

Publications

Books

Mehrabi, A.B., Torrealba, A., Abedin, M., Khedmatgozar Dolati, S.S., and Pranit Malla “Available ABC Options for Short-Span Bridges,” Cambridge Scholars Publishing, published March 19, 2024. <https://www.cambridgescholars.com/product/978-1-0364-0196-2>

Mehrabi, A.B., Khedmatgozar Dolati, S.S., Malla, P., Farhangdoust, S., and Azzi, Z., “Non-destructive Testing (NDT) for Inspection of Bridges and Buildings,” Cambridge Scholars Publishing, June 1, 2025. <https://www.cambridgescholars.com/product/978-1-0364-4528-7>

Mehrabi, A.B., Malla, P., Khedmatgozar Dolati, S.S., Ortiz, J., and Nanni, T., “Inspection of Concrete Elements Reinforced or Strengthened with Fiber-Reinforced Polymers,” In Preparation, CRC Press, Publication expected in late 2025.

Edited Book

Mehrabi, A.B., and Khedmatgozar Dolati, S.S., “Structural Health Monitoring and Performance Evaluation of Bridges and Structural Elements,” MDPI- Infrastructures, October, 2024. [Edited Book-SHM](#)

Journal Papers- 54 total papers, 36 published only in the last 5 years

Last 5-year average among 35 papers **Impact Factor = 3.2** (Range 0.7-6.5)

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

1. **Rakestraw, I**, Corven, J., Mehrabi, A, and Garber, D., “Experimental Study on Concrete Pile-to-Cap Connection Behavior,” ACI Structural Journal, under Review, [Civil & Structural Engineering, (Q2), Building & Construction, (Q2)] [IF = 1.3]
2. **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,” 2024/12, Transportation Research Record, 2678 (12), 139-154. [Civil and Structural Engineering (Q2); Mechanical Engineering (Q2)] <https://journals.sagepub.com/doi/10.1177/03611981221097093> [IF = 1.6]
3. **Odelola, M., Khedmatgozar Dolati, S.S.**, Mehrabi, and Garber, D., “Alternative Splicing Options for Ultra-High-Performance Concrete (UHPC) H-Piles,” MDPI *Buildings* 2025, 15(3), 481; <https://doi.org/10.3390/buildings15030481> [Architecture, (Q1)] [IF = 3.1]
4. **Fegghi, M., Khedmatgozar Dolati, S.S.**, Mehrabi, A., **Malla, P.**, and **Tabiatnejad, D.**, “A New Framework for Condition and Risk Assessment for Sustainable Management of PT Bridges,” MDPI *Sustainability* 2024, 16(22), 9703; <https://doi.org/10.3390/su16229703> [Geography, Planning and Development, (Q1)] [IF= 3.3]
5. Mehrabi, A., and **Khedmatgozar Dolati, S.S.**, “Structural Health Monitoring and Performance Evaluation of Bridges and Structural Elements,” MDPI *Infrastructures* 2024, 9(10), 178; <https://doi.org/10.3390/infrastructures9100178> [Civil & Structural Engineering, Building & Construction, Computer Science applications, (Q2)] [IF = 2.7]
6. **Tabiatnejad, D.**, Tabiatnejad, B., **Khedmatgozar Dolati, S.S.**, and Mehrabi, A., “Damage Detection in External Tendons of Post-Tensioned Bridges,” MDPI, *Infrastructures* 2024, 9(7), 103; <https://doi.org/10.3390/infrastructures9070103> [Civil & Structural Engineering, Building &

Construction, Computer Science applications, (Q2)] [IF = 2.7]

