

Kevin C. Bower, Ph.D., P.E.

Associate Provost for Academic Affairs and Dean of Graduate and General Studies

The Citadel

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1. *Name and Academic Rank.*

Kevin C. Bower, Professor

2. *Degrees with fields, institution, and dates.*

Bachelor of Science, Civil Engineering, Ohio University, 1995

Master of Science, Civil Engineering, University of Akron, 2000

Doctor of Philosophy, Environmental Engineering, University of Akron, 2003

3. *Academic Position and Rank.*

Associate Provost for Academic Affairs and Dean of General Studies, July 2021 - Present

Associate Provost for Academic Operations, The Citadel, July 2018 – July 2021

Assistant Provost for Academic Operations, The Citadel, January 2018 - June 2018

Department Head, Civil and Environmental Engineering, The Citadel, 2013-December 2017

D. Graham Copland Professor of Civil Engineering, The Citadel, 2014-December 2017

Professor, The Citadel, 2015-Present

Associate Professor, The Citadel, 2009-2015

Assistant Professor, The Citadel, 2003-2009

4. *Teaching*

Courses taught at The Citadel:

CIVL 103	Introduction of Civil Engineering
CIVL 210	Computer Application in Civil and Environmental Engineering
CIVL 239	Geomatics Laboratory
CIVL 310	Statics and Mechanics of Materials for Non-CE Majors
CIVL 314	Engineering Economy
CIVL 321	Hydrology and Hydraulics
CIVL 322	Introduction to Environmental Engineering
CIVL 408	Water and Wastewater Systems
CIVL 418	Fluid Mechanics Laboratory
CIVL 419	Environmental Engineering Laboratory
CIVL 422	Comprehensive Design Project in Environmental Engineering
CIVL 432	Civil and Environmental Engineering Capstone 1 (Environmental/ Army Corps of Engineering Permitting)
ELEC 421	Design 1 (Environmental Sustainability Module)

5. *Areas of Research:*

Faculty Development, 2013-Present. This research focuses on the development of new and existing faculty within the School of Engineering. It consists of motivating experienced faculty to engage in new research through the development of new faculty.

ABET Assessment Techniques of Civil Engineering Programs, 2006- Present. This research has developed alongside the development of our department assessment process. It focuses on effective and efficient techniques for faculty and departments to meet SACS and ABET accreditation as well as improve the instruction of undergraduate engineering students.

Disinfection By-Product formation in the Drinking Water Distribution System. This research consists of the development of a mechanism, which describes the role of the pipe deposit on DBP production in the drinking water distribution system. In addition, a more practical approach to handling the stage two disinfection by- product rule is also under development.

Student Learning, Motivation, and Retention,

2001-present. Work in this area has focused on problem-based learning pedagogies and research on improving student ability to be lifelong learners. Recently, a focus has been placed on retention of students and the development of improved self-efficacy.

Advance Oxidation Process for the Removal of Recalcitrant Compounds found in Soil and Water Matrixes. Fenton's reagent was optimized for hydroxyl radical production under various conditions and the role of soils concentration was investigated on various chlorinated organic removal. Masters research focused on the heterogeneous catalysis (iron oxide surfaces) of ozone decomposition for the removal of various explosive compounds (TNT, DNT, and RDX).

Solidification/Stabilization of Hazardous and Radioactive Material using various Grouts and Polymers.

This research focuses on the effectiveness of a silicone foam for solidifying and stabilizing a surrogate calcine mixed waste for the Idaho National Engineering and Environmental Laboratory. Additional research includes the development of a grout, which could be used to solidify and stabilize a radioactive mixed waste. Work has been done to show the grout loaded with waste still was capable of handling a variety of loading conditions without significant degradation.

Research Experience/Funding:

"Encouraging Civil Engineering Retention through Community and Self-Efficacy Building," National Science Foundation, 2017 \$999,840

"Evaluation of Cognitive Development of Students Enrolled in ExCEL-SC (Excellence in Civil Engineering Leadership for South Carolina) The Citadel Foundation, 2014 \$3,000

"Evaluation of Cognitive Development of Students Enrolled in ExCEL-SC (Excellence in Civil Engineering Leadership for South Carolina) The Citadel Foundation, 2013 \$3,000

"Evaluation of Cognitive Development of Students Enrolled in ExCEL-SC (Excellence in Civil Engineering Leadership for South Carolina) The Citadel Foundation, 2012 \$3,000

