enhancing Shrinkage Properties and Bond Performance of Prefabricated Bridge Deck Connection Grouts: Material and Component Testing," *ASCE Journal of Civil Engineering Materials*, Vol. 30, No. 4, 2018. doi.org/10.1061/(ASCE)MT.1943-5533.0002235

11. **Haber, Z. B**., Mackie, K. R., and Al-Jelawy, H. "Testing and Analysis of Precast Columns with Grouted Coupler Connections and Shifted Plastic Hinging," *ASCE Journal of Bridge Engineering*, Vol. 22, No. 10, 2017. doi.org/10.1061/(ASCE)BE.1943-5592.0001105

12. Ou, Y. C., Alrasyid, H., **Haber, Z. B.**, and Lee, H. J., "Cyclic Behavior of Precast High-Strength Reinforced Concrete Columns," *ACI Structural Journal,* Vol. 112, No. 6, November-December 2015. pp. 839-850.

13. **Haber, Z. B.**, Saiidi, M., and Sanders, D. "Behavior and Simplified Modeling of Mechanical Reinforcing Bar Splices," *ACI Structural Journal,* Vol. 112, No. 2, March-April 2015. pp. 179-188.

14. **Haber, Z. B.**, Saiidi, M., and Sanders, D. "Seismic Performance of Precast Columns with Mechanically Spliced Column-Footing Connections," *ACI Structural Journal,* Vol. 111, No. 3, May-June 2014, pp. 639-650.

15. Zghayar, E., Mackie, K. R., **Haber, Z. B.**, and Potter, W. "Secondary Anchorage in Post-Tensioned Bridge Systems," *ACI Structural Journal.* Vol. 110, No. 4, July-August 2013. pp. 629-638.

16. **Haber, Z. B.**, Mackie, K. R., and Zhao, L. "Mechanical and Environmental Loading of Concrete Beams Strengthened with Epoxy and Polyurethane Matrix Carbon Fiber Laminates," *Journal of Construction and Building Materials*, Vol. 26, 2012, pp. 604-612.

Conference Papers

1. Rangelov, M., Spragg, R. P., **Haber, Z. B.**, and Dylla, H., "Life Cycle Assessment of Ultra-High Performance Concrete Bridge Deck Overlays," *Proceedings of the International Symposium on Pavement, Roadway, and Bridge Life Cycle Assessment 2020*, Sacramento, CA, June 3-6, 2020.

2. **Haber, Z. B.**, and Graybeal, B. A., "Interface Shear Behavior of UHPC With and Without Supplemental Reinforcement," *Proceedings of the 2019 International National Accelerated Bridge Construction Conference*, Miami, FL, December 11-13, 2019.

3. **Haber, Z. B.**, and Graybeal, B. A., "Field-Cast Connections for ABC: From Research to Best Practices," *Proceedings of the 2019 International National Accelerated Bridge Construction Conference*, Miami, FL, December 11-13, 2019.

4. McMullen, K. F., and **Haber, Z. B.**, "Effect of Steel Reinforcement Type and Diameter on the Strength of Non-Contact Lap Splice Connections using UHPC," *Proceedings of the Second International Interactive Symposium on UHPC*, Albany, NY, June 2-5, 2019.

5. Mohebbi, A., **Haber, Z. B.**, and Graybeal, B. A., "Evaluation of AASHTO Provisions for Creep and Shrinkage of Prestressed UHPC Girders," *Proceedings of the Second International Interactive Symposium on UHPC*, Albany, NY, June 2-5, 2019.

6. Graybeal, B. A., **Haber, Z. B.**, De la Varga, I, and Spragg, R., "Accelerated Construction of Robust Bridges through Materials and Detailing Innovations," *Proceedings of the 9th International Conference on Bridge Maintenance, Safety, and Management,* Melbourne, Australia, July 9-13, 2018.

7. Al-Jelawy, H., Mackie, K. R., and **Haber, Z. B**., "Experimental and Numerical Studies on Precast Bridge Columns with Shifted Plastic Hinging," *Proceedings of the 11th U.S. National Conference on Earthquake Engineering,* Los Angeles, CA, June 25-29, 2018.

8. **Haber, Z. B.**, Graybeal, B. A., Nakashoji, B, Fay, A., "A New, Simplified Deck-to-Girder Composite Connections Using UHPC," *Proceedings of the 2017 National Accelerated Bridge Construction Conference*, Miami, FL, December 7-8, 2017.

9. **Haber, Z. B.**, De la Varga, I, Graybeal, B. A., "Properties of Field-Cast UHPC-Class Materials," *Proceedings of the 2017 National Accelerated Bridge Construction Conference*, Miami, FL, December 7-8, 2017.

10. Ou, Y.C., Alrasyid, H., **Haber, Z. B.**, and Lee, H.J., "Cyclic behavior of precast high-strength reinforced concrete columns with grouted-spliced longitudinal and welded-spliced transverse reinforcement." Proceedings of 16th World Conference on Earthquake Engineering, Santiago, Chile, January 9-13, 2017.

