# Jerome S. O'Connor, P.E., F, ASCE

Executive Director, Institute of Bridge Engineering Dept. of Civil, Structural and Environmental Engineering, University at Buffalo 228 Ketter Hall, UB North Campus, Buffalo, NY 14261 <u>jso7@buffalo.edu</u> (716) 645-5155

### **Education & Licenses:**

Master of Engineering in Civil Engineering; Rensselaer Polytechnic Institute, Troy NY. Bachelor of Science in Civil Engineering; Rensselaer Polytechnic Institute, Troy, NY. Licensed Professional Engineer (NY, PA, PR, KS, HI)

## **Professional Experience:**

#### Bridge Engineering:

Inspection, Safety assurance, Vulnerability assessment, Management, Load rating, Load testing, Retrofit & Rehabilitation, Preservation, Structural Health Monitoring (SHM); Non Destructive Evaluation (NDE, Structural Integrity Evaluation, Hazard mitigation, Earthquake Engineering; Accelerated construction (ABC); FRP Composite Decks and Superstructures; Innovative Technology

#### Engineering Education:

Course design and development of syllabi for new credit courses, NHI Computer-based training (CBT) courses, Technology deployment, Technology transfer workshops, Delivery of major conferences, Instructional Systems Design, Assessment tools

See attached list of projects and publications.

## **Employment:**

- 2013 present: Executive Director, Institute of Bridge Engineering; Civil, Structural and Environmental Engineering, University at Buffalo, Buffalo, NY
- 2010 present: Manager, Bridge Engineering Program; CSEE, UB
- 2002 2010: Senior Program Officer, Transportation Research, MCEER, UB
- 2001 present : President & CEO, BridgeComposites, LLC
- 1989 2002: Bridge Management Engineer, NYS Department of Transportation, Region 6
- 1982 1989: IT Manager and other positions in Design, Construction, Traffic & Safety Groups, NYS Department of Transportation, Region 6
- 1977 1981: Bridge Construction Inspector & Office Engineer, CHS, Consulting Engineers

# **Recognition Received:**

- 2000 Charles Pankow Award Leader of NYSDOT team that received ASCE's Civil Engineering Research Foundation's Award for Innovative Applications
- *"Engineer of the Year"* by New York State Association of Transportation Engineers, 1999
- Meritorious Service Award, NYS Department of Civil Service, signed by Governor, 1999
- *Exemplary Partner Team Recognition Award*, AASHTO's Standing Committee on Quality, Tulsa, OK, October 1999 (NYSDOT team leader).
- 1999 Charles Pankow Award 1<sup>st</sup> runner-up (NYSDOT team leader)
- "Smarter and Faster" Award, New York State DOT Commissioner, 1998.
- *Excellence in Engineering Award*, for post-flood bridge inspection response, 1997.



 Employee Recognition Award, 1995; Certificate of Appreciation, 1994; Employee Recognition Award, 1994; Award of Excellence, 1992; Exemplary Service Award, 1991; Recognition Award, 1990; Suggestion Awards 1984, 1983.

**Professional Service:** ASCE Fellow, Member of Bridging the Gap Africa's Technical Advisory Committee (TAC), Association for Bridge Construction and Design (ABCD-WNY), Engineering Society of Buffalo, Member of FHWA's Virtual Team for FRP Composites, Member of FHWA's Virtual Team for Earthquake Engineering, Past member of Transportation Research Board Committee for Structural Composites. Panel Member for NCHRP 4-27, Application of Advanced Composites to Highway Infrastructure: Strategic Plan.