"Enhancing Undergraduate Civil Engineering Opportunities for Socioeconomically Disadvantaged, Minorities and Female Students in SC", National Science Foundation, 2011 \$593,254

"Aqueous Disinfection Byproduct Formation Potential Modeling based on Natural Organic Matter Characterized by Florescence Spectroscopy," The Citadel Foundation, July 2010 \$3,000

"National Pile Driving Noise and Vibration Database," Pile Drivers Contractors Association, November 2004. \$15,000

"Professional Ethics and Engineering: An Assessment Approach," National Science Foundation, October 2004. \$2,000

"Modeling Disinfection Byproduct Formation in a Drinking Water Distribution System Utilizing Chlorine Residual," The Citadel Foundation New Faculty Research Grant, January 2004. \$3,000

"Kinetic Modeling of TTHM Formation: The Role of Goethite as Model Pipe Deposit," The Citadel Foundation Faculty Research Grant, October 2004. \$3,000

Research Grants Unfunded or In Process:

“Highlighting Women in STEM: Increasing Support and Participation at The Citadel,” National Science Foundation – HRD – Advance- Institutional Transfer, January 2016. \$ 1,660,477

“Proposal to Develop a Geotechnical Materials Database for the SCDOT,” (submitted with Edward Hajduk and Jeff Davis, The Citadel), SCDOT, December 2006. \$37,200

“Engineering Opportunities for Rural South Carolina Students and Teachers,” (submitted with Timothy W. Mays and Mark McKinney, The Citadel), The Alcoa Foundation, December 2005. \$30,000

“Acquisition of an Elemental Analyzer for use by multiple departments,” (Submitted with Kevin Crawford, Stacy Brown, and John Weinstein, The Citadel), Request to Associate Provost 2005. \$60,000

“A Solid Phase Microextraction-Gas Chromatography-Mass Spectrometry (SPME-GC-MS) Method for Determination of JP-8 Contamination in Soil: Method Optimization & Field Verification,” (submitted with Stacy Brown, The Citadel), The Petroleum Research Fund, September 2004. \$35,000

“Chlorine Disinfection Byproduct Formation in the Distribution System: Metal Oxide-Natural Organic Matter and Corrosion Inhibitor Interaction,” (submitted with Christopher M. Miller as P.I., The University of Akron), Nation Science Foundation, June 2002. Proposal was rated as good (a solid proposal worthy of funding). \$199,353

“Chlorine Residual and Pipe Deposit Role in Drinking Water Disinfection By-Product Risk Management,” (submitted with Christopher M. Miller, The University of Akron), Cleveland State University Risk Analysis Program, April 2002. Proposal ranked in the top three out of the proposals submitted. \$35,000

“In-Situ Groundwater Remediation Using In-Situ Sand-Catalyzed Chemical Oxidation,” (submitted with Christopher M. Miller, The University of Akron, and Kevin Gardner, Case Western Reserve University) Cleveland State University Risk Analysis Program, April 2000. \$99,353

“Development of an enhanced ozone –hydrogen peroxide advanced oxidation process,” (submitted with Christopher M. Miller, The University of Akron, and Stephen Duirk, The University of Akron) Environmental Protection Agency; Exploratory Research in Environmental Engineering, March, 1998. \$143,317

Funded Grants:

Professional Organization Travel American Society of Civil Engineering Committee on Student Activities, The Citadel Foundation, 2005-2010.

Professional Organization Travel National Conference and Exposition for American Society of Engineering Education, The Citadel Foundation, 2004-2013.

Professional Organization Travel ASEE Southeast Section Regional Conference for American Society of Engineering Education, The Citadel Foundation, 2007.

Faculty Development for American Society of Engineering Education- Southeastern Section Meeting in Tuscaloosa, Alabama, The Citadel Foundation, 2006 \$575

Presentation of Research on Sequential Course Outcome Linkage: A New Look at Environmental Engineering Curriculum in a Civil Engineering Program, The Citadel Foundation, 2006 \$2,000

6. Consulting Experience

Project Engineer, GPD Associates, Akron, OH, 1995-2000

Major Responsibilities: Project engineer and project management of water, wastewater, and environmental site assessment projects. This included handling client/consultant relationships, billing, conceptual and lead design responsibilities, personnel coordination, and construction administration. Representative projects include:

25 million gallon per day wastewater pumping station developed under a joint economic development district between a township and local municipality, preliminary and final design, plan preparation, Copley, OH, The City of Akron.

