

August 22, 2018

Search Committee
Provost and Vice President for Academic Affairs
Bowling Green State University

Committee Members:

With great enthusiasm, I am writing to apply for the position of Provost and Senior Vice President for Academic Affairs at Bowling Green State University (BGSU). Higher education faces numerous challenges for which institutions must develop innovative, efficient, cost-effective, and sustainable solutions. Such challenges include enhancing student success, reducing student debt, generating both private and public resources, recruiting and retaining diverse faculty, staff, and students, and sustaining a cohesive, engaging campus community. Overcoming challenges and taking advantage of opportunities specific to BGSU requires visionary and innovative leadership at both the presidential and provost levels working with an engaged campus community. My skill set, core values, experiences, knowledge, and lessons learned throughout my career in public higher education mesh well with the opportunities and challenges specific to BGSU such as student success, providing a relevant educational experience for all students, serving part-time and post-college-age students, inclusive excellence, and enhancing the faculty and staff experience. As a servant leader who values diverse perspectives and teamwork, shared governance is an essential element of my leadership approach. Shared governance shapes the campus culture and drives an institution's ability to overcome challenges and to take advantage of opportunities.

Presently, I am the Senior Advisor for Research to Senior Vice President for Academic Affairs of the University of North Carolina (UNC) System and Professor of Physics at North Carolina Agricultural and Technical State University. As Senior Advisor for Research, I manage a portfolio of research initiatives for the UNC System Office. The portfolio includes the Research Opportunities Initiative (ROI), Inter-Institutional Planning Grant (IPG) program, and the Undergraduate Research Award Program (URAP). The ROI program, funded by a recurring legislative appropriation of \$3M, provides competitive funding for innovative and potentially "game-changing" research within the University of North Carolina System to enhance competitiveness for major federal funding and to support statewide economic development. The IPG program utilizes a \$0.4M strategic research fund to promote collaboration and interdisciplinary research within the UNC system, and the URAP program provides funding to promote and enhance undergraduate research also within the UNC System. As Professor of Physics, my focus is introductory undergraduate physics education. Introductory physics education focused on student success is a career-long passion of mine.

As provost and vice chancellor of academic affairs at NCAT, I was responsible for the Division of Academic Affairs. The Division includes seven colleges, two schools, Library Services, Enrollment Management (Office of Admissions, Office of the Registrar, Office of Financial Aid, and New Student Programs), Office of Strategic Planning and Institutional Effectiveness (Assessment & Analytics, Accreditation and Institutional Effectiveness, and Institutional Research), EHRA Salary and Budget Administration, and the Office of International Affairs.

During my tenure as provost, total enrollment grew approximately 12.5%, new first-year enrollment grew approximately 29.7%, and transfer enrollment grew approximately 90%. The fall 2017 new first-year class of 2,309 students is the largest in the University's history. The average SAT and high school GPA for the fall 2017 class increased 11% and 5%, respectively, as compared to fall 2013. Retention of first-time, full-time first-year students increased approximately 3% for the fall 2016 cohort when compared to the fall 2015 cohort. Also, total applications for admission exceeded 16,000 in the 2016-2017 recruitment cycle. These gains in enrollment and student success were the result of a cohesive team effort with Enrollment Management (Office of Admissions,

Office of the Registrar, Office of Financial Aid, and New Student Programs), the Division of Student Affairs, and the entire campus community.

A significant undertaking as provost and vice chancellor for academic affairs at North Carolina A&T State University (NCAT) was the recent academic reorganization initiative. The overarching goal of the assessment and reorganization initiative was to position NCAT for enrollment growth, enhanced faculty research and scholarly/creative productivity, increased external funding, and increased national and international recognition through honorific awards and rankings. The initiative required a comprehensive review of existing resources, academic structure, academic program inventory, processes and procedures, and a clear awareness and understanding of emerging opportunities. The initiative utilized a diverse four-member External Review Committee (ERC), and a faculty-centered Internal Academic Restructuring Steering Committee (IARSC). The campus community and stakeholders were kept engaged and informed throughout the process with periodic updates through digital communications, townhall meetings, and Chancellor's forums. The outcomes of the reorganization initiative were 1) utilization a uniform naming convention for academic units reporting directly to the provost, 2) creation of the Colleges of Arts, Humanities, and Social Sciences, Health and Human Sciences, and the College of Science and Technology, 3) reorganize and rename the School of Education, 4) align licensure programs under disciplinary degree programs, 5) explore areas of opportunity for additional doctoral programming, and 6) conduct ongoing academic program analysis based on productivity, relevance, and student demographics. It is important to note that campus ownership of the process and meaningful stakeholder participation were crucial elements of the successful academic reorganization initiative.