#### **Projects:**

- 508 Support for Legacy Hydraulics Documents and Guidance Task Order 5010 under FHWA DTFH61-14-D-00050; Role: Principal Investigator (2014-present)
- <u>FHWA DTFH61-14-D-00050 Program Support HIBS Structures and Structural Engineering Team;</u> Role: Project Manager (2014-present)
- NCHRP 20-68A Domestic Scan 13-03 Advances in FRP Composites in Transportation Infrastructure; Role: Subject Matter Expert (SME) (2014-present)
- <u>NHI Bridge Maintenance Reference Manual</u> (National High Institute); Role: Subject Matter Expert (SME) (2013)
- Bonded FRP for Repair and Retrofit of Concrete Structures (Computer-based Training (CBT) for National High Institute); Role: Developer's SME (2013)
- <u>Pedestrian Bridge in Kenya; Preliminary Design</u> (Bridging the Gap Africa); Role: Instructor for senior level capstone design class (2013, 14)
- Implementation of a Master of Science Degree Program for Bridge Engineering (University at Buffalo, Dept. of Civil, Structural and Environmental Engineering); Role: Program Manager (2009present)
- Composite Bridge Decking, FHWA HfL Technology Partnership Project includes FRP Deck Installation in Bolivar, Allegany County NY (2012); (\$496k), Role: Principal Investigator (2010-2013)
- <u>Development of Post-Earthquake Bridge Inspection Procedures</u> (New York State Department of Transportation / Transportation Infrastructure Research Consortium; C-06-014, \$200k), Role: Principal Investigator (2010)
- <u>FRP Pontoon Expert Review Panel</u> (WSDOT Highway 520 over Lake Washington Floating Bridge Project), Role: Panel Member (2009)
- Innovative Technologies and Their Applications to Enhance the Seismic Performance of Highway Bridges (FHWA DTFH61-07-C-00020; \$3.9M), Role: Project Manager (2009-present)
- FRP Hybrid Superstructure: Rte PR 139 over Ausabo Creek, Ponce, Puerto Rico (2009), Role: Certifying Engineer
- FRP Hybrid Deck: T-776 over English Run, Lycoming County, PA (2009), Role: Certifying Engineer
- Principles of Multiple Hazard Design for Highway Bridges (FHWA DTFH61-08-C-00012; \$3.0M), Role: Project Manager (2008-present)
- <u>Application of Corrosion-Resistant Stainless Steel for Civil Engineering Construction in Seismic</u> <u>Regions – a Pilot Study</u> (Industry Pooled-Fund Project Award 42922; \$15,500), Role: Principal Investigator; Co-PI: George C. Lee (2008)
- <u>\$34M Light Rail Transit Car Rehabilitation Project</u>, Ansaldobreda for Niagara Frontier Transit Authority (NFTA) (2008-present), Role: Certifying Engineer for structural modifications
- Bridge Damage Inspection after Pisco Peru M8.0 Earthquake, FHWA (2007), Role: Team Leader

Seismic Vulnerability of the Highway System (FHWA DTFH61-98-C-00094; \$13.9M), Role: Project Manager (completed 2007)

- <u>ABC project: FRP Hybrid Superstructure: Bemus-Ellery Road over Bemus Creek</u>, Chautauqua County, NY (2007), Role: Project Initiator and Consultant to fabricator
- Seismic Vulnerability of Existing Highway Construction (FHWA DTFH61-92-C-00106; \$11.7M), Role: Project Manager (completed 2006)
- <u>FHWA Seismic Retrofitting Manual for Highway Structures, Parts I and II,</u> DTFH61-92-C-00106, Role: Project Manager (2006)
- Effect of Seismic Loads on Timber Bridges (FHWA DTFH61-3-P-00464; \$10k), Role: Principal Investigator for final deliverable only (completed 2005)
- Lifelines Damage Reconnaissance after Hurricane Katrina, U.S. Dept. of Commerce NIST (2005), Role: Lifelines Team Bridge Expert
- Bridge Damage Reconnaissance after Hurricane Katrina, FHWA and NSF (2005) Role: Team Leader.