Engineering design, plan preparation and permits activities for site improvements and construction of 1-million-gallon aerobic digester for the City of Seville, OH.

Engineering design, plan preparation and permits activities for site improvements and construction of two 5-acre settling ponds at the Sequoyah Nuclear Plant for TVA.

Engineering design, plan preparation and permits activities for site improvements and construction a large scale sulfuric acid spill containment facility at the Wheeling Pittsburgh Steel Company's Coke Byproduct Refinery Plant.

Engineering design, plan preparation and permits activities for site improvements and construction a Wastewater Treatment Plant at Burr Oak State Park, Ohio Department of Natural Resources.

7. ***Professional Registration***

Professional Engineer, South Carolina #24706 (2006)

8. ***Principal Publications/ Presentations***

Peer-Reviewed Technical Papers:

Kazi Z. A. Hassan, **Kevin C. Bower**, and Christopher M. Miller (2006). "Iron Oxide Enhanced Chlorine Decay and Disinfection Byproduct Formation," ASCE Journal of Environmental Engineering, 132 (12), 1609- 1616

Kazi Z. A. Hassan, **Kevin C. Bower**, and Christopher M. Miller (2003). "Numerical Simulation of Bromate Formation during Ozonation of Bromide," ASCE Journal of Environmental Engineering, 129 (11), 991- 997.

Christopher M. Miller, **Kevin C. Bower**, and Chris Ries (2003). "Fenton's Reagent Degradation of 2, 4-Dinitrotoluene in Water-Acetone Mixture," Environmental Engineering Science, 20 (1), 65-69.

Kevin C. Bower and Christopher M. Miller (2002). "Filter Sand- Phosphate Buffer Effects on DNT Ozonation," ASCE Journal of Environmental Engineering, 128 (2), 131-136.

Kevin C. Bower, Kevin H. Gardner, Christopher M. Miller, and L. Kong, (2001) "In-Situ Colloidal MnO₂ Deposition and Ozonation of 2,4- Dinitrotoluene," Environmental Engineering Science 18(4), 259-265.

Christopher M. Miller and **Kevin C. Bower** (2001). "Fenton's Reagent Degradation of Organic Compounds," AEESP Environmental Engineering Processes Laboratory Manual, Association of Environmental Engineering and Science Professors, Champaign, Illinois.

Kevin C. Bower, Steve E. Duirk, and Christopher M. Miller (2000). "Chapter 14. Development of an Enhanced Ozone-Hydrogen Peroxide Advanced Oxidation Process," Emerging Technologies in Hazardous Waste Management 8, Kluwer Academic/Plenum Publishers, pp. 167-176.

Kevin C. Bower, The Role of Iron Oxide-Pipe Deposits on Chlorine Disinfection Byproduct Formation in the Distribution System, Dissertation, The University of Akron, Akron, Ohio, August, 2003.

Kevin C. Bower, Filter Sand Phosphate Buffer Effects on Ozone Decomposition and 2,4-Dinitrotoluene Degradation, Master Thesis, The University of Akron, Akron, Ohio, August 2000.

Peer-Reviewed Educational Papers with Presentations – Faculty Development:

Ronald W. Welch, Kevin C. Bower, and Robert Rabb, "Growing/Traing Effective Faculty," Proceedings of the American Society for Engineering Education 2017 Annual Conference, Columbus, OH.

Ronal W. Welch, Ally Martin, Kevin Bower and Robert Rabb. “Promoting Engagement through Innovative and Pragmatic Programs” in Proceedings of the 2016 American Society for Engineering Education Annual Conference.

Peer-Reviewed Educational Papers with Presentations – Teaching and Student Development:

Mary Katherine Watson, Simon Thomas Ghanat, Timothy Aaron Wood, William J. Davis, and **Kevin C. Bower**, “A Systematic Review of Models for Calculus Course Innovations,” Proceedings of the American Society for Engineering Education 2019 Annual Conference, Tampa, Florida.

Ronald W. Welch, Tara Hornor, Robert J. Rabb, and **Kevin C. Bower**, “Enhancing Student Learning Through Accreditation,” Proceedings of the American Society for Engineering Education 2018 Annual Conference, Salt Lake City, Utah.

Ronald W. Welch, Robert J. Rabb, and **Kevin C. Bower**, “Industry Partnerships Assist Programs for Accreditation,” Proceedings of the American Society for Engineering Education 2018 Annual Conference, Salt Lake City, Utah.