Implementation of the reorganization outcomes required a heroic campus-wide effort. I led the Executive Transition Team (ETT) comprised of the vice-chancellors or designees from the Divisions of Business and Finance, Information Technology Services, Advancement, Academic Affairs, Human Resources, Research and Economic Development, and Student Affairs along with Faculty Senate, Staff Senate, Facilities, University Relations, and Enrollment Management. The implementation required substantial modification of the finance, human resources, and student modules in the Banner ERP system and thus, required a collaborative effort of personnel in the areas represented on the ETT. In addition to implementing the new organizational structure, the ETT included process analysis with a focus on enhancing data integrity and reliability.

As dean of the College of Science and Technology (CoST) at the University of Southern Mississippi, I was responsible for all matters related to academic leadership and administration, curriculum, budgeting, facilities, external development, faculty, staff, and students. In addition to the Hattiesburg Campus, the College utilized teaching and research sites in Ocean Springs, MS (Gulf Coast Research Laboratory), Long Beach, MS (Gulf Park Campus), and NASA's Stennis Space Center. I led a number of significant initiatives which enhanced the College of Science and Technology. I developed and implemented with the support of the provost a salary analysis and raise model which utilized comparison data from sources such as the Oklahoma State University Faculty Salary Survey and College and University Professional (CUPA). A modification of this model was implemented while provost at NCAT. Several innovative degree programs were approved and implemented during my tenure as dean. One example of which I am proud was approval of the University of Southern Mississippi's first engineering degree, a bachelor's degree in Polymer Science and Engineering, by the Institutions of Higher Learning (IHL) Governing Board. Another example of an innovative degree program approved during my tenure as dean is the master's degree in Logistics, Trade, and Transportation. The master's degree supported the growing demand for logistics professionals on the Mississippi Gulf Coast and throughout the state. The master's degree resulted from a collaboration between the School of Construction and the Department of Economic and Workforce Development. In addition to the approval of innovative degree programs responsive to economic and employment opportunities, a pilot project which utilized the emporium method for introductory mathematics instruction transitioned from a twenty-five computer one-room operation to full-scale one-hundred computer operation in a renovated central campus facility under my leadership. The on-campus supplier of chemical and laboratory supplies for instruction and research known as the Chemical Store ran a continuous deficit due to management issues, lack of utilization and less than desirable inventory control. As a result, I led an outsourcing

initiative with the support of Facilities and Information Technology that resulted in higher quality service and increased product availability at a lower cost to researchers and departments.

In addition to the academic reorganization initiative and NCAT, I developed the Faculty of the Future Program (FFP) in collaboration with the Vice-Chancellor for Human Resources, Vice-Chancellor for Research and Economic Development, Chief Financial Officer, academic deans and with critical input and review from the Faculty Senate. The FFP developed a framework to enhance the overall faculty profile, to promote student success, and to increase research, scholarship and creative activities. Faculty recruitment and hiring processes were revamped to ensure high quality and diverse applicant and interview pools. A "Hiring Toolkit" documented the revamped recruitment and hiring processes. A critical component of the revamped processes is comprehensive training inclusive of implicit bias training for all individuals involved in the recruitment and hiring. The Chief Financial Officer and Vice-Chancellor for Research and Economic Development committed to partner with Academic Affairs in funding faculty start-up packages. Another significant element of the FFP addressed non-tenure track teaching and research faculty (NTTF). NTTF are critical to the success of a university fulfilling its educational and research missions. The NTTF component established clear titles, minimum educational requirements, position descriptions, and expectations for promotion in rank. The goal of the NTTF component is to increase the cohort of full-time NTTFs while embracing NTTFs as full citizens of the university.