- ABC project: FRP Hybrid Superstructure: Catherine Street over Chauncey
- <u>Run</u>, Hornell, Steuben County, NY (2005), Role: Project Initiator and Consultant to fabricator <u>ABC project: FRP Hybrid Superstructure: New Oregon Road over Trib. Six Mile Creek Creek</u>, Erie County, NY (2004), Role: Project Initiator and Consultant to fabricator
- <u>FRP Superstructure: Rte. 36 over Trib. Troups Creek</u>, Steuben County, NY (2003), Role: Project Initiator
- Accelerated Bridge Construction; Advised bridge owners on several accelerated bridge construction projects that utilized prefabricated FRP components. (2002-present)
- <u>FRP Deck:</u> S. Broad St. over Dyke Creek, Village of Wellsville, Allegany County, NY (2000), Role: Project Manager
- FRP Deck: Rte. 228 over Cayuta Creek, Chemung County, NY (2000), Role: Project Manager
- <u>FRP Deck: Rte. 367 over Bentley Creek</u>, Chemung County, NY (1999), Role: Project Manager, Project Team was awarded Charles Pankow Award from Civil Engineering Research Foundation (CERF) in 2000
- FRP Column Wrap Demonstration Project, Railroad over I-86, Corning, Steuben County NY (1999), Role: Project Manager
- <u>FRP Column Wrap Demonstration & Evaluation Project</u>, Court Street, Owego, Tioga County NY (1999), Role: Project Manager
- Innovative technology applied to bridge inspection: e.g., *infrared thermography, wireless sensors, corrosion sensors, acoustic strain gauges, LIDAR (laser) technology*. (1998-2002)
- <u>FRP Strengthening Demonstration & Evaluation Project</u>, Church Street, Elmira, Chemung County NY (1998), Role: Project Manager
- <u>FRP Superstructure: Rte. 248 over Bennetts Creek</u>, Steuben County, NY (1998), Role: Project Manager, Project Team was 1<sup>st</sup> Runner-up for CERF's Charles Pankow Award in 1999
- Post-flood Inspection Program developed for NYSDOT and successfully implemented after floods of 1996. (1996)
- <u>Structural Integrity Evaluation</u> procedures developed for NYSDOT and produced prototype SIE meeting rigorous requirements of Uniform Code of Bridge Inspection. (~1996)
- Load Rating Program to drastically reduce number of unrated and unrateable bridges in Region 6 by Level 1 load rating and field load testing. Provided updated ratings for 89% of structures. Oversaw professional staff and was responsible for the technical accuracy of structural capacity calculations on approximately 900 bridges per year. Recommended weight restrictions in cases where structural repairs were needed but could not be done immediately. (1994-2002)

- <u>Bridge Proof-Testing Program</u>, with testing of 34 weight-restricted local bridges 1994-1995; followed up with <u>Diagnostic Load-testing</u> on dozens of more bridges in subsequent years
- Bridge Inspection: Oversaw work of 24 in-house and consultant professional staff in the management of 1800 existing bridges over a six county region. Fostered a team concept that was selfmanaged and performance driven. Delivered professional inspections while optimizing the use of available resources and achieving specific performance objectives. In a typical year, addressed 200 structural flags, 60 safety flags and 100 repair requests. Utilized various technologies for the assessment of structures (d-meter, dye penetrant, ultrasonic testing, scour depth finder, infrared distance meter). (1989-2002)
- <u>Bridge Management:</u> Utilized databases of inventory records and field data to develop the Region's work program for repair, rehabilitation or replacement. (1989-2002)
- <u>Bridge Safety Assurance:</u> Implemented and maintained a vulnerability assessment program to measure and lessen the risk of bridge failure due to scour, steel fatigue, overload, collision, concrete detailing, and earthquakes. (1989-2002)
- <u>Retrofitting</u>: Encouraged staff to develop innovative solutions to structural deficiencies. Oversaw design of economic and fast solutions using plating, post-tensioning, light-weight FRP decks, jacketing, etc. (1989-2002)
- <u>Conference Manager of Technical Workshops/Conferences</u> (e.g. 7<sup>th</sup> National Seismic Workshop on Bridges and Highways, Oakland, CA (2013), 4<sup>th</sup> US-Taiwan Bridge Engineering Workshop, Princeton, NJ (2008); 6<sup>th</sup> National Seismic Conference on Bridges and Highways, Charleston, SC (2008); 4<sup>th</sup> International Workshop of the Seismic Design and Retrofit of Transportation Facilities, San Francisco, (2006); 5<sup>th</sup> National Seismic Conference on Bridges and Highways, San Mateo (2006); REDARS Users' Workshop, San Francisco, (2006); Pilot Workshop on Seismic Retrofitting of Bridges, Portland, (2005); Pilot Workshop on Seismic Retrofitting of Steel Truss Highway Bridges, St. Louis, Dec. (2005). Accelerated Bridge Construction, Buffalo (2004)