11. Al-Jelawy, H., **Haber, Z. B**., and Mackie, K. R., "Grouted Splice Precast Column Connections with Shifted Plastic Hinging," 16th World Conference on Earthquake Engineering, Santiago, Chile, January 9-13, 2017.

12. **Haber, Z. B.**, and Graybeal, B. A., "Performance of Different UHPC-Class Materials in Prefabricated Bridge Deck Connections," First International Interactive Symposium on UHPC, Des Moines, IA, July 18-20, 2016.

13. De la Varga, I, **Haber, Z. B.**, Yuan, J., and Graybeal, B. A., "Material-Level Evaluation of Different Commercially-Available UHPC-Class Materials," First International Interactive Symposium on UHPC, Des Moines, IA, July 18-20, 2016.

14. De la Varga, I, **Haber, Z. B.**, and Graybeal, B. A., "Performance of Grouted Connections for Prefabricated Bridge Elements – Part I: Material-Level Investigation on Shrinkage and Bond," 2016 PCI Convention and National Bridge Conference, Nashville, TN, March 1-5, 2016.

15. **Haber, Z. B.**, De la Varga, I, and Graybeal, B. A., "Performance of Grouted Connections for Prefabricated Bridge Elements – Part II: Component-Level Investigation on Bond and Cracking," 2016 PCI Convention and National Bridge Conference, Nashville, TN, March 1-5, 2016.

16. **Haber, Z. B.,** and Graybeal, B. A., **"**Field-Cast Connections for Prefabricated Deck Panels: Performance of Pre-Bagged Connection Grouts," 2015 National Accelerated Bridge Construction Conference, Miami, FL, USA, December 7-8, 2015.

17. **Haber, Z. B.** and Graybeal, B., "Experimental Evaluation of Prefabricated Deck Panel Connections," 94th Annual Meeting of the Transportation Research Board, January 11-15, 2015.

18. Al-Jelawy, H., **Haber, Z. B**., and Mackie, K. R., "Seismic Performance of Grouted Splice Precast Columns Joints with Shifted Plastic Hinge Mechanisms," 2014 National Accelerated Bridge Construction Conference, Miami, FL, USA, December 4-5, 2014.

19. Yuan, J., Graybeal, B., and **Haber, Z. B**., "Field-cast connections for prefabricated bridge elements," 2014 National Accelerated Bridge Construction Conference, Miami, FL, USA, December 4-5, 2014.

20. **Haber, Z. B.**, "Precast Columns with Mechanically Spliced Connections for Accelerated Bridge Construction in Seismic Zones," 30th US-Japan Bridge Engineering Workshop, Washington D.C., October 21-23, 2014.

21. Tazarv, M., **Haber, Z. B.,** and Saiidi, M., "Precast Column Connections for Accelerated Bridge Construction in High Seismic Regions," 2013 PCI Convention and National Bridge Conference, Grapevine, Texas, September 21-24, 2013.

22. **Haber, Z. B.**, Saiidi, M., and Sanders, D., "Emulative Column-Footing Connections for Seismic Design in Accelerated Bridge Construction," 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Kos Island, Greece, June 12-14, 2013.

23. **Haber, Z. B.,** Saiidi, M., Ou, Y. C, and Sanders, D., "A Method for Calculating the Seismic Response of Bridge Columns with Grouted Sleeve Column Footing Connections," Seventh National Seismic Conference on Bridges & Highways, Oakland, CA., May 20-22, 2013.

24. **Haber, Z. B.**, "Seismic Performance of Emulative Precast Bridge Column Elements with Grouted Coupler Connections," James D. Cooper Award Winning Paper, International Bridge Conference, Pittsburgh, PA., June 10-13, 2012.

25. Saiidi, M., Vosooghi, A., Cruz, C., Motaref, S., Ayoub, C., Kavianipour, F., **Haber, Z. B.**, O'Brien, M., and Sanders, D. H., "Earthquake-Resistant Bridges of the Future with Advanced Materials," Keynote Paper, Proceedings, Ninth International Congress on Civil Engineering, 9ICCE, Isfahan, Iran, May 2012.

26. Saiidi, M., Vosooghi, A., **Haber, Z. B.**, Motaref, S., Cruz, C., and Sanders, D., "Next Generation of Earthquake-Resistant Bridges," Keynote Paper, International Conference EQADS 2011, Earthquake Analysis and Design of Structures, Coimbatore, India, December 2011, pp. 125-134.

27. **Haber, Z. B.**, Brown, C., and Mackie, K. R. "Effect of Environmental Conditioning on Mechanical Properties of Polyurethane Carbon Composites." SAMPE 2011. Long Beach, CA. May 23-26, 2011.

28. **Haber, Z. B.** and Mackie, K. R. "Short-Term Durability of Polyurethane Matrix Carbon Composites for Civil Infrastructure Applications." Structural Faults & Repair 2010. Edinburgh, UK, June 15-17, 2010.

