**TENURE AND PROMOTION CURRICULUM VITAE**

**OF**

**Armin B. Mehrabi, Ph.D., P.E., MBA**

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**Department of Civil and Environmental Engineering**

(Updated August 31, 2023)

**EDUCATION**

MBA Niagara University, 2010, International Business

Ph.D. Civil Engineering, University of Colorado, Boulder, Colorado, 1994

M.S. Civil Engineering, University of Tehran, Iran, 1985

**FULL-TIME ACADEMIC EXPERIENCE**

University of Nebraska-Lincoln, Research Associate – Post-doctoral Position 1994-1996

University of Colorado at Boulder Research Assistant – Doctoral Candidate 1990-1994

University of Sistan Baluchestan, Iran, Lecturer 1985-1989

**PART-TIME ACADEMIC EXPERIENCE**

University of Azad Islamic, Iran, Lecturer 1989-1990

Technical University of Sharif, Iran, Lecturer 1989-1990

**NON-ACADEMIC EXPERIENCE**

Bridge Engineering Solutions, PC, President and Principal Engineer, Bridge Evaluation 2004-2017 Construction Technology Laboratories, Inc.

Senior Principal Engineer 2002-2004

Principal Engineer and Group Manager 2000-2002

Associate Engineer, Engineer, Senior Engineer 1996-2000

US Army Engineer Research and Development Center (USAERDC), Contractor/Consultant, 2003-5

Sazeh Consulting Engineers, Tehran, Iran, Senior Design Engineer 1984-1990

Japan Gas Corporation, JGC, Yokohama, Japan, Visiting Design Engineer 1990-1990

**EMPLOYMENT RECORD AT FIU**

Associate Professor 2017-Present

Graduate Program Director 2019-Present

ABC-UTC Research Director 2017-2023

**Summary Expertise and Specialization**

Bridges in general, specialized in Cable-supported Bridges and Accelerated Bridge Construction

Inspection, Evaluation, Health monitoring, Investigation on cause of failure

NDE testing, Cable force & damping measurement, Vibration/Wind analysis & Damper design

Life-cycle-cost analysis, Rehab/Mitigation Design, Construction Support Services, QC and QA

Corrosion Control Plan, Bridge field testing and bridge/building component laboratory testing

Masonry and Infilled Frames

Lateral/Seismic Load Resistance evaluation and Analysis (modal, FE, & simple), & lab testing