**<u>Publications</u>**: (Peer-reviewed publications are preceded by \*)

- 1. \*Lopez de Murphy, M. et al (2014) "Field Performance of a New Fiber Reinforced Polymer Deck", ASCE Journal of Performance of Constructed Facilities CFENG-919R1
- 2. \*Ahn, I., Park, Y., Chen, S., O'Connor, J.; "Live Load Distribution of a Hybrid FRP Composite Superstructure Based on a Field Test" Transportation Research Record paper #12-4114 (2013)
- 3. \*O'Connor, J. Alampalli, S., "Post-Earthquake Bridge Inspection Guidelines for New York State"; Technical Report MCEER-12-0003 ISSN 1520-295X (2012)
- 4. O'Connor, J., Alampalli, S., Aref, A., Triandafilou, L., "Strategic Development and Deployment of a Composite Bridge Deck", *Keynote Address*, Advanced Composites in Construction, University of Warwick, UK (2011)
- 5. Lee G., Liang Z., Shen J., O'Connor, J.; "Extreme Load Combinations; A Survey of State Bridge Engineers" Technical Report MCEER-11-0007 ISSN 1520-295X (2011)
- \* Aref, A., O'Connor, J. S., (2010) "Bridge Vulnerabilities and the Practical Application of Advanced Composite Materials for Hardening, Strengthening, and Extending Service Life", U.S. Dept. of Homeland Security, Building and Infrastructure Protection Series, Aging Infrastructure: Issues, Research, and Technology, BIPS 01 / December 2010.
- 7. \*Triandafilou, L., O'Connor, J. "Field Issues Associated with the Use of FRP Composite Bridge Decks and Superstructures in Harsh Environments" IABSE Structural Engineering International Special Issue: *FRP Structures* (2010)

- 8. Triandafilou, L., O'Connor, J. (2009). "FRP Composites for Bridge Decks and Superstructures, State of the Practice in the U.S." proceedings of *FRP Composites for Infrastructure Applications*, University of the Pacific, Stockton, CA.
- 9. \*Zhou, Y., Ou, Y., Lee, G.C., O'Connor, J.S. (2009) "Mechanical and low-cycle fatigue behavior of stainless steel rebars for earthquake engineering applications," *Earthquake Engineering and Structural Dynamics*.
- 10. Capers, H., Lee, G.C., O'Connor, J.S. (2008). "Multiple Hazard Research Needs and AASHTO Code Development Activities." *Sixth National Seismic Conference on Bridges & Highways*. Charleston, SC, MCEER.
- 11. Lee, G.C., O'Connor, J.S., and Yen, W.P. (2008). "New Tools Available to Practicing Engineers for the Seismic Design of Bridges." *Sixth National Seismic Conference on Bridges & Highways* July 27-30, Charleston, SC.
- 12. O'Connor, J.S., Mesa, L., Nykamp, M. (2008). "Highway System Damage from Perú's 15 Aug 2007 M8.0 Earthquake." *International Bridge Conference*, Paper 08-099, Pittsburgh, PA.
- 13. Ou, Y.-C., Zhou, Y., Lee, G.C., O'Connor, J.S. (2008). "Low-Cycle Fatigue Behavior of Stainless Steel Reinforcing Bars," *Sixth National Seismic Conference on Bridges & Highways*, July 27-30, Charleston, SC.
- 14. Yen, W.P., Lee, G.C., O'Connor, J.S. (2008). "Safeguarding Highway Infrastructure." 14th World Conference on Earthquake Engineering (14WCEE), Beijing, China.
- 15. Yen, W.P. and O'Connor, J.S. (2008). "An Overview of Current State of the Practice for Seismic Design & Retrofit of Bridges." *International Bridge Conference*, Pittsburgh, PA.
- Capers, H. and O'Connor, J.S. (2008). "A Case for Multi-hazard Bridge Design." Sixth National Seismic Conference on Bridges & Highways, Seismic Technologies for Extreme Loads. July 27-30, Charleston, SC.
- 17. O'Connor, J. S. and McAnany, P. (2008). "Damage to Bridges from Wind, Storm Surge and Debris in the Wake of Hurricane Katrina," Volume 5, Bridges, MCEER-08-SP05, MCEER, University at Buffalo, http://mceer.buffalo.edu/publications/Katrina/default.asp.
- \*Lee, G.C. and O'Connor, J.S. (2008). "Improvement of Bridge Safety through Forensic Studies," Design of Highway Bridges Against Extreme Events: Issues, Principles, and Approaches, ed. George C. Lee, Mai Tong and W. Phillip Yen, MCEER-08-SP06, University at Buffalo.
- 19. O'Connor, J.S. (2008). "GFRP Composite Bridge Decks and Superstructures in the United States." *International Conference and Exhibition on Reinforced Plastics (ICERP) 2008*, February 7-9, FRP Institute, Mumbai, India.
- 20. O'Connor, J.S. (2008). "Rapid Replacement of a Short Span Bridge Using a Pre-Fabricated Lightweight Superstructure." *Fourth US-Taiwan Bridge Engineering Workshop*. Chauncey Conference Center, Princeton, New Jersey.
- 21. \*O'Connor, J.S., Mesa, L. and Nykamp, M. (2007). "An Assessment of Damage to the Highway System of Peru from the Aug.15, 2007 Pisco Earthquake." MCEER, University at Buffalo, The State University of New York, Special Report MCEER-07-2007, FHWA, ISSN 1520-295X.
- 22. Yen, W.P., O'Fallon, J., O'Connor, J.S. (2006). "The New Seismic Retrofitting Manual for U.S. Highway Bridges," 23rd Annual International Bridge Conference, Pittsburgh, PA, FHWA, MCEER.
- O'Connor, J.S. (2006). "Seismic experts: codes need more work," Bridge Design & Engineering, p. 18.