29. **Haber, Z. B.**, Zghayar, E., Mackie, K. R., and Potter, W. "External Anchorage Failure and Tendon Pull-out Tests on Bridge Piers." ASCE Structures Congress. Orlando, Fl. May 12-15, 2010.

30. Slade, R., **Haber, Z. B.**, and Mackie, K. R. "GFRP Bridge Deck Systems for Skewed Bridges: An Analytical Investigation on Deck Orientation." ASCE Structures Congress. Orlando, Fl. May 12-15, 2010.

31. **Haber, Z. B.**, Xia, J., and Zhao, L. "A New Approach to Testing Anchorage Mechanisms: Applications and Limitations." Composites in Civil Engineering. Zurich, Switzerland July 22-24, 2008.

Technical Research Reports

1. **Haber, Z. B.**, Foden, A., McDonagh, M., Ocel, J., Zmetra, K., Graybeal, B., "Design and Construction of UHPC-Based Bridge Preservation and Repair Solutions," *HRT-FHWA-22-065*, 2022. pp. 86.

2. **Haber, Z. B.**, and Graybeal, B. A., "Performance of Grouted Connections for Prefabricated Bridge Deck Connections," *FHWA-HIF-19-003*, 2018. pp. 156.

3. **Haber, Z. B.**, De la Varga, I, Graybeal, B. A., Nakashoji, B., El-Helou, R. "Properties and Behavior of UHPC-Class Materials," *FHWA-HRT-18-036*, 2018. pp. 153.

4. **Haber, Z. B.**, Munoz, J. F., and Graybeal, B. A., "Ultra-High Performance Concrete for Bridge Deck Overlays," *FHWA-HRT-17-096*, 2017. 57 pp.

5. Al-Jelawy, H., **Haber, Z. B.**, and Mackie, K. R., "Investigation of Precast Reinforced Concrete Bridge Columns with Grouted-Sleeve Connections," *Final Report Submitted to Splice Sleeve Japan (UCF Project. No. 16208129)*. January 2017.

6. **Haber, Z.B**., Saiidi, M.S., and Sanders, D.H., "Precast Column-Footing Connections for Accelerated Bridge Construction in Seismic Zones," *Report No. CCEER-13-08*, Center for Civil Engineering Earthquake Research, Department of Civil and Environmental Engineering, University of Nevada, Reno, Nevada, April 2013.

7. El-Zghayar, E. A., Mackie, K. R., and **Haber, Z. B.** "External Post-Tensioning Anchorage" *Florida Department of Transportation Research Report* (ID: BD550-11) 2011.

8. **Haber, Z. B.**, "On the Use of Polyurethane Matrix Carbon Fiber Composites for Strengthening Concrete Structures," *M.S. Thesis*, University of Central Florida, Orlando, Fl, CFE0003073, 2010.

9. **Haber, Z. B.**, Mackie, K. R, Zhao, L. and Olka, M. A. "Thermo-mechanical Durability of Carbon Fiber Reinforced Polymer Strengthened Reinforced Concrete Beams." *Florida Department of Transportation Research Report* (ID: BD550-06), 2009.

10. **Haber, Z. B.**, "A New Approach for Testing Anchorage Behavior of RC Beams and Slabs Strengthened with FRP Laminates," *Report Submitted to UCF College of Graduate Studies*, July 2007.

11. **Haber, Z. B.**, "A Preliminary Study on New Anchorage Designs for Strengthening RC Beams with Externally Bonded FRP Composite Materials," *Honors in the Major Thesis*, University of Central Florida, Orlando, Fl, 2006.

Forensic Investigation Reports

1. Graybeal, B. A., and **Haber, Z. B.**, "Concrete Interface Under Members 11 and 12," Factual Report Prepared for the National Transportation Safety Board (NTSB), Accident ID: HWY18MH009 (FIU Pedestrian Bridge Collapse, Miami, FL), September 2019.

2. Ocel, J., Graybeal, B. A., and **Haber, Z. B.**, "Steel and Concrete Materials Testing," Factual Report Prepared for the National Transportation Safety Board (NTSB), Accident ID: HWY18MH009 (FIU Bridge Pedestrian Collapse, Miami, FL), October 2018.

3. Ocel, J., Graybeal, B. A., and **Haber, Z. B.**, "Post-Tensioning System Performance Testing," Factual Report Prepared for the National Transportation Safety Board (NTSB), Accident ID: HWY18MH009 (FIU Bridge Pedestrian Collapse, Miami, FL), August 2018.

Short Contributions and White Papers

1. **Haber, Z. B.**, McDonagh, M., Foden, A., "Ultra-High Performance Concrete (UHPC) Overlays: An Example of Lifecycle Cost Analysis," *TechNote*, HRT-FHWA-23-012, November 2022.

2. Spragg, R., **Haber, Z. B.**, Graybeal, B. and Saladi, N., De la Varga, I., "Techniques to Inhibit Corrosion in Bridge Deck Reinforcement Prior to Overlay Installation," *TechNote,* FHWA-HRT-22-087, 2022.