**Journal Papers (Names in Bold identify Dr. Mehrabi’s current/former students)**

1. **Malla, P.,** **Khedmatgozar Dolati, S.S.,** Ortiz, J., Mehrabi, A., and Nanni, A., “Damage and Defects in Fiber-Reinforced Polymer Reinforced and Strengthened Concrete Elements,” Journal of Composites for Construction, 2023, ASCE, Vol. 27, No. 4, <https://doi.org/10.1061/JCCOF2.CCENG-4132>
2. Hameed, **A., Afzal, M.F., Javed, A**., Rasool, A.M., Qureshi, M.U., Mehrabi, A.B., and Ashraf, I., “Behavior and Performance of Reinforced Concrete Columns Subjected to Accelerated Corrosion,” MDPI Metals **2023**, 13(5), 930; [**https://doi.org/10.3390/met13050930**](https://doi.org/10.3390/met13050930)
3. **Khedmatgozar Dolati, S.S., Malla, P.,** Ortiz, J., Mehrabi, A., and Nanni, A., “Identifying NDT methods that are applicable to damage detection in concrete elements reinforced or strengthened with FRP,” Elsevier, Engineering Structures, Vol. 287, 15 July 2023, 116155, <https://doi.org/10.1016/j.engstruct.2023.116155>.
4. Awan, M.S., **Javed, A., Afzal, M.F**., Vilchez, L.F.N., and Mehrabi, A., “Evaluation of System Identification Methods for Free Vibration Flutter Derivatives of Long-Span Bridges,” MDPI Applied Sciences 13 (8), 4672, <https://doi.org/10.3390/app13084672>
5. **Malla, P.,** **Khedmatgozar Dolati, S.S.,** Ortiz, J., Mehrabi, A., Nanni, A., and Dinh, K., “Feasibility of Conventional Non-Destructive Testing Methods in Detecting Embedded FRP Reinforcements,” MDPI Appl. Sci. 2023, 13, 4399. https://doi.org/10.3390/app13074399
6. Ortiz, J., **Khedmatgozar Dolati, S.S., Malla, P.,** Nanni, A., and Mehrabi A., “FRP-Reinforced/Strengthened Concrete: State-of-the-Art Review on Durability and Mechanical Effects,” MDPI Materials2023, 16(5), 1990; https://doi.org/10.3390/ma16051990
7. **Javed, A**., Krishna, C., Ali, K., **Afzal, M.F.,** Mehrabi, A., and Meguro, K., “Micro-Scale Experimental Approach for the Seismic Performance Evaluation of RC Frames with Improper Lap Splices,” *MDPI Infrastructures 2023, 8, 56. https://doi.org/10.3390/infrastructures8030056*
8. **Farhangdoust, S.,** Mehrabi, A.B., and Nolan, S., “GFRP Composite Bars for Splicing Prestressed Precast Concrete Piles: Design and Experimental Investigation.” Engineering Structures, Elsevier, Volume 272, 1 December 2022, 114969, <https://doi.org/10.1016/j.engstruct.2022.114969>, [Civil and Structural Engineering (Q1)]
9. **Taeby, M.** and Mehrabi, A.B., “Risk-Based Selection of Inspection Method for External Post-Tensioning System of Bridges,” Applied Sciences, MDPI, 2022, *12*, 7103; https://doi.org/10.3390/app12147103. [Computer Science Applications (Q2); Engineering (miscellaneous) (Q2); Fluid Flow and Transfer Processes (Q2); Instrumentation (Q2); Materials Science (miscellaneous) (Q2); Process Chemistry and Technology (Q2)]
10. **Ahmed, M.D.,** Sadri, A.M., Mehrabi, A.B., and Azizinamni. A., “Identifying Topological Credentials of Physical Infrastructure Components to Enhance Transportation Network Resilience: A Case of Florida Bridges,” Journal of Transportation Engineering, Part A: Systems, 148 (9), September 2021.
11. **MokhtariMousavi,** S., Kitali, A.E., Anderson, J.C., Alluri, O., and Mehrabi, A.B**., “**COVID-19 and Injury Severity of Drivers Involved in Run-Off-Road Crashes: Analyzing the Impact of Contributing Factors,” Transportation Research Record, 2022. [Civil and Structural Engineering (Q2);Mechanical Engineering (Q2)] https://journals.sagepub.com/doi/10.1177/03611981221097093
12. **Khedmatgozar Dolati, S.S.,** and Mehrabi, A., “NSM FRP pile splice system for prestressed precast concrete piles,” Practice Periodical on Structural Design and Construction, ASCE, Volume 27, Issue 4, November 2022. DOI: 10.1061/(ASCE)SC.1943-5576.0000723. [Arts and Humanities (Q2), Building and Construction (Q3), Civil and Structural Engineering (Q3)]
13. **Abedin, M.,** Mehrabi, A., Azizinamini, A., Ghosn, M., Nowak, A., and Ramesh Babu, A., “Reliability and Redundancy Evaluation of Twin Steel Box Girder Bridges Using a Simplified Method,” Engineering Structures Journal, Volume 259, 15 May 2022. <https://doi.org/10.1016/j.engstruct.2022.114122> [Civil and Structural Engineering (Q1)]
14. **Khedmatgozar Dolati, S.S.,** and Mehrabi, A., “FRP sheet/jacket system as an alternative method for splicing prestressed-precast concrete piles,” Case Studies in Construction Materials, Elsevier, 2022, <https://doi.org/10.1016/j.cscm.2022.e00912> [(Q1) Material Science]
15. **MokhtariMousavi, S.,** and Mehrabi, A.B., **“**Flight Delay Causality: Machine Learning Technique in Conjunction with Random Parameter Statistical Analysis,” Elsevier, International Journal of Transportation Science and Technology, 2022. <https://doi.org/10.1016/j.ijtst.2022.01.007> [Automotive Engineering (Q1); Civil and Structural Engineering (Q1); Management, Monitoring, Policy and Law (Q1); Transportation (Q1)]
16. **Abedin, M**., De Caso y Basalo, F. J., Kiani, N., Mehrabi, A. B., & Nanni, A., “Performance evaluation of full-depth precast and prestressed voided slab bridge.” Engineering Structures, Elsevier, Volume 252, 1 February 2021, <https://doi.org/10.1016/j.engstruct.2021.113648>. [Civil and Structural Engineering (Q1)]
17. **Khedmatgozar Dolati, S.S.,** Khedmatgozar Dolati, S.S., and Mehrabi A., “Application of viscous damper and laminated rubber bearing pads for bridges in seismic regions,” Metals, MDPI, 2021, 11(11), 1666; <https://doi.org/10.3390/met11111666>. [Metals and Alloys (Q1); Materials Science (miscellaneous) (Q2)]
18. **Khedmatgozar Dolati, S.S.,** Caluk, N., Mehrabi A., and Khedmatgozar Dolati, S.S., “Non-Destructive Testing Applications for steel bridges,” Applied Sciences, MDPI, 2021, *11*(20), 9757; <https://doi.org/10.3390/app11209757>. [Computer Science Applications (Q2); Engineering (miscellaneous) (Q2); Fluid Flow and Transfer Processes (Q2); Instrumentation (Q2); Materials Science (miscellaneous) (Q2); Process Chemistry and Technology (Q2)]
19. **Khedmatgozar Dolati, S.S.,** and Mehrabi, A., “Alternative system and materials for splicing prestressed-precast concrete piles,” Transportation Research Records (TRR) of Transportation Research Board (TRB), TRB, 2021, Sage Publishers. [https://doi.org/10.1177/03611981211052949](https://doi.org/10.1177%2F03611981211052949). [Civil and Structural Engineering (Q2); Mechanical Engineering (Q2)]
20. **Abedin, M**, and Mehrabi, A.B., “Health monitoring of steel box girder bridges using non-contact sensors,” Structures, Elsevier, [Volume 34](https://www.sciencedirect.com/science/journal/23520124/34/supp/C), December 2021, Pages 4012-4024. <https://doi.org/10.1016/j.istruc.2021.10.021>. [Architecture (Q1); Building and Construction (Q1); Civil and Structural Engineering (Q1); Safety, Risk, Reliability and Quality (Q1)]
21. **Farhangdoust, S.,** Mehrabi, A.B., and Nolan, S., “Design of Prestressed Precast Pile Splice Using Glass Fiber Reinforced Polymer (GFRP) Dowels.” Engineering Structures, Elsevier, Volume 244, 1 October 2021, <https://doi.org/10.1016/j.engstruct.2021.112806>.. [Civil and Structural Engineering (Q1)]
22. **Farhangdoust, S.,** Georgeson, G., Ihn, J.B., and Mehrabi, A.B., “Embedded Metamaterial Subframe Patch for Increased Power Output of Piezoelectric Energy Harvesters,” ASME Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems, June 2021. [Civil and Structural Engineering (Q3); Mechanics of Materials (Q3); Safety, Risk, Reliability and Quality (Q3)]
23. **Khedmatgozar Dolati, S. S**., and Mehrabi, A.B. “Review of Mechanical Bar Couplers for Splicing Precast Concrete Members.” Sci J Research & Rev. 3(1): 2021. SJRR.MS.ID.000551. DOI: 10.33552/SJRR.2021.03.000551.
24. **Khedmatgozar Dolati, S. S.,** and Mehrabi, A.B. “Review of available systems and materials for splicing prestressed-precast concrete piles.” Structures, Elsevier 2021; 30:850-65 doi:10.1016/j.istruc.2021.01.029. [Architecture (Q1); Building and Construction (Q1); Civil and Structural Engineering (Q1); Safety, Risk, Reliability and Quality (Q1)]
25. Tashakori, S., **Farhangdoust, S**., Baghalian, A., McDaniel, D., Tansel, I.N., Mehrabi, A., “Damage detection of 3D printed mold using the surface response to excitation method,” Structural Engineering and Mechanics, Techno Press, Volume 75, Number 3, August10 2020, pages 369-376, DOI: <http://dx.doi.org/10.12989/sem.2020.75.3.369>. [Building and Construction (Q2); Civil and Structural Engineering (Q2); Mechanical Engineering (Q2); Mechanics of Materials (Q2)]
26. **Farhangdoust, S,** and Mehrabi, A.B., “Non-Destructive Evaluation of Closure Joints in Accelerated Bridge Construction using a Damage Etiology Approach,” MDPI- Applied Sciences, February 2020. <https://doi.org/10.3390/app10041457> . [Computer Science Applications (Q2); Engineering (miscellaneous) (Q2); Fluid Flow and Transfer Processes (Q2); Instrumentation (Q2); Materials Science (miscellaneous) (Q2); Process Chemistry and Technology (Q2)]
27. **Abedin, M**, and Mehrabi, A.B., “Effect of Cross-Frames on Load Distribution of Steel Bridges with Fractured Girder,” MDPI- *Infrastructures* April 2020, *5*(4),32, <https://doi.org/10.3390/infrastructures5040032> - 01 . [Building and Construction (Q2); Civil and Structural Engineering (Q2); Computer Science Applications (Q2); Geotechnical Engineering and Engineering Geology (Q2); Materials Science (miscellaneous) (Q2)]
28. **Taeby, M**., and Mehrabi, A.B., “Decision Support Framework for Inspection and Maintenance; A Focus on Bridges using Post-Tensioning Tendons,” Journal of Current Trends in Civil and Structural Engineering, Iris Publishers, 3(5): 2019. CTCSE.MS.ID.000574. DOI: 10.33552/CTCSE.2019.03.000574.
29. **Abedin, M.,** and Mehrabi, A.B., “Novel Approaches for Fracture Detection in Steel Girder Bridges,” MDPI Journal of Infrastructures 2019, 4(3), 42; <https://doi.org/10.3390/infrastructures4030042> . [Building and Construction (Q2); Civil and Structural Engineering (Q2); Computer Science Applications (Q2); Geotechnical Engineering and Engineering Geology (Q2); Materials Science (miscellaneous) (Q2)]
30. **Farhangdoust, S.,** and Mehrabi, A.B., “Health Monitoring of Closure Joints in Accelerated Bridge Construction: A Review of Non-Destructive Testing Application,” Journal of Advanced Concrete Technology, Vol. 17, 381-404, July 2019. <https://doi.org/10.3151/jact.17.381>. [SJR Q3]
31. Mehrabi, A.B., and **Farhangdoust, S.** “A Laser-Based Noncontact Vibration Technique for Health Monitoring of Structural Cables: Background, Success, and New Developments,” Advances in Acoustics and Vibration, vol. 2018, Article ID 8640674, 13 pages, 2018. <https://doi.org/10.1155/2018/8640674>. [SJR Q3]
32. Mehrabi, A., "Performance of Cable-Stayed Bridges: Evaluation Methods, Observations, and a Rehabilitation Case." ASCE, *J. Perform. Constr. Facil.*, 30 (1), February 2016. Also on-line [10.1061/(ASCE)CF.1943-5509.0000715](http://ascelibrary.org/doi/abs/10.1061/%28ASCE%29CF.1943-5509.0000715) , C4014007.
33. Mehrabi, A.B., Ligozio, C.A., Ciolko, A.T., and Wyatt, S.T., “Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana,” J. of Bridge Engineering, ASCE, 15(4), July-August 2010, pp. 364-372.
34. Al-Chaar, G, Mehrabi, A.B., and Manzouri, T., “Finite Element Interface Modeling and Experimental Verification of Masonry-Infilled R/C Frames,” The Masonry Society Journal, TMS, 26(1), July 2008, pp. 47-65.
35. Mehrabi, A.B., “In-Service Evaluation of Cable-Stayed Bridges, Overview of Available Methods and Findings,” J. of Bridge Engineering, ASCE, 11(6) Nov.-Dec. 2006, pp. 716-724.
36. Mehrabi, A.B., “A Monumental Bridge with a Problem Caused by Oversights in Design,” Bridge Structures , June 2006, 2(2), pp.79-95.
37. Mehrabi, A.B., and Shing, P.B., “Seismic Analysis of Masonry-Infilled RC Frames,” The Masonry Society Journal, September 2003, 21(1), pp. 81-94.
38. Shing, P.B., and Mehrabi, A.B., “Behavior and Analysis of Masonry-Infilled Frames,” J. of Progress in Structural Engineering and Material, 4(3), July-September 2002, pp. 320-331.
39. Mehrabi, A.B., and Corley, W.G., “Cable Supported Bridges and Structures: Health and Safety Monitoring and Problem Solving,” The Structural Engineer, Journal of the Institution of Structural Engineers, 78(9), May 2, 2000, pp. 17-20.
40. Tabatabai, H., and Mehrabi, A.B., “Design of Mechanical Viscous Dampers for Stay Cables,” Journal of Bridge Engineering, ASCE, 5(2), May 2000, pp. 114-123.
41. Mehrabi, A.B., Tabatabai, H., and Lotfi, H. R., "Damage Detection in Structures Using Precursor Transformation Method," Journalof Intelligent Material Systems and Structures, Vol. 9, October 1999, pp. 808-817.
42. Mehrabi, A.B., and Tabatabai, H., "A Unified Finite Difference Formulation for Free Vibration of Cables," Journal of Structural Engineering, ASCE, 124(11), 1998, pp. 1313-1322.
43. Mehrabi, A.B., and Shing, P.B., "Finite Element Analysis of Masonry-Infilled R/C Frames," Journal of Structural Engineering, ASCE, 123(5), 1997, pp. 604-613.
44. Azizinamini, A, Keeler, B., Rohde, J., and Mehrabi, A.B., "Implementation of a New Non-Destructive Technique on a 25-Year Old Prestressed Girder," PCI Journal, Vol. 41, No. 3, May-June 1996, pp. 82-95.
45. Mehrabi, A.B., Shing, P.B., Schuller, M., and Noland, J.L., "Experimental Evaluation of Masonry-Infilled RC Frames," Journal of Structural Engineering, ASCE, 122(3), 1996, pp. 228-237)

