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Assistant Professor

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Biographical Sketch:

Baoshan Huang joined the faculty of the Department of Civil and Environmental Engineering at the University of Tennessee in January 2002. He received his Ph.D. degree in civil engineering from the Louisiana State University, his M.S. and B.S. degrees from Tongji University in Shanghai, China. Prior joining to the University of Tennessee, he was a senior research engineer at the Louisiana Department of Transportation and Development (LADOTD). His professional career includes over 19 years of experience in geotechnical and pavement engineering with the Shanghai Institute of Geotechnical Investigation and Design, Louisiana Transportation Research Center (LTRC), and the LADOTD. He is registered as a professional engineer in Louisiana.

RESEARCH AREAS:

Infrastructural Materials – Engineering Characterization and Multi-Scale Modeling of Asphalt Cement, Hot-Mix Asphalt Mixtures (HMA), Portland Cement Concrete, and other Infrastructural Materials.

Pavement Engineering – Pavement Design and Testing, Construction Quality Control (QC) and Quality Assurance (QA), and Pavement Management System (PMS).

Geotechnical Engineering – Soil Improvement, Slope Stability, Deep Excavations, Drill Shaft and other Deep Foundations.

FUNDED RESEARCH IN PROGRESS:

- Principal Investigator, FHWA/Tennessee DOT, “Evaluation of Longitudinal Joints of HMA Pavements in Tennessee,” 2007 – 2009, \$192,345.
- Principal Investigator, FHWA/Tennessee DOT, “Optimizing Pavement Preventive Maintenance Treatment Applications in Tennessee,” 2007 – 2009, \$225,175
- Principal Investigator, Southeastern Transportation Research Center, “Effects of Asphalt Pavement Conditions on Traffic Accidents in Tennessee Utilizing Pavement Management System (PMS),” 2007 – 2008, \$25,000.
- Principal Investigator, (Co-PI: Dr. E. Drumm), FHWA/ Tennessee DOT, “Laboratory Evaluation of Layer Structural Coefficients for HMA Pavements,” 2005 – 2007, \$408,173.
- Principal Investigator, FHWA/Tennessee DOT, “Fatigue Characteristics of HMA Mixtures Containing Recycled Asphalt Pavement (RAP) – Phase II,” 2004 – 2009, \$238,000.

SELECTED RECENT JOURNAL PUBLICATIONS:

- Shu, X., and **B. Huang**, “Micromechanics-Based Dynamic Modulus Prediction of Polymeric Asphalt Concrete Mixtures,” *Composites Part B: Engineering*, In Press (available online)
- Shu, X., and **B. Huang**, “Laboratory Evaluation of Fatigue Characteristics of Recycled Asphalt Mixture,” *Construction and Building Materials*, In Press (available online)

- Chen, X., **B. Huang**, and Z. Xu, “Comparison between Flat Rubber Wheeled Loaded Wheel Tester and Asphalt Pavement Analyzer,” *International Journal of Road Materials and Pavement Design*, In Press.
- Chen, X. and **B. Huang**, “Evaluation of Moisture Damage in Hot Mix Asphalt using Simple Performance and Superpave Indirect Tensile Tests,” *Construction and Building Materials*, In Press (available online)
- **Huang, B.**, X. Shu, and X. Chen, “Effects of Mineral Fillers on Some Properties of HMA Mixtures,” *International Journal of Pavement Engineering*, Vol.8, No.1, 2007, pp 1 – 9.
- **Huang, B.**, X. Shu, and G. Li, “Analytical Modeling of Three Layered HMA Mixtures,” *International Journal of Geomechanics*, ASCE, Vol. 7, No.2, 2007, pp. 140 – 148.
- **Huang, B.**, G. Li, and X. Shu, “Investigation into Three-Layered HMA Mixtures,” *Composites Part B: Engineering*, Vol. 37, No.7-8, 2006, pp.679 – 690
- **Huang, B.**, X. Shu, and E. Burdette, “Properties of Portland Cement Concrete Containing Recycled Asphalt,” *Magazine of Concrete Research*, Vol.58, No.5, 2006, pp. 313 – 320.
- **Huang, B.**, G. Li, D. Vukosavljevic, and X. Shu, “Laboratory Investigation of Mixing HMA with RAP,” *Journal of Transportation Research Record 1929*, TRB, Washington, D.C., 2005, pp. 37 – 45.
- **Huang, B.**, X. Shu, and G. Li, “Laboratory Investigation of Portland Cement Concrete Containing Recycled Asphalt Pavements,” *Cement and Concrete Research*, Vol. 35, No. 10, 2005, pp.2008 – 2013.
- **Huang, B.**, L.N. Mohammad, and G.W. Wathugala, “Application of a Temperature Dependent Viscoplastic Hierarchical Single Surface Model for Asphalt Mixtures,” *ASCE Journal of Materials in Civil Engineering*, Vol. 16, No. 2, 2004, pp.147-154.
- **Huang, B.**, G. Li, S. Pang, and J. Eggers, “Investigation into Waste Tire Rubber Filled Concrete,” *ASCE Journal of Materials in Civil Engineering*, Vol. 16, No. 3, 2004, pp.187 – 194.
- **Huang, B.**, G. Li, and L.N. Mohammad, “Analytical Modeling and Experimental Study of Tensile Strength of Asphalt Concrete Composite at Low Temperatures,” *Composites Part B: Engineering*, Vol. 34, No. 8, 2003, pp. 705-714.

Awards:

- College of Engineering Research Fellow Award, The University of Tennessee in April 2007
- CEE Department Research Recognition Award, The University of Tennessee in May 2006
- College of Engineering Research Fellow Award, The University of Tennessee in March 2005
- CEE Department Scholar Recognition Award, The University of Tennessee in May 2004
- Third Degree National Award in 1992 by the Ministry of Construction, PRC
- Award for Technological Development by the City Commission of Science and Technology of Shanghai in 1992