7. **Tabiatnejad, D., Khedmatgozar Dolati, S.S.,** Mehrabi, A., and Helwig, T.A., “Fatigue Consideration for Tension Flange over Intermediate Support in Skewed Continuous Steel I-Girder Bridges,” MDPI *Infrastructures* **2024**, 9(7), 99; <https://doi.org/10.3390/infrastructures9070099> [Civil & Structural Engineering, Building & Construction, Computer Science applications, (Q2)] [IF = 2.7]
8. **Malla, P., Khedmatgozar Dolati, S.S.,** Ortiz, J., Mehrabi, A., Nanni, A., and **Ding, J.** “Damage Detection in FRP-reinforced Concrete Elements,” *Materials* **2024**, 17 (5), 1171, <https://doi.org/10.3390/ma17051171>. [Material Science, (Q2)] [IF = 3.1]
9. **Odelola, M., Khedmatgozar Dolati, S.S.,** Mehrabi, A., and Garber, D., “Ultra-High-Performance Concrete (UHPC) Piles and Splicing Options,” MDPI *Applied Sciences* **14** (2), 827, <https://doi.org/10.3390/app14020827> [Engineering, Material Science, (Q2)] [IF = 2.5]
10. Ortiz, J., **Khedmatgozar Dolati, S.S., Malla, P.,** Mehrabi A., and Nanni, A., “Nondestructive Testing (NDT) for Damage Detection in Concrete Elements with Externally Bonded Fiber-Reinforced Polymer,” MDPI *Buildings* **2024**, 14(1), 246; <https://doi.org/10.3390/buildings14010246> [Architecture, (Q1)] [IF = 3.1]
11. **Malla, P., Khedmatgozar Dolati, S.S.,** Mehrabi, A., Ortiz, J., and Nanni, A., “Applicability of available NDT methods for damage detection in concrete elements reinforced or strengthened with FRP,” *Bridge Structures* vol. 19, no. 4, pp. 149-164, 2023, DOI: 10.3233/BRS-230217. [IF = 0.7]
12. **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> [Civil & Structural Engineering, Building & Construction, Mechanical Engineering, Mechanics and Materials, (Q1)] [IF = 2.9]
13. 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> [Metals and Alloys, (Q1)] [IF = 2.9]
14. **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>. [Civil & Structural Engineering, (Q1)] [IF = 5.6]
Winner of 2023 Best Paper Award by Elsevier Engineering Structures
15. 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> [Engineering, Material Science, (Q2)] [IF = 2.5]
16. **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> [Engineering, Material Science, (Q2)] [IF = 2.5]
17. 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 Materials 2023, 16(5), 1990; <https://doi.org/10.3390/ma16051990> [Material Science, (Q2)] [IF = 3.1]
18. **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> [Civil & Structural Engineering, Building & Construction, Computer Science applications, (Q2)] [IF = 2.7]
 19. **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)] [IF = 3.9]
 20. **Taeb, 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)] [IF = 2.5]
 21. **Ahmed, M.D.**, Sadri, A.M., Mehrabi, A.B., and Azizinamini, A., “Identifying Topological Credentials of Physical Infrastructure Components to Enhance Transportation Network Resilience: A Case of Florida Bridges,” *ASCE, Journal of Transportation Engineering, Part A: Systems*, 148 (9), September 2021. [Civil and Structural Engineering, Transportation, Q2] [IF = 2.1]
 22. **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)] [IF = 1.6]
 23. **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)] [IF = 5.6]
 24. **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] [IF = 6.5]
 25. **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)] [IF = 4.3]
 26. **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)] [IF = 5.6]
 27. **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)] [IF = 2.9]
28. **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)] [IF = 2.5]
29. **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>. [Civil and Structural Engineering (Q2); Mechanical Engineering (Q2)] [IF = 1.6]
30. **Abedin, M.**, and Mehrabi, A.B., “Health monitoring of steel box girder bridges using non-contact sensors,” *Structures*, Elsevier, Volume 34, 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)] [IF = 3.9]
31. **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)] [IF = 5.6]
32. **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)] [IF = 2.0]
33. **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.
34. **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)] [IF = 3.9]
35. 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, August 10 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)] [IF = 2.99]
36. **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)] [IF = 2.5]

