Terry Beck
Professor

Professional Affiliations

Member ASME, American Society of Mechanical Engineers ASEE, American Society for Engineering Education
ASHRAE, American Society of Heating and Air-Conditioning Engineers
Sigma Xi, Scientific Research Society
Tau Beta Pi, Engineering Honor Society
Pi Tau Sigma, International Mechanical Engineering Honor Society
Phi Kappa Phi, Honor Society
SPIE, International Society for Optics and Photonics

Awards

2021 Myers-Alford Memorial Teaching Award
2016 Ranked Top 25 Professor of Mechanical Engineering; OnlineEngineeringPrograms.com
2015 Certificate of Recognition, ASHRAE, for services rendered as Chair for TC1.2 Measurements and Instruments
2013 Charles H. Scholar Faculty Award, K-State College of Engineering
2011 Certificate of Recognition, Mortar Board Senior Honor Society, K-State Chapter of Mortar Board
2009 Outstanding Advisor Award, K-State Mechanical & Nuclear Engineering Department
2008 Snell Distinguished Career Award for Excellence in Undergraduate Teaching
2004 Honor Paper Award, ASEE Midwest Section Conference
2002-2004 ASEE NASA Summer Faculty Fellowship, NASA Langley Research Center

Publications

- Adrijana Savic, Aref Shafiei Dastgerdi, B. Terry Beck, Robert J Peterman, Aaron A Robertson, "The Influence of Concrete Cover, Type of Wire Indentation and Concrete Mix on Bond Between Steel and Concrete in Prismatic Prestressed Concrete Members," Advanced Engineering Forum-AEF, Trans Tech Publication Switzerland; December, 2020.
- B. Terry Beck, Robert J. Peterman, Chih-Hang John Wu, "The Uncertainty of Solutions to Implicit Equation Systems," Journal of Fluids Engineering, Vol. 142, Jan 2020, pp. 014502-1 to 014502-7.
- Aref Shafiei Dastgerdi, A., Peterman, R., Beck, T., Riding, K.A., "Effect of Concrete Mixture Components, Proportioning, and Compressive Strength on Fracture Parameters," Construction and Building Materials, Vol. 206, pp. 179-192, 2019. doi: https://doi.org/10.1016/j.conbuildmat.2019.02.025.
- Amir F. Momeni, Robert J. Peterman, B. Terry Beck, "A PREDICTION MODEL FOR DEVELOPMENT LENGTH OF INDENTED PRESTRESSING WIRES," American Concrete Institute (ACI) Structural Journal; Volume 115, Issue 2, pp 525-534, March 1, 2018.
- Craig Hickman, B. Terry Beck, Bruce Babin," Effect of fittings on volumetric airflow measurements (RP-1245): Single-path duct disturbances," Science and Technology for the Built Environment (Formerly HVAC & R Research), Volume 21, pp. 190-206, 2015.
- Craig Hickman, B. Terry Beck, Bruce Babin," Effect of fittings on volumetric airflow measurements (RP-1245): Multiple-path (tee) duct disturbances," Science and Technology for the Built Environment (Formerly HVAC & R Research), Volume 21, pp. 957-975, 2015.
- Mark Haynes, Levi DeLissa, Chih-Hang John Wu, B. Terry Beck, and Robert J. Peterman, " Design of a Non-Contact Surface Profilometry System for Automated Geometrical Dimensioning and Tolerancing," International Journal of Engineering Inventions 2013 e-ISSN2278-7461, p-ISSN: 2319-6491, Vol. 3, Issue 2, Sep. 2013, PP: 15-19.
- Weixin Zhao, Robert L Murphy, Robert J Peterman, B. Terry Beck, Chih-Hang John Wu, Pelle Duong, A Non-Contact Inspection Method to Determine the Transfer Length in Pre-tensioned Concrete Railroad

Ties, ASCE, Journal of Engineering Mechanics, Journal of Engineering Mechanics, Volume: 139, Issue: 3, March 2013, pp. 256- 263.

