Bill B. Elmore, Ph. D., P. E. **Director and Deavenport Chair**
Dave C. Swalm School of Chemical Engineering
Mississippi State University
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Office (662) 325-2480
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EDUCATION

Ph.D. Chemical Engineering, University of Arkansas, Fayetteville, 1990
M.S. Chemical Engineering, University of Arkansas, Fayetteville, 1987
B.S. Chemical Engineering, University of Arkansas, Fayetteville, 1983

REGISTRATION

Registered **Professional Engineer** in Louisiana, Reg. No. 26806

ACADEMIC EXPERIENCE

Director and Deavenport Chair **Aug 2016 to present**

Interim Director **Mar 2014-July 2016**
Jan 2010-July 2011

Dave C. Swalm School of Chemical Engineering, Mississippi State University

Responsibilities as Director have included

- Directing search committees and coordinating hiring, curriculum planning, student recruiting and new student advising for the Petroleum Engineering Bachelor's degree program housed within the Swalm School of Chemical Engineering—restarted in the Fall 2015 semester and reaccredited beginning in Spring 2019.
- Stewardship of the School of Chemical Engineering endowment valued at over $16 million (over $12 million within my responsibility)
- Development and outreach with alumni and industry representatives
- Overall administration of faculty and support staff activities
- Recruitment and hiring responsibilities for students, faculty, support staff (have hired 6 tenure track faculty and 2 full-time Instructors/Professors of Practice during tenure as Director)
- ABET Program Assessment, Curriculum planning and review, Faculty teaching assignments, management of academic programs and course content
- Contributing to ongoing departmental research
- Serving as Graduate Coordinator for 12-month period during faculty vacancy & co-Graduate Coordinator AY 2022-present
- Conducting promotion and tenure and performance evaluations
- Preparing and overseeing departmental budgets for general and research operations
- Working with the Bagley College of Engineering Dean and University administration in establishing goals and objectives for the department, college and in

meeting the university missions of teaching, research and service
- Serving as a liaison among faculty, administration, alumni, students and the community stakeholders
- Conducting development activities for departmental support, scholarships and special projects
- Continued Hunter Henry Chair responsibilities during my Interim Director roles until that position was filled by Dr. Julie Jessop in 2018
- Serving as Building Supervisor

Associate Director **August 2011-March 2014**
March 2008-January 2010

Dave C. Swalm School of Chemical Engineering, Mississippi State University

Responsibilities included
- Stewardship of over $7 million in endowment funds (discretionary and scholarship funds associated with the Hunter Henry Chair and the Swalm School of Chemical Engineering)
- Serving as Assessment Program/ABET reporting coordinator
- Undergraduate Program Coordinator
- Faculty Advisor for the student chapter of the American Institute of Chemical Engineers (a nationally award-winning student chapter for each year but one during my tenure as Faculty Advisor)
- planning for annual teaching schedule
- Scholarship Coordinator (monitoring and preparing scholarship awards for 100+ students each semester plus typically 20+ students on co-op rotations each summer)
- Coordinating Academic Advising and supervising academic records for all chemical and petroleum engineering undergraduates
- Facilities planning and maintenance oversight for the Swalm Chemical Engineering building
- Pursuing development activities with alumni and industry representatives
- Representing the School in administrative duties in the absence of the Director
- Management of K-12 Outreach and Community Engagement activities for the School of Chemical Engineering

Associate Professor and Hunter Henry Chair **Aug 2005-Aug 2016**
Dave C. Swalm School of Chemical Engineering, Mississippi State University

Responsibilities included
- Serving as the Undergraduate Program Coordinator and AIChE Advisor
- Directing renewable fuels and biotechnology-related research for undergraduates and graduates
- Mentoring students and junior faculty

Undergraduate courses taught (including during service as Interim and Director roles)
- CHE 1101 Introduction to Chemical Engineering

- Team taught in Introduction to Engineering one semester (for undecided engineering majors)
- CHE 2203 Introduction to Engineering with CHE and PTE Applications (developed this course for dual enrollment at high schools in Mississippi. This course has been taught at Jackson Academy, Vicksburg-Warren High School, St. Andrews Episcopal in Madison and St. Aloysius Catholic in Vicksburg.
- CHE 2213 Chemical Engineering Problem Analysis (project-based learning course required for both chemical and petroleum engineering freshmen)
- CHE 3203 Fluid Unit Operations
- CHE 3113 & 3123 Chemical Engineering Thermo I & II
- CHE 3222 & CHE 3232 Chemical Engineering Unit Operations Labs I and II
- CHE 3213 Heat Transfer Unit Operations
- CHE 3331 Professional Development Seminar
- CHE 4441 Professional Engineering Seminar (developed course for F.E. exam prep)
- CHE 4134 & 4223 Team teaching in Process and Plant capstone Design courses
- CHE 4223 Automated Process Control (developing new course for Spring 2024)
- CHE 4633 Process Safety (developed new required course in response to AICHE and SACHE emphasis on increased safety training in Chemical Engineering and Chemistry curricula)

Academic Director, **September 2004-2005**
Louisiana Tech University

- **Biomedical Engineering**
- **Chemical Engineering**
- **Industrial Engineering**

September 2000-2004

- **Chemical Engineering**
- **Civil Engineering**
- **Construction Engineering Technology**
- **Geosciences**

The Academic Director serves as a member of the Dean's Leadership Team—administratively responsible for multiple academic program areas. Responsibilities included

- Budget planning and direction for College of Engineering and Science (COES)
- Coaching faculty search teams. (During my terms of service, I supervised hiring 10 faculty and several adjunct/visiting faculty).
- Serving multiple academic programs (during a single term of service)
- Directing assessment and accreditation issues
- Managing program involvement and commitment to the COES Strategic Plan
- Directing interdisciplinary faculty search teams for disciplines across COES
- Coaching Program Chairs, and research and curricular development teams
- Evaluating faculty and staff on a quarterly and annual basis
- Preparing ABET assessment documents and Self Study reports from faculty input
- Representing program areas to college and university entities

- Facilitating student recruiting, retention and advising—including visits to other campuses for graduate student recruiting
- Participating in K-12 initiatives in collaboration between College of Education and the COES

Program Chair, Chemical Engineering **June, 1997-August 2002**
Louisiana Tech University

The Program Chair is a nine-month faculty position, facilitating individual program activities.
Responsible for chemical engineering program activities including

- strategic planning and budgeting
- assessment plan for ABET accreditation
- conducting faculty interviews, hiring, and mentoring
- student organizational activities
- external relations and development
- space and equipment allocations, purchasing and setup
- curriculum planning and execution
- research and equipment grants

Associate Professor, Chemical Engineering **1996-2005**
Louisiana Tech University

- Courses taught and responsibilities continuing as with Assistant Professor rank.
- **Promotion to Professor rank approved by Louisiana Education Board of Supervisors at their August 2005 meeting.**

Assistant Professor, Chemical Engineering **1990-1996**
Louisiana Tech University

Undergraduate courses taught:

- Senior capstone design sequence
- Chemical Engineering Reactor Design
- Chemical Engineering Thermodynamics II
- General Engineering Thermodynamics I
- Chemical Engineering Unit Operations Labs (2 lab courses)
- Unit Operations I (fluid mechanics and applications)
- Unit Operations II (heat transfer and applications)
- Environmental Chemodynamics (an environmental transport course—CHE elective)
- Undergraduate Seminar
- Biochemical Engineering (CHE elective)
- Engineering 120 series (a three-course sequence focused on engineering problem-solving in our *Integrated Freshman Engineering* program)—collaborated with Associate Dean and Biomedical Engineering professor in creating this series

Graduate courses taught:

- Advanced Chemical Engineering Thermodynamics
- Advanced Chemical Engineering Reactor Design
- Analytical Methods for Conductive Heat Transfer (mechanical engineering)

Instructor, Mechanical Engineering **1989-1990**
John Brown University

Undergraduate courses taught:

- Introduction to Engineering
- Thermodynamics I
- Statics
- Dynamics
- Mechanical Engineering Instrumentation & Measurements Laboratory

Faculty Research Associate, **1998-2005**
Institute for Micromanufacturing, Louisiana Tech University

- An active member of "Departmental Excellence through Faculty Excellence" (DEFE) research faculty (2000 to 2005)
- Development of micro- and nano-scale systems for chemical process technologies
- Study of enzymes in polymer-based microreactors and the encapsulation into nanoparticles.

Advising activities

Graduate Student Supervision

Name	Degree	Topic	Enroll Date	Award Date
Fanny Huang	Ph.D. MSU	*Characterization of Novel Material Comprising Graphene Quantum Dots & Azobenzene Polymers*	Fall 2021	
Marinelle Pagdanganan	M.S. Ch.E. MSU	*TBD (Graduate from our Distance Program)*	Fall 2021	Fall 2023 (non-thesis)
Jeremy Walker	M.S. Ch.E. MSU	*Systems Modeling & Simulation's Role in the Modern Hybrid Electric Vehicle Development Process*	Summer 2014	Fall 2016 (non-thesis)
Ernest Rufus	M.S. Ch.E. MSU	*Reduction of Boiling Water Reactor Pressure Nozzle Inner Radius & Nozzle-to-Shell Weld Inspections*	Spring 2004	Fall 2016 (non-thesis)
Niranjan Adhikari	M.S. Ch.E. MSU	*Immobilized enzyme catalysis of cottonseed oil to biodiesel in a microreactor*	Spring 2014	Spring 2016 (non-thesis)