**Conference Papers (Names in Bold identify Dr. Mehrabi’s current/former students)**

1. **Taeby, M.,** Mehrabi, A., and **Khedmatgozar Dolati, S.S**., “Risk-based selection of inspection method for optimal maintenance of post-tensioned concrete bridges,” Risk-Based Strategies for Bridge Maintenance: Proceedings of the 11th New York City Bridge Conference, 21-22 August 2023, New York, USA.
2. **Taeby, M.,** and Mehrabi, A., “Stochastic Condition Assessment of External Post-Tensioning System of Bridges Based on NDE Results,” ASCE Structures Congress 2023, 174-181.
3. **Khedmatgozar Dolati, S.S.,** and Mehrabi, A., “Two New Methods for Establishing Simple Yet Durable Connection System for Precast Elements,” ASCE Structures Congress 2023, 293-303.
4. **Khedmatgozar Dolati, S.S., Malla, P.,** Polanco, J.O., Mehrabi A., and Nanni, A., “Nondestructive Testing Applications for FRP Reinforced or Strengthened Concrete Elements,” ASCE Structures Congress 2023, 217-229.
5. **Khedmatgozar Dolati, S.S.,** and Mehrabi, A., "Two new methods for establishing simple yet durable splicing of prestressed concrete piles," International Bridge Conference, 2022, IBC 22-67, Pittsburg, PA, July 18-20, 2022.
6. Kiani, N., **Abedin, M.,** Steputat, C.C., Mehrabi, A.B., and Nanni, A., “Structural health monitoring of FRP-reinforced concrete bridges using vibration responses,” EWSHM 2022, 032, v3, Palermo, Italy.
7. **Abedin, M.**, Mehrabi, A., Azizinamini, A., Ghosn, M., Nowak, A., and Ramesh Babu, A., “Redundancy Evaluation of Twin Steel Box Girder Bridge,” accepted for IABMAS-2022 Conference, MS01: Life-Cycle Redundancy, Robustness and Resilience of Bridges and Infrastructure Networks under Multiple Hazards, Barcelona, Spain, July 2022.
8. **Abedin, M.,** De Caso y Basalo, F. J., Kiani, N., Mehrabi, A. B., & Nanni, A., “Innovative Methods for Evaluation of Precast Box-Beam Bridges,” ASCE-SEI Structures Congress, 2022, Pages 148-159.
9. **Khedmatgozar Dolati, S.S.,** and Mehrabi, A., Khedmatgozar Dolati, S.S., and Caluk, N. "NDT methods for damage detection in steel bridges," Health Monitoring of Structural and Biological Systems XVI, SPIE, Volume 12048, Pages 385-394, Long Beach, CA, March 6-9, 2022.
10. **Khedmatgozar Dolati, S.S.,** Mehrabi, A., and Khedmatgozar Dolati, S.S., “Application of VD-LRBP system for bridges in seismic zones,” Active and Passive Smart Structures and Integrated Systems XVI, SPIE, Volume 12043, Pages 44-52, Long Beach, CA, March 6-9, 2022.
11. **Khedmatgozar Dolati, S.S., Mall, P.,** Mehrabi, A., Ortiz Polanco, J, and Nanni, A, "Non-Destructive Testing Applications for In-Service FRP Reinforced/Strengthened Concrete Bridge Elements," Nondestructive Characterization and Monitoring of Advanced Materials, SPIE, Volume 12047, Pages 59-74, Long Beach, CA, March 6-9, 2022.
12. **Farhangdoust, S.,** Moradisizkoohi, H., Georgeson, G. Mehrabi, A., and Soleimani, K., NDE 4.0 for In-motion wheel inspection of a high-speed train via a RF energy harvesting module: an autonomous cyber-physical approach toward the smart city, NDE 4.0 and Smart Structures for Industry, Smart Cities, Communication, and Energy, 11594, Pages 1159405, International Society for Optics and Photonics, March 2021.
13. Aasi, A., Aghaei, S.M., **Farhangdoust, S.,** Mehrabi, A., and Panchapakesan, B., Phosphorene-based nanosensor for lung cancer detection, Nano-, Bio-, Info-Tech Sensors and Wearable Systems, 11590, Pages 1159009, International Society for Optics and Photonics, March 2021.
14. **Abedin, M**., & Mehrabi, A. B., Bridge damage identification through frequency changes. Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2021, 11591, Pages 1159109, International Society for Optics and Photonics.
15. **Abedin, M.,** Mokhtari, S., & Mehrabi, A. B., Bridge joint damage detection using machine learning. Health Monitoring of Structural and Biological Systems XV, 11593, Pages 115932P, International Society for Optics and Photonics, March 2021.
16. **Farhangdoust, S.**, Aghaei,S.M., Amirahmadi, M., Pala, N., and Mehrabi, A.B., “Auxetic MEMS Sensor,” Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2020, International Society for Optics and Photonics, SPIE, V. 11379, P. 113790Z.
17. **Abedin, M, Farhangdoust, S.,** and Mehrabi, A.B., “Fracture detection in steel girder bridges using self-powered wireless sensors,” Proceedings of the 10th New York City Bridge Conference, CRC Press/Balkema, Leiden, The Netherlands, August 26-27, 2019, NY, NY, pp. 216-228.
18. **Farhangdoust, S.,** Tashakori, S., Baghalian, A., Mehrabi, A.B., and Tansel, I. N., “Prediction of damage location in composite plates using artificial neural network modeling,” SPIE Conference Proceedings Volume 10970, Health Monitoring of Structural and Biological Systems XIII; 109700I (2019) <https://doi.org/10.1117/12.2517422>
19. **Farhangdoust, S.,** Mehrabi, A.B., and Younesian, D., “Bistable wind-induced vibration energy harvester for self-powered wireless sensors in smart bridge monitoring systems,” SPIE Conference Proceedings Volume 10971, Health Monitoring of Structural and Biological Systems XIII; 109710C (2019) https://doi.org/10.1117/12.251742
20. Tashakori, S., **Farhangdoust, S**., Baghalian, A., Tansel, I. N., and Mehrabi, A.B., “Evaluating the performance of the SuRE method for inspection of bonding using the COMSOL finite element analysis package,” SPIE Conference Proceedings Volume 10972, Health Monitoring of Structural and Biological Systems XIII; 109722Q (2019) https://doi.org/10.1117/12.2517425
21. **Farhangdoust, S.,** Mehrabi, A.B., “NDT Inspection of Critical ABC Details to Assure Life Cycle Performance and Avoid Future Unforeseen Excessive Repairs,” ASCE-SEI Structures Congress 2019
22. **Farhangdoust, S.,** Mehrabi, A.B., and **Almosawi, S.F**., “NDT Methods Applicable to Health Monitoring of ABC Closure Joints,”27th ASNT Research Symposium, Orlando, FL, March 2018.
23. Mehrabi, A.B., “Cable-Stayed Bridges; Health Monitoring, Evaluation, and Rehabilitation,” Proceedings of 2nd International Conference on Bridge Testing, Monitoring & Assessment, HBRC-ISHMII, Cairo, Egypt, December 27-29, 2015.
24. Mehrabi, A.B., “Cable-Stayed Bridges; inspection, Evaluation, and Rehabilitation,” Proceedings of Geo-Hubei 2014 International Conference on Sustainable Civil Infrastructure, ASCE (ISBN: 978-0-7844-7851-6), July 20-22, Yichang, Hubei, China, pp.61-68.
25. Mehrabi, A.B., “Complete Stay cable Replacement for the Luling Bridge, First of its Kind in North America,” Proceedings of the 2013 International Bridge Conference, June 2013, Pittsburgh, PA.
26. Mehrabi, A.B., “Stay Cable Replacement of the Hale Boggs Bridge,” Proceedings of the 26th US-Japan Bridge Engineering Workshop, September 20-22, 2010, New Orleans, LA.
27. Mehrabi, A.B., and McGain, Z., “Design of Stay Cable Replacement for the Luling Bridge,” Proceedings of the 2009 International Bridge Conference, June 14-17, 2009, Pittsburgh, PA.
28. Mehrabi, A.B., “Luling Bridge Stay Cable Replacement,” Proceedings of the 2009 Structures Congress & Exposition, ASCE Structures Cong. 2009, Apr.30-May 2, Austin, TX.
29. Mehrabi, A.B., Ligozio, C.A., Ciolko, A.T., and Wyatt, S.T., “Condition Assessment, rehabilitation Planning, and Stay Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, “ 10th International Bridge and Structure Management Conference, IBSME, Transportation Research Board, October 2008, Buffalo, NY.
