Amjad J. Aref, Ph.D., F.ASCE, F.SEI

University at Buffalo, The State University of New York Department of Civil, Structural, and Environmental Engineering, 235 Ketter Hall, Buffalo, NY 14260-4300
716-645-4369 | aaref@buffalo.edu

EDUCATION

Ph.D. Civil Engineering
University of Illinois at Urbana-Champaign, January 1997
Advisor: Professor I.D. Parsons

M.S. Civil Engineering
New Jersey Institute of Technology, May 1991

B.S. Civil Engineering
Birzeit University, Palestine, May 1987

PROFESSIONAL EXPERIENCE

University at Buffalo, Department of Civil, Structural and Environmental Engineering
Professor, August 2009-present

University at Buffalo, Department of Civil, Structural and Environmental Engineering
 Associate Professor, August 2003-July 2009

University at Buffalo, Department of Civil, Structural and Environmental Engineering
Assistant Professor, August 1997-July 2003

Director, Structural Engineering and Earthquake Simulations Laboratory (SEESL) 2013- 2016,
 and Principal Investigator of NEES at Buffalo. 2013-2015.

Deputy Director, Structural Engineering and Earthquake Simulations Laboratory
October 2012-September 2013

University of Illinois at Urbana-Champaign, Department of Civil Engineering
Research Assistant, August 1993- August 1996
Teaching Assistant, September 1996- January 1997

AWARDS

Riefler Award, 1999. Awarded by the School of Engineering at SUNY-Buffalo.

The Pankow Award for Innovation, 2000. Awarded by the Civil Engineering Research Foundation for the project dealing with effective rehabilitation of a truss bridge with fiber reinforced polymeric (FRP) deck system. Jointly awarded with New York State Department of Transportation and industrial partners.

RESEARCH SUMMARY

My primary areas of research include—structural engineering, earthquake engineering, applied and computational mechanics, and multiphysics problems.

The following is a partial list of the most recent research projects:

- Monte Carlo solution of phonon mediated thermal transport in nanostructures and across nanoscale solid-solid interfaces

- Wave Dispersion in Locally Resonant Metamaterials with Axisymmetric Periodicity for Attenuating Seismic waves

- Development of functionally graded protective systems for blast loading mitigation

- Harnessing Hierarchical instabilities metamaterials for vibration control.

- Development of constitutive material models for metallic and metal-metal alloys under high temperatures and pressures

- Accelerated bridge construction (ABC) in seismic zones with utilization of prestressed segmental components.

GRADUATE STUDENT ADVISEMENT

Ph.D. Dissertations
(major advisor 11 ; co-advisor: 7; in progress 1)
PhD advisees holding tenured or tenure track positions 11):

1. Abhishek Pathak, "Phonon Mediated Heat Conduction in Meso-scale Structures and Across Solid/solid Interfaces " co-advised with Gary Dargush. 2023.

2. Mohammadreza Moghaddaszadeh, "Wave Dispersion in Locally Resonant Metamaterials with Axisymmetric Periodicity for Attenuating Seismic waves", co-advised with M. Nouh (MAE)

3. Sagar Gobagani, " Numerically Based Seismic Fragility Curves for Suspended Ceiling Systems." co-advised with A. Filiatrault. 2023

4. Enrique Morales, "Low-cost Base Isolation for Critical Hospital Facilities," with Andre Filiatrault, 2014-2017. Assistant Professor, Associate Dean, The Armed Forces University – ESPE, Ecuador.

5. Joge Cueto Baiz, Ph.D. "Telescopic Segmental Concrete Components," with Andre Filiatrault, 2012-2017. Chief Technology Officer, Smart Walls Construction, LLC.

6. Dipanshu Bansal, Ph.D. "Quantifying and Understanding Anharmonicity of Engineering Materials in Real and Reciprocal Space," 2011-2015, Assistant Professor, Indian Institute of Technology, Bombay.

7. Reza Rafiee-Dehkharghani, Ph.D. "Development of Functionally Graded Protective Systems for Attenuation of Blast Loading," 2010-2014. Assistant Professor, School of Civil Engineering, University of Tehran, Iran

8. Zilan Zhong, Ph.D. "Seismic Performance of Pipeline Systems Retrofitted with FRP Composite Liners Under Transient and Permanent Ground Deformations," with Andre Filiatrault, 2010-2014. Associate Professor, Beijing University of Technolgy.

9. Hosein Kerdar, Ph.D. "Electromagnetic Vibration Isolation and Stabilization System Concept and Simulation" with Andre Filiatrault and Gary Dargush, 2011-2014. Seismic Analyst at Mar Structural Design, San Francisco, CA.

10. MohammadJavad Hamidia, Ph.D. "Simplified Seismic Collapse Capacity Based Evaluation and Design of Frame Buildings with Supplemental Damping Systems," with Andre Filiatrault, 2011–2014.

11. Kiarash M. Dolatshahi, Ph.D. "Computational Procedures for Assessing Seismic Collapse of Masonry Structures". 2009–2012. Assistant Professor at Sharif University of Technology, Iran.

12. Hongwei Cai, Ph.D. , P.E. "Development of Fiber Reinforced Polymeric Deck and Cable System for Cable–stayed Bridges." 2008–2012. Structural Engineer at Parsons Brinckerhoff, Dallas/Fort Worth Area.

13. Petros Sideris, Ph.D. "Seismic Analysis and Design of Precast Concrete Segmental Bridges", (with A. Filiatrault, co–advisor). 2008–2012. Assistant Professor, University of Colorado, Boulder.

14. Xiaobo Luo, Ph.D. "Development of Layered Elastic Stress Wave Attenuators for Mitigating Impulsive Loadings," completed February 2008. Development Engineer, RISA Technologies, CA.

15. Wael Alnahhal, Ph.D. "Development and Optimization of Hybrid FRP-Concrete bridge components," completed December 2006. Assistant Professor, Qatar University. Doha, Qatar.

16. Wasim Barham, Ph.D. "Development of Large Increment Method for Solving Nonlinear Structural Systems," September 2005. Associate Professor, Jordan University of Science and Technology, Jordan.

17. Methee Chiewanichakorn, Ph.D., S.E. "Intrinsic Method of Effective Flange Width Evaluation for Steel-Concrete Composite Bridges," completed January 2005. Executive Structural Engineer at Meinhardt Group, Bangkok Metropolitan Area, Thailand.

18. Yasuo Kitane, Ph.D. "Development of Hybrid FRP-Concrete Bridge Deck and Superstructure Systems," completed January 2003. Associate Professor, Department of Civil Engineering, Kyoto University, Japan.

19. Woo Young Jung, Ph.D. "Polymer Matrix Composite Infill Wall Systems for Seismic Retrofitting," completed September 2003. Associate Professor, Department of Civil Engineering, Kangnung-Wonju National University, South Korea.

20. YiHong He, Ph.D. "Simplified Analysis and Optimum Design of FRP Web Core Sandwich Bridge Deck Systems," Faculty at Singapore University of Social Sciences, completed May 2002.

Ph.D. Dissertations Committee Member
(committee member: 29)

1. Ayman Shama, "On the Seismic Analysis and Design of Pile-to-Cap Connections," J. Mander and S. Chen , advisors, August 2000. Bridge Engineer, Parsons Bridge and Tunnel Division, New York, NY.

2. Ying Zhao, "Mechanics of Ball Grid Array Packages: Testing and Modeling," December 2000. Senior Reliability Engineer, Analog Devices, Norwood, MA. C. Basaran, advisor.