Graduate Student Supervision…

Name	Degree	Topic	Enroll Date	Award Date
Liu Jen Chen	M.S. Ch.E. MSU	*Production of fermentable sugars and lipids by microalgae from secondarily treated wastewater*	Summer 2008	May 2011 (thesis)
Shannon Robinson	M. S. Ch.E. LA Tech	*CFC and HCFC Recycling by Distillation*	Fall 2004	Winter 2006 (non-thesis)
Jie Wen	M.S. Ch.E. LA Tech	*Comparison of Layer-by-Layer Self Assembly Method—Direct Incorporation of Enzyme in PDMS Microreactors*	2003	August 2004 (thesis)
Suruchi Choppra	M.S. Ch.E. LA Tech	*Optimization of a process for preserving viability of bacterium SG-3—a bacterial algicide*	2002	May 2004 (thesis)
Zonghuan Lu	Ph.D. Engr. LA Tech	*Fabrication and performance of a Polydimethylsiloxane-based immobilized enzyme microreactor*	1999	February 2003 (dissertation)
Gowrisankar Sathanandam	M.S. Ch.E. LA Tech	*Optimizing the Biological Production of Ethanol from Carbon Monoxide using* ***Clostridium ljungdahlii***	1996	November 1998 (thesis)
Ernest Fegley	M.S. Ch.E. LA Tech	*Fate of Crude Oil Applied to Reconstituted Soil Cores*	1995	February 1997 (thesis)
Paras Trivedi	M.S. Ch.E. LA Tech	*Biological Conversion of Carbon Monoxide to Liquid Chemicals & Fuels using Anaerobic Bacterial Culture, PS-1, Isolated from Petroleum-contaminated Soil*	1993	August 1996 (thesis)
Hui Zhan	M.S. Ch.E. LA Tech	*Bioliquefaction of Louisiana Lignite Pretreated with Nitric Acid*	1993	February 1996 (thesis)
Madhukar Gundamaraju	M.S. Ch.E. LA Tech	*Screen Procedures for Microbial Conversion of Coal Derived Synthesis Gas*	1992	November 1995 (thesis)
Sanjoy Silva	M.S. Ch.E. LA Tech	*Cellulase Activity of* ***Trichoderma reesei (RUT-C30)*** *on Municipal Solid Waste*	1992	March 1995 (thesis)
Cynthia F. Dickey	Ph.D. Bm.E. LA Tech	*Design, Modeling, Fabrication and Testing of an Immobilized Enzyme Microreactor*	1995	May 2000 (dissertation)

Graduate Student Supervision…

Name	Degree	Topic	Enroll Date	Award Date
Audey Maxey	M.S. Ch.E. LA Tech	*Cellulase Activity of T. reeseii on Municipal Solid Waste*	1994	November (nonthesis)
David Krueger	M.S. Ch.E. LA Tech	*Studies & Methods for Increasing the Desulfurization Activity of* ***Thiobaccilus ferrooxidans*** *on Bituminous Coal*	1991	August 1993 (thesis)
Xuejin Chen	M.S. Ch.E. LA Tech	*Cellulase Activity of Fungi Acting on Refined Cellulose and Municipal Solid Waste*	1990	August 1992 (thesis)
Glen Jones	M.S. Ch.E. LA Tech	*Microbial Liquefaction of Louisiana Lignite*	1990	August 1992 (thesis)
Sandeep Sayal	M.S. Ch.E. LA Tech	*Advanced Scanning Electron Microscopy & Energy Dispersive Spectroscopy Techniques for Sulfur Analysis in Coal*	1989	May 1991 (thesis)

Undergraduate Advising

I served as Academic Advisor to the majority of chemical engineering undergraduates at Louisiana Tech and for some time, as the primary Academic Advisor to both chemical engineering and petroleum engineering undergraduates at Mississippi State until August 2018 at which time Academic Advising was distributed among all faculty members.

A primary focus of my academic career has been to provide careful mentoring and advising of every student with whom I interact daily. I seek to be an advocate and friend to each student—whether helping them to decide on an academic major, navigate the sometimes convoluted processes of higher education, or choosing a career path. I devote a significant portion of my time to the pursuit of advising. A particularly gratifying recognition of this devotion has been the expressed appreciation and recognition of my students and peers in academe. Both at Louisiana Tech University and at Mississippi State University, my role in advising our chemical engineering undergraduates evolved into a process of advising virtually all of our undergraduates enrolled in the program during various periods of the program. This developed as an outgrowth of the natural relationships I develop with students through daily interaction and through activities in our student chapters, the American Institute of Chemical Engineers (AIChE) which I have served as Faculty Advisor for my entire career in chemical engineering education and Omega Chi Epsilon—the chemical engineering honor society. While I readily, and frequently encourage students to seek out opportunities for career counseling with the chemical engineering faculty, the centralization of academic advising with a single individual brings a uniformity of communication both with the students and with university representatives (e.g. College Undergraduate Coordinator and Registrar) monitoring students' academic progress.

Upon arriving at Mississippi State University, the chemical engineering program enrollment was at 175. Enrollment surged over time reaching a high of 435 for chemical engineering and 85 for our new degree in petroleum engineering. As Director, my unofficial advising role has continued unabated, supplementing the formal program developed by Associate Director, Dr. Julie Jessop. My academic advising efforts have been recognized nationally with the 2013-14 NACADA (i.e. National Academic Advising Association) award for faculty advising and university-wide advising awards at both Mississippi State University and at Louisiana Tech University.

HONORS/AWARDS

Promotion to Professor rank approved, Mississippi State University **August, 2024**

Promotion to Professor rank approved, Louisiana Tech University **August, 2005**

Pi Kappi Phi Honor Society—nominated and inducted **April 30 2023**

Amer. Inst. of Chemical Engineers—Outstanding Chapter Advisor **November 2014**
Selected from among 160+ domestic active AICHE student chapter Advisors and 140+ international AICHE student chapter Advisors, the annual *Outstanding Student Chapter Advisor* is selected upon the basis of sustained leadership and service to students in AICHE. Accompanying this recognition was the selection of our AICHE student chapter for the **14th consecutive year** as an *Outstanding Student Chapter* (one of typically 10% or less of the more than 300 national and international AIChE student chapters). Nominated for this award by students, faculty and staff in ’07-08, ’08-’09, ’09-’10 and ’11-’12.

Natl. Academic Advising Assoc. (NACADA) Faculty Advising Award **October 2014**
Selected from faculty nominees based upon student, peer and supervisor feedback regarding student advising.

MSU Irvin Atly Jefcoat Excellence in Advising (university-wide award); **Spring 2014**
Selected in Spring ’14; nominated by chemical engineering faculty, staff and students

Tau Beta Pi, Eminent Engineer **Spring 2012**
Invitation and induction by the MSU Alpha chapter of Tau Beta PI

Bagley College of Engineering Academy of Distinguished Teachers **Spring 2012**

AIChE Fellow Inducted @ national AIChE meeting, **November, 2010**

MSU IMAGE/NSBE Faculty Appreciation Award **2010, 2011, 2012, 2016**
Bagley College of Engineering Diversity Programs, Mississippi State University

2009 ASEE First-Year Programs Division; Best Paper Award (2nd Place); ASEE Annual Conference, Austin, TX; Strawderman, L.; A. Salehi, and B. B. Elmore, *Exploring the Impact of First-Year Engineering Student Perceptions on Student Efficacy*

2006 Thomas C. Evans Instructional Paper Award & Outstanding Paper Award, ASEE Southeastern Section, April 2-4, 2006, Tuscaloosa, AL; Adrienne R. Minerick, Ebonye-Rosa T. Allen, and Bill B. Elmore; *Talking & Working for Diversity When You Don't Represent a Minority Demographic*

Deavenport Endowed Chair, Mississippi State University **Aug. '16 – present**

Hunter Henry Endowed Chair, Mississippi State University, **8/05 to 8/16**

Louisiana Engineering Foundation Faculty Professionalism Award **January 2003**
presented by the Louisiana Engineering Foundation

Louisiana Tech University Outstanding Faculty Advisor **1998-1999**

Faculty representative (elected position) to COES Eng. & Sci. Foundation **1999-2002**

R. William Upchurch Distinguished Associate Professor **1998-2005**

T. L. James Outstanding Achievement Award In Teaching **1997-1998**
awarded to the COES Freshman Integrated Curriculum Team

University Senate President **1996-1997**

University Senate Vice-President **1995-1996**

Louisiana Tech Engineering Outstanding Achievement Award in Service **1994-1995**

ASEE National Effective Teaching Institute **June, 1993**
Selected by Dean as among COE faculty, Champaign-Urbana, IL,

ASEE Chemical Engineering School for Faculty **August, 1992**
Selected by Dept. Head from among ChE faculty, Bozeman, MT,

T. L. James Outstanding Achievement Award in Instruction **1991-1992**
Awarded by the College of Engineering

FUNDED EDUCATION & RESEARCH PROJECTS

Mississippi State University

Deavenport Chair—August 15, 2016 to present.
Steward funds from the Deavenport chair for departmental support including providing funding for supplies and materials for student and faculty development, in support of the educational activities in the School, student worker support for faculty undergraduate research, funds for faculty members to attend conferences, etc.

Hunter Henry Chair—Aug. 15, 2005 to Aug. 15, 2016
As holder of the Hunter Henry endowed teaching chair, I managed both the Hunter Henry Chair and the American Institute of Chemical Engineers (AICHE) Student chapter endowments. With expenditures from endowed funds of approximately $40-60K per year directed at student activities, community outreach, service-learning, K-12 activities and faculty mentoring, I worked to steward use of these funds to support numerous individuals in a variety of Swalm School activities and contribute to the overall improvement of the Swalm School of Chemical Engineering.

Louisiana Tech Projects

Project Director—**Louisiana Tech Student Technology Fee Board;** *Funding for Bogard Hall computer laboratories;* **$70,909**; October, 2004; proposal funded for 35 computers, 2 LCD projectors and security surveillance equipment to equip two computer laboratories for computational modeling and simulation instruction and research.

Project Staff—**Louisiana Department of Education (LDE)/Louisiana Systemic Initiatives Program (LaSIP)**; *La Gear Up Summer Camps*; **$201,323**; June 1, 2003 through August 30, 2003. I worked on the project team for teaching math, science and engineering principles to junior high students through field and laboratory exercises.

Project Staff—**Louisiana Department of Education LDE)/Louisiana Systemic Initiatives Program (LaSIP)**; *La Gear Up Summer Camps for Teachers*; **$58,655**; June 1, 2003 through October 31, 2003. I worked on the project team for teaching math, science and engineering principles to junior high students through field and laboratory exercises.

Co-Investigator—Louisiana Tech's **Center for Entrepreneurship and Information Technology (CEnIT)**; *Engineering Design and Rapid Prototyping for Education Majors;* **$10,000**; February-May, 2003. Worked with Bill Jordan through our Engr. 189C course—teaching science, math and engineering principles to pre-service teachers.

Project co-director; **Louisiana Tech Student Technology Fee Program**; *Joint project between Chemical Engineering and Electrical Engineering Technology for enhancement of process control laboratories;* **$20,000**; 2002-03 academic year. Oversaw purchase of controls equipment and jointly supervised senior chemical engineering capstone design teams through the installation of this equipment on existing laboratory units.

Co-Investigator—**NASA**; *NOVA **Phase III**: Dissemination of our Model—A Course in Engineering Science Problem Solving for Future Teachers; **$12,929 additional funding***; June, 2002 through November, 2002. Work with Bill Jordan through our Engr 189C course.