Mary Katherine Watson, Ally Kindel Martin, Ronald W. Welch, and **Kevin C. Bower**, “Examining the Impacts of Academic and Community Enrichment Resources on First-Year Civil Engineering Students,” Proceedings of the American Society for Engineering Education 2018 Annual Conference, Salt Lake City, Utah.

Ronald W. Welch, **Kevin C. Bower**, Robert J. Rabb, and Ally Kindel Martin, “Keeping a Prospect on the Line and Then in the Boat: Recruitment and Retention Efforts that Make a Difference,” Proceedings of the American Society for Engineering Education 2018 Annual Conference, Salt Lake City, Utah.

Robert J. Rabb, Robert J. Barsanti Jr., and **Kevin C. Bower**, “Veteran Students in Engineering Leadership Roles,” Proceedings of the American Society for Engineering Education 2017 Annual Conference, Columbus, OH.

Robert J. Barsanti Jr., Johnston Peeples, Ronald Hayne, and **Kevin C. Bower**, “An Undergraduate Engineering Ethics and Leadership Education Program,” Proceedings of the American Society for Engineering Education 2017 Annual Conference, Columbus, OH.

Mary Katherine Watson, **Kevin C. Bower**, and W. Jeff Davis, “Advancing Diversity in the Civil Engineering Profession: Impacts of a NSF S-STEM Grant at a Regional Undergraduate Teaching Institution,” Proceedings of the American Society for Engineering Education 2017 Annual Conference, Columbus, OH.

Ronald W. Welch, **Kevin C. Bower**, Robert Rabb, and Ally Kindel Martin, “STEM Scholarships to Engage Exceptional Students,” Proceedings of the American Society for Engineering Education 2017 Annual Conference, Columbus, OH.

William Davis, Simon Ghanat, and **Kevin C. Bower**, “Undergraduate Engineering Student Perception of Professional Skill Preparedness,” Proceedings of the 2016 American Society for Engineering Education Annual Conference.

Dimitria Michalaka, Simon Ghanat, Mary K. Watson, **Kevin C. Bower**, and Ron Welch. “Effects of Classroom Pedagogies used in a Freshmen Course on Students’ Perception of the Sub-disciplines of Civil Engineering,” Proceedings of the 2016 American Society for Engineering Education Southeast Section Annual Conference.

Kevin C. Bower, Amber Mills, Kenneth Brannan, John Murden, Michael Woo, and Ron W. Welch. “Refinement of a Concept Inventory to Assess Conceptual Understanding in Civil Engineering Fluid Mechanics,” in Proceedings of the 2015 American Society for Engineering Education Annual Conference.

William J. Davis, **Kevin C. Bower**, and Ron Welch, “Enhancing Undergraduate Civil Engineering Opportunities for Minority, Females, and Socioeconomically Disadvantaged Students,” Proceedings of the 2014 American Society of Engineering Education Annual Conference and Exposition, Indianapolis, IN, June 2014.

Ron Welch, Kailin Marley, Ally Martin, and **Kevin C. Bower**, “Using Supplemental Instruction to Increase Retention in Engineering,” Proceedings of the 2014 American Society of Engineering Education Annual Conference and Exposition, Indianapolis, IN, June 2014.

Kevin C. Bower, William J. Davis, Ron Welch, David Fehrmann, “Developing and Assessing Student’s Principled Leadership Skills to Achieve the Vision for Civil Engineers in 2025,” Proceedings of the 2013 American Society of Engineering Education Annual Conference and Exposition, Atlanta, GA, June 2013.

Simon T. Ghanat, Kenneth Brannan, **Kevin C. Bower**, and Ron Welch, “Comparison of Direct and Indirect Assessment of a Summer Engineering Economy course taught with Active Learning Techniques,” Proceedings of the 2015 American Society for Engineering Education Annual Conference.

Simon T. Ghanat, Dimitra Michalaka, **Kevin C. Bower**, and Ron W. Welch. “Why Do Students Choose Engineering? Implications for First-Year Engineering Education” in Proceedings of the 7th First Year Engineering Education Conference (2015). **Included in American Society of Civil Engineers SmartBrief.**

Kevin C. Bower, Mary K. Watson, “Enhancing Undergraduate Civil Engineering Opportunities for Socioeconomically Disadvantaged, Minorities and Females students in SC,” annual progress report, National Science Foundation, Washington, DC, July 2015.