3. George Mavroeidis, "Modeling and Simulation of Near-Fault Ground Motion and its Implications on Long-Period Structures, " Apostolos Papageorgiou, advisor. 2004.

4. Hong Tang, "A Thermodynamic Damage Mechanics Theory and Experimental Verification: Thermomechanical Fatigue Life Prediction of Microelectronics Solder Joints. " 2003. C. Basaran, advisor.

5. Shiwa Nie, "A Thermodynamic Framework for Damage Mechanics of Particle Infilled Polymer Composites," 2005. C. Basaran, advisor.

6. Weiwei Jia, "Electro-Osmotic Grouting Technique for Liquefaction Mitigation of Low Permeability Silty Soils," 2006, Theva, advisor.

7. Shuichi Fujikura, "Multi-hazard Design of Bridge Piers — General Area of investigation: Structural and Blast engineering," Michel Bruneau, advisor. 2005-2008.

8. Bing Qu, "Seismic Behavior and Design of Boundary Frame Members of Steel Plate Shear Walls," Michel Bruneau, advisor.

9. Sangyul Cho, "Multiple Hazards and Corresponding Loads for Highway Bridges Design", George Lee, advisor.

10. Kim, " The Study of Constitutive and Fracture Damage Model for Large Deformation Problem Under Dynamic Loading," G. Dargush, advisor, May 2010.

11. Ioannis V. Kalpakidis, "Heating and History of Loading Effects on Behavior of Lead-Rubber Bearings," 2008, M. Constantinou, advisor.

12. Yu-Chen Ou, "Precast Segmental Post-Tensioned Concrete Bridge Piers for Seismic Retrofitting," G.C. Lee, advisor, September 2007.

13. Hongbo Wang, " A Passive Adaptive Control Fluid Damping Device for Seismic Protection of Structures," G.C. Lee, Advisor, December 2007.

14. Yi-Lun Chu, "Modal Analysis of Arbitrarily Damped Three-Dimensional Linear Structures Subjected to Seismic Excitations," G.C. Lee, Advisor, February 2009.

15. Samer Elbahey. "Structural Fuse Concept for Bridges" Bruneau, advisor, May 2010.

16. Lee, HyunSuk "Accurate and Efficient Boundary Element Analysis of 3-D Wave Problems" G. Dargush, advisor, 2014.

17. Eray Gunel. "Large Deformation Micromechanics of Particle Filled Acrylics at Elevated Temperatures S", Basaran, advisor. 2008-2010.

18. Yihui Zhou, "A Study of Seismic Applications of Stainless Steel in Segmental Bridge Columns", G.C. Lee, advisor. 2009-2012

19. Nasi Zhang, "Dynamic Properties and Application of High Performance Concrete for Segmental Bridge Columns in Seismic Region", Lee, advisor. 2011-2014

20. Nam Nguyen, " Behavior and analysis of composite steel-concrete walls," Whittaker, advisor 2011-present.

21. Tathagata Ray. Modeling of Multidimensional Inelastic and Nonlinear Elastic Structural Systems," Andrei Reinhorn, Advisor, 2013.

22. Ronny Purba, "Seismic Performance of Steel Plate Shear Walls," Bruneau, advisor, 2014.

23. Yasser Alzinni. "Sandwich Composite Steel Plate Shear Walls," Bruneau, advisor.

24. Siamak Epackachi, "Numerical and experimental investigation of High Performance steel-concrete composite shear walls," Andrew Whittaker, advisor.

25. Hanjin Hu. "Development of Interoperable Data Protocol for Bridge Project Delivery" S. Chen, advisor. 2014.

26. Jinwon Shin, Ph.D. "Modelling of the Erosion Strain of Concrete under Near-Field Blast," Andrew Whittaker, advisor, 2010-2014. Research Professor at Dankook University, South Korea.

27. Supratik Bose, "Nonlinear behavior of Damaged Infilled RC Frame Structures,' A. Stavridis, advisor.

28. Seyedsina Yousefianmoghadam, "Dynamic Testing and Modeling of RC Infilled Strictures," A. Stavridis, advisor.

29. Ali Gurbuz, "Simulation of Pressure-Driven Red Blood Cell Flow through Constrictions by Boundary Integral Methods," M. V. Sivaselvan, advisor, 2020.

30. Ehsan Osloub, M. V. Sivaselvan, advisor, 202

Ph.D. Dissertations outside CSEE Department
(committee member or outside reader; 10)

1. Mohammad Ali Attarzadeh, WAVE PROPAGATION IN SPACE-TIME-PERIODIC MEDIA: BREAKING ELASTIC AND ACOUSTIC RECIPROCITY, MAE, UB, MM. Nouh advisor. February 22, 2021.

2. Bassem Kadhom. "Blast Performance of Reinforced Concrete Columns Protected by FRP Laminates," Murat Saatcioglu and Husham Almansour, advisors, Department of Civil Engineering, University of Ottawa, Canada, March 2016.

3. Kundan Goswami, "A Numerically Effective Methodlogy for Risk-based Design of Control Systems for Stochastic Structures," Sonjoy Das and Gary Dargush (advisors), Mechanical and Aerospace Engineering. 2020.

4. Mugahed Y. Arman (2016). "Precast Foamed Concrete Sandwich Panel as Industrialized Building System." UPM, Malaysia, Advisor Dr. Raizal S. .M. Rashid.

5. Brad Darall. "Couple Stress Theory", Department of Mechanical and Aerospace Engineering," Gary Dargush, advisor, Department of Mechanical and Aerospace Engineering, May 2016.

6. Sourish Chakravarty. "Multiscale material modeling using variational principles and random matrix theory." Sonjoy Das, advisor, Department of Mechanical and Aerospace Engineering.

7. Dimitra Bouziou, "Performance of Underground Pipeline Systems Under Transient and Permanent Ground Deformations," external committee member, Cornell University, Thomas O'Rourke, Advisor. 2012-2015.

8. Guoqiang Deng, "Mixed Lagrangian formulation with couple stress." Department of Mechanical and Aerospace Engineering, UB, Dargush, advisor, 2012-2016.

9. Matthew McGurn, "Numerical Modeling and Simulation of Flame Spread Over Charring Materials" Committee member and outside reader, Department of Mechanical and Aerospace Engineering, UB, DesJardin, advisor, 2010-2012.

10. Renee M. Bagwell, "Modifying Ductile Fibers to Improve Fracture and Impact Toughness if Brittle Matrix composites," 2005. Department of Mechanical and Aerospace Engineering, UB, Wetherhold, advisor.

11. Zhen Mei (Chung, advisor), "Nondestructive Evaluation of Composite Materials by Electrical Resistance Measurement," Department of Mechanical and Aerospace Eng. ,UB, 2000.

Post-Doctoral Supervision

1. Dr. Methee Chiewanichakorn, 2005-2006. Executive Structural Engineer at Meinhardt Group, Bangkok.

2. Dr. Gordon Warn, 2007-2008. Associate Professor at Pennsylvania State University.

Masters Theses and Projects
(advisor of project or thesis; 13)

1. Justin Gecewicz, M.S. "A framework for Determining the Effectiveness of Polymer Matrix Composite Box Infill Walls as a Seismic Retrofit System."
Completed May 2004. Engineer at Moog Inc.