Principal Investigator—**Board of Regents—Graduate Fellows Program**; *Graduate Fellows for the Engineering, CAM, and BmE Ph.D. Programs;* with Dean Les Guice; ***$70,000***; awarded July, 2001.

Co-Investigator—**NASA**; *NOVA **Phase II**: Dissemination of our Model—A Course in Engineering Science Problem Solving for Future Teachers; **$55,361***; June, 2001 through November, 2002.

Co-Investigator—**Louisiana Board of Regents Enhancement**; *Implementing an Experimental Design Process in the Senior Chemical Engineering Design Curriculum;* **$35,285**; July, 2001. Collaboration with Jim Palmer, Senior Capstone Design instructor.
Other-Investigator—**Louisiana Board of Regents Enhancement Fund**; *Introduction of Peer Instruction into Introductory Chemistry classes;* **$12,778**; July, 2001.

Other Investigator—**Louisiana Board of Regents Departmental Excellence through Faculty Excellence (DEFE)** program: *One-Two-Three Go—A Strategic Initiative for Rapid Research Competitiveness in Microsystems Development;* **$142,275 (renewable annually)**; salary enhancement for research faculty working through the *Institute for Micromanufacturing*, September 2000.

Co-Principal Investigator—**NASA**; *NASA Opportunities for Visionary Academics*; A one-year program for Education, Science, Mathematics, Engineering, and Technology Faculty Involved in the Content Education of Future K-12 Teachers; **$51,505**, October, 1999.

Principal Investigator and Program Manager—**Louisiana Department of Labor**; *Incumbent Worker Training Program—Manufacturing Skills Development*; A two-year joint program with UOP in Shreveport, Louisiana; **$213,482**, beginning November, 1999.

Other Investigator—*Action Agenda;* **NSF** project for institutionalizing Tech's Integrated Freshman and Sophomore curriculum; (Jim Nelson and Bernd Schroeder—PI's); **$600K**, beginning August, 1999; faculty member teaching in the Integrated Engineering program.

Principal Investigator—**Louisiana Board of Regents Support Fund (LA BoRSF);** LEQSF(1999-00)-ENH-TR-32; *An Interdisciplinary Laboratory for the Integrated Freshman and Sophomore Engineering Curriculum;* **$30,313**; beginning June, 1999.

Principal Investigator—**LA BoRSF**; *Acquisition of a Modern High Performance Liquid Chromatography System*—Undergraduate Enhancement Proposal; 12 month contract; **$52,718**; '98-'99 academic year.

Other Investigator—**Department of Defense (DOD)**; *The Development of a Center for Advanced Mold/Mask Processes and Applications for the Miniaturization Technologies.* While primarily an equipment proposal, startup funds were included for research teams to developing micromanufacturing projects. Begun in February 1996, this served as the foundation for the current emphasis of IfM on microreactor systems. Built apparatus and support equipment for starting up microreactor project. **$1, 994, 501.**

Other Investigator—**Louisiana Applied Oil Spill R&D Program**; *Baseline Experimental Studies for Onshore Oil Spills*; 24 month contract; **$118,697**, 1995-96. Established analytical procedures and directed studies for assaying biological activity of microbial cultures subjected to oil spills upon soil.

Principal Investigator—**Louisiana Education Quality Support Fund (LEQSF);** *Microbial Solubilization of Louisiana Lignite*—a three-year project; **$90,893;** 1991.

Principal Investigator—**Department of Energy**; *Biodesulfurization Techniques: Application of Selected Microorganisms for Organic Sulfur Removal from Coals*—42 month contract; **$385,306;** through January 1992.

Principal Investigator—**Louisiana Tech** summer grants and IfM summer support; **$17,600** for various biochemical engineering related research projects, 1992-2001.

PROPOSAL ACTIVITY (SUBMITTED)

Mississippi State University

NSF—STEP: STEP-UP—Mississippi State University's STEM Talent Expansion Program; $1,618,720 for 60 months, submitted September 27, 2011

NSF—STEP: A Strategic Initiative for Expanding Mississippi's Engineering Graduates; $1,998,940 for 60 months, submitted September 28, 2010

NSF—Math and Science Partnerships—Promoting Robotics in Engineering and Physics in Mississippi (PREP-MS) Program. $2,378,071 for 60 months, March, 2008**.**

NSF—REU Site: Collaborative Research—The bonds between us. REU renewal grant. $385,013 for 36 months.

NSF—Math and Science Partnerships—Promoting Robotics in Engineering and Physics in Mississippi (PREP-MS) Program. $2,378,071 for 60 months, March, 2006**.**

Louisiana Tech

NSF—Bridges for Engineering Education (NSF 03-561); *Bridging the Gap—A model for improving technological literacy in SMET K-12 education; Senior Investigator* (assembled proposal writing team; wrote initial draft of technical narrative) **$100,000** planning grant; June 2003 (received one "excellent", one "very good" and two "fair" reviews).

NSF—Undergraduate Research Centers (NSF 01-10); *Research Training for Undergraduates—Engineering, Science and P-12 Pre-service Teachers,* Co-PI; (assembled proposal writing team; wrote initial draft of technical narrative) **$50,000** planning grant; February 2004.

Board of Regents Support Fund (BoRSF) – Enhancement Program; *Infrared Spectrometer for Chemical Engineering Education and Research*; **Co-PI**; $37,338; October, 2003.

DARPA; *Water Harvesting for the "In-field" Soldier*; PI; submitted as subcontract with **Computational Fluid Dynamics Research Corporation (CFDRC)**, Huntsville, AL; $766,022; June 2002.

La Health Excellence Fund; *Immobilized Enzyme Bioreactors for In vivo applications*; Co-PI with Ron Besser; submitted as a segment of a larger Bio-MEMS proposal; December, 1999.

BoRSF Research and Development Fund; *Microreactor Systems Analysis;* Co-PI with Ron Besser; October, 1999.
Board of Regents Louisiana Systemic Initiatives Program (LaSIP); *Experimental- and Computer-based Education for an Integrated Engineering Curriculum;* Co-PI; $23,335, April, 1998.

Louisiana Education Quality Support Fund (LEQSF)—Enhancement; *Integration of GC-MS into the Chemistry Curriculum;* Co-PI; $90,000, 1997.

LEQSF—Enhancement; *Equipment for Development and Analysis of Advanced Chemical Engineering Processes;* Principal Investigator; $257,000, 1996.

LEQSF—R&D; *Biological Conversion of Greenhouse and Synthesis Gas Components to Useful Fuels and Chemicals;* Principal Investigator; $95,000, 1996.

LaSIP; *Design, Technology and Engineering for America's Children;* Principal Investigator; $151,842, 1996.

Department of Energy--Program for the Support of Advanced Coal Research at Colleges and Universities; *Microbial Conversion of Coal Synthesis Gas to Useful Fuels and Chemicals;* Principal Investigator; $195,693, 1995.

LEQSF—Industrial Ties; *Environmentally Benign Paper Pulping Through Biomechanical Means;* Principal Investigator; $250,000, 1994.

NSF—EPSCoR; *The Effect of Coal Beneficiation Process on the Rheology and Atomization of Coal-Water Slurries*; Co-PI in conjunction with faculty at Grambling State University; $69, 872, 1993.

LEQSF—R&D; *Cellulase Production: Microorganism Selection and Feedstock Effects on Productivity;* Principal Investigator; $115,528, 1992.

DOE—EPSCoR; *Traineeship Grant for Louisiana;* Co-Investigator with faculty from Louisiana State University, Tulane, Southern, and University of Southwestern Louisiana; $500,000, 1992.

DOE—EPSCoR; *Cluster for Energy Recovery and Volume Minimization from Municipal Solid Waste;* Co-Investigator with faculty from Louisiana State University and University of New Orleans; $841,089, 1992.

LEQSF—Enhancement; *Equipment to Complete a Biotechnology Laboratory;* Principal Investigator; $90,000, 1992.

Louisiana Catfish Promotion and Research Board; *Control of Disease and Off-Flavor in Louisiana Farm Raised Catfish by Water Quality Improvement;* Co-PI; $20,000, 1992.

LEQSF—Industrial Ties; *Improved Aeration in Aquaculture*; Co-PI; $170,000, 1992.

LEQSF—R&D; *Bioremediation of Refinery Sites through Use of a Packed-Bed Biofilm Reactor;* Principal Investigator; $325,000, 1991.

INDUSTRIAL EXPERIENCE

Incumbent Worker Training Program Director **October 1999-September 2001**
UOP, Shreveport, LA

- Evaluating plant processes and procedures for technologies and processes.
- Design of training modules appropriate for introducing non-engineering plant personnel to chemical engineering fundamentals and leadership principles.
- Delivery of experimental-, computer- and team-based training.

Plant Manager Trainee/Department Supervisor **1985-1987**
Cargill Inc., Springdale, AR

- Supervised crews of 50 in multiple departments; selecting and training new hires.
- Supervised and provided "hands-on" training for employees in all phases of the processing facility—including live poultry processing, product development, by-product rendering, warehouse storage, and shipping.
- Interviewed, hired, trained new employees.
- Lead group safety training and instruction.

- Conducted Time/Motion studies to improve production efficiencies and reduce sanitation costs.
- Worked with Research and Development and Quality Control for the development of processing requirements and specifications.
- Assisted in design and staffing of new production equipment layout.
- Researched methods for process improvements for savings in operation costs of $50,000/yr and automation of packaging process for cost reductions.

Plant Engineering Internship **Summer, 1981**
White Bluff, Arkansas Power & Light, Red Field, AR

Projects included

- electrostatic precipitator inspections
- cooling tower heat balances
- coal yard and boiler platform surveying
- automatic process controller tuning training

Co-operative Education Term **January—May 1980**
Dow Chemical, Freeport, TX,

Research & Development projects included

- conducting continuous exchange resin studies
- chemical separation and analysis using film evaporators
- Gas and High Performance Liquid Chromatography analyses

PROFESSIONAL AFFILIATIONS

American Institute of Chemical Engineers
American Society for Engineering Education
American Chemical Society
Pi Kappa Phi
Tau Beta Pi Engineering Honor Society
National Academic Advising Association
National Science Teachers Association

PUBLICATIONS

1. Wijayapala, Rangana; Satish Mishra; Bill B. Elmore; Charles Freeman; Santanu Kundu; *Synthesis and characterization of crosslinked polymers from cottonseed oil;* ***J. Appl. Polymer***, 2019, DOI.10.1002/APP.47655; pp. 1-7.