Student success is the responsibility of the campus community. As provost, I collaborated with the Divisions of Business and Finance, Human Resources, Intercollegiate Athletics, Research and Economic Development, and Student Affairs to enhance student success. One example of a multi-divisional collaboration is the redesign of the first-year experience course to incorporate the use of Educational Testing Service's SuccessNavigator assessment and utilization of professional advisors as instructors to more effectively engage first-year students. Data from the SuccessNavigator assessment provides guidance in early identification of at-risk students and in deploying student specific support services and resources. The use of professional advisors as instructors ensures meaningful advisor advisee interaction on a weekly basis. The hiring of a learning specialist with grant funding from the NCAA is an example of a fascinating and gratifying collaboration between the Division of Academic Affairs and Intercollegiate Athletics. The learning specialist's success in enhancing student-athlete performance led to a commitment from the Vice-Chancellor for Student Affairs to jointly fund an additional learning specialist to extend support to non-student athletes. Under my leadership as provost, NCAT participated in numerous voluntary inter-institutional student success projects within the UNC System. Several examples are the Predictive Analytics Reporting (PAR) Framework which identifies barriers and potential solutions to enhance student success and the multi-institutional "Partway Home Alliance for Collaborative Education" degree completion initiative targeting individuals who discontinued their college experience before graduation.

My approach to diversity and inclusion is informed by my experiences as a student and scholar-athlete at a majority institution when diversity and inclusion was not part of the national consciousness, as an American graduate student in a STEM field, and as a faculty member and administrator at both majority and minority-serving institutions. In reflecting on those experiences, respect for the individuals regardless of race, gender, lifestyle, ethnicity, belief system, and realizing individuals from different groups have more commonalities than differences. The University must systematically provide opportunities for faculty, staff, and student interactions to facilitate interpersonal discovery. My commitment to diversity and inclusion is embodied in my professional body of work to increase underrepresented minority and women participation in STEM undergraduate and graduate programs, and recruitment of underrepresented minority and women faculty. As an untenured assistant professor, I served as the University of Southern Mississippi's Site Coordinator for the Louis Stokes Mississippi Alliance for Minority Participation (LSMAMP: formerly Mississippi Alliance for Minority Participation). LSMAMP was an alliance between the eight public universities in Mississippi funded by the National Science Foundation. The goal of LSMAMP was to increase underrepresented minority STEM bachelor degree recipients, and therefore, increase participation in STEM graduate programs. I was part of the Alliance for Graduate Education in Mississippi's (AGEM) leadership team which significantly increased underrepresented minority

STEM doctoral production in the State of Mississippi. AGEM, a National Science Foundation funded AGEP program, was a collaboration between the University of Mississippi, Mississippi State University, Jackson State University, and the University of Southern Mississippi.

Engaging the community is essential in advocating for and communicating the value of higher education. My dedication to engagement is, in part, exemplified by service on boards of directors. Board service provides invaluable insight on effectively engaging and serving the local community, regional community and beyond. Also, board service provides opportunities to break down barriers and advocate for higher education, in general, and the home institution in particular. As a member of the Executive Committee (class of 2017) of the Council on Academic Affairs of the Association of Public and Land-grant Universities, I developed a comprehensive understanding of the opportunities and challenges facing higher education. I served on the Board of Directors of the Guilford Merchants Association (GMA). GMA is a regional membership organization of businesses, large and small, focused on community growth and prosperity. I also served on the Gateway University Research Park Board of Directors. Gateway University Research Park is a 501c3 non-profit with two campuses totaling 150 acres created to promote economic development in the Central North Carolina region known as the Triad. I currently serve on the Boards of Go Global NC and MCNC. Go Global NC, formerly the Center for International Understanding, empowers North Carolina leaders to succeed in the global economy through skills development, understanding, and knowledge. MCNC is a non-profit communication network provider for the seventeen campus University of North Carolina System, Duke University, Wake Forest University and select non-profit and university hospitals. My service also includes the University of Southern Mississippi's Athletic Council. In addition to serving on boards and councils, my engagement experience includes briefing congressional staffers while at the University of Southern Mississippi and advocating for university priorities to state legislators in Mississippi and North Carolina.

The future is bright for BGSU as it embraces the challenges and opportunities as a community committed to the core values of respect for one another, collaboration, intellectual and personal growth, creativity and innovation, and the pursuit of excellence. As stated earlier, my experiences, knowledge, and lessons learned throughout my career in higher education mesh well with the challenges and opportunities specific to BGSU. Thus, I am well-positioned lead and facilitate BGSU in fulfilling its vision of meeting and exceeding the educational, economic, and societal challenges of Northwest Ohio, the State, and beyond as a premier learning community. In closing, this quote from Shirley Chisolm, "You don't make progress by standing on the sidelines, whimpering and complaining, you make progress by implementing ideas," captures the essence of my approach and passion for higher education. I look forward to discussing this opportunity in the next phase of the search process.