30. Mehrabi, A.B., “Stay Cables of the Luling Bridge are to be Replaced,” Proceedings of the 2008 International Bridge Conference, June 2-4, 2008, Pittsburgh, PA.
31. Mehrabi, A.B., and Ligozio, C.A., “Cable-Stayed Bridges – Discovering Alarming Distress and Damage,” Proceedings of the 2007 International Bridge Conference, June 4-7, 2007, Pittsburgh, PA.
32. Mehrabi, A.B., “A Monumental Bridge with a Problem Left by Design,” 5th International Cable-Supported Bridge Operators’ Conference (ICSBOC) & LRFD Workshop, August 28-29, 2006, New York, NY.
33. Mehrabi, A.B., and Ciolko, A.T. “A Non-destructive Method for Structural Evaluation of Pipeline Suspension Bridges,” Proc. of Pipelines 2006, ASCE, July 30-August 2, Chicago, IL.
34. Mehrabi, A.B., “Assessment of In-Service Cable-Stayed Bridges, Approach and Findings,” Proceedings of the 2006 Structures Congress & Exposition, ASCE Structures Congress 2006, May 18-20, Saint Louis, MO.
35. Mehrabi, A.B., “A Unique Bridge with a Unique Problem,” Proceedings of the 2005 International Bridge Conference, June 13-15, Pittsburgh, PA.
36. Ligozio, C.A., and Mehrabi, A.B., “Development and Verification of a NDT Method for Detection of Flaws in PE Sheathing of Stay Cables.” Proceedings of the 2005 International Bridge Conference, June 13-15, Pittsburgh, PA.
37. Mehrabi, A.B., “In-Service Evaluation of Cable-Stayed Bridges, Overview of Available Methods and Findings,” Proceedings of the 2005 Structures Congress & Exposition, ASCE Structures Congress 2005, April 20-24, New York, NY.
38. Mehrabi, A.B., and Telang, N.M., “Health Monitoring of Cable-Stayed Bridges- A Case Study,” Proceedings of the 2004 Structures Congress & Exposition, ASCE Structures Congress 2004, May 23-26, Nashville, TN.
39. Oesterle, R.G., Mehrabi, A.B., Tabatabai, H., Scanlon, A., and Ligozio, C.A., “Continuity Considerations in Prestressed Concrete Jointless Bridges,” Proceedings of the 2004 Structures Congress & Exposition, ASCE Structures Congress 2004, May 23-26, Nashville, TN.
40. Telang, N.M., and Mehrabi, A.B., “The Case of the Case Bridge,” Proceedings, 2nd New York City Bridge Conference, October 20-21, 2003.
41. Telang, N.M., and Mehrabi, A.B., “**Assessment of In-Service Cable-Stayed Bridges - Lessons from the Field**,” Proceedings of the 2003 International Bridge Conference, June 9-11, Pittsburgh, PA.
42. Mehrabi, A.B., and Telang, N.M., “Cable-Stayed Bridge Performance Evaluation- Lessons from the Field,” Proceedings of the 2003 Structures Congress & Exposition, ASCE Structures Congress 2003, May 29-June 1, Seattle, WA.
43. Mehrabi, A.B., Ligozio, C.A., Elremaily, A.F., and Vanderpool, D.R., “Performance of Thermoplastic Fiber Reinforced Polymer Rebars,” Proceedings of 6th International Symposium on Fibre Reinforced Polymer (FRP) Reinforcement for Concrete Structures (FRPRCS6), Singapore, July 8-10, 2003, pp 79-88.
44. Ligozio, C.A., Mehrabi, A.B., Gauvreau, and Bilow, D.N., “Design, Construction, and Testing of a Quarter Scale Model Precast Segmental Concrete Shelf Pylon for WMATA,” Proceedings of 1st Annual Concrete Bridge Conference, Nashville, Tennessee, Oct. 6-9, 2002.
45. Mehrabi, A.B., Elremaily, A.F., and Vanderpool, D.R., “Mechanical Performance of Thermoplastic Fiber Reinforced Polymer Rebars,” Proceedings of 9th International Conference on Composite Engineering, San Diego, CA, July 1-6, 2002, pp 521-522.
46. Mehrabi, A.B., and Ciolko, A.T., “Health Monitoring and Problem Solving for Cable Supported Bridges,” Proceedings of the 4th Symposium on Strait Crossing, Bergen, Norway, September 2-5, 2001, pp. 55-60.
47. Mehrabi, A.B., and Ciolko, A.T., “Health Monitoring of Aging Cable Structures,” Proceedings of the 2001 Structures Congress & Exposition, ASCE Structures Congress 2001, May 2001.
48. Tabatabai, H., and Mehrabi, A.B., “Evaluation of Various Damping Treatments for Stay Cables,” Proceedings, 18th International Modal Analysis Conference, SEM, Feb. 7-10, 2000, San Antonio, Texas, pp. 836-841.
49. Mehrabi, A.B., and Shing, P.B., “Seismic Resistance of Masonry-Infilled RC Frames,” Proceedings, 8th North American Masonry Conference, June 6-9, 1999, Austin, TX.
50. Mehrabi, A.B., and Tabatabai, H., “Damage Detection Using Precursor Transformation Method,” Proceedings, ASCE Structures Congress, April 18-21, 1999, New Orleans, LA, pp. 723-726.
51. Tabatabai, H., and Mehrabi, A.B., “Vibration Suppression Measures for Stay Cables,” Proceedings, 17th International Modal Analysis Conference, SEM, Feb. 8-11, 1999, Kissimmee, FL, pp. 1237-1243.
52. Tabatabai, H., and Mehrabi, A.B., "Combining Sag and Bending Stiffness Effects on Cable Vibrations,” Proceedings, ASCE 12th Engineering Mechanics Division Conference, May 17-20, 1998, La Jolla, CA, pp. 390-393.
53. Mehrabi, A.B., Tabatabai, H., and Lotfi, H. R., "Precursor Transformation Method for Damage Detection in Structures," Proceedings, 5-th Annual International Symposium on Smart Structures and Materials, SPIE, March 1-5, 1998, San Diego, CA, pp. 232-243.
54. Tabatabai, H., Mehrabi, A.B., and Yen, W.P., "Bridge Stay Cable Condition Assessment Using Vibration Measurement Techniques,” Proc., Struct. Materials Technology Conference on Bridges and Highways, SPIE, 31 March-2 April, 1998, San Antonio, Texas, pp. 194-204.
55. Mehrabi, A. B., and Shing, P. B., “Analysis of Masonry Infilled R/C Frames with Interface Model,” Proceedings, 1998 World Congress on Structural Engineering, ASCE, July 18-23, 1998, Elsevier, San Francisco, CA, T126-1.
56. Yen, W.P., Mehrabi, A.B., and Tabatabai, H., “Evaluation of Stay Cable Tension Using a Non-Destructive Vibration Technique," Proc., ASCE Struct. Cong., Apr. 1997, pp. 503-507.
57. Azizinamini, A, Mehrabi, A.B., Keeler, B., and Rohde, J., "A Non-Destructive Method of Prestress Evaluation," Proceedings, ASCE Structures Congress, Vol. 2, April 1996, 900-907.
58. Shing, P.B., and Mehrabi, A.B., "Influence of Masonry Infill on Lateral Resistance of Reinforced Concrete Frames," Proceedings, NIST Seismic Rehabilitation Workshop on Lightly Reinforced Concrete Frames, Gaithersburg, MD, June 12-13, 1995.
59. Shing, P.B., Mehrabi, A.B., Schuller, M., and Noland, J., "Experimental Evaluation and Finite Element Analysis of Masonry Infilled R/C Frames," Proceedings, Conference on Analysis and Computation, ASCE, Atlanta, GA, 1994, pp. 84-93.
60. Schuller, M., Mehrabi, A.B., Noland, J.L., and Shing, P.B., "Performance of Masonry Infilled R/C Frames Under In-Plane Lateral Loads: Experiments," Proceedings, NCEER Workshop on Seismic Response of Masonry Infills, San Francisco, CA, 1994.
61. Mehrabi, A.B., and Shing, P.B., "Performance of Masonry-Infilled R/C Frames Under In-Plane Lateral Loads: Analytical Modeling," Proceedings, NCEER Workshop on Seismic Response of Masonry Infills, San Francisco, CA, 1994.
62. Shing, P.B., Lotfi, H.R., Mehrabi, A.B., and Brunner, J., "Failure Analysis of Masonry Structures," Proceedings, 9th ASCE Engineering Mechanics Conference, L.D. Lutes and J.M. Niedzwecki, editors, New York, NY, 1992, pp. 780-783.
63. Shing, P.B., Lotfi, H.R., Mehrabi, A.B., and Brunner, J., "Finite Element Analysis of Resistance of Masonry Wall Panels With and Without Confining Frames," Proceedings, 10th Conference on Earthquake Engineering, Madrid, Spain, July 1992, pp. 2581-2586.
64. Mehrabi, A.B., Lotfi, H.M., and Shing, P.B., "Analysis of Infilled Reinforced Concrete Frames Subjected to Lateral Loads," Proceedings, International Conference on Concrete, Research and Standards Bureau, Tehran, Iran, 1992, pp. 482-496.