37. **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)] [IF = 2.7]
38. **Taeb, 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. [IF = 1.51]
39. **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)] [IF = 2.7]
40. **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>. [Building and Construction, Material Sciences, (Q2)] [IF = 1.6]
41. 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>. [Acoustics and Ultrasonics, Building and Construction, (Q3)]
42. 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](https://doi.org/10.1061/(ASCE)CF.1943-5509.0000715) , C4014007. [Civil & Structural Engineering, Building & Construction, (Q2)]
43. 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.
44. 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.
45. 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. [Civil & Structural Engineering, Building & Construction, (Q1)]
46. Mehrabi, A.B., “A Monumental Bridge with a Problem Caused by Oversights in Design,” *Bridge Structures*, June 2006, 2(2), pp.79-95. [Civil & Structural Engineering, Building & Construction, (Q1)]
47. 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.
48. 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.

49. 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.
50. 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. [Civil & Structural Engineering, Building & Construction, (Q1)]
51. Mehrabi, A.B., Tabatabai, H., and Lotfi, H. R., "Damage Detection in Structures Using Precursor Transformation Method," Journal of Intelligent Material Systems and Structures, Vol. 9, October 1999, pp. 808-817.
52. 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. [Civil & Structural Engineering, Building & Construction, (Q1)]
53. 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. [Civil & Structural Engineering, Building & Construction, (Q1)]
54. 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.
55. 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) [Civil & Structural Engineering, Building & Construction, (Q1)]

**Conference Papers - 70 total papers, 22 published only in the last 5 years
(Names in Bold identify Dr. Mehrabi's current/former students)**

1. **Odelola, M., Khedmatgozar Dolati, S.S.,** and Mehrabi, A., "Ultra-High-Performance Concrete (UHPC) Pile Splicing Techniques," ASCE, Structures Congress 2025, 209-219, <https://doi.org/10.1061/9780784486085.019>
2. **Tabiatnejad, D.,** Mehrabi, A., and **Khedmatgozar Dolati, S.S.,** "Introducing Efficiency for Damage Detection and Condition Assessment of Cable-Supported Bridges as a Basis for Life Cycle Analysis," ASCE, Structures Congress 2025, 121-134, <https://doi.org/10.1061/9780784486085.011>
3. **Khedmatgozar Dolati, S.S., Mall, P.,** Mehrabi, A., Ortiz, J., and Nanni, A., "Damage Detection in Concrete Elements Reinforced or Strengthened with FRP and New Methods for Improving the Detectability of FRP Bars in Concrete," ASCE, Structures Congress 2025, 373-393, <https://doi.org/10.1061/9780784486085.034>
4. **Malla, P., Khedmatgozar Dolati, S.S.,** Mehrabi, A., Ortiz, J., and Nanni, A., "Developing Inspection and Damage Detection Methods for FRP Reinforced/Strengthened Concrete Elements," ASCE, Structures Congress 2025, 446-457, <https://doi.org/10.1061/9780784486085.040>

5. Mehrabi, A., **Khedmatgozar Dolati, S.S., Malla, P.**, Ortiz, J., and Nanni, T., "NDT for damage detection in FRP reinforced/strengthened concrete elements," IABMAS 2024, Copenhagen, DK, June 24-28, 2024. <https://doi.org/10.1201/9781003483755>
6. **Taeb, M.**, Mehrabi, A., and **Khedmatgozar Dolati, S.S.**, "Risk-based optimal life-cycle maintenance of post-tensioned concrete bridges considering accuracy of inspection methods in structural model updating," Risk-Based Strategies for Bridge Maintenance: Proceedings of the 11th New York City Bridge Conference, 21-22 August 2023, New York, USA.
7. **Taeb, M.**, Mehrabi, A., and Lau, K., "Risk-based selection of inspection method for optimal maintenance of post-tensioned concrete bridges," Life-Cycle of Structures and Infrastructure Systems: Proceedings, CRC Press, 2023, Milan, Italy, PP. 1877-1884 DOI: 10.1201/9781003323020-230
8. **Taeb, M.**, and Mehrabi, A., "Stochastic Condition Assessment of External Post-Tensioning System of Bridges Based on NDE Results," ASCE Structures Congress 2023, 174-181.
9. **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.
10. **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.
11. **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.
12. 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.
13. **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.
14. **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.
15. **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.
16. **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.
17. **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.