2. Jeffrey Carpenter. M.S., "Negative Moment Experimental Investigation of Two 1/2-scale Composite Bridge Specimens." Completed August 2004. Engineer at Baird Air, Inc. (co-advised with S. Chen)

3. Ioannis V. Kalpakidis, M.E. degree. "Evaluation of the Effective Slab Width for Composite Cable-Stayed Bridges." Completed August 2004. (co-advised with S. Chen)

4. Aaron Nottis, M.S. "Experimental and Analytical Comparison of Service and Strength Limit States for 1/4-scale Composite Bridge." Completed February 2004. Acres International. (co-advised with S. Chen)

5. Sumit Bansal, " Implementation of the Large Increment Finite Element Method for Nonlinear Analysis of Structures," January 2007. Weidlinger Associates, NY.

6. Ashish Goel, "Computational Design of Layered Barrier System for Vehicle Impact Attenuation." (committee member, advisor: G. Dargush, MAE), 2008.

7. David Meehan, "Self-sensing of impact damage in carbon fiber cement mortar", committee member, D. Chung, Advisor, MAE. 2009.

8. Pushkaraj Sherkar, "Modeling the effects of detonation of high explosives to inform blast-resistant design" committee member, Andrew Whittaker, advisor. 2010.

9.   ABM Tahidul Haque, "Numerical study of vehicle crash on the railing system of an FRP bridge deck connections for Movable Bridges," 2012.

10. Goutham Vegesana, "Finite Element Modeling of a Composite Bridge Deck," 2013

11. Pandey, Hitesh, "Modeling Multiple Arbitrary Discontinuities with Extended Finite Element Method"

12. Feng, Xiaochen, "Experimental and Finite Element Analysis of Compressive Behavior of Steel Strands Confined Concrete," September 2013.

13. Stern, Jordan "An FEA Study of on Energy Absorption Capabilities of Natural Fiber Reinforced Composites," September 2013.

RESEARCH GRANTS
(Total funding of $4.2+ million)

Spectral Bandstructure Identification of Amplitude dependent Viscoelastic Mechanical Meta-materials.
A.J. Aref, J. Shim, and W. Alnahhal (Qatar University)
Sponsor: Qatar National research Fund
Funding: $884,480; University at Buffalo's share is (35%)
2015–2019

Modelling and Parametric Study on CFRP Retrofitted Reinforced Concrete Columns Subjected to Far– Field and Close–By/Attached Explosion
A.J. Aref PI)
Sponsor: NRC Canada
Funding: $36,777. 2019–2020.

Data–Driven Optimization and Planning of Multi–Component Track Responsive
A.J. Aref (co–PI) and Qing He (PI)
Maintenance with Defect Deterioration Modeling"
Sponsor: Federal Railroad Administration – FRA
Funding: $164,700. 2018–2019

Development of functionally graded protective system for attenuation of blast loading
A.J. Aref (PI), and G.F. Dargush (co–PI)
Sponsor: NSF; funding: $300,000.
2009–2013. Effort: 50%

NEESR–CR: Earthquake Response and Rehabilitation of Critical Lifelines
Thomas O'Rourke (PI) and Harry Stewart (co–PI) (Cornell), Amjad Aref (co–PI), Andre Filia-trault (co–PI)
Sponsor: NSF
Funding: $1,200,000 (UB share $536,694)
September 2010–August 2013. Effort: 50%

Fatigue Behavior of Hybrid FRP-Concrete Bridge Deck Systems and Connection Details; (C–02–07 continuation)
A. J. Aref (PI)
Sponsor: Transportation Infrastructure Research Consortium (TIRC)/New York State Department of Transportation (NYSDOT)
June 2007–December 2009; funding: $120,000. Effort: 100%

Development of technical Monograph on Seismic Effects of Prefabricated Bridge Systems,
Aref (PI) with G.C. Lee and S. Chen.
Sponsor: FHWA
September 2007–September 2008, funding: $30,714. Effort: 33%

Seismic Effects of Prefabricated Superstructure Systems,
Aref (PI)
Sponsor: FHWA
September 2007–September 2009, funding: $170,954. Effort: 100%

Investigation of Seismic Effects of Prefabricated Superstructure Systems,
Aref (PI)
Sponsor: FHWA
September 2005–September 2007, funding: $146,400. Effort: 100%

GRANTS (continued)

*T*emporal Thermal Analysis of Fiber‒reinforced Polymer Bridge Deck
Aref (PI)
Sponsor: NYSDOT; September 2004‒December 2004, funding: $9500. Effort: 100%

NSF-supported workshop on the "Performance and Design of Fiber Reinforced Polymer Composites at Very Low Temperatures"
Workshop held in Fairbanks, Alaska, August 13‒16, 2004.
Funds: $1000 for travel, NSF through Purdue University; Effort: 100%

Modeling Visco-elastic Composite Panels and Impact on Floor Velocity and Acceleration
A. J. Aref (PI)
Sponsor: MCEER, NSF; 2004‒2005 (year 8); funding: $45,000; Effort: 100%

Seismic Effects of Segmental Bridge Substructures
A. J. Aref (PI)
Sponsor: FHWA
2005‒2007; funding: $140,000. Effort: 100%

Hybrid FRP-Concrete Bridge Deck Systems; (C02‒07)
A. J. Aref (PI)
Sponsor: New York State Department of Transportation (NYSDOT)
2003‒2006; funding: $240,000. Effort: 100%

The Application of a Finite Element-Based Large Increment Method for Nonlinear Structural Problems; (CMS‒0002936)
A. J. Aref (PI) and G. F. Dargush (co-PI)
Sponsor: National Science Foundation (NSF)
2000‒2003; funding: $180,000. Effort: 50%

Effective Slab Width for Composite Steel Bridge Members; (NCHRP 12‒58)
A. J. Aref (co-PI), S. Chen (PI)
Sponsor: National Cooperative Highway Research Program (NCHRP)
2001‒2004; funding: $200,000. Effort: 50%

Scale Model Testing for Effective Slab width; (NCHRP12‒58‒ supplemental)
A. J. Aref (co-PI), S. Chen (PI)
Sponsor: National Cooperative Highway Research Program (NCHRP)
2001‒2004; funding: $160,000. Effort: 50%

Use of New and Durable Advanced Materials for Infrastructure Applications; (C008737)
A. J. Aref (PI)
Sponsor: Transportation Infrastructure Research Consortium (TIRC)/NYSDOT
1999‒2000; funding: $50,000. Effort: 100%

Analysis and Design Procedures of FRP bridge Deck Systems; (C008737)
A. J. Aref (PI)
Sponsor: Transportation Infrastructure Research Consortium/NYSDOT
2000‒2001; funding: $50,000. Effort: 100%

Polymer Matrix Composite Infill Walls For Seismic Retrofitting;
A. J. Aref (PI)
Sponsor: Multidisciplinary Center for Earthquake Engineering Research (MCEER), NSF
1998‒2002; funding: $146,000. Effort: 100%

Polymer Matrix Composite Infill Walls For Seismic Retrofitting;
A. J. Aref (PI)
Sponsor: MCEER, NSF;
2002-2004 (year 6); funding: $100,000. Effort: 100%

TEACHING SUMMARY

Dr. Aref teaches undergraduate courses in structural engineering, mechanics, and materials, and at the graduate-level, he teaches continuum solid mechanics, finite element analysis, advanced finite element analysis, blast engineering , and advanced composite materials. The following is the list of the courses taught at University at Buffalo.