Ronald W. Welch, **Kevin C. Bower**, Kaitlin Marley, and Ally Kindel Martin, “Using Student Instruction to Increase Retention in Engineering,” Proceedings of the 121th American Society for Engineering Education Annual Conference, Indianapolis, IN, June 2014.

William J. Davis, **Kevin C. Bower**, Ron Welch, Elizabeth Connor, “Enhancing Undergraduate Civil Engineering Opportunities for Minority, Female, and Socioeconomically Disadvantaged Students,” Proceedings of the 121th American Society for Engineering Education Annual Conference, Indianapolis, IN, June 2014.

Kevin C. Bower and William J. Davis, “Accreditation Board for Engineering Technology (ABET) Self-Study Report for the Civil Engineering Program at The Citadel,” Charleston, Citadel, 2014

William J. Davis, **Kevin C. Bower**, “Enhancing Undergraduate Civil Engineering Opportunities for Socioeconomically Disadvantaged, Minorities and Females students in SC,” annual progress report, National Science Foundation, Washington, DC, July 2014.

William J. Davis, **Kevin C. Bower**, Ron Welch, Doug Furman, “Developing and Assessing Student’s Principled Leadership Skills: to achieve the Vision for Civil Engineers in 2025,” Proceedings of the 120th American Society for Engineering Education Annual Conference, Atlanta, GA, June 2013.

William J. Davis and **Kevin C. Bower**, “Enhancing Undergraduate Civil Engineering Opportunities for Socioeconomically Disadvantaged, Minorities and Females students in SC,” annual progress report, National Science Foundation, Washington, DC, July 2013.

Joseph T. Coe Jr., Kaitlin H. Marley, Thomas R. Dion, and **Kevin C. Bower**, “Sequential Course Outcome Linkage: Integrating Learning Outcomes Throughout the Civil Engineering Curriculum to Meet Geotechnical Engineering Needs,” ASEE-SE, The Citadel, April, 2011.

Thomas R. Dion, **Kevin C. Bower**, and Dennis J. Fallon (2010), “Preparing Students for the Practice of Civil Engineering,” ASEE-SE, Virginia Polytechnic Institute and State University.

Thomas R. Dion and **Kevin C. Bower** (2009). “Creating A Positive Work Ethic In Civil Engineering Students: A Case for Attribution Theory and Scaffolding,” ASEE Southeast Section Annual Conference, Atlanta, GA.

Edward L. Hajduk, **Kevin C. Bower**, Timothy W. Mays, David A. Falatok, and Timothy S. Perkins (2009). “Development of a Driven Pile Ground Vibration Case History Database,” ASCE GEO–Institute International Foundation Congress & Equipment Expo, Dallas, Texas.

Kevin C. Bower and William J. Davis (2008). “Department Wide application of Embedded Indicators for Systematic Curriculum Assessment,” Frontiers in Education Annual Conference, Saratoga Springs, NY.

Kevin C. Bower and William J. Davis (2008). “Continuous Improvement of Environmental Engineering Curriculum in a CE Accredited Program,” ASEE National Conference – Environmental Engineering Division, Pittsburgh, PA.

Thomas Dion, Dennis J. Fallon, and **Kevin C. Bower** (2008). “Accreditation Changes in Civil Engineering Curricula: Addressing the Additional Science Requirement.” ASEE Southeast Section Annual Conference, Nashville, TN.

Timothy W. Mays, **Kevin C. Bower**, and William J. Davis (2007). “Sequential Course Outcome Linkage: A New Look at the Structural Engineering Curriculum of a Civil Engineering Program.” ASEE Southeast Section Annual Conference, Louisville, KY.

Thomas Dion and **Kevin C. Bower** (2007). “Integrating Learning Outcomes Throughout the Civil Engineering Curriculum to Meet Site Engineering Prerequisite Needs.” ASEE Southeast Section Annual Conference, Louisville, KY.

Timothy W. Mays and **Kevin C. Bower** (2007). “Using Concept Oriented Example Problems to Improve Student Performance in a Traditional Dynamics Course.” ASEE National Conference – Mechanics Division, Honolulu, HI.

Timothy W. Mays and **Kevin C. Bower** (2007). “Seismic Design of Piers and Wharfs: A Capstone Course Application of a New Standard for Designing Port Structures in the United States.” ASEE National Conference – Ocean and Marine Engineering Division, Honolulu, HI.

Kevin C. Bower, Kenneth P. Brannan, and William J. Davis (2006). “Sequential Course Outcome Linkage: A New Look at Environmental Engineering Curriculum in a Civil Engineering Program.” ASEE National Conference – Environmental Engineering Division, Chicago, IL.