18. **Farhangdoust, S.**, Moradisizkoochi, 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.
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20. **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.
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MDPI- Applied Sciences, Applied Mechanics, Sensors, Infrastructure, Vibration and JMSE Journals (2020-present)
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Co-Guest Editor for:

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Past Guest Editor for:

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Special Issue of Advances in Mechanical Engineering, a SAGE Journal- Complete
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Editorial Board Member for:

The Journal of Durability and Resilience of Bridges

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Google Scholar Citation (4/28/25)

	All Time	Since 2020
Citations	4425	2086
h-index	29	22
i10-index	70	53

WORKS IN PROGRESS

Research in Progress

Mehrabi, A.B., and Lau, K. Evaluation of Ultra-High Performance Concrete (UHPC) Pile Splices, 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 (ongoing).

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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 Implementation 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

Development of a Guideline for Detecting FRP Reinforcing Bars in Concrete, ACI- NEX RFP ID:SG25.02, October 2024, \$95,000.

Concept Paper and Proposal -A Guide for Risk Assessment and Management of Post-tensioned Bridges, March 2024, FHWA, \$300,000.

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, Spring 2023, \$145,000.
 Concept Paper- Mobile Lab for Bridge Load Testing and Bridge Performance Testing – Feasibility and Conceptual Framework Study, March 2023, FHWA, \$240,000.
 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 in 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
D2025-0003	Dowel Connection for H-Shape UHPC Structural elements	Approved	1/24/2025
D2024-0051	T&G Joint Column to Footing/Cap Connections	Approved	7/21/2024
D2024-0003	Connection of Precast Concrete Panels and Walls using Near surface Mounted Bars	Approved	1/17/2024
D2022-0101	Methods for making embedded FRP detectable by NDT	Approved	12/22/2022
D2024-0039	NSMB-BC AND NSMB-LC Connection for H-SHAPE Precast UHPC Beam Element	Approved	5/12/2024

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
Co-Inventor, Grouted Sleeve Coupler Splice (GSCS) for Precast Concrete Piles (2023)
US 11,828,033

Other Awards

FIU Excellence Recognition for Publication of two books in 2024
FIU Top Scholar Award for academic year 2024-2025 for Research and Creative Activities
Selected as Senior Member of the Nominated for National Academy of Inventors (NAI), 2025,
[Mehrabi-NAI](#)
Elected to ASCE Fellows, 2024 [Elected to ASCE Fellow](#)
2023 Best Paper Award- Elsevier Engineering structures [Elsevier- Best Paper-2023](#).
FIU- Tenure Award- 2023
FIU CEC Service Award, April 21, 2022.
Outstanding reviewer award by ASCE Bridge Engineering Journal, 2009.
Listed in The Marquis Who's Who Publication, 2000/2001.
Outstanding Paper Award of 8th North American Masonry Conference, 1999.
Awarded by Engineering News Record as One of Top 25 Newsmakers of the Year, 1997.
The Outstanding Doctoral Dissertation Award of The Masonry Society, 1997.

PARTICIPATION IN COMMITTEES AND DEPARTMENTAL SERVICES

Committees

Member of CEE Undergraduate Program Advisory Committee- UPAC- 2019- Present
Member of CEE Graduate Program Advisory Committee- GPAC- 2019- Present
Chair of CEE Teaching Evaluating Committee- 2019- Present
Graduate Program Director- Civil and Environmental Engineering- 2019- 2023
Leading Colloquium Enhancement Initiative- Received UGS Award for 2022-2023
Search and Screen Committee (SSC) for Open-Rank, Tenure-Track Position: Robotics and Water
Resources Engineering, Structural Engineering in Changing Climate, College of Engineering and
Computing- 2018-2024
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- 2020-2024
CEE Scholarship Committee- 2018-Present