3. Saladi, N., Helsel, M. A, **Haber, Z. B.**, and Spragg, R., "Assessing Chloride Ingress in UHPC Overlay Construction Joints," *ResearchNote,* FHWA-HRT-22-078, 2022.

4. **Haber, Z. B.,** "Improving Bridge Preservation with UHPC," *Public Roads*, Winter Edition, 2021.

5. **Haber, Z. B.**, and Graybeal, B. A., "Advancing Bridge Repair and Preservation using UHPC," *Aspire*, Spring 2019, pp. 45-46.

6. **Haber, Z. B.**, Munoz, J. F., De la Varga, and Graybeal, B. A., "Ultra-High Performance Concrete for Bridge Deck Overlays," *TechNote,* FHWA-HRT-17-097, 2018.

7. **Haber, Z. B.**, De la Varga, I, and Graybeal, B. A., "One Step Ahead: FHWA Investigates Commercially-Available UHPCs," *Aspire*, Spring 2017, pp. 44-46.

8. De la Varga, I., **Haber, Z. B.** and Graybeal, B. A., "Bond of Field-Cast Grouts to Precast Concrete Materials," *Technote*, FHWA-HRT-16-081, 2016.

9. De la Varga, I., **Haber, Z. B.** and Graybeal, B. A., "Dimensional Stability of Cementitious Grouts in Prefabricated Bridge Connections – Ensuring Good Performance," *Concrete Bridge Views*, Issue 78, Sept/Oct 2014. www.concretebridgeviews.com

10. **Haber, Z. B.**, Saiidi, M., Sanders, D., "Seismic Performance of Precast Bridge Columns with Grouted Couplers," *Research Notes*, Summited to Caltrans, June 2013.

11. **Haber, Z. B.**, Saiidi, M., Sanders, D., "Seismic Performance of Next Generation Bridge (NGB) Components for Accelerated Bridge Construction: Mechanical Bar Splices for Precast Connection," *Research Notes*, Summited to Caltrans, July 2012.

12. **Haber, Z. B.**, Saiidi, M., Sanders, D., "Seismic Performance of Next Generation Bridge (NGB) Components for Accelerated Bridge Construction: Precast Column-to-Footing Connections," *Research Notes*, Summited to Caltrans, February 2012.

Technical Presentations

1. **Haber, Z. B.**, Foden, A. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Workshop*, Delivered to Kansas Department of Transportation, Topeka, KS, September 21, 2022.

2. **Haber, Z. B.**, Foden, A., and Ocel, J., "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Massachusetts Department of Transportation, June 22-23, 2022.

3. **Haber, Z. B.**, Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to District of Columbia Department of Transportation, May 24-25, 2022.

4. **Haber, Z. B.**, "Ultra-High Performance Concrete for Bridge Preservation and Repair (P&R): State of the Practice in the United States," *Arizona Bridge Technical Committee*, Virtual, May 17, 2022.

5. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Delaware Department of Transportation, April 6-7, 2022.

6. **Haber, Z. B.**, "Ultra-High Performance Concrete for Bridge Preservation and Rehabilitation (P&R): State of the Practice in the United States," *Spring 2022 ACI Concrete Convention, Session: Developments, Applications, and Case Studies in UHPC for Bridges and Structures, Part 2 of 3,* Orlando, FL, March 28, 2022.

7. **Haber, Z. B.**, "Evaluation and Validation of Test Methods for Mechanical Rebar Couplers for Seismic Zones," *Spring 2022 ACI Concrete Convention, Committee 408-A,* Orlando, FL, March 27, 2022.

8. **Haber, Z. B.**, "Evaluation and Validation of Test Methods for Mechanical Rebar Couplers for Seismic Zones," *Spring 2022 ACI Concrete Convention, Committee 341-C,* Orlando, FL, March 27, 2022.

9. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to California Department of Transportation, March 14-15, 2022.

10. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Pennsylvania Department of Transportation, February 22-23, 2022.

11. **Haber, Z. B.** "Ultra-High Performance Concrete: Background and Applications in the United States," *Virtual Webinar Presentation*, Center for Local Aid Support Innovation Exchange, February 17, 2022.

12. **Haber, Z. B.**, Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to South Carolina Department of Transportation, January 26-27, 2022.

13. **Haber, Z. B.**, "Ultra-High Performance Concrete for Bridge Preservation: State of the Practice in the United States," *Workshop 1025: Innovative Materials to Preserve, Strengthen, and Extend the Useful Life of Bridges,* 2022 Transportation Research Board Annual Meeting, January 9, 2022.

14. **Haber, Z. B.** "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair (P&R): State of the Practice in the United States," *2021 Virtual International National Accelerated Bridge Construction Conference*, December 8-10, 2021.

15. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Illinois Department of Transportation, December 1-2, 2021.

16. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Workshop*, Delivered to Nebraska Department of Transportation, Lincoln, NE, November 16, 2021.

17. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Indiana Department of Transportation, November 3-4, 2021.

18. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to New Jersey Department of Transportation, October 20-21, 2021.

19. **Haber, Z. B.**, "Bridge Preservation and Repair Solutions using Ultra-High Performance Concrete (UHPC)," *Virtual Presentation*, 70th Arizona Conference on Roads & Streets Conference, October 12, 2021.

20. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to West Virginia Department of Highways, October 6-7, 2021.

21. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Rehabilitation," *2 Invited Lecture (Virtual)* – Boston Society of Civil Engineers, October 5, 2021. ***Invited.***

22. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to South Dakota Department of Transportation, August 17-18, 2021.

23. **Haber, Z. B.**, Ocel, J., Foden, A., and Padilla, J. "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Puerto Rico Highways and Transportation Authority and The U.S. Virgin Island Division of Public Works, August 17-18, 2021.

24. **Haber, Z. B.**, Leonard, M, and Foden, A., "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *8 Hour Virtual Workshop*, Delivered to Louisiana Department of Transportation and Development, August 4-5, 2021.

25. **Haber, Z. B.** "Owner Perspectives and Lessons Learned," *3rd International Workshop on FRP Bars,* Interactive Panel Discussion, August 3, 2021. ***Invited Panel Member.***

26. **Haber, Z. B.** "Update on FHWA - TFHRC Seismic Research: Mechanical Rebar Couplers in Column Plastic Hinge Zones" *AASHTO Annual Meeting*, Technical Committee T-3, July 12, 2021.

27. **Haber, Z. B.** "UHPC for Bridge Preservation EDC-6 Update" *AASHTO Annual Meeting*, Delivered to Technical Committee T-9, July 12, 2021.

28. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair" *2-Hour Webinar* – Illinois Tollway Authority, June 16, 2021.

29. **Haber, Z. B.**, Leonard, M, and Foden, A., "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair Part 2: Expert Panel Discussion," *4 Hour Virtual Workshop - International Bridge Conference (IBC)*, June 11, 2021.

30. **Haber, Z. B.**, Leonard, M, and Foden, A., "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair Part 1: Introduction, Promising Applications, Practical Concepts," *4 Hour Virtual Workshop - International Bridge Conference (IBC)*, June 10, 2021.

31. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair" *1-Hour Webinar* – Missouri Department of Transportation, June 3, 2021.

32. Leonard, M., and **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair" *1-Hour Webinar* – Washington State Department of Transportation Bridge Preservation and Maintenance Group, May 27, 2021.

33. **Haber, Z. B.**, and Leonard, M., "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair" *2-Hour Webinar* – Washington State Department of Transportation, May 10, 2021.

34. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair" *National Association of County Engineer's (NACE) 2021 Virtual Conference*, April 21, 2020.

35. **Haber, Z. B.**, "Current Research on UHPC Overlays for Bridge Decks," *FHWA-MLIT (Japan) Bridge Engineering Meeting*, Virtual Meeting., April 7, 2021.

36. **Haber, Z. B.**, and Mark Leonard "Ultra-High Performance Concrete: Connections for PBES and Bridge Presentation and Repair (P&R)" *6.5 Hour Virtual Workshop,* Delivered to Arkansas Department of Transportation, April 5 2021.

37. **Haber, Z. B.**, "Interface Shear Behavior of Monolithic UHPC ," *5-min Spark Presentation*, ACI Committee 239: Ultra-High Performance Concrete, 2021 ACI Spring Convention, March 29, 2021.

38. **Haber, Z. B.**, "Enhancing the Design and Performance of Highway Bridges using Ultra-High Performance Concrete: An Update," *FHWA-MLIT (Japan) Bridge Engineering Meeting*, Virtual Meeting., January 14, 2021.

39. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair (P&R)," *100th Annual Meeting of the Transportation Research Board*, AKT60 Bridge Preservation Committee, January 14, 2021.

40. **Haber, Z. B.**, and Dorri, M., "Update on FHWA - TFHRC Seismic Research: Mechanical Rebar Couplers in Column Plastic Hinge Zones," *100th Annual Meeting of the Transportation Research Board*, January 25, 2021.

41. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Deck Overlays," *Webinar – Ohio Department of Transportation, FHWA Ohio Division*, December 17, 2020.

42. **Haber, Z. B.**, Leonard, M., Scarlata, J., Nelson, J., and Rogers, D., "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *Every Day Count 6 Summit Webinar*, December 10, 2020.

43. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair: The U.S. Perspective," *Webinar – ASCE SEI Central Florida Section*, November 17, 2020.

44. **Haber, Z. B.**, "Bridge Presentation and Repair (P&R) using Ultra-High Performance Concrete (UHPC)," *4 Hour Virtual Workshop - International Bridge Conference (IBC)*, October 21, 2020.

45. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Deck Overlays," *Webinar – U.S. Army Corps of Engineers*, October 15, 2020.

46. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair: The U.S. Perspective," *Webinar – Joint ICRI & ACI Quebec Section*, October 8, 2020.

47. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC) for Bridge Preservation and Repair," *Every Day Count 6 Pre-Summit Webinar*, October 8, 2020.

48. **Haber, Z. B.**, "Bridge Maintenance & Repair with Ultra-High Performance Concrete (UHPC)," *FHWA Bridge Preservation Expert Task Group,* April 21, 2020.

49. **Haber, Z. B.**, "UHPC Overlays for Highway Bridge Decks," *Webinar – Bureau of Land Management*. March 4, 2020.

50. **Haber, Z. B.**, "Enhancing the Design and Performance of Highway Bridges using Ultra-High Performance Concrete," *Graduate Structures Seminar*, Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor, MI., February 4, 2020. ***Invited.***

51. **Haber, Z. B.**, "FHWA UHPC Research Program," *Discussion - MDOT, Clare County, and University of Michigan*, University of Michigan, Ann Arbor, MI., February 3, 2020.

52. **Haber, Z. B.**, and Graybeal, B. A., "Interface Shear Behavior of UHPC With and Without Supplemental Reinforcement," *2019 International National Accelerated Bridge Construction Conference*, Miami, FL, December 11-13, 2019.

53. **Haber, Z. B.**, and Graybeal, B. A., "Field-Cast Connections for ABC: From Research to Best Practices," *2019 International National Accelerated Bridge Construction Conference*, Miami, FL, December 11-13, 2019.

54. **Haber, Z. B.**, "Ultra-High Performance Concrete (UHPC): Introduction and Applications in Bridge Engineering," *Workshop - MTA Long Island Railroad (LIRR)*, Queens, New York City, November 2019.

55. **Haber, Z. B.**, "Applications of Ultra-High Performance Concrete (UHPC)," *USDOT State of Good Repair Topical Working Group Meeting*, Web Meeting, October 31, 2019.

56. **Haber, Z. B.**, "FHWA Bridge Engineering Research Program," *AASHTO T-9 2019 Mid-Year Meeting,* Washington D.C., October 23, 2019.

57. **Haber, Z. B.**, "UHPC: A Compelling Solution to a Wide Variety of Challenges," *Fall 2019 ACI Concrete Convention, Committee 123 Forum: Is Ultra-High Performance Concrete Necessary?,* Cincinnati, OH, October 21, 2019.

58. **Haber, Z. B.**, "Bridge Maintenance and Repair with Ultra-High Performance Concrete (UHPC)," *2019 Northeast Bridge Preservation Partnership Meeting,* Burlington, VT, September 10, 2019.

59. **Haber, Z. B.**, "FHWA Structural Concrete Research Program," *2019 National Concrete Bridge Council (NCBC) Annual Meeting,* Farmington Hill, MI, July 23, 2019.

60. **Haber, Z. B.**, "Bridge Maintenance and Repair with UHPC: A Vision for EDC 6," *2019 FHWA Resource Center Structures and Geotechnical/Hydraulics Coordination Team Meeting,* Sterling, VA, June 30, 2019.

61. **Haber, Z. B.**, Zmetra, K., Graybeal, B. A., "Interface Shear Behavior of UHPC," *Second International Interactive Symposium on UHPC,* Albany, NY, June 2-5, 2019.

62. **Haber, Z. B.**, Maree, A. F., Graybeal, B. A., "Strengthening Riveted Steel Girders Using UHPC and External Post-tensioning," *Second International Interactive Symposium on UHPC,* Albany, NY, June 2-5, 2019.

63. **Haber, Z. B.**, "UHPC Overlays for Highway Bridge Decks: Bond, Durability, and Structural Performance," *Second International Interactive Symposium on UHPC,* Albany, NY, June 2-5, 2019.

64. **Haber, Z. B.**, "Emerging Topics in Design and Rehabilitation using UHPC," *FHWA Structures Discipline Webinar Series*, Session 27, April 16, 2019.

65. **Haber, Z. B.**, "Enhancing the Design and Performance of Highway Bridges using Ultra-High Performance Concrete," *FHWA-NILIM Bridge Engineering Meeting*, McLean, VA., March 21, 2019.

66. **Haber, Z. B.**, "Enhancing the Design and Performance of Highway Bridges using Ultra-High Performance Concrete," *Civil Engineering Seminar*, University of Delaware, Newark, DE., March 11, 2019. ***Invited.***

67. Graybeal, B. A. and **Haber, Z. B.**, "FHWA ABC-PBE Research: Status Update 2019," Presentation to AFF00 – Joint Subcommittee on Accelerated Bridge Construction, *98th Annual Meeting of the Transportation Research Board*, Washington D.C., January 2019.

68. **Haber, Z. B.**, "Performance of Grouted Connections for Accelerated Bridge Construction," Presentation to AFN40 – Concrete Materials and Placement Techniques Committee, *98th Annual Meeting of the Transportation Research Board*, Washington D.C., January 2019.