Thomas Dion, **Kevin C. Bower**, Timothy W. Mays, and William J. Davis (2006). “Teaching Design throughout the Civil and Environmental Engineering Curriculum.” ASEE Southeast Section Annual Conference, Chattanooga, TN.

Kevin C. Bower, William J. Davis, and Timothy Mays (2005). “Meaningful Learning Environment by Design: Systematic Curriculum Assessment to Enhance Sequential Linkage of Course Goals and Objectives,” Frontiers in Education Annual Conference, Indianapolis, IN.

Kevin C. Bower and Kenneth P. Brannan (2005). “Implementing Self- Directed Problem-Based Learning in a Multidisciplinary Environmental Engineering Capstone Class.” ASEE National Conference – Environmental Engineering Division, Portland, OR.

Kevin C. Bower and Timothy W. Mays (2005). “Incorporating Multidisciplinary Components of Ocean and Marine Engineering in Traditional Civil Engineering Capstone Courses.” ASEE National Conference – Ocean Engineering Division, Portland, OR.

William J. Davis, Timothy W. Mays, **Kevin C. Bower** (2005). “Implementation of a Course Assessment Process for Continuous Improvement and Outcomes Assessment.” ASEE Southeast Section Annual Conference, Chattanooga, TN.

Timothy W. Mays and **Kevin C. Bower** (2005). “Analyzing the Effects of Extra Credit Opportunities on Student Learning, Motivation, and Faculty Perceptions.” ASEE Southeast Section Annual Conference, Chattanooga, TN.

Jonathan Black, **Kevin C. Bower**, Timothy W. Mays, and Thomas Dion (2005). “Multi-Disciplinary Capstone Design Class: Integrating Specific Civil Disciplines, Teaching Styles and Teaching Effectiveness to Meet ABET Criteria.” ASEE Southeast Section Annual Conference, Chattanooga, TN.

Raymond R. Foltz, Timothy W. Mays, and **Kevin C. Bower** (2005). “Adding Student Led Components to FE Review Courses to Improve FE Examination Scores at The Citadel: A Case Study,” ASEE Southeast Section Annual Conference, Chattanooga, TN.

Kevin C. Bower, Timothy Mays, and Christopher M. Miller (2004). “Small Group, Self-Directed Problem-Based Learning Development in a Traditional Engineering Program,” Frontiers in Education Annual Conference, Savannah, Georgia.

Presentations:

“Developing and Assessing Student’s Principled Leadership Skills: to achieve the Vision for Civil Engineers in 2025,” 120th American Society for Engineering Education Annual Conference, Atlanta, GA, June 2013.

“Continuous Improvement of Environmental Engineering Curriculum in a CE Accredited Program,” ASEE National Conference – Environmental Engineering Division, Pittsburgh, PA, June 2008.

“Group Icebreaker and Joint Focus Session” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Workshop for Section and Branch Leaders, and Younger Member Forum, Baltimore, MD, January 2008.

“National CSA Address.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Baltimore, MD, January 2008.

“Preparing an Outstanding Annual Report.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Baltimore, MD, January 2008.

“Organizing and Conducting an Effective Meeting” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Baltimore, MD, January 2008.

“Recognition of Award Winners” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Baltimore, MD, January 2008.

“Committee on Student Activities” ASCE Committee on Student Activities – Practitioner and Faculty Advisor Training Workshop, Reston, VA, August 2007.

“The Role of the ASCE Advisor” ASCE Committee on Student Activities – Practitioner and Faculty Advisor Training Workshop, Reston, VA, August 2007.

“Workshop for Student Chapter Leaders” ASCE Committee on Student Activities – Practitioner and Faculty Advisor Training Workshop, Reston, VA, August 2007.

“Preparing an Outstanding Annual Report.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Nashville, TN, January 2007.

“National CSA Orientation Address.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Nashville, TN, January 2007.

“Mystery Event.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Nashville, TN, January 2007.

“Effective Chapter Meetings.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Nashville, TN, January 2007.

“ASCE Student Chapter Conference Preparation.” ASCE Committee on Student Activities – Region Conference Host Teleconference, October 2006

“Sequential Course Outcome Linkage: A New Look at Environmental Engineering Curriculum in a Civil Engineering Program.” ASEE National Conference – Environmental Engineering Division, Chicago, IL, June 2006

“Mystery Event.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Tampa, FL, February 2006.