- Weixin Zhao, Kyle Larsan Robert J. Peterman,B. Terry Beck, and C.-H.John Wu, "Development of a laser-speckle imaging device to determine the transfer length in pretensioned concrete members" PCI Journal Winter 2012 Vol. 57, Issue 1, pp. 135-143.
- Wu C.-H., Zhao W., Beck T. and Peterman R. "Optical Sensor Developments for Measuring the Surface Strains in Prestressed Concrete Members" Journal of Strains, 47, Supp. 1, pp. 376-386, (2011), DOI: 10.1111/j.1475-1305.2009.00621.x.
- Hosni, Mohammad; Beck, B. Terry," "Updated Experimental Results for Heat Gain from Office Equipment in Buildings (1482-RP)", ASHRAE TRANSACTIONS, TRNS-00308-2010.R1, December 2010.

Conference Presentations

- Adrijana Savic, B. Terry Beck, Robert J Peterman, "Proposed Qualification Test to Identify Prestressed Concrete Ties That May Be Susceptible to End-Splitting Cracks," Paper Number JRC2021- 1003, Proceedings of the 2021 Joint Rail Conference, April 20-21, 2021.
- Gallman, Benjamin, Beck, B.T., Hosni, M.H., "DIRECT PRESSURE MEASUREMENT AND FLOW VISUALIZATION OF CAVITATION IN A CONVERGING-DIVERGING NOZZLE," Paper No. IMECE2019-12236, ASME 2019 International Mechanical Engineering Congress and Exposition, November 11-14, 2019, Salt Lake City, UT, USA.
- Scott, J., Peterman, R., Robertson, A., Beck, B., & Riding, K. (2019). Evaluation of the Remaining Prestress Force and Center Negative Bending Moment in Crossties Removed From Track After 25 Years of Service, Proceedings of the 2019 Joint Rail Conference, JRC2019-1275 April 9-12, 2019, Snowbird, Utah, USA.
- Aref Shafiei, Adrijana Savic, Robert J Peterman, Kyle A Riding, B Terry Beck "Evaluation of splitting crack propagation in pre-stressed concrete ties made with different types of coarse aggregate", Proceedings of the 2019 Joint Rail Conference, JRC2019-1278 April 9-12, 2019, Snowbird, Utah, USA.
- Adrijana Savic, Aref Shafiei, Robert J Peterman, B Terry Beck "The Effect of Wire Type on Cracking Propensity in Prestressed Concrete Prisms", Proceedings of the 2019 Joint Rail Conference, JRC2019-1234 April 9-12, 2019, Snowbird, Utah, USA.
- Amir F. Momeni, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, "EFFECT OF STRAND INDENTATION TYPE ON THE DEVELOPMENT LENGTH AND FLEXURAL CAPACITY OF CONCRETE RAILROAD TIES MADE WITH DIFFERENT PRESTRESSING STRANDS," Proceedings of the 2019 Joint Rail Conference, JRC2019-1233 April 9-12, 2019, Snowbird, Utah, USA.
- B. Terry Beck, Aaron A. Robertson, Robert J. Peterman, Adrijana Savic, Chih-Hang (John) Wu, Kyle A. Riding, John Bloomfield, "A HIGH RESOLUTION AUTOMATED PRESTRESSING WIRE INDENT PROFILING SYSTEM FOR VERIFICATION OF WIRE-CONCRETE MIX COMPATIBILITY," Proceedings of the 2019 Joint Rail Conference, JRC2019-1269 April 9-12, 2019, Snowbird, Utah, USA.
- Dipta Sarkar, Partha Pratim Chakraborty, B. Terry Beck, Zayd C. Leseman; "TWO-DIMENSIONAL HEAT TRANSFER CONSIDERATIONS FOR THERMOREFLECTANCE MEASUREMENTS;" Paper Number IMECE2018-88657; Proceedings of the International Mechanical Engineering Congress & Exposition; November 9-15, 2018, Pittsburgh, PA, USA.
- Adrijana Savic, B. Terry Beck, Aaron A. Robertson, Robert J. Peterman, Jeremiah Clark, Chih-Hang (John) Wu; "EFFECTS OF COVER, COMPRESSIVE STRENGTH, AND WIRE TYPE ON BOND PERFORMANCE IN PRISMATIC PRESTRESSED CONCRETE MEMBERS;" Paper Number JRC2018-6153, Proceedings of the 2018 ASME Joint Rail Conference, April 18-20, 2018, Pittsburgh, PA, USA.
- James D. Scott, Robert J. Peterman, B. Terry Beck, Aaron A. Robertson, Chih-Hang John Wu, Kyle A. Riding, "DETERMINING THE REMAINING PRESTRESS FORCE IN A PRESTRESSED CONCRETE RAILROAD TIE THROUGH LOADING IN DIRECT TENSION" JRC2018-6168, Proceedings of the 2018 ASME Joint Rail Conference (JRC 2018), April 18-20, 2018, Pittsburgh, PA, USA.
- Aref Shafiei Dastgerdi, Kyle A. Riding, Robert J. Peterman, B. Terry Beck, "MATERIAL CHARACTERISTICS EVALUATION OF EXISITING PRE-STRESSED CONCRETE RAILROAD TIES AFTER SERVICE PERIOD" JRC2018-6168, Proceedings of the 2018 ASME Joint Rail Conference (JRC 2018), April 18-20, 2018, Pittsburgh, PA, USA.