**Articles in Professional Magazines**

1. Mehrabi, A.B., “Warning Signs of Early Deterioration in Stay Cables,” CEE News 2017, Department of Civil and Environmental Engineering, Florida International University.
2. Mehrabi, A.B., “Can’t Stop the Traffic,” Iowa State University, institute of Transportation, Online e-zine Go, Spring 2017.
3. Mehrabi, A.B., and Ligozio, C.A., “Traveling by Buggy,” Roads and Bridges, November 2006, Volume 44, No. 11, pp. 58-61.
4. Mehrabi, A.B., and Ciolko, A.T., “Heart of the Matter,” **Bridge design & engineering, Fourth Quarter 2004, pp. 67-69.**
5. Telang. N.M., and Mehrabi, A.B., “Cracked Girders,” Public Roads, U.S. Department of Transportation, Federal Highway Administration, November/December 2003, pp. 12-15.
6. Mehrabi, A.B., “Force Field, Cable Technology,” **Bridge design & engineering, Fourth Quarter 2003, pp. 59-60.**
7. Mehrabi, A.B., and Lim, M.K., “NDT Verifies Garage Barrier Safety,” Parking Today, Volume 8, Number 6- June 2003.
8. Ciolko, A.T., & Mehrabi, A.B.,“A Real Glassy Bridge,” World Highways, Mar. 2003, PP. 28.
9. Ciolko, A.T., and Mehrabi, A.B., “Toledo’s New Signature Structure,” Public Roads, U.S. Department of Transportation, Federal Highway Administration, Sept./Oct. 2002, pp. 30-34.
10. Mehrabi, A.B., and Ciolko, A.T., “Put to the Test,” **Bridge design & engineering, Second Quarter 2001, pp. 64-65.**

**Invited Speaker and Presentations**

Guide for Safety Inspection of FRP Reinforced/Strengthened structures, May 23, 2023, AASHTO T-6 Annual Meeting, Kansas City, MO.

Smart Material and Structures Conference, Dublin, Ireland, August 1-2, 2019, “Development of Smart Materials and Structures should Anticipate Evolution of Structural Systems and Construction Methods.

ASCE-Florida Section 2019 Conference, Orlando, FL, July 18-19, 2019. “Development of Guide for Selection of Substructure for ABC Projects.

Civil Engineering Symposium, November 8-9, 2018, Civil Engineering Department, Autonomous University of Nuevo León, San Nicolas de los Garza, Nuevo León, México

Civil Engineering Symposium, May 17, 2013, Civil Engineering Department, Autonomous University of Nuevo León, San Nicolas de los Garza, Nuevo León, México

2013, Louisiana Transportation Engineering Conference, Baton Rouge, LA, February 17-20, 2013, “Stay Cable Replacement of the Luling Bridge.”

Louisiana Engineering Society, New Orleans Chapter, Monthly Meeting, “Cable-Stayed Bridges in Louisiana,” New Orleans, LA, May 18, 2011.

26th US-Japan Bridge Engineering Workshop, “Stay cable Replacement of the Hale Boggs Bridge,” New Orleans, Louisiana, September 20-22, 2010.

10th Annual Tulane Engineering Forum, “Stay Cable Replacement for the Luling Bridge,” New Orleans, Louisiana, April 16, 2010.

2009 AASHTO Subcommittee on Bridges and Structures, New Orleans, LA, July 5, “Stay Cable Replacement for the Luling Bridge.”

2009, Louisiana Transportation Engineering Conference, Baton Rouge, LA, February 9, 2009, “Stay Cable Replacement of the Luling Bridge.”

5th Annual SEAOI Midwest Bridge Symposium, “Stay Cable Replacement of the Luling/Hale Boggs Bridge,” Chicago, IL, April 24, 2008.

LTRC Seminar Series, Bridge Structures, New Orleans, LA, February 20-21, 2008, “Luling Cable Stay Replacement.”

2006 Cable Stay Workshop, Missouri Department of Transportation, “Structural Evaluation of Stay Cables of the Luling Bridge,” April 25-27, 2006, Saint Louis, MO.

Keynote Speaker for The First National Conference on the Strengthening of Historical and Unreinforced Masonry Buildings, December 18 and 19, 2005, Shiraz, Iran.

Delaware Department of Transportation, Dover, Delaware, “Condition Evaluation of Stay Cables in Cable-Stayed Bridges,” September 21, 2004.

Iowa Department of Transportation, Ames, IA, April 26, 2004, “Evaluation of Stay Cables of the Mississippi River Bridge at Luling.”

2004, Louisiana Transportation Engineering Conference, Baton Rouge, LA, February 17, 2004, “Evaluation of Stay Cables of the Mississippi River Bridge at Luling.”

Midwest Bridge Working Group, Winter Conference, Nashville, TN, December 4, 2003, “Health Monitoring of Cable-Stayed Bridges.”

Illinois Department of Transportation, Bureau of Bridges and Structures, June 4, 2003, “Cable-Stayed Bridge Performance Evaluation- Lessons from Laboratory and Field,”

ACI Convention, Vancouver, Canada, March 30-April 3, 2003, “Diagnostic Field and Laboratory Load Testing of 60-ft Prestressed Double Tee Beams,” Evaluating Existing Structures-Methods and Case Histories, Part II

ABCD-NWNY Conference, Nov. 15, 2002, “Experimental Evaluation of Jointless Bridges”

ABCD-NWNY Conference, Nov. 17, 2000, “Measurement of Stay Cable Forces Using Laser.”

**Government Reports or Monographs**

1. Mehrabi, A.B., Farhangdoust, S., Khedmatgozar Dolati, S.S, and Tabiatnejad, D, Epoxy Dowel Pile Splice Evaluation, Project No. BDV29 TWO 977-40, Florida Department of Transportation.
2. Mehrabi, A.B., Richitelli, F., Abedin, M., Farhangdoust, S., and Khedmatgozar Dolati, S.S., “Performance of existing ABC Projects- Inspection case studies,” ABC-UTC Project Report, USDOT Grant # 69A3551747121.
3. Mehrabi, A.B., Torrealba, A., Abedin, M., and Khedmatgozar Dolati, S.S., “Available ABC options for short-span bridge- Course module,” ABC-UTC Project Report, USDOT Grant # 69A3551747121.
4. Mehrabi, A.B., Azizinamini, A., Abedin, M., Ghosn, M., Nowak, A., and Babu, A.R.,” Redundancy of Twin Steel Box Girder Bridges,” Report to FDOT, BDV29-977-40, 2021.
5. Mehrabi, A.B., Farhangdoust, S., Garber, D., and Lee, SJ, “Evaluation of Epoxy Dowel Pile Splices,” Report to FDOT, Multiple deliverables, BDV29-977-52, 2020-2021.
6. Mehrabi, A.B., Ali, H., Zaman, M., Baqersad, M., and Ali, A., “Development of a Guide for Selection of Substructure for ABC Projects,” ABC-UTC Project Report, USDOT Grant # 69A3551747121.
7. Mehrabi, A.B., and Farhangdoust, S., “NDT Methods Applicable to Health Monitoring of ABC Closure Joints,” (2019). ABC-UTC Project Report, USDOT Grant # 69A3551747121.
8. Al-Chaar, G., and Mehrabi, A.B., “Constitutive models for nonlinear finite element analysis of masonry prisms and infill walls,” United States. Army. Corps of Engineers.; Engineer Research and Development Center (U.S.); Construction Engineering Research Laboratory (U.S.), Computer file: National government publication, ERDC/CERL TR, 08-19, 2008.
9. Telang, N.M., Dumlao, C., Mehrabi, A.B., Ciolko, A.T., and Gutierez, J., “Field Inspection of In-Service FRP Bridge Decks,” NCHRP Project No. 10-64, Report 564, 2006.
10. Mehrabi, A.B., Telang, N.M., and Tabatabai, H, “Implementation of Tuned Dampers for Suppression of Bridge Stay Cable Vibration,” NCHRP-IDEA Project No. 71, 2002.
11. Telang, N. M., and Mehrabi, A.B., “Francis Case Memorial Bridge, Structural Evaluation of Case Bridge,”, Report to Legion Design/Campbell & Associates, Inc., and the Washington, D.C. Department of Public Works, Construction Technology Laboratories, IL, 2002.
12. Mehrabi, A.B, “In-Plane Lateral Load Resistance of Wall Panels in Residential Buildings,” Portland Cement Association, PCA R&D Serial No. 2403, 2000.
13. Tabatabai, H., and Mehrabi, “Tuned Dampers and Cable Fillers for Suppression of Bridge Stay Cable Vibrations,” NCHRP-IDEA Project No. 50, 1999.
14. Azizinamini, A., Lotfi, H.R., Elremaily, A., Mehrabi, A.B., Mans, P., and Luedke, J., “Assessing Strength Capacity of Prestressed Concrete Girders,” SPR-PL-1(031)P481, University of Nebraska, Lincoln, Nebraska Department of Roads, Federal Highway Administration, 2001-6.
15. Azizinamini, A., Luedke, J., Mehrabi, A.B., Kathol, S., and Keeler, B., “**Strength Capacity of Steel Girder Bridges,” Report to Nebraska Department of Roads.**
16. **Azizinamini, A.,** Mehrabi, Lofti, H.R., and Mans, P. “Evaluation and Retrofitting of Historic Steel Truss Bridges,” Report to Nebraska Department of Roads Research Project No. STB-STWB (13); Center for Infrastructure Research; University of Nebraska-Lincoln, 1997.
17. Tabatabai, H., Mehrabi, A.B., Morgan, B.J., and Lotfi, H.R., "Non-destructive bridge evaluation technology: bridge stay cable condition assessment." Report submitted to the Federal Highway Administration, Construction Technology Laboratories, Inc., IL, 1998.
18. Keeler, B., Mehrabi, A.B., Azizinamini, A., and Rohde, J., "Toward Development of a Non-Destructive Technique to Measure the Available Prestress in Prestressed Concrete Girders," Report No. 12801, Civil Engineering Department, University of Nebraska-Lincoln, Lincoln, NE, 1994.
19. Mehrabi, A.B., Shing, P.B., Schuller, M., and Noland, J., "Performance of Masonry Infilled R/C Frames Under In-Plane Lateral Loads" CU/SR-94-6, Civil, Environmental and Architectural Engineering Department, University of Colorado, Boulder, CO, 1994.

