Robert W. Barnes, Ph.D., P.E. Professor and Associate Chair for Undergraduate Studies Department of Civil and Environmental Engineering 219 Harbert Engineering Center Auburn University, Alabama 36849-5337 Phone: (334) 663-9092, Email: <u>barnerw@auburn.edu</u>

Education

- PhD, Civil Engineering, The University of Texas at Austin, 2000
- MSE, Civil Engineering, The University of Texas at Austin, 1996
- BCE, Civil Engineering, Georgia Institute of Technology, 1993

Academic Experience

- Auburn University, Professor, 2023-present
- Auburn University, Brasfield and Gorrie Associate Professor, 2020–2023
- Auburn University, Associate Professor, 2005–2023
- Auburn University, James J. Mallett Associate Professor, 2007–14
- Auburn University, Assistant Professor, 1999–2005
- The University of Texas at Austin, Graduate Research Assistant, 1993-99

Non-Academic Experience

• Froehling and Robertson, Inc., *Engineering Assistant* and *Construction Inspector*, 1989–92

Professional Registration or Certifications

• Professional Engineer, Alabama, No. 26289

Current Membership in Professional Organizations

- American Society of Civil Engineers (ASCE)
- American Concrete Institute (ACI)
- Precast/Prestressed Concrete Institute (PCI)
- Structural Engineers Association of Alabama (SEAoAL)

Honors and Awards

- Fellow of the American Concrete Institute (ACI), 2010
- ACI Mete A. Sozen Award for Excellence in Structural Research, 2023
- Arthur N.L. Chiu National Award for Excellence as a Faculty Advisor, Chi Epsilon National Civil Engineering Honor Society (XE), 2016
- ACI Structural Research Award, 2005
- James M. Robbins Southern District Award for Excellence in Teaching, XE, 2011
- Southern District Award for Excellence as a Faculty Advisor, XE, 2008 and 2010
- *William F. Walker Merit Teaching Award*, Samuel Ginn College of Engineering (SGCOE), Auburn University, 2005, 2010, and 2017
- Outstanding Faculty Member, Civil & Env. Engineering, 2001, 2002, 2020, and 2024

Service Activities

Auburn University

- Chair, Undergraduate Program Committee, Dept. of Civil & Env. Engineering, 2013-present
- Continuous Improvement Committee, SGCOE, 2014-present
- Core Curriculum and General Education Committee, 2019–present
- AUBURNACHIEVE Quality Enhancement Plan Advisory Council, 2022-present
- Engineering Faculty Council, 2024–present
- Stone Leadership Award Committee, Civil & Environmental Engineering, 2012-present
- Users Group Design and Equipment Procurement Team for \$22 million Advanced Structural Engineering Laboratory (ASEL), 2018–2021

External to Auburn University

- Editorial Board, ACI Structural Journal (2024-present)
- Chair (2024–present) and Voting Member (2001–present), ACI-ASCE Committee 423 Prestressed Concrete
- Voting Member, ACI-PCI 319 Precast Structural Concrete Code, 2019-present
- Voting Member, ACI Technical Activities Committee (TAC), 2024-present
- Secretary, Subcommittee P, ACI 318, Structural Concrete Building Code, 2019–present
- Voting Member (and past Secretary), ACI-ASCE Committee 445 Shear and Torsion, 2003– present
- Associate Member, ACI-ASCE Committee 408 Bond and Development of Steel Reinforcement, 2017–present; past Voting Member, 2004–17
- Program Evaluator, Accreditation Board for Engineering and Technology (ABET), 2021– present
- National Marshal (2016–20) and District Councillor (2012–20), Chi Epsilon
- Consulting Member, Civil Engineering Body of Knowledge 3 Task Committee, ASCE, 2017–19
- Head Judge, National Concrete Canoe Competition, ASCE, 2013

Most Important Recent Publications and Presentations (past five years)

- Aguilar, V., Barnes, R.W., and Nowak, A.S. 2023. "Data-driven Professional Factors for ACI 318 One-way Shear Strength," *Structure and Infrastructure Engineering* 19 (9): 1205–1217.
- Mante, D.M., Isbiliroglu, L., Hofrichter, A., Barnes, R.W., and Schindler, A.K. 2022. "Expected Compressive Strength in Precast, Prestressed Concrete Design–A Methodology to Analyze Regional Strength Test Results." *PCI Journal* 67 (5): 40–54.
- Mante, D.M., Isbiliroglu, L., Hofrichter, A., Barnes, R.W., and Schindler, A.K. 2022. "Expected Compressive Strength in Precast, Prestressed Concrete Design—Review and Discussion of Regional Practice." *PCI Journal* 67 (3): 53–70.
- Aguilar, V., Barnes, R.W., and Nowak, A.S. 2022. "Strength Reduction Factors for the ACI 318 Strut-and-Tie Method for Deep Beams," *ACI Structural Journal* 119(2): 103–112.
- Aguilar, V., Barnes, R.W., and Nowak, A.S. 2022. "Comparative Assessment of Shear Strength Equations for Reinforced Concrete," *ASCE Practice Periodical on Structural Design and Construction* 27(2).