- Ahmed, Zayed, Beck, B.T., Hosni, M.H., "The effect of Temperature on Water Cavitation Phenomena in Converging-Diverging Nozzle Flow," Paper Number FEDSM2017-69544, ASME Fluids Engineering Summer Meeting, 2017.
- B. Terry Beck, Aaron A. Robertson, Robert J. Peterman, Chih-Hang John Wu, Kyle A. Riding, "TRANSFER LENGTH CHARACTERIZATION OF ENTIRE CROSSTIE PLANT CASTING BED USING CONTINUOUSLY TRAVERSING DUAL-CAMERA NON-CONTACT OPTICAL STRAIN SENSORS," Paper Number JRC2017-2297, Proceedings of the 2017 Joint Rail conference, Philadelphia, Pennsylvania, April 4 - 7, 2017.
- B. Terry Beck, Aaron A. Robertson, Robert J. Peterman, Chih-Hang John Wu, Kyle A. Riding, "ACCURACY OF HIGH RESOLUTION 3D OPTICAL SCANNING OF CROSSTIE GEOMETRY FOR ASSESSMENT OF CROSS-SECTIONAL PARAMETERS AND LONG-TERM ABRASION AND WEAR," Paper Number JRC2017-2296, Proceedings of the 2017 Joint Rail conference, Philadelphia, Pennsylvania, April 4 - 7, 2017.
- B. Terry Beck, Aaron A. Robertson, Robert J. Peterman, Chih-Hang John Wu, Naga Narendra B. Bodapati, Kyle A. Riding, "THE IMPORTANCE OF CROSS-SECTION SHAPE FACTOR RESOLUTION TO ACCURATE ASSESSMENT OF TRANSFER LENGTH FOR NON-PRISMATIC RAILROAD TIES," Proceedings of the 2017 PCI Convention and National Bridge Conference, Cleveland, OH, March 2-4, 2017.
- James Scott, Aaron A. Robertson, Robert J. Peterman, B. Terry Beck, , Chih-Hang John Wu, Kyle A. Riding, "DETERMINING THE REMAINING PRESTRESS FORCE IN A PRESTRESSED CONCRETE CROSSTIE," Paper Number JRC2017-2287, Proceedings of the 2017 Joint Rail conference, Philadelphia, Pennsylvania, April 4 - 7, 2017.
- B. Terry Beck, Naga Narendra B. Bodapati, Aaron A. Robertson, Robert J. Peterman, Chih-Hang John Wu, "VERIFICATION OF THERMAL STRAIN OFFSET IN PRISMS AND RAILROAD CROSS-TIE PRODUCTION," 2016 PCI Convention.
- B. Terry Beck, Naga Narendra B. Bodapati, Aaron A. Robertson, Robert J. Peterman, Chih-Hang John Wu, "EXPERIMENTAL INVESTIGATION OF THE LONGITUDINAL SURFACE STRAIN PROFILES OF PRESTRESSED NON-PRISMATIC MEMBERS," 2016 PCI Convention.