**CREATIVE WORK**

**Reviewer for:**

ASTM International- Journal of Testing and Evaluation- (2022-present)

Bulletin of Earthquake Engineering- (2020- present)

IEEE Transactions on Intelligent Transportation Systems- (2021-present)

MDPI- Applied Sciences, Applied Mechanics, Sensors, Infrastructure, Vibration and JMSE Journals (2020-present)

Structural Engineering and Mechanics, An International Journal (2018-present)

ASCE Journal of Performance of Constructed Facilities, 2014-present

ASCE Journal of Structural Engineering. 2016-present

ASCE Journal of Composites for Construction- 2021-present

Engineering Structures, Elsevier, 2007-present

The TMS Journal, 1999-present

The TMS Outstanding Thesis Award, 1999

ASCE Bridge Engineering Journal, 2003-present

ASCE Architectural Engineering Journal, 2003-present

Estonian Science Foundation, Grant Proposals, 2005

**Guest Editor** for:

Non-Destructive Evaluation, Structural Health Monitoring and Vibration Analysis of Steel Bridges,

Special issue of MDPI Metals, Volume I, an Open Access Journal by MDPI

mdpi.com/si/61528

**Guest Editor** for:

Non-Destructive Evaluation, Structural Health Monitoring and Vibration Analysis of Steel Bridges,

Special issue of MDPI Metals, Volume II, an Open Access Journal by MDPI

<https://www.mdpi.com/journal/metals/special_issues/W6UBE137G9>

**Guest Editor** for:

Sustainable Infrastructure Engineering and Reliability of Condition Assessment,

Special issue of MDPI Sustainability, an Open Access Journal by MDPI

mdpi.com/si/167649

**Guest Editor** for:

Structural Health Monitoring and Performance Evaluation of Bridges and Structural Elements,

Special issue of Infrastructure, an Open Access Journal by MDPI

<https://www.mdpi.com/journal/infrastructures/special_issues/0LRF202A18>

**Guest Editor** for:

Advanced Materials and Technology for Resilient Bridge Infrastructures,

Special issue of Infrastructure, an Open Access Journal by MDPI

<http://mdpi.com/si/19216>

**Co-Guest Editor** for:

Vibration Energy Harvesting for Sensor Networks

Special Issue of Advances in Mechanical Engineering, a SAGE Journal

<http://journals.sagepub.com/page/ade/call-for-papers/special-issues/vibration-energy-harvesting>

**Editorial Board Member** for:

The Journal of Durability and Resilience of Bridges

<https://dc.uwm.edu/durability/editorialboard.html>

**Google Scholar Citation (10/02/23)**

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|  | **All Time** | **Since 2018** |
| **Citations** | 3469 | 1711 |
| **h-index** | 24 | 19 |
| **i10-index** | 49 | 34 |

**WORKS IN PROGRESS**

**Books**

Mehrabi, A.B., Torrealba, A., Abedin, M., Khedmatgozar Dolati,S.S., and Pranit Malla “Available ABC Options for Short-Span Bridges,” Proposal approved by Cambridge Scholars Publishing, Date to be determined.

**Research in Progress**

Mehrabi, A.B., and Nanni, A., Guide for Field Inspection of In-service FRP Reinforced/ Strengthened Concrete Bridge Elements, Project No. PR HIF210133PR, Federal Highway Administration, USDOT.

Mehrabi, A.B., and Khedmatgozar Dolati, S.S., Alternative Materials and Configuration for Precast Prestressed Concrete Pile Splices, ABC-UTC, USDOT.

Mehrabi, A.B., Azizinamini, A., Lau, K., and Helwig, T., Half-Round Bearing Stiffeners for Skewed Steel I-Girders, Florida Department of Transportation,

**Grant Proposals**

**FUNDED RESEARCH**

Mehrabi, A.B., and Lau, K. Evaluation of Ultra-High Performance Concrete (UHPC) Pile Splices, Florida Department of Transportation, February 2023, $360,000 (Initial PI, David Garber).

Mehrabi, A.B., and Lee, S.J. Evaluation of Concrete Pile to Footing or Cap Connections, Florida Department of Transportation, June 2021, $300,000 (Initial PI, David Garber).

Mehrabi, A.B., Azizinamini, A., Lau, K., and Helwig, T., Half-Round Bearing Stiffeners for Skewed Steel I-Girders, Florida Department of Transportation, June 2022, $200,000 (ongoing).

Mehrabi, A.B., and Nanni, A., Guide for Field Inspection of In-service FRP Reinforced/ Strengthened Concrete Bridge Elements, Project No. PR HIF210133PR, Federal Highway Administration, USDOT, $275,000. (ongoing)

Mehrabi, A.B., Farhangdoust, S., Garber, D., and Lee, SJ, Epoxy Dowel Pile Splice Evaluation, Project No. BDV29 TWO 977-40, Florida Department of Transportation, $299,000, PI (Completed-2022).

Mehrabi, A.B., and Khedmatgozar Dolati, S.S., Alternative Materials and Configuration for Precast Prestressed Concrete Pile Splices, ABC-UTC under USDOT Grant No. 69A3551747121. $60,000 plus $30,000 Cost Sharing, PI (ongoing).

Sadri, A., Azizinamini, A., and Mehrabi, A.B., Complex Networks Perspectives towards Accelerated Bridge Construction, ABC-UTC under USDOT Grant No. 69A3551747121. 2020, $60,000 plus $30,000 Cost Sharing, Co-PI (Completed).

Mehrabi, A.B., Azizinamini, A., and Abedin, M., Redundancy of Twin Steel Box Girder Bridges, Project No. BDV29-977, Florida Department of Transportation, $175,000, PI (Completed-2021).

Mehrabi, A.B., and Torrealba, A., Available ABC Bridge Systems for Short Span Bridges- Course Module. ABC-UTC under USDOT Grant No. 69A3551747121. $30,000 plus $20,000 Cost Sharing, PI (completed 2020).

Mehrabi, A.B., and Riccitelli, F. Performance of Existing ABC Projects: Inspection Case Studies, 2020, ABC-UTC under USDOT Grant No. 69A3551747121 $20,000 plus $15,000 Cost Sharing, PI (Completed 2021).

Mehrabi, A.B., Ali, H., Zaman, M., Development of a Guide for Selection of Substructure for ABC Projects (ongoing). ABC-UTC under USDOT Grant No. 69A3551747121, $80,000 Plus $40,000 Co0st Sharing, PI (Completed 2021).

Mehrabi, A.B., and Farhangdoust, S., NDT Methods Applicable to Health Monitoring of ABC Closure Joints (2019). ABC-UTC under USDOT Grant No. DTRT13-G-UTC41, $60,000 plus $30,000 Cost Sharing, PI (completed 2019).

Mardanpour, P, and Mehrabi, A.B., Principal and Considerations for Design of Small Unmanned Aerial Vehicles for Inspection and Survey (2019). ABC-UTC under USDOT Grant No. DTRT13-G-UTC41, $60,000 plus $30,000 Cost Sharing, PI (completed 2019).

Mehrabi, A.B., and Taeby, M., Synthesis of Inspection and Rehabilitation Activities for the External Post-Tensioning Tendons of the Vivekananda Bridge. (2019), Second Vivekananda Bridge Toll Company, India. $50,000, PI (Completed 2019).

Azizinamini et al., ABC-UTC USDOT Grant No. 69A3551747121, 2016-17, $6,071,141. Co-PI.

Co-investigator, FHWA Contract No. DTFH61-96-R-00029, Condition Assessment of Cable-Stayed Bridges, 1996-1999

Principal Investigator (Later Consultant)-, NCHRP #12-69, Design and Construction Guidelines for Long-Span Decked Precast, Prestressed Concrete Girder Bridges, 2004- $450,000.

Consultant, NCHRP #10-64, Field Inspection of FRP Bridge Decks, 2003-2005- $40,000.

Principal Investigator, NCHRP IDEA Project #71, Field Implemetation of Tuned Mass Dampers for Suppression of Stay Cable Vibration, 2000-2001- $90,000.