- 24. \*NIST Technical Note 1476 (2006) "Performance of Physical Structures in Hurricane Katrina and Hurricane Rita: A Reconnaissance Report", National Institute of Standards and Technology, U.S. Dept. of Commerce, Wash., DC, (co-authored chapter on bridges).
- 25. Ou, Y.-C., Chiewanichakorn, M., Ahn, I.-S., Lee, G.C., Chen, S., Aref, A., Liang, Z., and O'Connor, J.S. (2005). "Segmental Precast Un-Bonded Post-Tensioned Columns for Accelerated Bridge Construction," *Proceedings of The PCI National Bridge Conference, Innovative Solutions: Imagineering with Concrete Bridges*, Palm Springs, California.
- 26. Yen, W.P., O'Fallon, J., and O'Connor, J.S. (2005). "FHWA's 2005 Seismic Retrofitting Manual, Part I: Bridges," *Proceedings of the 2005 New York City Bridge Conference*, New York, NY.
- 27. Yen, P., Seim, C., and O'Connor, J.S. (2005). "Seismic Retrofitting for Steel Truss Highway Bridges," *Proceedings of Fourth International Conference on Advances in Steel Structures (ICASS '05)*, Shanghai, China. pp. 374-388.
- \*Seim, C., Yen, W.P., O'Connor, J.S., and Ho, T. (2005). "Seismic Retrofitting Highway Truss Bridges," *International Journal of Advanced Steel Construction (IJASC)*, W. F. Chen, R. Zandonini, and S. L. Chan, eds.
- 29. \*O'Connor, J.S. and Hooks J.M. (2005). "Experience in the United States with Fiber-Reinforced Polymer Composite Bridge Decks and Superstructures," 6th International Bridge Engineering Conference: Reliability, Security, and Sustainability in Bridge Engineering, Boston, MA, Transportation Research Board.
- 30. O'Connor, J.S., Wagner, N., DePlanche, J., Dimmig, C.P., Lehman, M. (2005). "Demonstration of Rapid Bridge Construction in Erie County, NY," 22nd Annual International Bridge Conference, Pittsburgh, PA.
- 31. Lin, L.-Y., Lee, G.C., Liang, Z., and O'Connor, J.S. (2005). "Health Monitoring of Bridge Bearings," *Proceedings of ASNT Fall Conference and Quality Testing Show*, Columbus, OH.
- 32. O'Connor, J.S. (2004). "Seismic Risk Assessment Procedures and Mitigation Measures for Highway Bridges in Moderate Earthquake Zones of the Eastern U.S.," *Proceedings of the 3rd US-PRC Workshop on Seismic Behavior and Design of Special Highway Bridges*, Shanghai, China.
- 33. Celebi, M., Purvis, R., Hartnagel, B.A., Gupta, S., Clogston, P., Yen, W.P., O'Connor, J.S., and Franke, M. (2004). "Seismic Instrumentation of the Bill Emerson Memorial Mississippi River Bridge at Cape Girardeau (MO): A Cooperative Effort," *Proceedings of 13th World Conference on Earthquake Engineering (13 WCEE), Vancouver, B.C. Canada.*
- 34. Seim, C., Yen, W.P., and O'Connor, J.S. (2004). "Seismic Retrofitting Manual for Steel Truss Highway Bridges," *Proceedings of 13th World Conference on Earthquake Engineering* (13WCEE), Vancouver, B.C., Canada.
- 35. O'Connor, J.S. and Hooks, J. (2004). "FRP Bridge Decks and Superstructures: A Summary of U.S. Experience," *Proceedings of Society for the Advancement of Material & Process Engineering 2004 Preliminary Program (SAMPE)*, Long Beach, CA.
- 36. O'Connor, J.S. and J. Hooks (2004). "A Summary of Six Years Experience Using FRP Composites for Bridge Decks," *21st International Bridge Conference*, Pittsburgh, PA.
- 37. O'Connor, J.S. and Hooks, J. (2003). "USA's Experience Using Fiber Reinforced Polymer (FRP) Composite Bridge Decks to Extend Bridge Service Life," *Proceedings of 19th U.S. - Japan Bridge Engineering Workshop*, Ibaraki-Ken, Japan, pp. 237-248.
- 38. Minser, A., Schongar, G., and O'Connor, J.S. (2002). "Multi-year Study to Evaluate FRP Wrapping of Deteriorated Concrete Columns," *Proceedings of Structural Materials Technology V, an NDT Conference*, Cincinnati, OH, pp. 234-239.