2. Elmore, Bill B., *A freshman design course using LEGO® NXT Robotics*, **Chemical Engineering Education**, Spring 2011, **45:2**, pp. 86-92.

3. Scott R. Forrest, Bill B. Elmore, James D. Palmer; *Activity and lifetime of organophosphorous hydrolase (OPH) immobilized using layer-by-layer nano self-assembly on silicon microchannels*; ***Catalysis Today;*** **120:1**; 30 January 2007, p.p. 30-34

4. Bailey, Rob; Frank Jones, Ben Fisher and Bill Elmore; *Enhancing Design of Immobilized Enzymatic Microbioreactors Using Computational Simulation;* ***Applied Biochemistry and Biotechnology;*** 2005; **121-124**, p.p. 639-652

5. Forrest, Scott R.; Bill B. Elmore; James D. Palmer; *Activity and Lifetime of Urease Immobilized using Layer-by-layer Nano Self-assembly on Silicon and Polydimethylsiloxane Microchannels;* ***Applied Biochemistry and Biotechnology;*** 2005; ***121-124***, pp. 85-92

6. Jordan, W.M., B. B. Elmore, C. Sundberg; *A Model for Reform in Teaching in Engineering and Technology: With a Focus on Prospective Elementary Teachers;* in **Research in Science Education: Reform in Undergraduate Science Teaching for the 21st Century**; D.W. Sunal, E.L. Wright, & J. Bland (Eds.); Information Age Pub. Inc., Greenwich, CT, spring 2004, ISBN 1-930608-85-3
7. Jones, F.; S. Forrest; J. Palmer; Z. Lu; J. Elmore, Bill B. Elmore; *Immobilized enzyme studies in a micro-scale bioreactor,* ***Applied Biochemistry and Biotechnology;*** 2004; **113-116**; pp. 261-272

8. Disawal, Sandeep; Jianhong Qui; Bill B. Elmore; Yuri M. Lvov; *Two-step sequential reaction catalyzed by layer-by-layer assembled urease and arginase multilayers;* ***Colloids and Surfaces B: Biointerfaces***; May 28, 2003; Vol. **32;** pp. 145-156

9. Elmore, B. B., Zonghuan Lu, and Francis Jones, *The development of a novel micro-scale system as an immobilized enzyme bioreactor*, ***Applied Biochemistry and Biotechnology, 98-100****, p.627-632, 2002*

10. Jones, Francis J, and B. B. Elmore; *Incorporating Chemical Process Miniaturization into the ChE Curriculum;* ***Chemical Engineering Education****,* Graduate Issue, **34/4**, 316-319, 325, Fall 2000

11. McCurdy, M, J. B. Hillard, B. B. Elmore; *Baseline Experimental Studies for Onshore Oil Spills*; Louisiana Applied Oil Spill Research and Development Program (OSRADP) Final Technical Report on Subcontract No. R113774; 1997

12. Madhukar, G. R., B. B. Elmore and H. K. Huckabay; *Microbial Conversion of Synthesis Gas Components to Useful Fuels and Chemicals*; ***Applied Biochemistry and Biotechnology***, **57/58**, 243-251, 1996

13. Huckabay, H. K., S. A. Behbahani, B. B. Elmore, F. J. Jones, C. M. Sheppard, R. H. Thompson; *Combining of Engineering Science and Design;* ***Proceedings of the ASEE Gulf-Southwest Section Meeting****,* 159-166*,* Beaumont, TX, March, 1995

14. Elmore, B. B.; *Microbial Liquefaction of Louisiana Lignite;* Final Project report for the State of Louisiana LEQSF-8g (Board of Regents Support Fund) research and development program (Contract #LEQSF(l99l-94)-RD-A-20), February, l995

15. Silva, S., B. B. Elmore and H. K. Huckabay; *Cellulase Activity of **Trichoderma reesei** (RUT-C30) on Municipal Solid Waste*; ***Applied Biochemistry and Biotechnology***, **51/52**, 145-153, 1995

16. Maxey, A., A. Rao, B. B. Elmore and H. K. Huckabay; *Microbial Liquefaction of Lignite Pretreated with Dilute Acid at Elevated Temperature and Pressure*; ***Applied Biochemistry and Biotechnology;*** **45/46**, 81-91, 1994

17. Elmore, B. B.; *Biodesulfurization Techniques: Application of Selected Microorganisms for Organic Sulfur Removal from Coals;* Final Project Report submitted to the Pittsburgh Energy Technology Center, Department of Energy, approved for publication and dissemination March, 1994

18. Huckabay, H., B. B. Elmore, C. M. Sheppard, M. W. Hsieh, and J. Lorenz; *Computer Enhanced Applications of Engineering Economy;* Proceedings of the Annual Conference of the American Society for Engineering Education, New Orleans, LA, June, 1991

19. Huckabay, H. K., D. W. Braswell, G. F. Pyle, B. B. Elmore, M. W. Hsieh; *Alternative Explosives;* Final Project Report submitted to the Thiokol Corporation, Minden, LA, September, 1990

20. Klasson, K. T., B. B. Elmore, J. L. Vega, M. D. Ackerson, E. C. Clausen, and J. L. Gaddy; *Biological Production of Liquid and Gaseous Fuels from Synthesis Gas*; ***Applied Biochemistry and Biotechnology***, **24/25**, 857-873,1990

21. Vega, J. L., S. Prieto, B. B. Elmore, E. C. Clausen, and J. L. Gaddy; *The Biological Production of Ethanol from Synthesis Gas*; ***Applied Biochemistry and Biotechnology*****, 20/21**, 781-797, 1989

PRESENTATIONS AND CONFERENCE PROCEEDINGS

1. Heshmati, M., & Elmore, B. B. (July 28-30, 2024), Energy Sustainability for First-Year Engineering Students—Exploring Renewable Energy Production through Hands-on Activities, Work-In-Progress presented at 15th Annual FYEE 2024, Northeastern, Boston, MA. https://sites.asee.org/fyee2025/wp-content/uploads/sites/70/2024/07/FYEE2024_Program.pdf

2. Heshmati, M., & Elmore, B. B. (2024, June), Project-Based Learning in a Multidisciplinary Two-Semester First-Year Experience Paper presented at 2024 ASEE Annual Conference & Exposition, Portland, Oregon. https://peer.asee.org/47885

3. Grantham, Abigail; Katherine Elmore; Bill B. Elmore; Santanu Kundu; *Enzymatic Polymerization of Epoxidized Oleic Acid;* presented at the Summer 2019 Shackouls Honors College Undergraduate Research Symposium, July, 2019.

4. Wijayapala, Rangana; Deonante Frazier; Bill B. Elmore; Charles Freeman; Santanu Kundu; *Synthesis & Characterization of Crosslinked Polymers from Cottonseed Oil;* presented at the AIChE Annual meeting in Minneapolis, MN; October 30, 2017.

5. Wijayapala, Rangana; Deonante Frazier; Bill B. Elmore; Charles Freeman; Santanu Kundu; *Crosslinked Cottonseed Oil Polymer Synthesis & Characterization;* poster presented at the ACS national meeting, Washington D.C., August 20-24, 2017

6. Elmore, Bill B.; *Integrating Problem-based & Project-based learning in large enrollment freshman engineering courses;* presented at the ASEE annual meeting in Columbus, OH, June 25-28, 2017.

7. Frazier, Deonante; Rangana Wijayapala; Charles Freeman; Bill B. Elmore; and, Santanu Kundu; *Polymer Synthesis from Cottonseed Oil;* presented at the AICHE national student conference poster competition; AICHE Annual Conference, San Francisco, CA, November 10-15, 2016.

8. Mohammadi-Aragh, Jean; James Warnock; Bill B. Elmore; and, Jason Keith; *Incorporating Engineering into the First-Year Curriculum at Mississippi State University*, presented at the American Institute of Chemical Engineering annual meeting, Atlanta, November 16-21, 2014.

9. Elmore, Bill B.; *Integrating Community Engagement through AIChE with a Problem-based Freshman Chemical Engineering Course;* presented at the 121st ASEE Annual Conference & Exposition; Indianapolis, IN; June 15-18th, 2014.

10. Elmore, Bill B.; *Conducting Project-based Learning with a Large Chemical Engineering Freshman Cohort using LEGO NXT robotics;* presented at the 121st ASEE Annual Conference & Exposition; Indianapolis, IN; June 15-18th, 2014.

11. Elmore, Bill B.; *LEGO Robotics—A Tool for Integrating K-12 Outreach, Freshman Engineering & Service Learning;* presented at the 2014 AICHE Spring Meeting & 10th Global Congress on Process Safety; New Orleans, LA; March 30-April 3, 2014.

12. Elmore, Bill B.; *Using LEGO NXT Robotics, Vernier sensors and Imagination to Build an Integrated Freshman Engineering and Service Learning Program;* presented at the 2012 AIChE Spring national meeting; Houston, TX; April 1-5, 2012.

13. Elmore, Bill B.; *Design and the Robotically-controlled "Mini-plant" in Freshman Chemical Engineering;* to be presented at the 2011 Frontiers in Education conference; Rapid City, SD; October 12-15, 2011.

14. Toghiani, Rebecca and Bill B. Elmore; *Examining Current and Historical Events in a Freshman Chemical Engineering Seminar;* presented at the 118th ASEE Annual Conference and Exposition, Vancouver, British Columbia, June 26-29, 2011.

15. Toghiani, Rebecca and Bill B. Elmore; *Freshman Seminar in Chemical Engineering: Strategies for Student Success*; presented at the ASEE Southeastern Regional conference; The Citadel, Charleston, SC; April 10-12, 2011.

16. Liu, Jen, Todd French, Rafael Hernandez, Bill B. Elmore*; *Biofuels production from microalgae: A study of natural isolates from local wastewater sources;* presented at the 32nd Symposium on Biotechnology for Fuels and Chemicals; Clearwater Beach, FL; April 19-22, 2010.

17. Dana Franz and Bill B. Elmore; *Work in Progress—Collaborative Outreach to "at-risk" Middle School Students using LEGO Robotics;* presented at the 39th ASEE/IEEE Frontiers in Education Conference; San Antonio, TX; October 18-21, 2009.

18. Minerick, A.R., K. B. Walters, B. B. Elmore, R. Toghiani, P. Hill, R. Hernandez, H. Toghiani and T. French; *Cross-Curricular Topic Inventory: Strategic Topic Placement for Concept Reinforcement & Enhanced Student Accountability;* presented at the ASEE Annual Meeting; Austin, TX, June 14-17, 2009.