Policies (led development of the following departmental policies)

Teaching Evaluating Project, 2019-Present
Differential Assignment Policy, 2019-2020
Department Decentralization, 2019
Non-CEE Faculty Application to Serve as Major Professor Policies, 2019

STUDENT MENTORING AND INVOLVEMENT

ASCE-SEI Graduate Student Chapter at FIU Founded at FIU and serves as Faculty Advisor-
2018-Present

FIU AISC Student Chapter- 2022- present- Serves as Faculty Advisor

Chapters help students networking and outreach, hold informative and technical presentations and seminars, conduct fieldtrips, and participate in student competitions.

Major Advisor for the following students at FIU:

Student Name	Degree	Start Date	Anticipated Graduation Date
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 Assistant Prof. at Embry Riddle Univ.
Mahdy Taeby	PhD	Fall 18	Graduated Spring 2023
Seyed Saman Khedmatgozar Dolati	PhD	Spring 2020	Graduated in Spring 2024 FIU Outstanding Graduate Scholar Award '23, FIU Presidential Award '24, FIU CEC Outstanding MS Student '22 and CEC Outstanding PhD Student '24
Pranit Malla	PhD	Fall 2020	Graduated Fall 2024, FIU UGS DEA (Fall 2024) and DYF (Spring 2025) Fellowships
Dariya Tabiatnejad	PhD	Fall 2021	Summer 2025 FIU UGS DF Fellowship (Spring 2025)
Michael Odelola	PhD	Spring 2023	Fall 2026 FIU UGS DEA Fellowship (Fall 2024)
Jiayi Ding	PhD	Summer '23	Fall 2025 Provost Employer Supported Tuition Fellowship
Masood Fegghi	PhD	Spring 2024	Spring 2027
Mark Braxton	PhD	Spring 2020	Spring 2027
Pere Pla-Junca	PhD	Fall 2025	Spring 2029
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
Ahmad Etayem	MS	Spring 2020	Graduated Spring 2022
Leana Lu	MS	Summer2021	Graduated Spring 2022
Francesco Riccitelli	MS	Spring 2019	Graduated in Summer 2020
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
Seyed Feras Al Mosawi	MS	Spring 2016	Graduated in Fall 2018
Ana Torrealba	MS	Spring 2017	Graduated in Fall 2019
Luis Lumbi	MS	Summer '23	Graduated Fall 2023
Manuel Alcalde	MS	Spring 2023	Graduated Spring 2024
Luis Ortiz	MS	Spring 2021	Graduated Fall 2023
Barbara Torano	MS	Fall 2023	Graduated Spring 2024
Kevin Roman Gomez	MS	Fall 2023	Graduated Spring 2024
Josue Flores	MS	Fall 2023	Graduated Fall 2024
Melanie Gonzalez	MS4+1	Fall 2024	Graduated Spring 2025
Gerresse Lee	MS	Fall 2022	Graduated Spring 2024
Marlon Diaz	MS4+1	Summer '24	Graduated Spring 2025
Alexandra Ocampo	MS	Spring 2022	Graduated Fall 2024
Yanet Poyato	MS	Fall 2018	Graduated in Spring 2020
Rafael Hernandez	MS	Fall 2017	Graduated in Summer 2020
Luis Alcantara	MS	Summer '25	Spring 2026
Maal Abuhamid	MS	Fall 2023	Graduated Spring 2025
Marlon Mieres	MS4+1	Spring 2025	Fall 2025
Ryan Manalo	MS	Fall 2023	Fall 2025
Laura Da Silva	MS4+1	Spring 2024	Fall 2025
Rohan Dominguez	MS4+1	Spring 2025	Fall 2025