Graduate Courses at UB

Advanced Finite Elements (CIE617/MAE513)
    Fall 2011, Fall 2012, Fall 2013, Spring 2015, Spring 2017

Blast Engineering (CIE618)
    Spring 2007; Spring 2009; Spring 2011, Spring 2017

Solid Mechanics (CIE511)
    Fall 2010-Fall2019

Fiber-reinforced Composite Structures (CIE528)
    Spring 1999; Spring 2001; Spring 2005; Fall 2007; Fall 2010

Finite Element Structural Analysis (CIE426/526, and MAE 529)
    Fall 2003; Fall 2004; Fall 2005; Spring 2007; Spring 2008; Spring 2009; Spring 2010

Concrete Structures (CIE525)
    Spring 1999; Spring 2001

Graduate Courses at other Universities

Advanced nonlinear Seismic Analysis, November 2016; one-month course given at IUSS-Scuola Universitaria Superiore, Pavia, Italy

Undergraduate Courses

Structural Analysis I (CIE323)
    Fall2017-2019 , Summer 2018-2019

Structural Analysis II (CIE 324); Summer 2016

Structural Analysis III (CIE 423)
    Spring 1998; Spring 2000; Spring 2002; Spring 2013, Spring 2014

Engineering Computations (EAS451)
    Spring 2000; Fall 2001; Fall 2003; Fall 2004

Dynamics (EAS208)
    Fall 2005; Fall 2006; Fall 2007; Fall 2008; Fall 2009

Civil Engineering Materials, lecture and laboratory (CIE 427)
    Fall 1997; Fall 1998; Fall 1999; Fall 2000;Fall 2001

Civil Engineering Materials, lecture (CIE 327), Fall 2002

Materials Science & Engineering I (MAE381)
Summer 2013

PUBLICATIONS

<u>**Refereed Journal Papers**</u>
(Students' name are shown in bold letters; 91)

1.   Aref, A. J., and Parsons, I.D. (1999). "Design Optimization Procedures for a Fiber Reinforced Plastic Bridge." *Journal of Engineering Mechanics,* ASCE, Vol. 125, No. 9, 1040-1047.

2.   Aref, A. J., and Parsons, I.D. (2000). "Design and Performance of a Modular Fiber Reinforced Plastic Bridge." *Composites Journal-Part B: Engineering*, Vol. 31, 619-628.

3.   Aref, A. J., Alampalli, S., and **He, Y.** (2001). "A Ritz-Based Static Analysis Method for Fiber Reinforced Plastic Skew Bridge Superstructure." *Journal of Engineering Mechanics,* ASCE, Vol. 127, No. 5, 450-458.

4.   Aref, A. J., and, **Guo, Zaoyang.** (2001). "A Framework of a Finite Element-Based Large Increment Method for Nonlinear Structural Problems." *Journal of Engineering Mechanics*, ASCE, Vol. 127, No. 7, 739-746.

5.   Aref, A. J., and Alampalli, S. (2001). "Vibration Characteristics of a Fiber Reinforced Plastic Bridge Deck." *Composite Structures*, Vol. 52, No. 3-4, 467-474.

6.   **Shama, A.,** Chen, S., Mander, J., and Aref, A. (2001). "Ambient Vibration and Seismic Evaluation of a Cantilever Bridge." *Engineering Structures Journal*. Vol. 23, No. 10, 1281-1292.

7.   **Shama, S.**, Mander, J., and Aref, A. (2002). "Seismic Performance and Retrofit of Steel Pile to Concrete Cap Connections." *ACI Structural Journal*, Vol. 99, No. 1, 51-61.

8.   **He, Y.**, and Aref, A. (2002). "A Semi-Analytical Procedure for Simplified Design of Bidirectional FRP Web-core Sandwich Bridge Decks." *International Journal of Computational Engineering Science,* Vol. 3, No. 2, 129-154.

9.   Shama, A., Mander, JB, and Aref, AJ. (2002). Seismic performance and retrofit of steel pile to concrete cap connections. Author's closure. *ACI Structural Journal,* Volume: 99, Issue: 6, 837-837.

10. Aref, A. J., and **Jung, W.** (2003). "Energy Dissipating Polymer Matrix Composite Infill Wall System for Seismic Retrofitting." *Journal of Structural Engineering*, ASCE. Vol. 129, No. 4, 440-448.

11. **Jung, W.,** and Aref, A. (2003). "A Combined Honeycomb and Solid Viscoelastic Material for Structural Damping Applications." *Mechanics of Materials Journal*, Vol. 35, No. 8, 831-844.

12. **He, Y.**, and Aref, A. J. (2003). "An Optimization Design Procedure for Fiber Reinforced Web-core Sandwich Bridge Deck system." *Journal of Composite Structures,* Vol. 60, 2, 183-195.

13. **Chiewanichakorn, M.**, Aref, A.J., and Alampalli, S. (2003). "Failure Analysis of a Fiber-reinforced Polymer Bridge Deck System." *ASTM Journal of Composites and Technology,* Vol. 25, No.2, 119-128.

Refereed Journal Papers (continued)

14. **Kitane, Y.**, Aref. A., and Lee, G. (2004). "Static and Fatigue Testing of Hybrid FRP-Concrete Bridge Superstructure." *Journal of Composites for Construction*, ASCE. Vol. 8, No. 2, 182–190.

15. **Chiewanichakorn, M.**, Aref, A., Chen, S., Ahn, I. (2004). "Effective Flange Width Definition for Steel-Concrete Composite Bridge Girder." *Journal of Structural Engineering,* ASCE. Vol. 130, No. 12, 2016–2031.

16. Ahn, I., **Chiewanichakorn, M.**, Chen, S., and Aref, A. (2004). "Effective Width Provisions for Steel Bridges." *Engineering Structures Journal*. Vol. 26, 1843–1851.

17. **Jung, W.** and Aref, A. J. (2005). "Analytical and Numerical Studies of Polymer Matrix Composite Sandwich infill Panels." *Composite Structures Journal* , Vol. 68, No. 3, 359–370.

18. Aref, A., **Kitane, Y.,** and Lee, G. (2005) "Analysis of Hybrid FRP-Concrete Multi-Cell Bridge Superstructure." *Journal of Composite Structures*. Vol. 69, No. 3, 346–359.

19. Aref, A., Alampalli, S. and **He, Y.** (2005). "Performance of a Fiber Reinforced Polymer Web Core Skew Bridge Superstructure, Part I: Field Testing and Finite Element Analysis." *Composite Structures.* Vol. 69, No. 4, 491–499.

20. Aref, A., Alampalli, S. and **He, Y.** (2005). "Performance of a Fiber Reinforced Polymer Web Core Skew Bridge Superstructure, Part II: Failure Modes and Parametric Study." *Composite Structures*. Vol. 69, No. 4, 500–509.

21. **Barham, W.,** Aref, A., Dargush, G. (2005). "Flexibility-based Large Increment Method for Analysis of Elastic Perfectly Plastic Beam Structures." *Computers & Structures.* Vol. 83/28–30, 2453–2462.

22. I.-S. Ahn, **M. Chiewanichakorn,** A.F. Nottis, J.A. Carpenter, S.S. Chen, and A.J. Aref. (2005). "Experimental Study on the Ultimate Behavior at the Negative Moment Regions of Composite Bridges." Design of Structures 2005, Transportation Research Record, *Journal of the Transportation Research Board*, No. 1928, 3–12.

23. **M. Chiewanichakorn,** A.J. Aref, S.S. Chen, and I.-S. Ahn, (2005). "Methodologies for Evaluation of Effective Slab Width." Design of Structures 2005, Transportation Research Record, *Journal of the Transportation Research Board*, No. 1928, 13–26.

24. **Barham, W.,** Aref, A., Dargush, G. (2005). "Development of the Large Increment Method For Elastic Perfectly Plastic Analysis of Plane Frame Structures Under Monotonic Loading." *Int. Journal of Solids & Structures.* Vol. 42, 6586–6609.