69. **Haber, Z. B.** and Graybeal, B. A., "Innovative Maintenance and Repair using Ultra-High Performance Concrete," Presentation to ADH30 – Structures Maintenance Committee, *98th Annual Meeting of the Transportation Research Board*, Washington D.C., January 2019.

70. Chen, T., Mackie, K. R., and **Haber, Z. B.**, "Seismic-Resistant Precast Bridge Column Connection using Ultra-High Performance Concrete" Presentation to AFF50 – Seismic Design and Performance of Bridge Committee, *98th Annual Meeting of the Transportation Research Board*, Washington D.C., January 2019.

71. **Haber, Z. B.** and Graybeal, B. A., "FHWA Structural Concrete Research Program," *FHWA / NCBC Mid-Year Meeting*, Delivered via Web Conference, July 2018.

72. **Haber, Z. B.** "Emerging Concepts Beyond Connections," *Topic 9, Ultra-High Performance Concrete Connections for Prefabricated Bridge Decks*, Every Day Counts 4 Workshop, Connecticut Department of Transportation, Newington, CT., September 25, 2018.

73. **Haber, Z. B.,** "Novel Precast Deck-to-Girder Composite Connections using UHPC," *ACI Spring 2018 Convention,* Salt Lake City, UT, March 25-29, 2018.

74. Mackie, K. R., Al-Jelawy, H. K., and **Haber, Z. B.,** "Experimental Studies on Precast Columns with Grouted Coupler Connections and Shifted Plastic Hinging," *ACI Spring 2018 Convention,* Salt Lake City, UT, March 25-29, 2018.

75. **Haber, Z. B.** "Ultra-High Performance Concrete (UHPC)," *County Engineers Association of Maryland Fall 2017 Conference,* Ocean City, MD, September 22, 2017.

76. **Haber, Z. B.**, "UHPC Overlays and Status of Testing of UHPC Haunch," *2017 Ultra-High Performance Concrete Meeting*, Albany, NY, June 28, 2017.

77. Al-Jelawy, H., **Haber, Z. B**., and Mackie, K. R., "Grouted Splice Precast Column Connections with Shifted Plastic Hinging," *16th World Conference on Earthquake Engineering*, Santiago, Chile, January 2017.

78. Leonard, M., **Haber, Z. B.**, and Whaley, D., "Ultra-High Performance Concrete Connections for Prefabricated Bridge Element," *EDC-4 Regional Summit*, Orlando, FL, December 2016.

79. **Haber, Z. B**., and Mackie, K. R., and Al-Jelawy, H., "Improving the Seismic Performance of Precast Bridge Columns with Grouted Sleeve Connections," *Research in Progress Session of the ACI Fall 2016 Convention*, Philadelphia, PA, October 2016.

80. **Haber, Z. B.**, and Graybeal, B. A., "Performance of Different UHPC-Class Materials in Prefabricated Bridge Deck Connections," *First International Interactive Symposium on UHPC*, Des Moines, IA, July 2016.

81. Yuan, J., Graybeal, B., and **Haber, Z. B.**, "Evaluation of Bond of Reinforcing Steel in UHPC," *First International Interactive Symposium on UHPC*, Des Moines, IA, July 2016.

82. **Haber, Z. B.** "Ultra-High Performance Concrete (UHPC)," *FDOT Design Training Expo,* Daytona Beach, FL, June 2016.

83. **Haber, Z. B.**, De la Varga, I., and Graybeal, B. A., "Bond and Cracking in Prefabricated Bridge Element Connections for Accelerated Bridge Construction, *Brown Bag Lunch Seminar*, Turner-Fairbank Highway Research Center, McLean, VA. March 2016.

84. **Haber, Z. B.**, De la Varga, I, and Graybeal, B. A., "Performance of Grouted Connections for Prefabricated Bridge Elements – Part II: Component-Level Investigation on Bond and Cracking," *2016 PCI Convention and National Bridge Conference*, Nashville, TN, March 2016.

85. Al-Jelawy, H., **Haber, Z. B**., and Mackie, K. R., "Precast Column-Footing Connections Using Grouted Splices with Shifted Plastic Hinging," *2016 PCI Convention and National Bridge Conference*, Nashville, TN, March 2016.

86. **Haber, Z. B.** "Performance of Prefabricated Bridge Elements and Connections," *Seminar - Department of Civil, Environmental, and Construction Engineering,* University of Central Florida, February 2016. ***Invited.***

87. **Haber, Z. B.**, Leonard, M., and Elkaissi, J., "Ultra-High Performance Concrete Connections for Prefabricated Bridge Element," *EDC-3 Workshop Presented to Missouri Department of Transportation*, Jefferson City, MO January 2016.

88. **Haber, Z. B.** and Graybeal, B. A., **"**Field-Cast Connections for Prefabricated Deck Panels: Performance of Pre-Bagged Connection Grouts," *2015 National Accelerated Bridge Construction Conference*, Miami, FL, December 2015.

