

SANG-WOOK BAE, Ph.D.  
Assistant Professor of Civil, Environmental and Construction Engineering  
Texas Tech University  
Lubbock, Texas  
e-mail: [sangwook.bae@ttu.edu](mailto:sangwook.bae@ttu.edu)  
PH: (806) 834-4792

#### Professional Preparation

B.S. in Civil Engineering, Myongji University, South Korea, 1998  
M.S. in Civil Engineering, Myongji University, South Korea, 2000  
Ph. D. in Civil Engineering (structures), Missouri University of Science and Technology (Formerly University of Missouri Rolla), 2004

#### Professional Chronology

Assistant Professor, Department of Civil and Environmental Engineering, Texas Tech University (2009 ~ Present) Tenured September 2015.  
Post Doctoral Research Fellow, Department of Civil, Architectural and Environmental Engineering, Missouri University of Science and Technology (2005 ~ 2009)  
Research Assistant, Department of Civil, Architectural and Environmental Engineering, University of Missouri-Rolla (2001 ~ 2004).  
Researcher, Concrete Structure Laboratory, Dept. of Civil Engineering, Myongji University, S. Korea (1999 ~ Oct. 2000)  
Research Assistant, Department of Civil and Environmental Engineering, Myongji University, S. Korea (1999 ~ 2000).  
Teaching Assistant, Academic Affairs & Academic Support Team, Myongji University, S. Korea (1999 ~ 2000)  
Structural Engineer, Dongrim Consultant Co., Ltd., S. Korea (1997 ~ 1998)

#### Research Interests

Structural behavior of reinforced and prestressed concrete structures  
Fiber-reinforced-polymer (FRP) composite materials as internal and external reinforcement for concrete structures.  
Sustainable structural rehabilitation using FRP composite materials and other emerging materials.  
Computational modeling

#### Honors/Awards

Dr. Charles L. Burford Faculty Award for Excellence in Undergraduate Teaching, College of Engineering, Texas Tech University, April, 2013.  
Excellence in Civil Engineering Education (ExCEED) Fellowship, American Society of Civil Engineers (ASCE), 2010.  
First Place Winner of the Year, Annual Poster Presentation, Intelligent System Center, University of Missouri-Rolla, 2005.  
Best Graduate Research Presentation Award, Annual Research Presentation, Intelligent System Center, University of Missouri-Rolla, 2004.  
Role Model Scholarship, Myongji University, 1997.  
Tau Beta Pi the Engineering Honor Society  
Sigma Xi the International Honor Society for Scientific and Engineering Research

#### Synergistic Activities/Committee Membership

1. ACI Committee 440 Fiber Reinforced Polymer Reinforcement (ACI 440-L FRP Durability)
2. ACI Committee 563 Specifications for Repair of Structural Concrete in Buildings
3. Technical Paper Reviewers (Advances in Structural Engineering, ASCE Journal of Bridge Engineering, ASCE Journal of Composites for Construction, ASCE Journal of Structural Engineering, ASCE Journal of Materials in Civil Engineering, Composite Structures: Elsevier, NED University Journal of Research, International Journal of Concrete Structures and Materials, Structural Engineering and Mechanics)
4. Excellence in Civil Engineering Education (ExCEED) Workshop, American Society of Civil Engineers (ASCE), United States Military Academy, West Point, NY, July 28 - August 2, 2010.
5. PCA Professor's Workshop, Portland Cement Association, Skokie, IL, August 1-5, 2011

#### Selected Publications(Last 10 years)

You, Y., Ayoub, A., Bae, S.W. and Belarbi, A., "Numerical Simulation of FRP Shear-Strengthened Reinforced Concrete Girders", ACI Special Publication, Vol. 301, pp. 1-16., 2015.

Lee, S., Wu, D., and Bae, S. W. "Analyzing Life-Cycle Costs in Repairing Bridge Piles: TxDOT Case", Transportation Research Board 93rd Annual Meeting, Washington, D. C., January, 2014

Bae, S.W., and Belarbi, A., "Behavior of Various Anchorage Systems Used for Shear Strengthening of Concrete Structures with Externally Bonded FRP Sheets", ASCE Journal of Bridge Engineering, Vol. 18, No. 9, pp. 837-847, 2013.

Lee, S., Wu, D., and Bae, S. W. "Evaluation of Life-Cycle Cost Analysis Programs for Bridge Pile Repair Projects", the ASC 49th Annual International Conference held in conjunction with the CIB Workgroup 89, California Polytechnic State University, San Luis Obispo, California, April, 2013.

Bae, S.W., Murphy, M., Mirmiran, A., and Belarbi, A. "Behavior of RC T-Beams Strengthened in Shear with CFRP under Cyclic Loading", ASCE Journal of Bridge Engineering, Vol. 18, No. 2, pp. 99-109, 2013.

Yang, Q, Tate, D., and Bae, S.W. "Finite Element Modeling and Simulation Analysis of a Portable Roll-Up Sign", ASME 2012 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Chicago, IL, August, 2012.

Murphy, M. S., Belarbi, A., and Bae, S.W., "Behavior of PC I-Girders Strengthened in Shear with Externally Bonded FRP Sheets", PCI Journal, Vol. 57, No. 3, pp. 63-82, 2012.

Belarbi, A., Bae, S.W., and Brancaccio, A., "Behavior of Full-Scale RC T-Beams Strengthened in Shear with Externally Bonded FRP Sheets." Construction and Building Materials, Vol. 32, pp. 27-40, 2012.

Bae, S.W., and Belarbi, A., "Effects of Various Environmental Conditions on RC Columns Wrapped with FRP Sheets." Journal of Reinforced Plastics and Polymers, Vol. 29, No. 2, pp. 290-309, 2010.

Ouezdou, M.B., Belarbi, A., and Bae, S.W., "Effective Bond Length of FRP Sheets Externally Bonded to Concrete." International Journal of Concrete Structures and Materials, Vol. 3, No. 2, pp.127-131, 2009.