25. **Alnahhal, W. Chiewanichakorn, M.,** Aref, A. and Alampalli, S. (2006). "Temporal Thermal Behavior and damage Simulations of FRP Deck." *Journal of Bridge Engineering, ASCE.* Vol. 11, No. 4, 452–465.

26. Aref, A. and **Jung, W.** (2006). "Advanced Composite Panels for Seismic and Vibration Mitigation of Existing Structures." *Journal of Engineering Materials Technology, ASME.* Transactions of the ASME, Vol 128, 618–633.

27. **Chiewanichakorn, M.,** Aref, A.J., Chen, S.S., and Ahn, I-S. (2006). Closure to: Effective Flange Width Definition for Steel-Concrete Composite Bridge Girder, *Journal of Structural Engineering,* ASCE. Vol. 132, No. 2, pp. 322–324.

Refereed Journal Papers (continued)

28. **Alnahhal. W., Chiewanichakorn, M.**, Aref, A.J. and Alampalli, S. (2007), "Simulations of Structural behavior of Fiber-reinforced Polymer Bridge Deck under Thermal Effects" *International Journal of Materials and Product Technology (IJMPT)*. Vol. 28, No.1/2, 122–140.

29. Ou, Y.-C, **Chiewanichakorn, M.,** Ahn, I.-S., Aref, A., Chen, Filiatrault, A and Lee, G. (2006). "Cyclic Performance of Precast Segmental Bridge Columns." Transportation Research Record, *Journal of the Transportation Research Board.* No. 1976, 66–74.

30. Chen, S.S., Aref, A.J., **Chiewanichakorn, M.,** and Ahn, I-S. (2007). "Proposed Effective Flange Width Criteria for Composite Bridge Girders," *Journal of Bridge Engineering*, ASCE. Vol. 12, No. 3, 325–338.

31. Aref, A.J., **Chiewanichakorn, M.,** Chen, S.S., Ahn, I-S. (2007). "Effective Width Definitions for Negative Moment Regions of Composite Bridges," *Journal of Bridge Engineering*, ASCE. Vol. 12, No. 3, 339–349.

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24. **Petros Sideris**, Amjad Aref and Andre Filiatrault, (2014). "Experimental Seismic Performance Evaluation of a Large Scale Hybrid Sliding–Rocking Precast Concrete Segmental Bridge," The 10th National Conference on Earthquake Engineering, Anchorage, Alaska, July 21–25, 2014. (#1135)

25. **MohammadJavad Hamidia,** Andre Filiatrault, and Amjad Aref. (2014). "Simplified Collapse Analysis of Frame Buildings from Pushover Analysis" for the 10th US National Conference on Earthquake Engineering. Anchorage, Alaska, July 21–25, 2014. (#451)

26. Dimitra **Bouziou**, Zilan **Zhong**, Brad Wham, Andre Filiatrault, , Thomas O'Rourke, Harry Stewart, and Amjad Aref. (2014). "Performance of Water Pipelines Retrofitted with Cured in Place Pipe Linings under Permanent Earthquake Movement," The 10th National Conference on Earthquake Engineering, Anchorage, Alaska, July 21–25, 2014.

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28. **Sideris**, Aref and Filiatrault. (2014). "Experimental Seismic Performance Evaluation of a Large–scale Hybrid Sliding–rocking Post–tensioned Segmental Bridge." The 2014 ASCE Structures Congress, Boston, MA, April 3-5, 2014.

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31. Maria Lopez de Murphy, Amjad Aref, Ph.D., University at Buffalo, Buffalo, NY; Stephen Ayers, Jerome S. O'Connor. (2013). "Solid–Surface Decking for Historic and Moveable Bridges," IBC, September 12–17, 2013.

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37. O'Connor and Aref. (2013). "Light-weight, Solid-surface Decking for Moveable Bridges in Seismic Regions. Seventh National Seismic Conference on Bridges & Highways, Oakland, CA.

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41. **Rafiee-Dehkharghani, R.*** and Aref, A. and Dargush (2012). "Numerical investigation of periodic structures under short period transient loading. " Joint Conference of the Engineering Mechanics Institute and 11th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012), The University of Notre Dame.

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43. **Dolatshahi,** M. K. * and Aref, A. (2011) "Three Dimensional Modeling of Masonry Structures and Interaction of In-Plane and Out-of-Plane Deformation of Masonry Walls" Engineering Mechanics Conference, June 2-4, Boston, MA.

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46. A. Aref, G. Dargush, **R. Rafiee Dehkharghani.*** (2011). Development Of Functionally Graded Protective Systems For Attenuation Of Blast Loading", NSF CMMI Research and Innovation Conference 2011, Atlanta, GA, USA. (poster presentation)

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50. Whittaker, A.S.*, **Sherkar, P.**, and Aref, A.J. (2010). "Modeling the effects of detonations of high explosives to inform blast-resistant design," Workshop on Computational Modeling of Airblast, Department of Homeland Security, Washington, D.C.

51. **O'Connor, J.* and** Aref, A. (2009). "Bridge Vulnerabilities and the Practical Application of Advanced Composite Materials for Hardening, Strengthening, and Extending Service Life," Department of Homeland Security Aging Infrastructure workshop, Columbia University, NY July 21-23, 2009.

52. **Petros Sideris, Myrto Anagnostopoulou**, Amjad Aref * and Andre Filiatrault (2010). "Experimental and Analytical Evaluation of Seismic Performance of Precast Segmental Bridges," Structures Congress, Orlando, FL May 12-14, 2010.

53. **Gordon P. Warn** and Amjad Aref (2010). "Experimental Study of the Fatigue Resistance and Ultimate Capacity of a Hybrid FRP-Concrete Bridge Deck." Structures Congress, Orlando, FL May 12-14, 2010.

54. **Gordon P. Warn*, Wael Alnahhal,** and Amjad Aref (2010). "Analytical and Experimental Studies of Hybrid FRP-Concrete Bridge Systems." Fiber Reinforced Polymer (FRP) Composites For Infrastructure Applications Conference, San Francisco, November 4-6, 2009.

55. **Sideris,** P. Aref, A.*, Filiatrault A. (2009). "Invited lecture: Development of a Simplified Element for Seismic Analysis of Segmental Bridges. The Twelfth International Conference on Civil, Structural and Environmental Engineering Computing, Funchal, Madeira, Portugal, September 1-4, 2009

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63. Aref, A. and **Alnahhal, W.*** (2007). "Development of Hybrid FRP-Concrete Bridge Deck System," SAMPE '07 in Baltimore, Maryland, June 3-7, 2007.

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65. **Luo, X.*,** Aref, A., and Dargush, G. (2007). "Analytical Solutions of Layered Elastic Stress Wave Attenuators Subjected to Impulse Loading." Engineering Mechanics Division Conference of the American Society of Civil Engineers. June 3-6, 2007 .

66. **Luo, X.,** Aref, A., and Dargush, G. (2007). "Optimal Analysis of Layered Elastic Stress Wave Attenuator Subjected to Blast Loading." Compdyn 2007, June 13-15, 2007, Crete Greece.

67. **Graeme Ballantyne**, Amjad Aref, Gary Dargush, and Andrew Whittaker. (2007). "Evaluation of Concrete Material Models Under Dynamic and Quasi-Static Loading." Workshop on Modeling Concrete Under High-Impulsive Loadings, 20-21 March 2007, Austin, Texas.

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69. Yen, W. P. and A. Aref . (2007). "Development of Accelerated Bridge Construction Detail for Seismic Regions", Public Research Works Institute Document (Japanese Ministry of Construction) No. 4089, Page 45-462.