89. **Haber, Z. B.** "Seismic and Non-Seismic Performance of Prefabricated Element Connections for Accelerated Bridge Construction," *EERI Student Chapter Seminar Series*, Iowa State University, November 2015. ***Invited.***

90. **Haber, Z. B.** "Updates on Ultra-High Performance Concrete," *91st Annual Meeting of the North East State Materials Engineers Association*, Burlington, VT, October 2015.

91. **Haber, Z. B.** "Updates on Structural Concrete Research Related to ACMs," *FHWA EAR Program Workshop: Cementitious Materials*, Turner-Fairbank Highway Research Center, McLean, VA, October 2015.

92. **Haber, Z. B.** and Graybeal, B. A., "FHWA Structural Concrete Research Program," *FHWA / NCBC Annual Meeting*, Delivered via Web Conference, July 2015.

93. **Haber, Z. B.** and Graybeal, B., "Experimental Evaluation of Prefabricated Deck Panel Connections*," 94th Annual Meeting of the Transportation Research Board*, Washington D.C., January 2015.

94. **Haber, Z. B.** "Behavior of Ductile Concrete Bridge Columns with Mechanical Reinforcing Bar Splices," *Presentation to ACI Subcommittee 408-OA – Mechanical Reinforcing Bar Anchorage and Splices*, ACI Fall Convention, October 2014.

95. **Haber, Z. B.**, "Precast Columns with Mechanically Spliced Connections for Accelerated Bridge Construction in Seismic Zones," *30th US-Japan Bridge Engineering Workshop*, Washington D.C., October 2014.

96. Haber, Z. B, "Mechanically-Spliced Column-Footing Connections for Accelerated Bridge Construction (ABC), *Presentation to the FHWA TFHRC Bridge Structures Group*, Turner-Fairbank Highway Research Center, McLean, VA, February 2014.

97. **Haber, Z. B.** "Acceleration Bridge Construction in Seismic Zones," *Seminar – K.R. Mackie Research Group,* University of Central Florida, June 2013.

98. **Haber, Z. B.,** Saiidi, M., Ou, Y. C, and Sanders, D., "A Method for Calculating the Seismic Response of Bridge Columns with Grouted Sleeve Column Footing Connections," *Seventh National Seismic Conference on Bridges & Highways*, Oakland, CA., May 2013.

99. **Haber, Z. B.** "Emulative Precast Column-Footing Connections for Accelerated Bridge Construction in Seismic Zones," *Seminar - Department of Civil and Environmental Engineering*, University of Michigan, March 2013. ***Invited.***

100. **Haber, Z. B.** "Precast Column-Footing Connections for Acceleration Bridge Construction in Moderate-to-High Seismic Zones," *Seminar - Weisberg Division of Engineering and Computer Science,* Marshall University, February 2013. ***Invited.***

101. **Haber, Z. B.** "Mechanical Splices in Precast Column-Footing Connections," Presentation to the Bridge and Structural Engineering Research Group of the Public Works Research Institute (PWRI), Tsukuba, Japan, August, 2012.

102. **Haber, Z. B.** "Seismic Performance of Emulative Precast Bridge Column Elements with Grouted Coupler Connections," Presentation to Splice Sleeve Japan Co, Tokyo, Japan, August, 2012.

103. **Haber, Z. B.** "Mechanical Splices in Precast Column-Footing Connections," Presentation to the Bridge Division of the National Center for Research on Earthquake Engineering (NCREE), Taipei, Taiwan, August, 2012.

104. **Haber, Z. B.**, "Seismic Performance of Emulative Precast Bridge Column Elements with Grouted Coupler Connections," *International Bridge Conference*, Pittsburgh, PA., June 2012. ***James D. Cooper Award Winning Paper Presentation***

105. **Haber, Z. B.**, Saiidi, M., Sanders, D., "Seismic Performance of Precast Column to Foundation Connections for Accelerated Bridge Construction," American Concrete Institute Fall 2011 Meeting. Research in Progress Session, Cincinnati, OH. October 16-20, 2011.

106. **Haber, Z. B.** and Mackie, K. R. "Short-Term Durability of Polyurethane Matrix Carbon Composites for Civil Infrastructure Applications." *Structural Faults & Repair 2010*. Edinburgh, UK, June 2010.

107. **Haber, Z. B.**, Olka, M. A., and Mackie, K. R., "Thermo-Mechanical Durability of CFRP Strengthed Reinforced Concrete Beams," *Graduate Research Forum*, University of Central Florida, Orlando, FL. March 2010.

108. **Haber, Z. B.**, Xia, J., and Zhao, L. "A New Approach to Testing Anchorage Mechanisms: Applications and Limitations." *Composites in Civil Engineering (CICE) 2008*. Zurich, Switzerland, July 2008.

109. **Haber, Z. B.** and Zhao, L., "A New Approach for Testing Anchorage Mechanisms for RC Beams and Slabs Strengthened with FRP Laminates," *Composites and Polycon 2007*, Tampa, FL. October, 2007.