

CIRRICULUM VITA

Department of Civil and Environmental Engineering
The Citadel, 171 Moultrie Street
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Kevin Christian Bower, Ph.D., P.E.

Career Summary

Civil/Environmental engineer with practical experience designing water and wastewater treatment and conveyance infrastructure, investigation of subsurface contaminant transport, conducting structural analysis for the telecommunication industry, and miscellaneous project manager responsibilities. Academic interests focus on environmental and general civil coursework overlaid with improving student's cognitive development and critical thinking skills.

Education

B.S. Civil Engineering, Ohio University, 1995
M.S. Civil Engineering, The University of Akron, 2000
Ph.D. Environmental Engineering, The University of Akron, 2003

Registration

Professional Engineer, South Carolina #24706 (2006)

Experience Summary

The Citadel, Professor, Charleston, SC, 2015 - Present
The Citadel, Associate Professor, Charleston, SC, 2009-2015
The Citadel, Assistant Professor, Charleston, SC, 2003-2009
The University of Akron, Doctorial Candidate, Akron, Ohio, 2000-2003
The University of Akron, Teaching/Research Assistant, Akron, Ohio, 1999-2000
GPD Associates, Project Engineer, Akron, Ohio, 1995-2000
GPD Associates, Summer Intern, Akron, Ohio, 1992-1994

Research Activities

ABET Assessment Techniques of Civil Engineering Programs, 2006-Present. This research has developed along side 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, 2000-present. 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 Development of Professional Identity, 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 ethical and moral development of students and the role of a developing professional identity on thinking and learning.

Advance Oxidation Process for the Removal of Recalcitrant Compounds found in Soil and Water Matrixes, 1996-present. 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, 1996-present. 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.

**Admin.
Experience**

2013 - PRESENT DEPARTMENT HEAD OF CIVIL AND ENVIRONMENTAL ENG.

THE CITADEL, MILITARY COLLEGE OF SC

CHARLESTON, SC

Serve as a Professor in the Department of Civil and Environmental Engineering. Teaching responsibilities primarily include environmental engineering related courses, laboratories and freshman programs. Administrative responsibilities include planning and organizing student events for American Society of Civil Engineers student chapter. Research responsibilities include development and planning an externally funded research program.

**Teaching
Experience**

2015 - PRESENT THE CITADEL, MILITARY COLLEGE OF SC

CHARLESTON, SC

Serve as a Professor in the Department of Civil and Environmental Engineering. Teaching responsibilities primarily include environmental engineering related courses, laboratories and freshman programs. Administrative responsibilities include planning and organizing student events for American Society of Civil Engineers student chapter. Research

responsibilities include development and planning an externally funded research program.

2009 - 2015 THE CITADEL, MILITARY COLLEGE OF SC CHARLESTON, SC

Serve as an Associate Professor in the Department of Civil and Environmental Engineering. Teaching responsibilities primarily include environmental engineering related courses, laboratories and freshman programs. Administrative responsibilities include planning and organizing student events for American Society of Civil Engineers student chapter. Research responsibilities include development and planning an externally funded research program.

2003 - 2009 THE CITADEL, MILITARY COLLEGE OF SC CHARLESTON, SC

Serve as an Assistant Professor in the Department of Civil and Environmental Engineering. Teaching responsibilities primarily include environmental engineering related courses, laboratories and freshman programs. Administrative responsibilities include planning and organizing student events for American Society of Civil Engineers student chapter. Research responsibilities include development and planning an externally funded research program.

2000 - 2003 THE UNIVERSITY OF AKRON AKRON, OH

Served as Instructor for statics, introduction to environmental engineering, soil mechanics, water and wastewater systems, hydraulic engineering, and hydraulic engineering laboratory. Developed course material and self-directed problem-based pedagogy for water quality modeling and management in the Department of Civil Engineering.

**Work
Experience**

1995 - 2000 GPD ASSOCIATES AKRON, OH

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.

1992 - 1994 GPD ASSOCIATES AKRON, OH

Major Responsibilities: Construction management of telecommunication cell sites. This included handling client/consultant relationships, change orders, facilitating the contractor on equipment delivery, personnel coordination, and on-site problem solving.

**Peer -
Reviewed
Publications**

K. Bower, A. Mills, K. Brannan, J. Murden, M. Woo, and R.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.

Ghanat, S.T., Brannan, K., Bower, K., and Welch, R. "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.

S.T. Ghanat, D. Michalaka, K. Bower, and R.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 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 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

Davis, William, Kevin 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.

Davis, William, Kevin 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.

Davis, William, Kevin 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.

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

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.

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.