70. Ou, Y-C, **Chiewanichakorn,** M.*, Aref, A. Lee, G. (2006). "Nonlinear response time-history analysis of segmental precast concrete bridge columns for seismic regions." PCI conference on accelerated construction: getting in and getting out fast. Grapevine, TX, October 2006.

71. **Luo X.*** and Aref, A., (2006) "Fiber Reinforced Polymer Panels for Attenuating Floor Accelerations in a Hospital Structure." Structures Congress, ASCE, St. Louis, Missouri, May18-21, 2006.

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73. **Alnahhal, W., Chiewanichakorn, M.,** Alampalli, S. and Aref, A.* (2006). "Simulations of Fire Temporal Thermal Behavior of Fibre Reinforced Polymer Bridge Decks" The Eighth International Conference on Computational Structures Technology, Las Palmas de Gran Canaria, Spain 12–15 September 2006.

74. **Wael I. Alnahhal*,** Amjad J. Aref, and Sreenivas Alampalli. (2006). Experimental Evaluation of a Hybrid FRP-Concrete Bridge Deck on Steel Girders." The 43rd Annual Technical Meeting of the Society of Engineering Science, Penn. State University, August 13–16, 2006.

75. **Chiewanichakorn, M.*,** and Aref, A.(2006). "Load-Induced Fatigue Simulations of Truss Bridge with Fiber Reinforced Polymer Decks." The 43rd Annual Technical Meeting of the Society of Engineering Science, Penn. State University, August 13–16, 2006.

76. Aref, A., **Jung, W. and Luo X*.** (2006) "Polymer Matrix Composite Panels for Seismic and Vibration Mitigation" part of the session on Analysis and Design of Innovative FRP Systems, Earth and Space 2006 Conference. Houston TX, March 5–8, 2006.

77. I-S Ahn, A. Aref*, S. Chen, **M. Chiewanichakorn,** G. C. Lee and Y. Ou. (2005). "Accelerated Modular Construction: Seismic Considerations". 2005 FHWA Accelerated Bridge Construction Conference, San Diego, CA, Dec. 15–16, 2005.

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79. Filiatrault, A. Aref, A., Bruneau, M., Constantinou, M., Lee, G., Mosqueda, G., Reinhorn, A., and Whittaker, A. (2005). 11th ATC US-Japan Workshop on Improvement of Structural Design and Construction.

80. **Barham, W.S.,** Aref, A.J., and Dargush, G.F.* (2005). "Large Increment Method for Elastic Perfectly Plastic Analysis of Plane Frames Under Cyclic Loading." The 2005 Joint ACSE/ASME/SES Conference on Mechanics and Materials, Baton Rouge, Louisiana, June 1–3, 2005.

81. **Barham, W.S.,** Aref, A.J., and Dargush, G.F.* (2005). "A Finite-Element Based Large Increment Method for Nonlinear Structural Dynamic Analysis." 10th International Conference on Civil and structural Engineering Computing. Rome Italy, August 30–September 2, 2005.

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83. **Chiewanichakorn, M.,** Aref, A.J., Chen, S.*, Ahn, I-S., and Carpenter, J.A. (2005), "Effective Flange Width of Composite Girders in Negative Moment Region", International Bridge Engineering Conference (IBEC), Boston, MA, July 2005.

84. Aref, A. and **Kitane, Yasuo.*** (2005). "Nonlinear Finite Element Analysis for Failure Prediction of Hybrid FRP-Concrete Structures." Nonlinear Finite Element Analysis for Failure Prediction of Hybrid FRP-Concrete Structures, Austin, TX, April 18–21, 2005.

85. Aref, A.*, **Chiewanichakorn, M.,** Alampalli, **S. Alnahhal, W., and Kitane, Y.** (2005). "On the Temporal Thermal Behavior of Fiber Reinforced Polymer Bridge Decks", Alexandria, Egypt, May 20–23.

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86. **Chiewanichakorn, M.*,** Aref, A., Chen, S. and Ahn, I. (2005)."Methodologies for Evalua-
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     Computational Structures Technology, Lisbon, Portugal, September 7-9, 2004.

89. Aref, A.* and **Jung , W.** (2004). "Analytical and Experimental Studies of Polymer Matrix
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     Cell Bridge Superstructure" Structures Congress, ASCE, Nashville, May 26-29, 2004.

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     er. (2004). "Recent Progress Towards the Seismic Control of Structural and Non-Structural
     Systems in Hospitals" 36th Technical Meeting on Panel on wind and Seismic Effects, May
     17-22, 2004, Gaithersburg, MD.

96. Chen, S.*, Ahn, I., Nottis, A., **Chiewanichakorn, M.**, and Aref, A. (2004). "Continuous
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99. Aref, A. J.*, and **Jung, W.** (2003). "Conceptual Infill Panel Designs for Seismic Retrofitting," Structures Congress, ASCE, May 29–31, 2003, Seattle, Washington, (on CD–ROM.

100. **Kitane, Y.**, Aref, A.*, and Lee, G. (2003). "Nonlinear Finite Element Analysis of Hybrid FRP–Concrete Bridge Superstructure" 16th ASCE Engineering Mechanics Conference, Seattle, Washington, July 16–17, 2003, (on CD–ROM).

101. Aref, A. J.* and **Chiewanichakorn, M.** (2003). "A Comparative Study of Field Testing and FE Analysis of FRP Bridge Systems." Transportation Research Board 82 Annual Meeting, January 12–16, Washington, D.C., (on CD–ROM).

102. Aref, A. J.*, and **Jung, W.** (2002). "Retrofit of Semi-rigidly Connected Steel Frames with FRP composite Panels," Seventh U.S. National Conference on Earthquake Engineering, July 21–25, Boston, MA, (on CD–ROM).

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107. Aref, A. J.* and **He, Y.** (2001). "A Genetic Algorithm-Based Approach for Design Optimization of Fiber Reinforced Polymer Structural Components," Mechanics and Materials Conference, June 27–29, San Diego, CA.

108. Aref, A. J.*, and Alampalli, S. (2001). "Health Monitoring of FRP Bridge Superstructure Using Vibration Characteristics," Mechanics and Materials Conference, June 27–29, San Diego, CA.

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111. Aref, A. J.* and Alampalli, S. (2000). "Dynamic Behavior and Damage Detection of a Fiber Reinforced Plastic Bridge Superstructure." Proceedings of the Structures Congress 2000, Philadelphia, PA, (on CD–ROM).

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113. Aref, A. J.*, Parsons, I. D., and White, S. (1999). "Manufacture, Design and Performance of a Modular Fiber Reinforced Composite Bridge." 31st International SAMPE Technical Conference, Chicago, IL, 581-591.

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115. Aref, A. J.* (1999). "Hybrid Concrete-FRP structural components and Systems." The Sixth International Conference on Composites Engineering. Orlando, Florida.

116. Bisantz, A.*, Cartwright, A. and Aref, A. J. (1999). "Introducing Students to Engineering Using a Case Study Approach." The ASEE Annual Conference and Exposition.

117. Aref, A. J.* and Parsons, I. D. (1996). "Design and Analysis Procedures for a Novel Fiber Reinforced Plastic Bridge Deck." Advanced Composite Materials in Bridges and Structures, M. El-Badry, editor, Montreal, Canada, 743-750.

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119. Aref, A. J.* and Parsons, I.D. (1996). "An Integral Composite Bridge Superstructure." Third International Conference on Composites Engineering, David Hui, editor, New Orleans, LA, p79.

120. Aref, A. J. and Parsons, I.D.*(1996). "A Novel Fiber Reinforced Plastic Bridge Deck." The Fourth Annual Wilson Forum, Existing & Potential applications of Composite Materials in the Infrastructure, San Francisco, CA.