19. Strawderman, L., A. Salehi, and B. B. Elmore, *Exploring the Impact of First-Year Engineering Student Perceptions on Student Efficacy,* presented at the ASEE annual meeting; Austin, TX, June 14-17, 2009.

20. Lui, Jen, Todd French and Bill B. Elmore, *Microalgae production of lipids and starches for bio-fuel production*, presented at the 31st Symposium on Biotechnology for Fuels and Chemicals, May 2009.

21. Bill B. Elmore; *Enabling Students to Capture the "Spirit" of Education*, presented at the NACADA Region IV advising conference, Mississippi State University, March 15-17, 2009

22. Bill B. Elmore, Matthew Young and Stephanie Rodgers; *Growth and production studies of Botryococcus sudeticus (UTEX 2629) and other microalgae on Secondarily Treated Wastewater;* presented at the 30th Symposium on Biotechnology for Fuels and Chemicals; New Orleans; May 4-7, 2008

23. Bill B. Elmore, *Introducing Engineering Concepts to Freshmen through LEGO Robotics,* presented at the AIChE Annual Meeting, Salt Lake City, Nov. 4-9, 2007

24. Davis, P., M. Wall, M. Young, T. French and B. B. Elmore; *Tertiary treatment of wastewater for lipids production and carbon dioxide sequestration;* presented at Sandia National Laboratory; July, 2007.

25. Reddy, Shaila, L. Dale Snow, Bill B. Elmore*, and James D. Palmer; *Improved Analytical Methods and Quantifying Mass Deposition of Urease Immobilized using Layer-by-layer Nano Self-assembly;* presented at the 28th Symposium on Biotechnology for Fuels and Chemicals, Nashville, TN, Apr. 30-May 3, 2007.

26. Davis, P., M. Wall and B. B. Elmore; *Valuable Products from Pond Scum?*; presented at the AIChE Southern Regional student conference; Columbia, SC; Mar. 2007.

27. Bill B. Elmore, *LEGO NXT Robotics—a platform for teaching engineering concepts in a problem-based learning environment,* presented at the AIChE Annual Meeting, San Francisco, Nov. 2-5, 2006.

28. Craft, B., P. Davis, M. Wall and B. B. Elmore; *Growth of* ***Botryococcus braunii*** *microalga on secondarily treated wastewater;* presented at the First Annual MSU Biofuels Conference; Mississippi State University, Mississippi State, MS; August 2006.

29. Bill Jordan (Baylor) ; Walter Bradley (Baylor); Bill B. Elmore (Mississippi State University); *Mentoring New Faculty: What Works and What Does not Work***,** presented at the ASEE national meeting, Chicago, June, 2006

30. Bill Jordan (Baylor); Bill B. Elmore (Mississippi State University); *Engineering Ethics and Moral Theories : A Student Perspective***,** , presented at the ASEE national meeting, Chicago, June, 2006

31. Adrienne Minerick and Bill B. Elmore; *Using Research As a Tool for Recruiting***;**, presented at the ASEE national meeting, Chicago, June, 2006

32. Adrienne R. Minerick, Ebonye-Rosa T. Allen, and Bill B. Elmore; *Talking & Working for Diversity When You Don't Represent a Minority Demographic***;** presented at the ASEE SE Section conference, April 2-4, 2006 University of AL, Tuscaloosa, AL (received the overall *Outstanding Paper* award for the conference)

33. Jaricus A. Whitlock[1], Rafael Hernandez[1], Todd French[1], Bill B. Elmore[1], Mark Bricka[1] and Sandun Fernando[2]; *In-Situ Transesterification of Soybeans***;**; (1) Dave C. Swalm School of Chemical Engineering, Mississippi State University, (2) Agricultural and Biological Engineering Department, Mississippi State University, Mississippi State, MS 39762; Catalysis and Reaction Engineering Division, 2006 AIChE National Meeting, November 11-17, San Francisco

34. Jordan, W., Bill B. Elmore, Henry Cardenas, and Chad O'Neal, *Using a Materials Concept Inventory to Assess and Introductory Materials Class: Potential and Problems,* presented at the June 2005 ASEE meeting, Portland, OR, in CD proceedings (no page numbers)

35. Jordan, William and Bill B. Elmore, *Making Personal Technology Work Appropriately,* presented at the Annual Meeting of the American Scientific Affiliation, Grantham, PA, August, 2005

36. Jordan, William; Bill B. Elmore, Kelly Crittenden, Laura Wesson and Norm Pumphrey; *Assessing Changes in Student Attitudes and Knowledge in an Engineering for Educators class*; presented at the June 2005 ASEE meeting, Portland, OR, in CD proceedings (no page numbers)

37. Bailey, Rob; Frank Jones, Ben Fisher and Bill B. Elmore; *Immobilized Enzymatic Microbioreactor Design Enhancement Using Computational Simulation;* presented at the 26th Symposium on Biotechnology for Fuels and Chemicals, Chattanooga, TN; May 5-8, 2004

38. Forrest, Scott R.; Bill B. Elmore; James D. Palmer; *Activity and Lifetime of Urease Immobilized using Layer-by-layer Nano Self-assembly on Silicon and Polydimethylsiloxane Microchannels;* presented at the 26th Symposium on Biotechnology for Fuels and Chemicals, Chattanooga, TN; May 5-8, 2004

39. Palmer, J*, R. Bailey٢, F. Jones٢ and Bill B. Elmore*, *The Effect of Enzyme Attachment Method on Biomicroreactor Design and Operation,* presented at the 26th Symposium on Biotechnology for Fuels and Chemicals, Chattanooga, TN, May 5-8, 2004 (*-Louisiana Tech University, ٢The University of Tennessee at Chattanooga)

40. Jordan, W., Elmore, B., *An Engineering Student Perspective on Ethics,* Proceedings of the 5th Christian Engineering Education Conference, Salt Lake City, Utah, June 23-25, 2004, pp. 85-98

41. Jordan, W., Elmore, B., *Balancing Professional and Personal Life to Achieve Significance in an Academic Career,* presented at the New Engineering Educators Division Session, 2003 A. S. E. E. Annual Conference, Nashville, TN, June, 2003

42. Jordan, W., Elmore, B., *Introducing Materials Science and Chemistry to the K-12 Community,* presented at Session 2364, 2003 A. S. E. E. Annual Conference, Nashville, TN, June, 2003

43. Elmore, John B.; Zonghuan, Lu; Elmore, Bill B.; Jones, Francis, "*Immobilized Enzyme Studies in a Micro-scale Bioreactor"*, presented at the 25th Symposium on Biotechnology for Fuels and Chemicals, Breckenridge, CO, May 4-7, 2003

44. Jordan, W., Elmore, B., and Napper, S., *Using Moral Theories to Help Engineers Make Ethical Decisions,* presented at the 2003 Gulf Southwest ASEE regional meeting, Arlington, TX, March, 2003

45. Jordan, W., Elmore, B., Madden, D.; workshop for *Dissemination of Our Model; A Course in Engineering Science Problem Solving for Future Teachers*; presented at Louisiana Tech, June 6-7, 2002

46. Jordan, W, Elmore, B, and Napper, S.; *Using Moral Theories to Evaluate Engineering Codes of Conduct*, presented at the A.S.E.E. Annual Meeting in Montreal, Quebec, Canada, June 2002

47. Elmore, B. B. , Zonghuan Lu, Rui Jiang, and Francis Jones; *A Novel Micro-Scale Enzyme Reactor for Environmental Applications,* presented at 24th Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, TN, May 2002

48. Bailey, R., Prakash Damshala, B. B. Elmore, and Francis Jones; *Numerical Simulation of an Immobilized Enzyme Microbioreactor,* presented at 24th Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, TN, May 2002.

49. Zonghuan, L.*; Elmore, B. B.*; Jones, Francis[§], Rui Jiang[§], (*Chemical Engineering Program, Louisiana Tech University, [§]Chemical & Environmental Engineering Department, The University of Tennessee at Chattanooga); *"Micro-scale Biochemical Reactor Studies Using Immobilized Enzymes in Polydimethylsiloxane (PDMS)"*, presented at the 2002 Louisiana EPSCoR Conference, Baton Rouge, LA, April 10-11, 2002

50. Jiang, R., F. Jones (University of Tennessee, Chattanooga), B. B. Elmore (Louisiana Tech University); *The Use of MEMS Technology in the Development of Novel Bioreactors for the Degradation of Pollutants in Wastewater*, presented at the Graduate Student Research poster presentation, University of Tennessee, Chattanooga, April 12, 2002

51. Jordan, W., and Elmore, B.; *Developing an Outreach Program to Introduce Engineering to Non-Engineers*, paper presented at the Gulf Southwest Regional Meeting of A.S.E.E., March 2002. In CD based *Proceedings* (no page numbers)

52. Jordan, W., and Elmore, B.; *Report on our Problem Solving in Engineering Science Course*, paper presented at NASA Opportunities for Visionary Academics (NOVA) Leadership Development Conference (LDC), Greenbelt, MD, March 2002

53. Jordan, W., Elmore, B., and Silver, D.; *Using Space Topics to Teach Engineering Concepts to Elementary and Middle-school Students*, paper presented at the Louisiana Science Teachers Association (L.S.T.A.) Annual Convention, Baton Rouge, LA, December 2001

54. B. B. Elmore*, F. Jones [#], Z. Lu*, A. Forrest*, and R. Jiang[#], (* Louisiana Tech University, [#] Univ. of Tennessee—Chattanooga); *Heterogeneous catalysis in a microscale reactor fabricated from a biologically active polymer*, presented at the 2001 SPIE symposium on *Micromachining and Microfabrication*, San Francisco, CA, October 21-24, 2001

55. Disawal, S., J. Qiu, B.Chen, S. Patton, B. B. Elmore, Y. Lvov, *Nano-Fabrication by Electrostatic Layer-by-Layer (LbL) Self-Assembly,* presented at the Second Louisiana Conference on Microfabrication and Material Science, Baton Rouge, LA, August 20-22, 2001

56. Jordan, W., D. Silver, and B. B. Elmore; *Using Laboratories to Teach Engineering Skills to Future Teachers*, presented at the Summer ASEE national meeting, Albuquerque, NM, June 2001, CD-based proceedings (no page numbers)