“Effective Chapter Meetings.” ASCE Committee on Student Activities – Workshop for Student Chapter Leaders, Tampa, FL, February 2006.

“Implementing Self-Directed Problem-Based Learning in a Multidisciplinary Environmental Engineering Capstone Class.” ASEE National Conference – Environmental Engineering Division, Portland, OR., June 2005.

“Implementation of a Course Assessment Process for Continuous Improvement and Outcomes Assessment.” ASEE Southeast Section Annual Conference, Chattanooga, TN, April 2005.

“Multi-Disciplinary Capstone Design Class: Integrating Specific Civil Disciplines, Teaching Styles and Teaching Effectiveness to Meet ABET Criteria.” ASEE Southeast Section Annual Conference, Chattanooga, TN, April 2005.

“Small Group, Self-Directed Problem-Based Learning Development in a Traditional Engineering Program,” Platform and poster presentation Frontiers in Education Annual Conference, Savannah, Georgia, October 2004.

“In-Situ Chemical Oxidation with Colloidal Metal Oxides,” Poster presentation at International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, California, May 2002.

“Metal Oxide-Coated Sand-Catalyzed Ozonation of 2,4-Dinitrotoluene,” Poster presentation at International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, California, May 2000.

9. *Other Work:*

Paper reviewer, Journal of Engineering Education.

Paper Reviewer, American Society of Engineering Education National Conference.

Paper reviewer, American Society of Engineering Education Southeast Section Conference.

Paper reviewer, Environmental Science and Technology.

Paper reviewer, Journal of Environmental Engineering and Science.

Paper reviewer, Journal of Water, Air and Soil Pollution.

10. *Scientific and professional societies of which a member*

American Society of Civil Engineers (ASCE)

American Society for Engineering Education (ASEE)

Tau Beta Pi Honor Society

11. *Honors and awards:*

D. Graham Copeland Professor of Civil Engineering, 2014-2017

Faculty Award for Excellence and Innovation in Service and Teaching, The Citadel Provost Award, 2012

Meritorious Service Award, ASEE National, Environmental Engineering Division, 2011

Harry C. Saxe Teaching Award, The Citadel, 2011

ASEE-SE Section Most Outstanding Campus Representative, 2009

C.A. Medbery Award for Dedication to Teaching, The Citadel, 2008

ASCE Section Service Award, South Carolina Section ASCE, 2008
 ASEE Zone II Most Outstanding Campus Representative, 2008
 ASEE-SE Section Most Outstanding Campus Representative, 2008
 ASCE Certificate of Commendation for Exceptional Service as a Faculty Advisor, ASCE National, 2007
 ExCEED New Faculty Excellence in Teaching Award, ASCE National, 2007
 ASEE Zone II Most Outstanding Campus Representative, 2006
 ASEE-SE Section Most Outstanding Campus Representative, 2006
 Most Outstanding New Faculty, ASEE-SE Section, 2005
 Early Career Award, Environmental Engineering Division, ASEE, 2005
 New Faculty Fellow at the Frontiers in Engineering Conference, 2004
 Scholarship awarded to participate in the workshop entitled, "Conducting Rigorous Research in Engineering Education" This included a \$2000 award for conducting research, 2004

12. *Institutional and professional service*

National Service:

Treasurer, Board of Governors of the Order of the Engineer, 2018-2020
 Liaison to the Executive Committee, Board of Governors of the Order of the Engineer, 2016-2018
 Member, Board of Governors of the Order of the Engineer, 2012-2020
 Member, American Society of Civil Engineering National Department Heads Counsel, 2013-2017
 Member, American Society of Civil Engineering National Committee on Scholarships, 2011-2015
 Director, Environmental Engineering Division, ASEE National, 2010-2012
 Past Chair, Environmental Engineering Division, ASEE National, 2009-2010
 Past Chair of the American Society of Civil Engineering National Committee on Student Activities, 2008-2009
 Chair, Environmental Engineering Division, ASEE National, 2008-2009
 The Citadel's American Society for Engineering Education Campus Representative, 2004 – 2015
 Chair of the American Society of Civil Engineers National Committee on Student Activities, 2007 – 2008
 Program Chair, Environmental Engineering Division, ASEE National, 2007-2008
 Member (1 of 9 nationwide) of the American Society of Civil Engineers National Committee on Student Activities, 2005 – 2010
 Section Moderator, ASEE National Conference and Exposition, Environmental Engineering Division, Honolulu, HI, 2007
 Secretary, Environmental Engineering Division, ASEE National, 2006-2007
 Section Moderator, ASEE National Conference and Exposition, Environmental Engineering Division, Chicago, IL, 2006
 Treasurer, Environmental Engineering Division, ASEE National, 2005-2006
 Chair, Research Division, ASEE-SE Section, 2006-2007
 Vice Chair, Research Division, ASEE-SE Section, 2005-2006