Workshops and other Publications

1. International Workshop on Protection of Critical Infrastructure against Close-by and Attached Explosives--State of Practice, Knowledge Gaps and Roadmap for Risk-Based Protection of Critical Infrastructure. Ottawa, March 28-29, 2019.

2. Enrique **Morales**, Andre Filiatrault*, Amjad Aref. (2016). "Sustainable and Low Cost Seismic Isolation for Essential Care Units of Hospitals in Developing Countries." Seismic Performance of Non-Structural Elements Workshop, NZ Society for Earthquake Engineering.

3. NIST/CIB Fire Resistant Structure Workshop, May 21, 2014, NIST, Gaithersburg, MD.

4. **Sideris P., Anagnostopoulou, M**., Aref, A. and Filiatrault, A. (2009), "Analytical and Experimental Investigation of Precast Bridge Systems", Proceedings of the Special International Workshop on Seismic Connection Details for Segmental Bridge Construction – Technical Report MCEER-09-0012, July 22-24, 2009, Seattle, Washington, U.S.A.

5. Aref, A. (2008). "Cable supported Bridges," ASCE/SEI Bridge Workshop - Enhancing Bridge Performance. Reston, VA, February 21-22, 2008.

6. Aref, A. (2006). "Prefabricated Bridge Pier Structures in Seismic Zones," 2nd US-Taiwan Bridge Engineering Workshop, San Mateo, CA, September 21-22, 2006.

7. Aref A. (2005) "Development of Visco-elastic Composite panels for Increasing Damping in Hospital Buildings" California Office of State-wide Health Planning & Development (OSHPD)-MCEER Seminar. Sacramento, CA February 24, 2005.

8. Aref, A. (2004). "Temporal Thermal Simulation of FRP Decks." Workshop on the Performance and Design of Fiber Reinforced Polymer Composites at Very Cold Temperatures. Workshop held at University of Alaska-Fairbanks and organized by Hong Liang and Judy Liu. Moderated a session on failure Mechanisms. Fairbanks, Alaska, August 10-12, 2005.

9. Research Progress and Accomplishments, MCEER. M. Bruneau, editor. Contributed paper "Advanced Composite Infills", May 2003.

10. Chiewanichakorn, Aref, A., and Alampalli, S. (2003). "Structural Behavior Study of an FRP Deck System Using FEA." Federal Highway Administration (FHWA) Workshop, New York City, NY, August 20-21, 2003.

11. Alampalli, S., Aref, A., Schongar, G., and Greenberg, H. (2003). "In-Service Performance and Analytical Investigations of an FRP Superstructure," Conference Proceedings, Fourth International Workshop on Structural Health Monitoring, Stanford, CA, p.239.

12. Workshop that focused on using case-study approach toward engineering curricula. Held at University at Buffalo, June 1-5,1998.

13. Two-day workshop cosponsored by NSF and ASEE, which focused on teaching and learning processes. Held at University at Buffalo, Spring 1998.

Citations of Work in Newspapers and Magazines

"Quake tests new bridge construction", by Ellen Goldbaum, UB Reporter, May 19, 2010.

"Precast Bridge Segments Are Shaken and Stirred in Lab," by Jim Parsons, Engineering News Record (ENR), June 23, 2010.

"Pipe Liners Undergo Initial Seismic Test," by Kevin Wilcox, Civil Engineering Magazine, July 22, 2014.

"Going through the motions" Trenchless World, October issue, Page 23-25.

SELECTED SEMINARS AND PRESENTATIONS

Invited Lecture: "Hybrid Sliding-Rocking (HSR) Post-Tensioned Segmental Bridges for Seismic Regions" lecture given at FIGG's Designers Seminar series. Exton PA, November 4, 2011.

Invited Lecture: "Seismic Performance of Segmental Bridge" Invited lecture at the meeting held by Association for Bridge Construction and Design, Buffalo, NY, November 12, 2010.

Invited Lecture: Seismic Performance of a Novel Precast Segmental Concrete Bridge, Emerging technologies in Bridge Engineering Class, UB. September 20, 2010.

Invited Lecture: "A study of Segmental Bridge Structures in Seismic Zones", Technion-Israel Institute of Technology, June 2, 2010.

Invited lecture: "Prefabricated Bridge Systems," New York State of Transportation Engineers (NYSATE) Annual Conference 69, Ellicottville, NY, June 3, 2009.

"Advanced Composite Material Applications in Structural Engineering--Advances and Challenges," Structural Engineering Lecture Series, Department of Civil, Structural and Environmental Engineering, University at Buffalo, October 18, 2008, and October 2009.

"Invited Lecture: Analysis and optimal Design of Multi-layer Structures Subjected to Impulse Loading." The 11th International Conference in Civil, structural and Environmental Engineering Computing, St. Julians, Malta, September 18-21, 2007.

"Seismic Performance of Precast Bridge Piers" second US-Taiwan Bridge Engineering Workshop, San Francisco, CA, September 22, 2006.

"Dynamic Considerations of rehabilitated Bridges with FRP Deck System", Institute of Engineering Mechanics (IEM), Harbin, China, May 29, 2006.

"Overview of CSEE Department", Tongji University, Shanghai, China, June 7, 2006.

"Hybrid FRP-Concrete Bridge Deck System" Seminar at Jordan University of Science and Technology, Irbid, Jordan, May 30, 2005.

"Development of Visco-elastic Composite Panels for Increasing Damping in Hospital Buildings" California Office of Statewide Health Planning & Development (OSHPD)-MCEER Seminar. Sacramento, CA February 24, 2005.

"Novel Polymer Matrix Composite Panels for Seismic Retrofitting," Department of Civil and Environmental Engineering, University of California, Los Angeles, February 21, 2002, Los Angeles, CA.

"Advanced Composite Energy Dissipating panels, " Mitigation of Earthquake Disaster by Advanced Technologies (MEDAT-II), Workshop organized by MCEER, November 30-December 1, 2000, Las Vegas, NV.

"Fiber Reinforced Polymer Bridge Concepts for Infrastructure Renewal," ASCE Buffalo Section Meeting, September 19, 2001, Amherst, NY.

"Fiber Reinforced Polymer Composites," project presentation at New York State Department of Transportation, March 9, 2001, Albany, NY.

"Manufacture, Design, and Performance of a Modular Fiber Reinforced Composite Bridge," 31st International SAMPE Technical Conference, October 29, 1999, Chicago, IL.

"Finite Element Modeling of FRP Bridges," Composite Materials Workshop sponsored by New York State Department of Transportation, Union College, August 24, 1999, Schenectady, NY.

Invited lecture: "Recent Advances in the Applications of FRP in the Infrastructure," Department of Civil Engineering, Technion, August, 9, 1999, Haifa, Israel.

"A Study of Structural Behavior of FRP Composite Bridges," Department of Civil, Structural and Environmental Engineering, University at Buffalo, January 30, 1998, Buffalo, NY.

ORGANIZATION OF TECHNICAL SESSIONS

Aref, Amjad and Baylot, James, "Session Title: Analysis Methods for Blast Loads." Sponsored by the Blast, Shock and Impact Committee. Structures Congress 2014, Boston MA.

Aref, A. and Lee, G. "Accelerated Bridge Construction in Seismic Regions." 9th US National and 10th Canadian Conference on Earthquake Engineering, July 25–29, 2010.