57. Elmore*, B. B., Jim Palmer*, Francis Jones[ϒ], Zonghuan Lu*, and Rui Jiang[ϒ]; *Development of a micro-scale biochemical reactor fabricated from a biologically active polymer*, (*Louisiana Tech University, [ϒ]Univ. Tennessee—Chattanooga); presented at TEXMEMS III, Dallas, TX, June 7, 2001

58. Elmore, B. B., Zonghuan Lu, and Francis Jones; *The development of a novel micro-scale system as an immobilized enzyme bioreactor*, presented at the *23rd Symposium on Biotechnology for Fuels and Chemicals*, Breckenridge, CO, May 6-9, 2001

59. Jordan, W., B. B. Elmore, D. Silver; *Report on the Creation of a Problem Solving in Engineering Science Course for Future Teachers*, presented at NASA Opportunities for Visionary Academics (NOVA) Leadership Development Conference (LDC), Arlington, VA, January 2001

60. Dickey, C. K., B. B. Elmore and Francis Jones; *Enzyme catalyzed biochemical production in a polydimethylsiloxane (PDMS) microreactor*, presented at the International Society for Optical Engineering (SPIE) *Micromachining and Microfabrication 2000* symposium, San Jose, CA, September 18-20, 2000

61. F. Jones, R. Besser, B. B. Elmore, J. Fang, T. Cui, *Experimental system for the study of gas-solid heterogeneous catalysis in microreactors*, presented at the International Society for Optical Engineering (SPIE) *Micromachining and Microfabrication 2000* symposium, San Jose, CA, September 18-20, 2000

62. Jordan, W., B. B. Elmore, D. Silver, *Creating a Course in Engineering Problem Solving for Future Teachers*, Louisiana Tech University, presented at the American Society for Engineering Education (ASEE) national meeting, St. Louis, June 2000, CD-based proceedings (no page numbers)

63. Jordan, W., B. B. Elmore, D. Silver, *Update on NOVA Grant at Louisiana Tech University,* presented at NOVA Phase III Workshop, Marshall Space Flight Center, Huntsville, AL, June 2000

64. Dickey, C. F., B. B. Elmore and Frank Jones, *Production of Pharmaceuticals by Immobilized Enzymes in a Microreactor,* 2000 Spring National Meeting of The American Institute of Chemical Engineers (IMRET 4 Topical Conference), Atlanta, GA, March 2000

65. Jordan, W., B. B. Elmore, D. Silver, *Problem Solving in Engineering Science for Teachers*, presented at the NASA Opportunities for Visionary Academics (NOVA) Conference, Orlando, FL, Januray 2000

66. Elmore, B. B., P. I. Trivedi, G. Sathanandam, and F. Jones, *Microbial Conversion of Synthesis Gas Components to Useful Fuels and Chemicals*, presented at the Nineteenth Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, CO, May 4-8, 1997

67. Fegley, E. P., D. D. Charles, B. B. Elmore, M. M. McCurdy, *Natural remediation of spilled oil in an upland North Louisiana location*, presented at the Louisiana Academy of Sciences annual meeting; Nicholls State Univ., Thibodeaux, LA, Feb. 1-2, 1996

68. Elmore, B. B., G. R. Madhukar, and H. K. Huckabay, *Microbial Conversion of Synthesis Gas Components to Useful Fuels and Chemicals*, presented at the Seventeenth Symposium on Biotechnology for Fuels and Chemicals, Vail, CO, May 7-11, 1995

69. Elmore, B. B., Brad Todd, Jennifer Austin, and H. K. Huckabay, *Cellulase Activity of Trichoderma reesei (RUT-C30) on Municipal Solid Waste*, presented at the Seventeenth Symposium on Biotechnology for Fuels and Chemicals, Vail, CO, May 7-11, 1995

70. Elmore, B. B., Hui Zhan, and H. K. Huckabay, *Microbial Liquefaction of Lignite Pretreated with Dilute Acid at Elevated Temperature and Pressure*, presented at the Sixteenth Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg,TN, May 9-13, 1994
71. Elmore, B. B., Sanjoy Silva, Houston K. Huckabay, *Cellulase Activity of Trichoderma reesei (RUT-C30) on Municipal Solid Waste*, presented at the Sixteenth Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, TN, May 9, 1994

72. Elmore, B. B., Houston K. Huckabay, Audie Maxey, Amit Rao, *Microbial Liquefaction of Louisiana Lignite*, presented at the Fifteenth Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, CO, May 10-14, 1993

73. Elmore, B. B., H. K. Huckabay, X. Chen, A. Maxey, *Cellulase Activity of Trichoderma reesei (RUT-C30) on Municipal Solid Waste*, presented at the Fifteenth Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, CO, May 10-14, 1993

74. Elmore, B. B., M. W. Hsieh; *Coal Handling, Processing and Analysis Techniques as Applied to Microbial Coal Desulfurization*, workshop presentation at the Sixth Annual Coal Preparation, Utilization, and Environmental Control Contractors Conference, Pittsburgh, PA, August, 1990

75. Lundback, K. M. O., B. B. Elmore, S. B. Baker, K. T. Klasson, E. C. Clausen, J. L. Gaddy, *Parameters Affecting the Kinetics of Ethanol Production from CO, CO_2, and H_2 by* ***Clostridium ljungdahlii***, presented at the Twelfth Symposium on Biotechnology for Fuels and Chemicals, Gatlinburgh, TN, May 1990

76. Klasson, K. T., B. B. Elmore, J. L. Vega, M. D. Ackerson, E. C. Clausen and J. L. Gaddy, *Biological Production of Liquid and Gaseous Fuels from Synthesis Gas*, presented at the Eleventh Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, CO, May 1989

77. Vega, J. L., B. B. Elmore, M. D. Ackerson, E. C. Clausen, and J. L. Gaddy, *Biological Production of Liquid Fuels from Coal*, presented at the Symposium on Biological Processing of Coal and Coal-Derived Substances, Palo Alto, CA, May 1989

78. Vega, J. L., B. B. Elmore, J. W. Green, K. T. Klasson, E. C. Clausen, and J. L. Gaddy, *Manipulation of Clostridium ljungdahlii to Produce Higher Yields of Ethanol from CO, CO_2, and H_2*, presented at the American Society for Microbiology Conference on Biotechnology, Orlando, FL, June 1989

79. Elmore, B. B., J. L. Vega, M. D. Ackerson, E. C. Clausen, and J.L. Gaddy, *Bioconversion of Synthesis Gas into Ethanol or Methane*, Proceedings of the IGT Symposium on Gas, Oil, and Coal Biotechnology, 1989

80. Vega, J. L., S. Prieto, B. B. Elmore, E. C. Clausen, and J. L. Gaddy, *Biological Production of Ethanol from Synthesis Gas*, presented at the Tenth Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, TN, May 1988

INVITED PRESENTATIONS AND WORKSHOPS

1. Bill B. Elmore & PTE faculty/students—Society of Petroleum Engineers (SPE)—Annual Technical Conference & Exhibition (ATCE) MSU PTE Alumni reception; presented PTE program updates and outlook; Houston, TX, October, 2022.

2. Bill B. Elmore—Jones County Junior College; Invited to speak on the new Petroleum Engineering degree within the School of Chemical Engineering and to present project-based learning modules used in the first-year chemical engineering experience, December 5, 2014 and December 4, 2015.

3. Bill B. Elmore and three AIChE female students—*Women in Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; to be conducted February, 2015.

4. Bill B. Elmore and three AIChE female students—Elizabeth Stafford, Ebony Tenner, and Brigid McCool; *Women in Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February 28, 2014.

5. Bill B. Elmore and four AIChE female students—Hannah Weems, Kelsey LeSaicherre, Sarah Heintz and Liza Nalley; *Women in Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February 27, 2013.

6. Bill B. Elmore and four AIChE female students—Hannah Weems, Kelsey LeSaicherre, Sarah Heintz and Liza Nalley; *Women in Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February 24, 2012.

7. Elmore, Bill B.; *LEGO™Robotics—a tool for integrating K-12 Outreach, Freshman Engineering and Service Learning;* ASEE MidAtlantic Conference; Temple University; Oct. 28-29, 2011.

8. Bill B. Elmore and three AIChE female students—Betsy Barber, Bonnie O'Neal and Lauren Hartley; *Women In Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February, 2011

9. Bill B. Elmore and three AIChE female students—Betsy Barber, Ruthie Franke and Laura Davis; *Women In Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February, 2010

10. Bill B. Elmore and three AICHE female students—Laura Davis, Erin Casey and Betsy Barber; *Women In Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February, 2009

11. Bill B. Elmore, *Introducing STEM Middle School Teachers to LEGO Robotics,* training program; invited by Mississippi State University's Research and Curriculum Unit, May 30, 2008

12. Bill B. Elmore, *LEGO Robotics workshop;* Sudduth Elementary; Starkville, MS; May 20, 2008

13. Bill B. Elmore, *LEGO Robotics workshop;* Fifth Street Elementary; West Point, MS; April 25, 2008

14. Bill B. Elmore, *LEGO Robotics workshop;* West Clay Elementary; Montpelier, MS; April 21, 2008

15. Bill B. Elmore, *LEGO Robotics workshop;* Oak Grove Middle and High Schools; Hattiesburg, MS; April 11, 2008

16. Bill B. Elmore; *LEGO Robotics Workshop;* Middle School students and STEM teachers; Dave C. Swalm School of Chemical Engineering; March 26, 2008

17. Bill B. Elmore and Emma Seiler; *LEGO Robotics Workshop;* Tupelo Middle School; Tupelo, MS; February 29, 2008

18. Bill B. Elmore and Emma Seiler; *Women In Science and Technology Workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February 22, 2008

19. Bill B. Elmore (and Amer. Inst. Chem. Engrs. Student organization—AIChE); *First Annual Boy Scout Merit Badge Day*; directed events for 86 Boy Scouts completing two engineering and science related Merit Badges; Dave C. Swalm School of Chemical Engineering; February 2, 2008

20. Bill B. Elmore and Emma Seiler; *LEGO Robotics Workshop;* Mississippi Science Teachers Association; October 22, 2008

21. Bill B. Elmore; *ABET Report Preparation and Assessment Program Evaluation;* University of Tennessee—Chattanooga; work with Chemical Engineering Program Chair for their upcoming ABET visit; April 3-4, 2007

22. Bill B. Elmore; *LEGO Robotics Workshop;* Forest Hill High School; Jackson, MS; March 26, 2007

23. Bill B. Elmore; *LEGO Robotics Workshop;* Northwest Rankin Middle and High Schools; Flowood, MS; March 9, 2007

24. Bill B. Elmore and Emma Seiler; *Women In Science and Technology workshop* (hosted by East Mississippi Community College); LEGO robotics workshop for middle and high school women interested in STEM-related careers; February 23, 2007