Secretary, Research Division, ASEE SE Section, 2004-2005
Section Moderator, ASEE - SE Annual Conference, Chattanooga, TN, 2005
Section Moderator, ASEE Nation Conference and Exposition, Portland, OR, 2005
Proctor, FE Exam, State Board of Engineers and Land Surveyors, 2003-2007
Section Moderator, Frontiers in Education, Savannah, GA, 2004
Section Moderator, Civil Engineering Division, ASEE SE Section, 2004

University Service:

Member, The School of Engineering Building Replacement Feasibility Study, The Citadel 2022
Chair, Ad Hoc Data Governance Charter Committee, The Citadel 2022 - 2023
Member, The Citadel Campus Mater Plan, The Citadel 2020 - 2022
Member, COVID Protocol Taskforce, The Citadel 2020 - 2021
End-user Coordinator, School of Humanities and Social Science Building Replacement Project, The Citadel 2018 - 2023
Member, Our Mighty Citadel Strategic Plan, The Citadel 2018 - Present
Chair, Citadel Commencement Committee, The Citadel 2018 - Present
Recording Secretary, Faculty Senate, The Citadel, 2017-2018
Member, General Education Reform Committee, The Citadel 2016-Present
Member, Strategic Planning Committee, The Citadel School of Engineering, 2016-2017
Member, Presidential Task Force for Diversity and Inclusion, The Citadel, 2016
Member, Ad hoc Committee on Faculty Governance, The Citadel, 2014 – 2016
Chair, Faculty Search Committee, The Citadel CEE Department, 2016
Chair, Faculty Search Committee, The Citadel CEE Department, 2015
Member, Faculty Analysis and Assessment Team, The Citadel, 2012-2015
Chair, Faculty Search Committee, The Citadel CEE Department, 2012
Member, Dean of the School of Engineering Search Committee, The Citadel, 2011
Member, Interim Dean of Graduate and Professional Studies Search Committee, The Citadel, 2009
Chair, CEE Laboratory Technician Search Committee, The Citadel CEE Department, 2009.
Chair, CEE Department Assessment Committee, The Citadel CEE Department, 2011-Present
Member, Financial Affairs Committee, The Citadel, 2005-2012
Member, Scholarship Committee, The Citadel CEE Department, 2005-2010
Founding Faculty Advisor, Society of Women Engineers, The Citadel School of Engineering 2007 - 2014
Chair, Financial Affairs Committee, The Citadel, 2006-2007
Charlie Company Faculty Academic Advisor, The Citadel, 2005 - 2006
Member, Awards Committee, The Citadel CEE Department, 2004-2005
Faculty Advisor for the School of Engineering Professional Activities Event, The Citadel School of Engineering, 2006 - 2010
Assistant Chief Proctor for the Fundamentals of Engineering Exam, The Citadel 2003 – 2008
School of Engineering Summer Assessment Committee, The Citadel School of Engineering, 2005 - 2012

Chair of the CEE Department Committee for Strategic Planning resulting in the generation of the departments strategic plan 2009-2010

Founder of The Citadel Link of the Order of the Engineer

Coordinate and conduct the annual Ring Ceremony for the Order of the Engineer, 2005-Present

Faculty Advisor, ASCE Carolinas Conference hosted by The Citadel, 2006 –2007

Chemical Hygiene Officer, The Citadel CEE Department, 2003 – 2015

Member, Scholarship, Research and Professional Opportunities Committee, The Citadel CEE Department, 2003-2013 (CEE)

Member, Capstone Committee, The Citadel CEE Department, 2003-Present

Member, Computer Committee, The Citadel CEE Department, 2003-2013

Member, Freshman Committee, The Citadel CEE Department, 2003 – 2004 and 2007-2008

Student Advisory Council Advisor, The Citadel CEE Department, 2004 – 2006

Faculty Advisor, The Citadel ASCE Student Chapter, The Citadel CEE Department, 2004-2007

Assistant Editor, Department Newsletter, The Citadel CEE Department, 2004 – 2008