Amjad Aref and Ertugrul Taciroglu, "Advances in Simulation and Mitigation of Damage under Extreme Loads." Mini-Symposium at the Inaugural International Conference of the Engineering Mechanics Institute (EM08), Minneapolis, Minnesota, May 18–21, 2008.

Aref, A. and Alampalli, S. (2007). " FRP Composites" ASNT 16th Annual Research Symposium Program Dates: March 27–29, 2007

Aref, A. "Analysis and Design of Innovative FRP Systems" Earth and Space 2006 Conference. Houston TX, March 5–8, 2006.

Aref, A. "NDT/NDE for Infrastructure III: FRP Applications" Structural Materials Technologies (SMT): NDE/NDT for Highways and Bridges. September 14–17, 2004, Buffalo, NY.

Aref, A. "Composites Sessions (I & II)", 17th Engineering Mechanics Conference, ASCE, University of Delaware, June 13–16, 2004.

Aref, A. "Structures ST-15: Fiber Composites for Seismic Strengthening," Seventh U.S. National Conference on Earthquake Engineering, Earthquake Engineering Research Institute (EERI), July 23, 2002, Boston, MA.

Aref, A. "Structural Identification and Monitoring: Session 3 Health Monitoring I." Mechanics and Materials Conference, ASCE, ASME, and Society of Engineering Science, June 27, 2001, San Diego, CA.

Aref, A. "Multi-Scale Modeling of Materials: VI", Mechanics and Materials Conference, ASCE, ASME, and Society of Engineering Science, June 29, 2001, San Diego, CA.

Aref, A. "NDT/NDE Technologies for Fiber-Reinforced Polymer Composites," Structural Materials Technology: A Non-destructive Testing Conference, February 28–March 3, 2000, Atlantic City, NJ.

PROFESSIONAL SERVICE

Editorial Boards

Journal Editorila Boards:
    Section (managing) Editor, ASCE Journal of Structural Engineering, 2018–present
    Associate Editor, ASCE Journal of Structural Engineering, 2007–2018
    Associate Editor, ASCE Journal of Bridge Engineering, 2016–present

Conference Editorial Boards:
    CIVIL–COMP 2019–The Sixteenth International Conference on Civil, Structural and Environmental Engineering Computing; 16–19 September 2019; Riva Del Garda Congress Centre, Lake Garda, Italy http://www.bhvt.uk/c19/cc.html

    Member of the Advisory Committee for the (6th) International Conference on Protective Structures, May 2020, Auburn University.

    Editorial Board, the Eighth International Conference on Computational Structures Technology, Las Palmas de Gran Canaria, Spain, 2006

Editorial Board, the Eleventh International Conference on Civil, Structural and Environmental Engineering Computing, St. Julians, Malta, 2007

Editorial Board, the 12th International Conference on Computational Structures Tech Naples, Italy

Editorial Board, the Ninth International Conference on Computational Structures Technology, Athens, Greece, from 2–5 September 2008

The Twelfth International Conference on Civil, Structural and Environmental Engineering Computing, Funchal, Madeira, Portugal, 1–4 September 2009

Professional Societies Membership and Affiliation

E.I.T., Illinois
Member, American Society of Civil Engineers (ASCE)
Member, International Association of Computational Mechanics (IACM)
Member, American Academy of Mechanics

Technical Committees Membership

Chair, Dynamic Effects Technical Administrative Committee, ASCE, 2022–present

Chair, Blast, Shock and Impact Committee, ASCE 2016–2019

Vice–Chair, Blast, Shock and Impact Committee, ASCE 2013–2016

Member of the Blast, Shock and Impact Committee, ASCE 2011–2019

Member of the selection committee for the Ammann Fellowship, ASCE, 2016–2018

Member, ASCE/SEI Blast Protection of Buildings Standards Committee 2015

Member of Methods of Analysis Committee, ASCE, 2001–2007

Member of Dynamics Committee, EMI , ASCE, 2014–present

Member of Seismic Effects Committee, ASCE, 2004–2010

Member of Methods of Monitoring, ASCE, 2002–2008

Vice–chair of Advanced Materials and Structures, ASCE, (2004–2009)

Member of Blast Standards, ASCE, (2006–2010)

NIST workshop on Fire May 21–22, 2014

Technical Referee

Journal of Engineering Mechanics, ASCE
Journal of Structural Engineering, ASCE
Journal of Composites for Construction, ASCE

Mechanics of Materials Journal
Computers and Structures Journal
Composites Science and Technology
International Journal of Solids and Structures
Engineering Fracture Mechanics Journal
Journal of Polymer Engineering
Journal of Constructional Steel Research
Journal of Earthquake Engineering and Structural Dynamics
Computer-Aided Civil and Infrastructure Engineering – An International Journal
Swiss National Science Foundation (SNSF) Division of Mathematics, Physical and Engineering Sciences, reviewer, 2015.
CONICYT– Chile (funding agency), 2018
Reviewer for the Ralph E. Powe Junior Faculty Award, Oak Ridge Associated Universities
National Science Foundation – Panelist, Structural Systems Program, June 2000
National Science Foundation – Panelist, Analysis Methods Panel, July 2006.
National Science Foundation – Panelist, CMMI–Hazard Mitigation and Structural Engineering, May, 2009.
Referee for several promotion and tenure cases
Referee for the Marie Curie individual fellowship proposal, the European Commission.

Professional Service - Short Courses

"Finite Element Analysis of Structures," Short Course presented by A.J. Aref and G.F. Dargush to engineers at New York State Department of Transportation, Albany, NY, July 26-27, 2001

"Finite Element Analysis" Short Course presented by A.J. Aref and G.F. Dargush to engineers working in local industries. Buffalo, NY, September 19-22, 2005

UNIVERSITY SERVICE

Director of CSEE Graduate Studies Committee, UB, 2018-present

Member of SEAS Graduate Acadmic Programs Committee 2019-presnet

Member of the SEAS Promotion Commitee, 2019-present

Member of review panel, Graduate School Committee for Presidential and Schomburg Evaluation

Chair of the Structural/Materials Faculty Search Committee, 2016

Member of the Advisory Committee for Center - UB; 2014-present

Member of the Materials Faculty Search Committee, 2014

Member of the Laboratory Committee, 2013-present

Chair of the Structural and Materials Faculty Search Committee, 2016

Chair of the Structural and Geotechnical Engineering Faculty Search Committee, 2015

Chair of the Structural Engineering Faculty Search Committee, 2013

Mentor to newly-hired junior faculty, 2012-present

Deputy Director, Structural Engineering and Earthquake simulations Laboratory, 10/2012-9/2013

Department Computer Committee, Member, 2010-2012

System Administrator of the Department Linux cluster, 2011-present.

UB Engineering Tenure and Promotion Committee, member, 2007-2010

UB Engineering Research Advisory Committee 2009-2010

UB faculty Senate Committee July 1, 2009 - June 30, 2011

CSEE, Academic Integrity Ad-hoc Committee, member, Fall 2008

UB Graduate School Executive Committee, member, 2007-2010

Department Graduate Studies Committee, Chair, 2007–2010

Department Computer Committee, Chair, 2004–2007

Department Undergraduate Studies Committee, Member, 2004–2005

Department Strategic Planning Committee, member, Fall 2005

University Standing Committee on Academic Integrity, 2005–2010

Department Search Committee for faculty in computational Mechanics, Spring 2006, Spring 2012

Participant in the Provost's Envisioning Retreat for Computer and Information Technology Strategic Strength. Retreat was held on March 31, 2005

Department Seminar Coordinator, 1998–1999

Department Graduate Studies Committee, University at Buffalo, Member, 1999–2004

Undergraduate Mentor, 1999–2000