25. B. B. Elmore, *Micro-scale reactor systems and their use with immobilized enzymes*, invited presentation to the College of Engineering & Computer Science, University of Tennessee—Chattanooga, April 8, 2003

26. Jordan, W., and Elmore, B.; *NOVA Phase II Progress Report*, presented at NASA Opportunities for Visionary Academics (NOVA) Leadership Development Conference (LDC), Greenbelt, MD, March 2002

27. B. B. Elmore, *Heterogeneous catalysis in a micro-scale reactor fabricated from a biolocally-active plastic*, presented to College of Engineering, University of Tennessee—Chattanooga, April 6, 2001

28. Jordan, W., Elmore, B., and Silver, D.; *An Example of an Exemplary NOVA Course*, presented at NASA Opportunities for Visionary Academics (NOVA) conference, Stennis Space Center, MS, November 2001

29. Elmore, B. B., W. Jordan, D. Silver; *Action Research and Analysis of a Course in Engineering Problem Solving for Future Teachers*, NASA Opportunities for Visionary Academics (NOVA) Leadership Development Conference (LDC), Arlington, VA, January 2001

30. Jordan, W., B. B. Elmore, Debbie Silver; *Development of Web-based Course Material for a Course in Engineering Problem Solving for Future Teachers,* NASA Opportunities for Visionary Academics (NOVA) Leadership Development Conference (LDC), Arlington, VA, January 2001

31. Elmore, B. B.; *Strategic Planning for the School of Human Ecology, Louisiana Tech University*—Conducted a day-long, invited workshop to assist members of the School of Human Ecology in developing a strategic plan, Fall '97

PROFESSIONAL DEVELOPMENT

Working with International Students, **International Student Office, Mississippi State University,** F2F workshop, July 19, 2023.

Writing Effective Course Outcomes, **Center for Distance Education, Mississippi State University,** Online training, completed May 2023.

Course Accessibility, **Center for Distance Education, Mississippi State University,** Online training, completed May 2023.

The Lifetime Edge: What Every Graduate Should Know about Industrial Process Safety, AICHE Annual Meeting, Minneapolis, MN, October 2017.

Promotion and Tenure Process Training for Administrators; MSU Provost's office; September 11, 2-4 p.m., 2017.

Administrator Training for all administrators at department head or above; MSU Provost's office; weekly 3 hour training sessions; 11 sessions, July 6-Sept 14, 2017.

From Conversation to Collaboration: Pathways to Diversity; Biennial Diversity conference at Mississippi State University sponsored by the MSU President's Commission on the Status of Minorities; November 13-14, 2014.

National Effectiveness Teaching Institute -2 (NETI-2); held in conjunction with the 2012 Frontiers in Engineering conference, Seattle, WA; October 6-9, 2012.

25th Annual NACADA Summer Institute, New Orleans, LA July 31-August 5, 2011

ABET—TAC "cross-training" teleconference, preparation for making ABET accreditation visits to chemical technology programs, July 2011

NSF-STEP proposal preparation workshop, Louisville, KY, June 23-25, 2010

NSF-STEP program workshop at Louisiana Tech University, Ruston, LA, July 13-16, 2009
(Workshop focused on Louisiana Tech's NSF grand "Living with the Lab" in which engineering freshmen participate in a design oriented course sequence using robotics, rapid prototyping and bench-scale milling apparatus)

National Academic Advising Association (NACADA) Region IV conference, MSU campus, March 14-17, 2009

Accrediting Board for Engineering and Technology (ABET) "Best Practices" workshop; Atlanta, GA, February 6-8, 2009

NSF visit, Arlington VA; visited with program officers regarding funding opportunities; April 22-23, 2007

Effective Teaching: A Workshop; led Rich Felder, Ph.D. and Rebecca Brent—specialists and noted authors and speakers in Effective Teaching strategies; Swalm auditorium, MSU campus, January 4-5, 2007

Rigorous Research in Engineering Education—NSF funded workshop ; presented, in part, by grantees from the Colorado School of Mines, Golden, CO, July 16-21, 2006

NSF visit, Arlington VA, visited with various program officers about funding opportunities, April 30-May 1, 2006

SERVICE

Professional

Chair, Industrial & Systems Engineering Department Head Search Committee, Fall 2024.

Development of comprehensive review of "naming opportunities" within Swalm School of Chemical Engineering, Fall 2024.

Serving as "Department Head" for the Industrial & Systems Engineering Promotion and Tenure Review with departure of ISE Department Head, Fall 2024.

Chemical & Petroleum Engineering "Maker Space" laboratory selected & financially supported by donor. I have supervised purchasing 3D printers, desktop CNC and Laser cutters, and supporting equipment for use in the freshman year CHE and PTE course sequence and for revisions to the Automated Process Control course (expanding the focus of the course to include project-based learning activities).

ABET Self-study; writing Petroleum Engineering Self Study and collaboration on Chemical Engineering Self Study for fall 2023 ABET review.

ABET Self-study; wrote Petroleum Engineering Self Study report for newly re-established Petroleum Engineering Bachelor's degree program, 2018

AICHE International Student Chapter sub-committee—reviewer for International Student Chapter Leadership Development Travel Grants, August, 2017.

ABET Self-studies; wrote Chemical Engineering Self Study reports for ABET review at Mississippi State, 2010, 2017 and for Petroleum Engineering in 2023.

Participated with ChE faculty from University of Mississippi and Christian Brothers to revive the senior design competition among our three schools as part of the AIChE Mid-South Professional

Section, April 2017. Returned two student teams to this event Spring 2023 (for the first time since COVID-19). Both three-person Mississippi State teams placed first and second in the six team competition.

Session Chair, *Technology and Project-Based Learning in the Curriculum;* AIChE Spring National Meeting; Houston, TX; April 1-5, 2012

Session Co-Chair, *Free Forum on Engineering Education;* AIChE Spring National Meeting; Houston, TX; April 1-5, 2012

Appointed as CEOC liason to AIChE *Young Professionals* committee, February, 2012-2013.

Inducted to the national AIChE *Career and Education Operation Council (CEOC)*, AIChE annual meeting, Mineapolis, MN, October, 2011; serving as liason between CEOC and AIChE International Student Chapters subcommittee, 2011-12.

Mentoring advisor to AIChE "Sister Chapter" program—collaborating with Universidad Nacional Autonoma de Honduras AIChE student chapter, begun July 2010 to July 2018

Chosen to serve on AIChE International Student Chapters Subcommittee—May 2010 to present

National AIChE New Student Chapter (domestic) subcommittee—Spring 2009 to Spring 2010
Session Chair, ASEE/IEEE Frontiers in Education Conference, San Antonio, TX, October 18-21, 2009

NSF-ISE (i.e. Informal Science Education) proposal panel reviewer; Arlington, VA, August 5-6, 2008

Mississippi Science Teachers Association—presented a workshop on using LEGO NXT® in the classroom for project-based learning; Jackson, MS, October 21-22, 2007

University of Tennessee, Chattanooga—Provided consultation visit for chemical engineering program preparing for ABET visit, April 3-5, 2007

AIChE student conferences—Invited judge for the following:

- ***Southern Regional Student Paper Competition*—AIChE Student Conference;** Auburn, AL, April 2024

- ***First Annual Brewing Competition (for Young Professional AIChE section members)***—poster judge; AICHE Annual Meeting; Minneapolis, MN, October 2017

- ***National Student Poster Competition*—**AIChE Student Conference; Minneapolis, MN, October 2017

- ***Southern Regional Student Poster Competition*—AIChE Student Conference;** U. Kentucky, Lexington, KY, April 2013

- ***Southern Regional Student Poster Competition*—AIChE Student Conference;** Clemson, SC, April 2012

- ***National Student Poster Competition*—AIChE National Student Conference;** Minneapolis, MN, October 2011

- ***Southern Regional Student Poster Competition*—AIChE Student Conference;** Georgia Tech, Atlanta, GA, April 2011

- ***National Student Poster Competition*—AIChE National Student Conference;** Salt Lake City, UT, November 2010

- ***Southern Regional Student Poster Competition***—AIChE Regional Student Conf.; N.C. State; Raleigh, NC; April '10

- ***National Student Poster Competition***—AIChE National Student Conference, Nashville, TN, Nov. '09

- ***Southern Regional Student Poster Competition***—AIChE Regional Student Conf.; U. Alabama; Tuscaloosa, AL; March '09

- ***National Student Poster Competition*—**AIChE National Student Conference, Philadelphia, PA; Nov. '08

- ***Southern Regional AIChE Car Competition*—**AIChE Regional Student Conference, Auburn, AL; March 2008.

- ***National Student Paper and Poster Competitions*—**AIChE National Student Conference, Salt Lake City, UT; November, 2007

- ***Southern Regional Conference Poster Competition***—AIChE Regional Conference, Univ. South Carolina, SC; March, 2007

- ***National Poster Competition***—AIChE National Student Conference, San Francisco, CA; November, 2006

Invited keynote speaker—*Women in Science and Technology Conference, East Mississippi Community College, Golden Triangle Campus, February 2007.*

Team coach—"BEST Robotics" Christian Homeschool Educators team, competition sponsored by Bagley College of Engineering, Mississippi State University, October 2005.

Team coach—National Engineers Week **Future City Competition**, Oct./Nov 2003

Team coach—First Lego League "No Limits" (Disabilities awareness project), Louisiana Tech sponsored robotics design team—received second place Design Innovation award, ages 9-14, competition November, 2004

Team coach—First Lego League **Mission to Mars Challenge***,* Louisiana Tech sponsored robotics design team, ages 9-14, received Design Innovation award at first state competition to be held in Louisiana, November 15, 2003

ABET Chemical Engineering Program Reviewer—Chemical Engineering Evaluation visits:

- University of Minnesota, Minneapolis, MN, Sept. 28-Oct. 1, 2013
- Served as a consultant conducting a mock ABET review for the Biomedical Engineering program at Wichita State University, December 5-7, 2012
- Colorado School of Mines (evaluated both the Chemical Engineering Program and the Biochemical Engineering Program), Oct. 20-23, 2012.
- Lamar University, Sept. 29-Oct. 2, 2012
- Cross-training for ABET-EAC evaluation of Biomedical Engineering programs, Spring 2012
- Cross-training for ABET-TAC; Industrial Chemical Process Technology program visit made, University of Puerto Rico, Aricebo, October 2011
- University of Kentucky—Paducah, November 2010
- Trine University, Angola, IN, October 2008
- Polytechnic University of Puerto Rico, San Juan, September 2007
- Cooper Union, Manhattan, NYC, NY, November 2006
- Hampton University, November, 2005
- Auburn University, November, 2004
- Observer training, University of Alabama-Huntsville ABET visit, October 12-14, 2003.