- 39. O'Connor, J.S. (2002). "New York's Experience with FRP Bridge Decks," *Proceedings of Polymer Composites II, Application of Composites in Infrastructure Renewal and Economic Development*, Morgantown, WV, pp. 21-32.
- 40. Alampalli, S., O'Connor, J.S., and Yannotti, A. (2002). "Fiber Reinforced Polymer Composites for the Superstructure of a Short Span Rural Bridge," *Composite Structures*, pp.21-27.
- O'Connor, J.S. (2001). "New York's Experience with FRP Bridge Decks," *Proceedings of* Society for the Advancement of Material & Process Engineering (SAMPE), Long Beach, CA, pp. 1341-1351.
- Alampalli, S., Yannotti, A., O'Connor, J.S., Norfolk, M., Schongar, G., and Greenberg, H. (2000). "In-Service Monitoring of FRP Bridge in New York," *Proceedings of ASCE Structures Congress 2000*, Philadelphia, PA.
- 43. \*O'Connor, J.S. (2000). "Bridge Safety Assurance Measures Taken in New York State," Transportation *Research Record*, TRB and NRC, eds., 1(1696), pp. 187-192.
- 44. Alberski, Tadeus, and O'Connor, J.S. (2000). "Advanced Composites for Bridges in New York State," *Proceedings of Composites for Bridge Construction*, Lodz, Poland.
- 45. \*Halstead, J.P., O'Connor, J.S., Luu, K., Alampalli, S., and Minser, A. (2000). "Fiber-Reinforced Polymer Wrapping of Deteriorated Concrete Columns," *Transportation Research Record*, TRB and NRC, eds., 2(1696), pp. 124-130.
- 46. Alampalli, S., O'Connor, J.S., and Yannotti, A. (2000). "Design, Fabrication, Construction, and Testing of an FRP Superstructure." NYSDOT. Transportation Research & Development Bureau, Albany, NY, Special Report FHWA/NY/SR-00/134.
- 47. Halstead, J.P., O'Connor, J.S., Alampalli, S., and Minser, A. (2000). "Evaluating FRP Wrap with NDT Methods," *Proceedings of Structural Materials Technology IV, An NDT Conference*, Atlantic City, NJ, pp. 275-280.
- O'Connor, J.S., Hoyos, H., Yannotti, A., and Wagh, V. (2000). "Installing an FRP Deck on a Truss Bridge," *Proceedings of 17th Annual International Bridge Conference*, Pittsburgh, PA, pp. 70-75.
- Yannotti, A., Alampalli, S., O'Connor, J.S., Schongar, G., Greenberg, H., and Norfolk, M. (2000). "Proof Load Testing an FRP Composite Bridge," *Proceedings of Structural Materials Technology IV, An NDT Conference*, Atlantic City, NJ, pp. 281-286.
- 50. \*Alampalli, S., O'Connor, J.S., and Yannotti, A. (1999). "Advanced Composites for Cost Effective Bridge Superstructure Replacement," *Advanced Composites for Civil Infrastructures, ASCE Structural Special Publication*.
- 51. Halstead, J.P., O'Connor, J.S., Alampalli, S., Yannotti, A., and Luu, K. (1999). "A FRP column Wrap Demonstration Project." New York State Department of Transportation.
- 52. Alampalli, S., O'Connor, J.S., Yannotti, A., and Luu, K. (1999). "Advanced Composites for Bridge Rehabilitation," *Proceedings of 13th ASCE Engineering Mechanics Conference*, Baltimore, Maryland.
- 53. Alampalli, S., O'Connor, J.S., Yannotti, A., and Luu, K. (1999). "FRP's for Bridge Construction and Rehabilitation in New York," *Proceedings of Materials and Construction, Exploring the Connection*, Cincinnati, OH, pp 344-350.
- 54. Alampalli, S., Yannotti, A., and O'Connor, J.S. (1999). "Extending Life of Bridges Using FRP Composites," *Proceedings of Structural Faults and Repair '99 Eight International Conference and Exhibition*, Kensington, London.
- 55. Halstead, J.P., O'Connor, J.S., Alampalli, S., and Luu, K. (1999). "FRP Column Wrap Demonstration Project," *Proceedings of 16th Annual International Bridge Conference*, Engineer's Society of Western Pennsylvania, Pittsburgh, PA, pp. 126-129.