- Naga Narendra B. Bodapati, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, Kyle A. Riding, "COMPARISON OF INITIAL AND LONG-TERM TRANSFER LENGTHS DETERMINED FROM INTERNAL AND EXTERNAL CONCRETE STRAIN MEASUREMENTS," 2016 PCI Convention and National Bridge Conference.
- B. Terry Beck, Aaron A. Robertson, Robert J. Peterman, Chih-Hang John Wu, "Performance of a Continuously Traversing 2-Camera Non-Contact Optical Strain Sensor for In-Plant Assessment of Prestressed Concrete Railroad Crosstie Transfer Length," Paper Number: JRC2016-5751, Proceedings of the 2016 Joint Rail Conference.
- B. Terry Beck, Aaron A. Robertson, Naga Narendra B. Bodapati, Robert J. Peterman, Chih-Hang John Wu, Kyle A. Riding, "Utilization of High Resolution 3D Optical Scanning of Crossties to Assess Cross-Sectional Parameters and the Effects of Long-Term Abrasion and Wear," Paper Number: JRC2016-5753, 2016 Joint Rail Conference.
- Amir Farid Momeni, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, Naga Narendra B. Bodapati, "EFFECT OF PRESTRESSING WIRE INDENTATION TYPE ON THE BOND PERFORMANCE AND FLEXURAL CAPACITY OF PRETENTIONED CONCRETE CROSSTIES SUBJECTED TO CYCLIC LOADING," Paper Number: JRC2016-5761, 2016 Joint Rail Conference.
- Amir Farid Momeni, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, Naga Narendra B. Bodapati, "EFFECT OF CONCRETE RELEASE STRENGTH ON THE DEVELOPMENT LENGTH AND FLEXURAL CAPACITYOF MEMBERS MADE WITH DIFFERENT PRESTRESSING STRANDS," Paper Number: JRC2016-5762, 2016 Joint Rail Conference.
- Aref Shafiei, Kyle A. Riding, Robert J. Peterman, Chris Christensen, B. Terry Beck, Aaron A. Robertson, Chih-Hang John Wu, "Suitability and Variability of Non-Destructive Testing Methods for Concrete Railroad Tie Inspection," Paper Number: JRC2016-5776, 2016 Joint Rail Conference.
- Naga Narendra B. Bodapati, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, "Comparison of transfer lengths in pretensioned concrete railroad ties subjected to different magnitudes of rail loads," Paper Number: JRC2016-5781, 2016 Joint Rail Conference.
- Mark Haynes, Chih-Hang John Wu, Naga Narendra B. Bodapati, Matt Arnold, B. Terry Beck, Robert J. Peterman, "Bond Index Numbers of Prestressed Concrete Reinforcement Wires and their Relationships to