Peer reviewer for the following journals:

AIChE J.; J. Amer. Chem. Soc.; Biocatalysis and Biotransformations; Applied Biochemistry and Biotechnology; Chemical Engineering Communications; J. Chemical Engineering Education; and, proposals submitted to the *National Science Foundation,* various years

ABET EC2000 criteria assessment report—coordination of assessment activities and report development for fall 2001 visit—2000 to 2001 (ongoing assessment program). Active with program assessment for Dave C. Swalm School of Chemical Engineering, Mississippi State University. Currently coordinating ABET program assessment with Dr. Julie Jessop for chemical and petroleum engineering programs.

AIChE—El Dorado Section, '98-'99, Louisiana Tech coordinator/liaison for Engineering Week and student activities

University & Community Service

Mississippi State

Chair Computer & Systems Engineering Department Head Search Committee, AY 2025-26

Acting Head Electrical and Computer Engineering (for purposes of Promotion and Tenure review during department head vacancy), AY 2025-26

Acting Head Industrial and Systems Engineering (for purposes of Promotion and Tenure review during department head vacancy), AY 2024-25

Chair Industrial & Systems Engineering Department Head Search Committee, AY 2024-25

Summer Autism Spectrum Day Camp, June 7 2023

Provided hands-on activities and refreshments for high school campers. Sponsored by the Physics and Astronomy department, the Autism Spectrum camp engages high school students in a variety of activities during June.

Co-Graduate Coordinator (currently with untenured faculty member)—May '21 to Jul '23; Summer/Fall '24

Swalm School Diversity, Equity and Inclusion Working Group—member Spring 2023 to present.

Swalm School Curriculum Review Working Group—member Spring 2023 to present.

Omega Chi Epsilon, *Chemical Engineering Honor Society—Faculty Advisor*, Spring 2022 to present (I reactivated chapter in the 2014-15 academic year after several years of dormancy with the passing of a faculty member, Dr. Becky Toghiani, who had provided many years of consistent service as OXE faculty advisor).

Academic Department Heads Executive Committee; Advises the Provost and Executive Vice President on issues affecting academic department heads. Plans and coordinates the activities which seek to improve the performance of academic department heads. Serves as liaison among

academic departments. One representative is elected by the department heads of each college for a three-year term. Term of service—June 2020 through May 2022

Swalm building manager—Fall 2014 to present

Bagley College of Engineering Diversity Working Group, February 2021 to present

Bagley College of Engineering Research Engagement Task Force, May 2021 to Fall 2021

Coordinator, CHE 2203 Introduction to Engineering with Applications to Chemical & Petroleum Engineering; work annually with administrators in the Vicksburg Warren School District and with Instructors provided by ISER in Vicksburg to offer the course in the VWSD school district.

Instructor, Jackson Academy—CHE 2203 Introduction to Engineering with Applications from Chemical & Petroleum Engineering; taught course via distance and on-site visits; course developed from my original course development of CHE 2213 Analysis using project-based learning through a series of *Team Challenges* covering a variety of engineering applications (e.g. heat exchangers, tank level control, flow meter calibration, centrifugal pump operations, etc.), Spring 2019, Fall 2020

Atly Jefcoat Outstanding Advisor Award—Selection Committee, Spring 2018, Spring 2019, Spring 2020.

Scholarship Coordinator—Swalm School of Chemical Engineering—assumed responsibilities January, 2012 to present

Undergraduate Coordinator—Fall 2007 to Summer 2018 (oversaw and co-advised virtually all ChE/PTE undergraduates ’07 through summer’18—conducting reviews of all student curriculum audits (i.e. CAPP) and senior degree checks; responsible for coordinating curriculum changes).

ABET Program Assessment Coordinator—Swalm School of Chemical Engineering—Fall 2007 to Summer 2018. Dr. Jessop joined the faculty in the Hunter Henry Chair role in Fall 2018 and assumed duties as Undergraduate Coordinator, AICHE Faculty Advisor and ABET Program Assessment Coordinator.

University Quality Enhancement Program Committee (standing)—centralized committee for developing a university-wide enhancement plan as part of the Southern Association of Colleges and Schools (SACS) Accreditation process (October 2011 to 2012).

University Community Engagement Committee—co-Chair for the Undergraduate Research sub-committee— University-wide committee dedicated to coordinating community engagement, service learning and outreach activities to the university, region and beyond. Fall 2010 to fall 2011

Summer Bridge, June 2025

Directed minority students entering MSU in the fall 2025 semester in hands-on engineering project activities. Also held multiple informal meetings to discuss academic and career planning.

Summer Bridge, June 2024

Directed minority students entering MSU in the fall 2024 semester in hands-on engineering project activities. Also held multiple informal meetings to discuss academic and career planning.

Summer Bridge, June 2023

Directed minority students entering MSU in the fall 2023 semester in hands-on engineering project activities. Also held multiple informal meetings to discuss academic and career planning.

Summer Bridge Mentor, June, 2022

Directed minority students entering MSU in the fall 2022 semester in hands-on engineering project activities. Also held multiple informal meetings to discuss academic and career planning.

Summer Bridge Mentor, June, 2021

Directed minority students entering MSU in the fall 2021 semester in hands-on engineering project activities. Also held multiple informal meetings to discuss academic and career planning. Provided multiple refreshment events to Bridge participants and the counseling staff.

Summer Bridge Mentor, summers 2014, 2015, 2020

Directed Problem-Based/Project-Based engineering activities for Summer Bridge minority students entering MSU in the fall semesters following Summer Bridge. Also held multiple informal meetings to discuss academic and career planning. With our AIChE student chapter volunteers, we hosted social events for all Bridge participants and the counseling staff.

Summer Bridge Mentor, July 21-August 4, 2010

Directed 25 minority students entering MSU in the fall 2010 semester in robotics activities. Also held multiple informal meetings to discuss academic and career planning. AIChE hosted a "celebration picnic" for all 50 Bridge participants and the counseling staff.

Summer Bridge Mentor, July 20-31, 2009

Directed ~10 minority students entering MSU in the fall 2009 semester in robotics activities, including informal discussions on academic and career planning. AIChE hosted a closing picnic for all Summer Bridge participants and the counseling staff.

Quest Camp, summers of 2008, 2009, 2010, 2011, 2012

Directed students (up to four) in chemical engineering related research for several weeks each summer. These students are rising seniors and high academic achievers. At least three of these students have joined chemical engineering and two have already proven to be among the highest academic achievers in our department.

AIChE Advisor**,** August 2005 to 2018

Activities included

- Planning and setup of meetings & special events
- AIChE tailgates for all home football games
- Fall "GumboFest" (held in conjunction with AIChE golf tournament and homecoming)
- "Spring Release"—annual crawfish boil held in conjunction with spring AIChE golf tournament and Super Bulldog weekends
- *AIChE Chem-E car, Team coach*
- *AIChE cookout team*, facilitator
- *Coordinating AIChE service events including Habitat for Humanity, Salvation Army, Girl Scouts & Boy Scouts and Palmer Children's Home*
- *Annual Report to Hunter Henry and family*

Chair, Bagley College of Engineering Promotion and Tenure Committee, 2008, 2009

BEST Robotics, homeschool team coach (inaugural year of competition in Mississippi—competition held on Mississippi State campus)

Louisiana Tech

COES Dean's Search Committee, College of Engineering and Science, March-May, 2004

Chemical Engineering Advisory Board—Organize annual fall/spring advisory board meetings; recruiting new board members; facilitating communications with board

Louisiana Tech Road Show—high school recruiting trips to regional community centers, April 2003 & 2004

College of Education reaccreditation review (NCATE)—poster presentation for Engr 289C (NASA sponsored engineering problem-solving course for pre-service teachers), Feb., 2004

ABET Assessment Team—working on a team with the Associate Dean for Undergraduate Studies and Program Chairs to refine and implement assessment tools for standardization within the College of Engineering & Science, ’98 to ‘05

Student Advising—advising approximately 25-50 students each quarter; reviewing all graduating senior records

“Time Out for Tech” and visits with football recruits—TOFT three Saturday’s yearly in student recruiting; football recruits periodic as needed (1990 to 2005)

Strategic Plan Development Team*, Team Leader,* ‘97-’98 academic year

Faculty Advisor for the following student organizations

- ***IMPACT***—African-American ministry (associated with Campus Crusade for Christ) (’03-’04)
- ***Omega Chi Epsilon (****Chemical Engineering honor society, ’97 to ’05)*
- ***American Institute of Chemical Engineers*** *(‘90-’96, ’98-’00, ’02 to ’05)*
- ***The Fellowship*** *(an interdenominational campus Christian org., ’96 to‘00)*
- ***ATO Fraternity Board of Trustees****,* ‘95-’96*; **Faculty Advisor**,* ’96 to fall 2000

Regional Science Fair Judge—(several years of service)

Community Service in Ruston, LA and Starkville, MS

Couples Community Group—co-leading with my wife, Kathy, young couples Bible study at First Baptist Church (October 2020 to present)—Starkville, MS

Collegiate Bible Study groups—co-leading with my wife, Kathy, small group studies in our home (2019 to present)—Starkville, MS

Pinelake Church—provide informal worship/music for small group study (’13-’14)—Starkville, MS

Broadmoor Baptist Church, Starkville, MS—children’s ministry, congregational teaching and music (’08-‘10)

Calvary Baptist Church, Starkville, MS—youth music, teaching collegiates, pastoral search committee (2006-2008)

Crossroads church—Elder, directing youth activities and playing with worship band *(2003 to summer 2005)—Ruston, LA*

Boy Scouts of America—*Assistant Scoutmaster—Troop 27 (Starkville, '05-'08) and Troop 45 (Ruston, LA, '97-'05; den assistant with Pack 59, Den 7 (Ruston, LA, '92-'97)*

The Navigators *(Associate staff, campus ministry division, '94 to '97), Ruston, LA*

Community music—Provide music for various community activities (e.g. reunions, retirement communities, civic & church events, etc.)—1972 to present