Co-investigator, NCHRP IDEA Project #50, Tuned Dampers and Cable Fillers for Suppression of Bridge Stay Cable Vibrations, 1998-1999- $90,000.

Ph.D. Studies, NSF Grant Nos. MSM-8914008 and MSM-9011065, Seismic Performance of Masonry-Infilled RC Frames, 1990-1994.

**PROPOSALS SUBMITTED BUT NOT FUNDED**

Experimental Verification and Design Procedure for Alternative Splicing Methods Applicable to Prismatic RC/PC Concrete Structural Elements (RPCSE), January 2023, ABC-UTC, US DOT, $100,000.

Enabling Detection and Monitoring of FRP Reinforcement Embedded in Concrete Elements, Transportation Research Board, NCHRP-IDEA Program, $145,000.

Development of Lightweight High Performance Concrete with ABC Applications, Submitted as IDEA Proposal for Cycle 5 of ABC-UTC, January 2022. Amount $60,000 plus Matching $30,000

Design Procedure and Tool for Alternative Splicing Methods for Prestressed-Precast Concrete Piles, Submitted as IDEA Proposal for Cycle 5 of ABC-UTC, January 2022. Amount $60,000 plus Matching $30,000

Experimental Verification and Design Procedure for Alternative Splicing Methods Applicable to Prismatic RC/PC Concrete Structural Elements (RPCSE)- Submitted to FDOT Research Idea, September 2021. Amount $175,000.

Implementing and Leveraging Machine Learning at State Departments of Transportation, NCHRP 23-16, Joint proposal to NCHRP by AECOM, FIU, and Portland State University. Grant amount $350,000.

Guideline for Risk-Based Inspection of Main Suspension Cables, National Cooperative Highway Research Program (NCHRP 12-115), 2018, $470,000. Principal Investigator.

Guidelines for Response Planning, Assessment, and Rapid Restoration of Service of Bridges is Extreme Events, National Cooperative Highway Research Program (NCHRP 14-45), 2020, $400,000. Principal Investigator.

Internal Competition Proposal- Development of a Hybrid Testing Bed for Structural and Serviceability Testing under Storm and Hurricane Level Wind Conditions, FIU-NSF, 2019, $230,000. Principal Investigator.

Capturing Deformation, Defect, and Failure of Materials and Structures using Low-Cost Dispersed Sensing System (DSS) and Spatial Scanning Method, NSF, 2018, $480,000. Principal Investigator.

Florida Local Assistance Program RFRP 17/18 003 Technical Proposal, FDOT, 2017, $300k Co-PI.

Underwater Noise Level Study During Impact Pile Driving // 442745-1-C2-01, FDOT 2018, $460,000, Principal Investigator.

Effect of Decades-Long Aging on Properties of High Performance Concrete, NSF, 2017, $336,000. Principal Investigator.

**PATENT DISCLOSURES, APPLICATIONS, AND AWARDS**

**Patent Disclosures (FIU)**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Name** | **Status** | **Create Date** |
| D2020-0061 | Bimorph Piezoelectric Energy Harvester (BPEH) to Support Intelligent Transportation System (ITS) for Cable Supported Bridges | Approved | 6/21/2020 |
| D2022-0101 | Methods for making embedded FRP detectable by NDT | Approved | 12/22/2022 |
| D2022-0056 | Grouted Sleeve Coupler Splice (GSCS) for Precast Concrete Piles | Approved | 9/4/2022 |

**Awarded Patents**

Co-inventor of A New Damping System for Cables, Patented (2000) US6292967B1.

Co-inventor, Structural joint damage detector tool (2021) US 11,120,181 B1.

Co-Inventor, FRP Splice System for Joining Structural Elements (2022) US 11,319,706 B1.

Co-Inventor, NSMB Pile Splice System for Precast Concrete Piles (2022) US 11,319,689 B1.

Co-Inventor, Connection systems and methods for skewed frames (2023) US 11,746,484

**Other Awards**

FIU CEC Service Award, April 21, 2022.

The Outstanding Doctoral Dissertation Award of The Masonry Society, 1997.

Awarded by Engineering News Record as One of Top 25 Newsmakers of the Year, 1997.

Outstanding Paper Award of 8th North American Masonry Conference, 1999.

Listed in The Marquis Who’s Who Publication, 2000/2001.

Outstanding reviewer award by ASCE Bridge Engineering Journal, 2009.

**PARTCIPATION IN COMMITTEES AND DEPARTMETNAL SERVICES**

**Committees**

Search and Screen Committee (SSC) for Open-Rank, Tenure-Track Position: Robotics and Water Resources Engineering, College of Engineering and Computing- 2018-2019

Search and Screen Committee (SSC) for Open-Rank, Tenure-Track Position: Artificial Intelligence, Robotics and Automation in Civil and Environmental Systems Construction.- 2019-2020. Diversity Advocate for this Committee.

CEE Diversity and Inclusion Committee- 2020-Present

CEE Scholarship Committee- 2018-Present

**Policies (led development of the following departmental policies)**

Teaching Evaluating Project, 2019-2020

Differential Assignment Policy, 2019-2020

Department Decentralization, 2019

Non-CEE Faculty Application to Serve as Major Professor Policies, 2019

**STUDENT MENTORING AND INVOLVEMENT**

Initiated the **ASCE-SEI Graduate Student Chapter at FIU** and serves as Faculty Advisor- The chapter helps students networking and outreach, holds informative and technical presentations and seminar, and conducts fieldtrips in the area of structural engineering. 2018-Present

**Major Advisor for the following students at FIU:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Name** | **Degree** | **Start Date** | **Anticipated Graduation Date** |
| Seyed Feras Al Mosawi | MS | Spring 2016 | **Graduated in Fall 2018** |
| Ana Torrealba | MS | Spring 2017 | **Graduated in Fall 2019** |
| **Mohammad Abedin** | **PhD** | **Spring 2018** | **Graduated in Fall 2021**  **Outstanding PhD Graduate ‘21-College of Engrg. & Computing** |
| **Saman Farhangdoust** | **PhD** | **Fall 2017** | **Graduated in Fall 2021**  **FIU Outstanding Graduate Scholar Award ‘21**  **FIU Real Triumphs Award ‘21** |
| Mahdy Taeby | PhD | Fall 18 | **Graduated Spring 2023** |
| Francesco Riccitelli | MS | Spring 2019 | **Graduated in Summer 2020** |
| Saman Khedmatgozar Dolati | PhD | Spring 2020 | Spring 2024 |
| Yanet Poyato | MS | Fall 2018 | **Graduated in Spring 2020** |
| Rafael Hernandez | MS | Fall 2017 | **Graduated in Summer 2020** |
| Pranit Malla | PhD | Fall 2020 | Summer 2024 |
| Leana Lu | MS | Summer2021 | **Graduated Spring 2022** |
| Dariya Tabiatnejad | PhD | Fall 2021 | Spring 2025 |
| Yaqoub Khadadah | MS | Fall 2021 | **Graduated Fall 2022** |
| Batool Shahab | MS | Fall 2021 | **Graduated Fall 2022** |
| Juan Gaviria Orozco | MS | Fall 2020 | **Graduated in Fall 2021** |
| Estrella Ruaigip Vazquez | MS | Fall 2020 | **Graduated in Fall 2021** |
| Nigel Salick | MS | Fall 2021 | **Graduated Summer 2023** |
| Jean Cantave Guerrier | MS | Fall 2021 | **Graduated Fall 2022** |
| Eid Algharib | MS | Spring 2022 | Spring 2023 |
| Ahmad Etayem | MS | Spring 2020 | **Graduated Spring 2022** |
| Nicholas Garcia | MS | Spring 2022 | **Graduated Fall 2022** |
| Nicholas Arango | MS | Spring 2022 | **Graduated Fall 2022** |
| Maria Fernanda Corrales | MS | Spring 2022 | **Graduated Fall 2022** |
| Jean-Michel Pierre-Louis | MS | Spring 2022 | **Graduated Fall 2022** |
| Roger Marcia | MS | Spring 2022 | **Graduated Spring 2023** |
| Carla Louis | MS | Fall 2021 | **Graduated Spring 2023** |
| Lakshmi Dominguez | MS | Fall 2021 | **Graduated Spring 2023** |
| Ali Albalawi | MS | Spring 2022 | **Graduated Spring 2023** |
| Carlos Lombana | MS | Fall 2022 | **Graduated Summer 2023** |
| Osniel Vazquez | MS | Fall 2022 | **Graduated Summer 2023** |
| Sebastian Cabrera | MS | Fall 2022 | **Graduated Fall 2023** |
| Diego Barba | MS | Fall 2022 | **Graduated Fall 2023** |
| Novin Khoshooee | MS | Summer ‘22 | **Graduated Spring 2023** |
| Stefania Reyez | MS | Fall 2022 | **Graduated Fall 2023** |
| Michael Odelola | PhD | Spring 2023 | Fall 2026 |
| Jiayi Ding | PhD | Summer 2023 | Fall 2024 |
| Luis Lumbi | MS | Summer 2023 | **Graduated Fall 2023** |
| Manuel Alcalde | MS | Spring 2023 | Spring 2024 |
| Luis Ortiz | MS | Spring 2021 | **Graduated Fall 2023** |
| Barbara Torano | MS | Fall 2023 | Spring 2024 |