Transfer Lengths and Pull-Out Forces," Paper Number: JRC2016-5787, 2016 Joint Rail Conference.

- Patrick E. Collins, B. Terry Beck, James T. Schaefer, "Verification of the Accuracy of Air Flow Measurement Using the Multi-Nozzle Chamber Method," 2016 ASHRAE Annual Conference.
- B. Terry Beck, Robert J. Peterman, John C.-H. Wu, Steve Mattson, "Experimental Investigation of the Influence of Surface Contaminants on the Transfer Length of Smooth and Indented Prestressing Reinforcements Used in the Manufacture of Concrete Railroad Ties, Paper Number: JRC2015-5751, 2015 Joint Rail Conference.
- B. Terry Beck, Robert J. Peterman, John C.-H. Wu, Naga Narendra B. Bodapati, "In-Plant Testing of a New Multi-Camera Transfer length Measurement system for Monitoring Quality Control of Railroad Crosstie Production," Paper Number: JRC2015-5749, 2015 Joint Rail Conference.
- Amir Farid Momeni, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, Naga Narendra B. Bodapati, "Effect of Prestressing Wire Indentation Type on the Development Length and Flexural Capacity of Pretensioned Concrete Crossties," Paper Number: JRC2015-5739, 2015 Joint Rail Conference.
- Mark Haynes, Chih-Hang John Wu, Naga Narendra B. Bodapati, B. Terry Beck, Robert J. Peterman, "Modeling the Behavior of Prestressed concrete Railroad Ties," Paper Number: JRC2015-5703, 2015 Joint Rail Conference.
- B. Terry Beck, Naga Narendra B. Bodapati, Robert J. Peterman, Amir Farid Momeni, Chih-Hang John Wu, "Transfer length Measurements in Pretensioned Concrete Railroad Ties Under Rail Loads," Paper Number: JRC2015-5690, 2015 Joint Rail Conference.
- Robert J. Peterman, Naga Narendra B. Bodapati, B. Terry Beck, John C.-H. Wu, "Long-Term End-Slip Measurements and Corresponding Transfer lengths in Pretensioned concrete Railroad Ties fabricated with 15 Different Reinforcements," Paper Number: JRC2015-5678, 2015 Joint Rail Conference.
- Amir Farid Momeni, Robert J. Peterman, B. Terry Beck, Chih-Hang John Wu, Naga Narendra B. Bodapati, "Effect of Concrete Release Strength on the Development Length and Flexural capacity of Members Madewith different Prestressing Wires Commonly Used in Pretensioned concrete Railroad Ties," Paper Number: JRC2015-5736, 2015 Joint Rail Conference.
- Abdulmalik Alkotami, B. Terry Beck, Christopher M. Sorensen, Mohammad H. Hosni, Steven J. Eckels, Don Tomasi, "A Thermodynamic analysis of the Temperature Drop and Potential Cooling Effect of Cavitation," Paper Number IMECE 2015-51527, ASME 2015 Intl. Mechanical Engineering Congress & Exposition.
- Alan Duong, Aaron Schmidt (Graduate Adviser), B. Terry Beck (Academic Adviser), "OPTICAL FLOW MEASUREMENT OF CAVITATION IN A CONVERGING-DIVERGING NOZZLE USING HIGH-SPEED IMAGERY," Paper Number IMECE2015-54172, 2nd Place Winner, Young Engineers Paper (YEP) Contest (Entry by Alan Duong), 2015 Intl. Mechanical Engineering Congress & Exposition (IMECE).
- Wilms, J.M., Beck, B.T., Hosni, M.H., Sorensen, C.M., Tomasi, D., and Eckels, S.J. "Experimental Measurements and Flow Visualization of Water Cavitation through a Nozzle," proceedings of the ASME 2014 International Mechanical Engineering Congress & Exposition (IMECE2014).
- Naga N.B. Bodapati, Weixin Zhao, Robert J. Peterman , John C.-H. Wu, B. Terry Beck, Mark Haynes and Joseph R. Holste, "Effect of Concrete Properties On Transfer Lengths In Concrete Rail-Road Ties" 2014 Joint Rail Conference, JRC2014-3859.
- Weixin Zhao, B. Terry Beck, Robert J. Peterman, John C.-H. Wu, Naga N.B. Bodapati, and Grace Lee, "Reliable Transfer Length Assessment For Real-Time Monitoring Of Railroad Cross-Tie Production," 2014 Joint Rail Conference, JRC2014-3830.
- Mark Haynes, John C.-H. Wu, B. Terry Beck, Naga N.B. Bodapati, and Robert J. Peterman " Prestressing Steel Reinforcement Wire Measurement Protocol," 2014 Joint Rail Conference, JRC2014-3800.
- Joseph R. Holste, Mark Haynes, Robert J. Peterman, B. Terry Beck, John C.-H. Wu, "Tensioned Pullout Test used to Investigate Wire Splitting Propensity in Concrete Railroad Ties," 2014 Joint Rail Conference, JRC2014-3799.
- Mark Haynes, John C.-H. Wu, B. Terry Beck, Naga N.B. Bodapati, and Robert J. Peterman "An Investigation into Non-Linear Search Modifications for Minimizing Objective Function Computations," 2014 Industrial & Systems Engineering Research Conference (ISERC) Conference, ISERC2014-I393.
- B. Terry Beck, Weixin Zhao, Robert J. Peterman, Chih-Hang John Wu, Joseph Holste, Naga Narendra B. Bodapati, Grace Lee, "Effect Of Surface-Strain Sampling Interval On The Reliability Of Pretensioned

Concrete Railroad Tie Transfer Length Measurements," 2014 PCI Convention and National Bridge Conference.