- 56. O'Connor, J.S., Hoyos, H., Alampalli, S., Yannotti, A., and Luu, K. (1999). "Strengthening a RC Cap Beam Using FRP Composites," *Proceedings of Structural Faults and Repair '99 Eighth International Conference and Exhibition*, Kensington, London.
- 57. O'Connor, J.S., Hoyos, H., Yannotti, A., Alampalli, S., and Luu, K. (1999). "Reinforced Concrete Capbeam Strengthening Using Fiber Reinforced Polymer Composites," *Proceedings of Fourth International symposium on Fiber Reinforced Polymer Reinforcement for RC Structures*, Baltimore, Maryland, pp. 481-490.
- 58. O'Connor, J.S., Hoyos, H., Yannotti, A., Alampalli, S., and Luu, K. (1999). "Strengthening a RC Capbeam Using FRP Composites: A Case Study," *Proceedings of 5th ASCE Materials Engineering Congress, Materials and Construction - Exploring the Connection*, Cincinnati, Ohio, pp. 344-350.
- 59. O'Connor, J.S., Yannotti, A., and Luu, K. (1999). "FRP Composites for Bridge Rehabilitation in New York," *Proceedings of 16th Annual International Bridge Conference*, Engineer's Society of Western Pennsylvania, Pittsburgh, PA, pp. 126-147.
- 60. Yannotti, A., Alampalli, S., O'Connor, J.S., and Luu, K. (1999). "Superstructure Replacement Using FRP Composites," *Proceedings of Structural Faults and Repair '99 Eighth International Conference and Exhibition*, Kensington, London.
- 61. Halstead, J.P., Szustak, P.W., and O'Connor, J.S. (1998). "Truss Bridge Fatigue Evaluation Using Acoustic Strain Gauges," *Proceedings of Computational Methods for Smart Structures and Materials*, Smart Structures I, Rome, Italy, pp. 151-159.
- O'Connor, J.S., and Baker, M. (1995). "New York State Department of Transportation Non-Destructive Load Testing of Highway Bridges," *Proceedings of 12th Annual International Bridge Conference*, Pittsburgh, PA, pp. 302-309.
- 63. O'Connor, J.S. (1994). "Bridge Condition," *Proceedings of Timber Bridge Conference*, Hornell, NY.
- 64. \*Michaelopolis, P., O'Connor, J.S., and Novoa, S. (1978). "Estimation of Left Turn Saturation Flow at Unsignalized Intersections," *Transportation Research Record #667*.