**Member of Dissertation or Thesis Committee for the following students at FIU:**

|  |  |  |
| --- | --- | --- |
| **Student Name** | **Major Advisor** | **Expected Graduation** |
| Amir Sadeghnejad PhD | Dr. Azizinamini | **Graduated Spr. 2021** |
| Sheharyar E Rahmat PhD | Dr. Azizinamini | Spring 2022 |
| Mojtaba Moshtaghzadeh PhD | (Mech) Dr. Mardanpour | **Graduated Summer 2023** |
| Seyedmirsajad Mokhtariomousavi | Dr. Azizinamini | **Graduated Fall 2020** |
| Fatima Vieira PhD | Dr. Garber | **Graduated Fall 2022** |
| Alireza Modir PhD | (Mechanical) Dr. Tansel | **Graduated Spring 2023** |
| Esmail Shahrokhinasab PhD | Dr. Garber | **Graduated Fall 2021** |
| Sunil Dhakal  PhD | (CM) Dr. Zhang | **Graduated Spring 2022** |
| Dogukan Ozecik MS | Masters Dr. Leon | **Graduated Sum. 2021** |
| Abbas Khodayari PhD | Dr. Azizinamini | **Graduated Summer 2023** |
| Carlos Alberto Sosa Cardenas | Dr. Azizinamini | Summer 2022 |
| Isabella Zapata Vivas PhD | Dr. Garber | **Graduated Summer 2023** |
| Piyush Pradhananga PhD | Dr. Zhang | Spring 2023 |
| Carla Reid PhD | Dr. Lau | Spring 2023 |
| Jiayi Ding PhD | Dr. Garber | Spring 2023 |
| Mohammad Abu-Haifa PhD | Dr. Lee | **Graduated Summer 2023** |
| Md. Ashraf Ahmed | Dr. Sadri | **Graduated Fall 2021** |
| Natalia Rangel Campagnaro | Dr. Mardanpour (Mech) | Spring 2023 |
| Erika Rivera | Dr. ElZomor (CM) | Spring 2025 |
| Romaine Byfield | Dr. Tansel (MEch.) | Spring 2025 |
| Rafael Gutierrez | Dr. Lau | Spring 2026 |

**Post-doctoral Associates:**

|  |  |  |
| --- | --- | --- |
| **Student Name** | **Start** | **End** |
| Isabella rakestraw | Fall 2023 | Spring 2024 |
| Seyedmirsajad Mokhtarimousavi | Spring 2020 | Fall 2022 |
| Mohammad Abedin | Spring 2022 | Fall 2022 |
| Saman Farhangdoust | Spring 2022 | Spring 2022 |

**OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE**

**Professional Organization membership and Committees**

Member, American Society of Civil Engineers (ASCE)- 1994-Present

Member of The International Society for Optical Engineering (SPIE) 1997-1999, 2020-Present

Former Member of The Masonry Society (TMS), Member of TMS Research Committee

Former Member of The Society of Experimental Mechanics (SEM) 1997-2002

Member of Technical Committee on ASCE SEI Task Group 1, On Life Cycle Performance of Structural Systems of the Tech Council on Life-Cycle Performance, Safety, and Reliability.

Member of Advisory Panel: NSF Project: Field Monitoring and Measurement Education; A Model for Civil and Environmental Engineering for Tulane University.

**Conferences, Symposiums, Seminars and Webinars**

Proposed, Organized and Moderated ASCE SEI Conference Technical Sessions, 2019-20

Member of Planning Committee for Annual University Transportation Centers (UTC) Conferences for the Southeastern Region, 2018-Present

Member of Planning Committee and Moderator for Regional UTC Student Spotlight Virtual Conference for the Southeastern Region, Current Challenges in Transportation and Logistics, November 4, 2020.

Planned and organized an interactive seminar in Research Ethics and Integrity. Invited speaker: Dr. Julie Simpson the director of Research Ethics Services of the New Hampshire University. More than 60 graduate students and faculty from CEE and CM attended.

**University Transportation Centers**

Serves as Research Director for Accelerated Bridge Construction University Transportation Center (ABC-UTC)- Organize research, reporting, and presentations.

Plan, Organize and Moderate Semiannual Research Day, full-day webinars with participation of 5 universities across the nation and attended by more than 100 registrants. 2017-Present

# Professional Registrations and Certificates

# Professional Engineer Licenses in Florida, Nebraska, Louisiana, and New York.

**Experience in Industry**

Dr. Mehrabi has more than 25 years of experience in industry in non-destructive evaluation, inspection and condition assessment of bridges, design and laboratory and field testing. He has been very successful in turning research results and new technologies into practical tools in the shortest time. As part of the first comprehensive research project for condition assessment of cable-stayed bridges sponsored by FHWA, he co-invented a Laser-Based Cable Monitoring System (DTFH-61-96-C-00029), for which he was awarded as “One of Top 25 Newsmakers of the Year, 1997, By ENR.” This tool went to practice before the end of project, and has been used for condition assessment of 25 cable-supported bridges worldwide (<https://rb.gy/yqjqev> ). Before establishing his own firm (Bridge Engineering Solutions) in 2004, he managed the largest privately-owned structural laboratory in the US. Below is a selective list of bridge consulting projects Dr. Mehrabi has been involved;

* Consultant, Principal Investigator for NDT inspection of external post-tensioning tendons and stay cables of 2nd Vivekananda Bridge in Kolkata, India (2015-2017).
* Consultant, Project Engineer for Construction Phase Force Verification of Hangers of the Hart Bridge in Jacksonville, FL (2016).
* Project manager and engineer for stay cable force evaluation of the Leonard Zakim (Charles River) Bridge in Boston, MA (2015).
* Resident Engineer and Consultant to Louisiana DOTD for construction support services & QC/QA consulting activities related to total cable replacement and repairs in the Hale Boggs Bridge Cable-Stayed Bridge in Luling, Louisiana (2009-2014).
* Consultant for Instrumentation and Structural Health Monitoring of the Sunshine Skyway Bridge in St. Petersburg, Florida (2009-2017).
* Principal investigator and project manager for evaluation of cables and vibration susceptibility analysis of the Dames Point Bridge in Jacksonville, FL, 2008, 2012, 2016.
* Principal Investigator and Project Manager for cable integrity check using force and damping measurement for the Sunshine Skyway Bridge in Tampa, FL, 2009-2010.
* Project manager for cable replacement design for the Luling Bridge, 2008.
* Principal Investigator and Project Manager for inspection, safety assessment and life-cycle-cost-analysis of stay cables of the Luling Bridge for Louisiana DOTD, 2002-2007.
* Principal Investigator and project manager for evaluation of cables and wind-induced vibration susceptibility analysis of several cable-stayed bridges including Talmadge Bridge in GA, Sunshine Skyway Bridge in FL, Cochrane Bridge in AL, SR1 Bridge C&D Canal, DE, Varina-Enon Bridge, VA, Fitchburg Bridge, MA, Maumee River Crossing Bridge, OH, and QEII Bridge in London, UK (1998-2007).
* Project Manager and Principal Investigator for the cause of hanger plate fracture and remaining service life analysis of the Bosporus Bridge in Istanbul for Turkish Highway Directorate, 2004.
* Project manager for evaluation of cables in suspension bridges including Tazlina and Tanana Bridges along Trans-Alaskan Oil Pipeline, Paseo Suspension Bridge in Kansas City, and Carquinez Bridge (1999 – 2004).
* Project manager for force measurement and evaluation of hangers in arch bridges including Hoan and Cass-Street Bridges, WI, Belle-Vernon Bridge, PA, Telegraph Rd Bridge, MI, Troup Howell Bridge, NY, & Sherman Minton Bridge, KY (2000-11).
* Performed numerical assessment of seismic response and ductility of nuclear facilities in Savannah River Site (1998), and analytical evaluation of structural defects in prestressed trestles and decks at Naval Weapons Station, Colts Neck, NJ (1997-1999).

While working at CTL, Dr. Mehrabi led the building product R&D, testing, and certification programs, and worked with building code organizations, and Miami Metro Dade County. Through this experience, he has developed a strong familiarity with material standards and Quality Control/Quality Assurance procedures. Some of his involvements in this field are:

* Consultant for ICC evaluation programs for Cold-formed Truss Members for Dietrich Industries (2004-7), and Aegis Metal Framing (2007-2008).
* Development and qualification testing for Cement Based Glass Fiber Composites for strengthening of Unreinforced Masonry Walls for Saint Gobain Technical Fabrics, 2002-2004. Developed acceptance criteria for evaluation, ICC AC218.
* Principal investigator for Performance of Thermoplastic Fiber Reinforced Polymer Rebars sponsored by Dow Chemicals, 2001-2003.
* Project manager for ICBO and SSBCI Code certification of Aerated Autoclaved Concrete blocks and reinforced panels for Contec Mexicana (1998) and AACO (2002).