**Funded
Proposals**

"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 South Carolina”, National Science Foundation, 2011	\$593,254
Professional Organization Travel American Society of Civil Engineering Committee on Student Activities, The Citadel Foundation, 2007	\$2,000
Professional Organization Travel National Conference and Exposition for American Society of Engineering Education, The Citadel Foundation, 2007	\$1,800
“Aqueous Disinfection Byproduct Formation Potential Modeling based on Natural Organic Matter Characterized by Florescence Spectroscopy,” The Citadel Foundation Faculty Research Grant, July 200	\$3,000
Student Travel to ASCE Workshop for Student Chapter Leaders and ASCE Carolinas Conference, Departmental Request for Cadet Travel Funds, 2007.	\$6,800
Professional Organization Travel ASEE Southeast Section Regional Conference for American Society of Engineering Education, The Citadel Foundation, 2007	\$1,000
Professional Organization Travel National Conference and Exposition for American Society of Engineering Education, The Citadel Foundation, 2006	\$2,600
Professional Organization Travel American Society of Civil Engineering Committee on Student Activities, The Citadel Foundation, 2006	\$2,000
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
Student Travel to ASCE Workshop for Student Chapter Leaders, Departmental Request for Cadet Travel Funds, 2005.	\$3,400
“National Pile Driving Noise and Vibration Database,” (submitted with Timothy W. Mays, The Citadel and Edward L. Hajduk, WPC) 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

Student Travel to ASCE Workshop for Student Chapter Leaders and ASCE Carolinas Conference, Departmental Request for Cadet Travel Funds, 2004. \$10,600

Student Travel to ASCE Workshop for Student Chapter Leaders, Departmental Request for Cadet Travel Funds, 2004. \$3,400

**Submitted
Proposals**

“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

Presentations

Conducted the Order of the Engineer Ritual for approximately 60 graduates and faculty at the CEE Engineering Award Banquet.

“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.

Memberships

American Chemical Society (2000 – 2006)

American Society of Civil Engineers (2004 – Present)

American Society of Engineering Education (2003 – Present)

American Water Works Association (2002 – 2007)

Association of Environmental Engineering and Science Professors (2003 – Present)

Society of Women Engineers (2007-Present)

Professional Service

Member, Board of Governors of the Order of the Engineer, 2012-Present

Member, American Society of Civil Engineering National Department Heads Counsel, 2013-Present

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 - Present

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

Honors & Awards

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

The Doctorial Enhanced Scholarship - The University of Akron, 2000 – 2003

**College
Service**

Member, Presidential Task Force for Diversity and Inclusion, The Citadel, 2016

Member, Adhoc 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 Department of CEE, 2009.

Chair, CEE Department Assessment Committee, 2011-Present

Member, Financial Affairs Committee, 2005-2012

Member, Scholarship Committee, 2005-2010

Founding Faculty Advisor, Society of Women Engineers, 2007 - 2014

Chair, Financial Affairs Committee, 2006-2007

Charlie Company Faculty Academic Advisor, 2005 - 2006

Member, Awards Committee, 2004-2005

Faculty Advisor for the School of Engineering Professional Activities Event, 2006 - 2010

Assistant Chief Proctor for the Fundamentals of Engineering Exam, 2003 – 2008

School of Engineering Summer Assessment Committee, 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 (CEE)

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

Chemical Hygiene Officer, 2003 – 2015 (CEE)

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

Member, Capstone Committee, 2003-Present (CEE)

Member, Computer Committee, 2003-2013 (CEE)

Member, Freshman Committee 2003 – 2004 and 2007-2008(CEE)

Student Advisory Council Advisor, 2004 – 2006(CEE)

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

Assistant Editor, Department Newsletter, 2004 – 2008 (CEE)

Public Service

SWE Girl Scout Outreach Event, 2009-2015

Spann Elementary Leadership Day Coordinator, 2012-Present

Greg Middle School Career Fair 2003 & 2005

Popsicle Stick Bridge Competition Instructor and Judge, James P. Edwards Elementary School, 2004 & 2006

Engineers Week Banquet Coordinator, Charleston, SC, 2003-2006

Other Activities

Reviewer, American Society of Engineering Education National Conference, Environmental Engineering Division, Pittsburgh, PA, 2007. (6x)

Reviewer, American Society of Engineering Education National Conference, Civil Engineering Division, Pittsburgh, PA, 2007. (x2)

Reviewer, "Catalytic Mechanism of Trace Manganese (II) on Ozonation of DNT in the presence of Oxalic Acid", Environmental Science and Technology, Nov 2007.

Reviewer, American Society of Engineering Education National Conference, Civil Engineering Division, Honolulu, HI, 2007.

Reviewer, "Reduction of chlorite in drinking water by ferrous sulphate: impact of water quality and effect on ozone demand", Journal of Environmental Engineering and Science, 2006.

Reviewer, American Society of Engineering Education National Conference, Environmental Engineering Division, Chicago, IL, 2006.

Reviewer, American Society of Engineering Education National Conference, Civil Engineering Division, Chicago, IL, 2006.

Reviewer, "The Impact of Rainfall on Flows and Loadings at Georgia's Wastewater Treatment Plants", Journal of Water, Air, and Soil Pollution, 2006.

Reviewer, ASEE SE Section Annual Conference, American Society of Engineering Education, Civil Division, Auburn, AL, April 2004.

Reviewer, ASEE SE Section Annual Conference, American Society of Engineering Education, Instruction Division, Auburn, AL, April 2004.

Reviewer, Frontiers in Education Conference, Civil and Mechanical Engineering Divisions, Savannah, GA, 2004.

Reviewer, American Society of Engineering Education National Conference, conducted annually for multiple divisions, 2004-2015.