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	Graduated Sum. 2023
Mojtaba Moshtagzadeh PhD	(Mech) Dr. Mardanpour	Graduated Sum, 2023
Syedmirsajad 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 Sum. 2023
Carlos Alberto Sosa Cardenas	Dr. Azizinamini	Graduated Spring 2024
Isabella Zapata Vivas PhD	Dr. Garber	Graduated Sum. 2023
Piyush Pradhananga PhD	Dr. Zhang	Graduated Fall 2023
Carla Reid PhD	Dr. Lau	Fall 2025
Mohammad Abu-Haifa PhD	Dr. Lee	Graduated Sum. 2023
Md. Ashraf Ahmed	Dr. Sadri	Graduated Fall 2021
Natalia Rangel Campagnaro	Dr. Mardanpour (Mech)	Graduated Fall 2024
Erika Rivera	Dr. ElZomor (CM)	Fall 2025
Romaine Byfield	Dr. Tansel (MEch.)	Summer 2025
Rafael Gutierrez	Dr. Misra	Summer 2025
Claudia Calle Muller	Dr. ElZomor	Summer 2025
Syeda Mahnaz	Dr. Chang	Spring 2026
Juan Rosario Barboza	Dr. Mardanpour (Mech)	Fall 2025
Chia Mohammadjani	Dr. Zisis	Graduated Sum. 2024
Berry Lamy	Dr. Dickerson- (Mech)	Fall 2026
Nasim Mohamadiazar	Dr. Ebrahimian	Graduated Spring 2025
Hilda Kafur Nuwoku	Dr. Prasar (Mechanical)	Spring 2027
Abid Hossein	Dr. Chang	Graduated Spring 2025

Post-doctoral Associates:

Student Name	Start	End
Fatima Vieira	Fall 2024	Fall 2025
Pranit Malla	Spring 2025	Spring 2026
Isabella Rakestraw	Fall 2023	Spring 2024
Syedmirsjad Mokhtarimousavi	Spring 2020	Fall 2025
Mohammad Abedin	Spring 2022	Fall 2024
Saman Farhangdoust	Spring 2022	Spring 2022
Esmail Shahrokhinasab	Spring 2024	Spring 2025
Francisco Gonzalo Chitty	Spring 2024	Spring 2026
Seyed Saman Khedmatogozar Dolati	Spring 2024	Spring 2026

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

Professional Organization membership and Committees

Member, International Association for Bridge Management and Safety (IABMAS), 2023-Present

Member of Bridge Load Testing Committee

Member, International Association for Life Cycle Civil Engineering (IALCCE), 2024-Present

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, 2010-2016.

Conferences, Symposiums, Seminars and Webinars

Planned and organized a research webinar on Digital Twinning with speaker from University

Polytechnic Barcelona (UPC) on March 20, 2025. Open to all students and faculty.

Planned and organized a forum of engineers from FDOT Districts 4, 6, and headquarter, consultants, faculty and students on March 6, 2025, to showcase FIU CEE capabilities and facilities and exchange of ideas and research needs.

Planned and organized an interactive seminar in Research Ethics and Integrity in 2022. 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.

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.

Member of Planning Committee for Annual University Transportation Centers (UTC) Conferences for the Southeastern Region, 2018-2023

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

University Transportation Centers

Served as Research Director for Accelerated Bridge Construction University Transportation Center (ABC-UTC)- Organize research, reporting, and presentations. 2017-2023

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. 2017-2023

Professional Registrations and Certificates

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

Experience in Industry

Dr. Mehrabi has more than 30 years of experience in industry in non-destructive evaluation, inspection, condition assessment and rehabilitation of bridges, specialized in cable-supported and post-tensioned bridge, as well as 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. His involvement in project with unique challenges demonstrates his highly recognized specialties and pioneering experiences. These include managing inspection, life-cycle cost analysis, rehabilitation design, and construction services for the replacement of cables in the Luling bridge in Louisiana (2002 through 2020), the first of its kind in North America. Below is a selective list of bridge consulting projects Dr. Mehrabi has been involved;

- Principal Investigator and Project Manager for cable integrity check using force and damping measurement for the Sunshine Skyway Bridge in Tampa, FL, 1999, 2009, 2014, and 2024.
- 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 Bosphorus 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).