- Joseph Holste, Mark Haynes, Robert Peterman, B. Terry Beck, Chih-Hang John Wu, "Application Of Tensioned Pullout Tests To Investigate The Effect Of Prestressing Wire Indent Geometry On Bond And Splitting Characteristics," 2014 PCI Convention and National Bridge Conference.
- Naga Narendra B. Bodapati, Robert J. Peterman, Weixin Zhao, B. Terry Beck, PhD, Chih-Hang John Wu, Joseph R. Holste, Matthew L. Arnold, Ryan Benteman, Robert Schweiger, "Long-Term Transfer-Length Measurements On Pretensioned Concrete Rail Road Ties," 2014 PCI Convention and National Bridge Conference.
- Mark Haynes, John C.-H. Wu, B. Terry Beck, Naga N.B. Bodapati, and Robert J. Peterman " Prestressing Steel Reinforcement Wire Bond Index Number" 2013 Joint Rail Conference, JRC2013-2422.
- Matthew L. Arnold, Robert J. Peterman, Naga N.B. Bodapati, B. Terry Beck and John C.-H. Wu "Development of A Standard Bond Test For Indented Prestressing Wires" 2013 Joint Rail Conference.
- Naga N.B. Bodapati, Weixin Zhao, Robert J. Peterman, John C.-H. Wu, B. Terry Beck, Mark Haynes and Joseph R. Holste, "Influence Of Indented Wire Geometry And Concrete Parameters On The Transfer Length In Prestressed Concrete Crossties" 2013 Joint Rail Conference.
- Weixin Zhao, B. Terry Beck, Robert J. Peterman, and John C.-H. Wu, "Development Of A 5-Camera Transfer Length Measurement System For Real-Time Monitoring Of Railroad Crosstie Production" 2013 Joint Rail Conference.
- Weixin Zhao, B. Terry Beck, Robert J. Peterman, Robert Murphy, John C.-H. Wu, and Grace Lee, "A Direct Comparison Of The Traditional Method And A New Approach In Determining 220 Transfer Lengths In Prestressed Concrete Railroad Ties" 2013 Joint Rail Conference.
- Mark D. Haynes, Chih-Hang J. Wu, B. Terry Beck, Robert J. Peterman (2013). 3D Non-contact Profilometry For Reinforcement Steel Quality Control, 2013 Industrial and Systems Engineering Research Conference (ISERC).
- Mark D. Haynes, Chih-Hang J. Wu, B. Terry Beck, Robert J. Peterman (2013). Automated Real-Time Search and Analysis Algorithms for a Non-Contact 3D Profiling System, 2013 SPIE.
- Naga Bodapati, R.J. Peterman, W. Zhao, T. Beck, C.-H. Wu, J. Holste, M. Arnold, R. Benteman, R. Schweiger, "Transfer-Length Measurements On Concrete Railroad Ties Fabricated With 15 Different Prestressing Reinforcements" 2013 PCI Convention and National Bridge Conference.
- Weixin Zhao, B. Terry Beck, Robert J. Peterman, John C.-H. Wu, Grace Lee, and Naga N.B. Bodapati, " Determining Transfer Length In Pre-Tensioned Concrete Railroad Ties: Is Anew Evaluation Method Needed?" 2013 ASME Rail Transportation Division Fall Technical Conference.
- Joseph R. Holste, Robert J. Peterman, Naga, N.B. Bodapati, B.Terry Beck, and C.-H. John Wu, "Transfer Bond Test User to Predict Transfer Length of Concrete Railroad Ties" 2013 ASME Rail Transportation Division Fall Technical Conference.
- Mark Haynes, John C.-H. Wu, B. Terry Beck, and Robert J. Peterman "Non-Contact Measurement of Wire Indent Profiles on Prestressing Reinforcement Steel" 2012 AREMA Conference.
- Weixin Zhao, Terry Beck, Robert Peterman, John Wu, Rob Murphy and John Bloomfield, Grace Lee. "An Automated Transfer Length Measurement System for use on Concrete Railroad Ties," 2012 PCI Convention and National Bridge Conference.
- Weixin Zhao ; B. Terry Beck ; Robert J. Peterman and Chih-Hang J. Wu, " A Portable Modular Optical Sensor Capable of Measuring Complex Multi-Axis Strain Fields", 2012 SPIE, Instrumentation, Metrology, and Standards for Nanomanufacturing, Optics, and Semiconductors.
- Weixin Zhao, B. Terry Beck, Robert J. Peterman, Chih-Hang (John) Wu, " A Portable Modular Optical Sensor Capable of Measuring Complex Multi-Axis Strain Fields," 2012 SPIE Optics & Photonics Conference, 12-16.
- Hammerschmidt, S., Peterman, R., Zhao, W., Beck, B.T., and Wu, C.H. "Development of a Procedure to Determine Internal Stresses in Concrete Bridge Members", 2011 PCI Convention and National Bridge Conference.