Sincerely,

Joe B. Whitehead, Jr., PhD

JOE BENJAMIN WHITEHEAD, JR.

EDUCATION

1989 Kent State University

Ph.D. Physics

The Liquid Crystal Institute

Thesis: "Light Scattering from Polymer Dispersed Liquid Crystals"
(Advisor: Professor J. William Doane)

1985 Kent State University

M.A. Physics

1983 Delta State University

B.S. Physics

PROFESSIONAL EXPERIENCE

- 2017 - Present** Senior Advisor for Research,
The University of North Carolina System
- 2013 - 2017** Provost and Vice Chancellor for Academic Affairs,
North Carolina A&T State University
- 2013-Present** Professor of Physics,
North Carolina A&T State University
- 2010 - 2013** Dean, College of Science and Technology,
University of Southern Mississippi
- 2009 - 2010** Interim Dean, College of Science and Technology,
University of Southern Mississippi
- 2004 - 2009** Associate Dean, College of Science and Technology,
University of Southern Mississippi
- 1998 - 2003** Chair, Department of Physics and Astronomy,
University of Southern Mississippi
- 2007 - 2013** Professor of Physics and Astronomy,
University of Southern Mississippi
Professor of Chemistry & Biochemistry
University of Southern Mississippi,
- 1996 - 2007** Associate Professor of Physics and Astronomy,
University of Southern Mississippi,
Associate Professor of Chemistry & Biochemistry,
University of Southern Mississippi,
- 1993 - 1996** Assistant Professor of Chemistry and Biochemistry
University of Southern Mississippi
- 1990 - 1996** Assistant Professor of Physics and Astronomy,
University of Southern Mississippi

- 1991 (summer)** NASA/ASEE Summer Faculty Fellow, John C. Stennis Space Center
- 1989 - 1990** Research Scientist II, Energy and Materials Sciences Laboratory, Georgia Tech Research Institute
- 1986 - 1989** Research Assistant, The Liquid Crystal Institute, Kent State University
- 1983 - 1986** Teaching and Laboratory Assistant, Department of Physics, Kent State University
- 1979 - 1983** Engineer Trainee, Computer Sciences Corporation, John C. Stennis Space Center (summers)

PROFESSIONAL EXPERIENCE SUMMARY

2017 - Present - Senior Advisor for Research, The University of North Carolina System

Primary Responsibilities: responsibilities include prioritization of research funding processes to include Research Opportunities Initiative and Strategic Research Fund activities, examine research reporting methodologies, and examine/propose enhancing inter-campus capacity building in concert with Chief Research Officers of the University of North Carolina constituent institutions.

2013-Present - North Carolina A & T State University, Greensboro, NC

Provost and Vice Chancellor for Academic Affairs (2013 – 2017): Provided strategic vision and operational leadership for the Division of Academic Affairs. The Division of Academic Affairs is composed of eight colleges and one school (College of Agriculture and Environmental Sciences; College of Art, Humanities, and Social Sciences; College of Business and Economics; College of Education; College of Engineering; College of Health and Human Sciences; College of Science and Technology; Joint School of Nanoscience and Nanoengineering, and The Graduate College). In addition, the Division includes Library Services, Enrollment Management (Office of Admissions, Office of the Registrar, Office of Financial Aid, and New Student Programs), Office of Strategic Planning and Institutional Effectiveness (Assessment & Analytics, Accreditation and Institutional Effectiveness, and Institutional Research), EHRA Salary and Budget Administration, and the Office of International Affairs.

Accomplishments include:

- Led major restructuring of the academic enterprise within Division of Academic Affairs
 - Created three new colleges (Arts, Humanities, and Social Sciences; Health and Human Sciences; and Science and Technology)
 - Reorganized the College of Education (formerly School of Education)
 - Reconfigured ERP to reflect new academic structure
- Designed and implemented the Faculty of the Future Program in collaboration with the academic deans and the Division of Human Resources
 - Redesigned faculty hiring process
 - Implemented structured new faculty hire packages

- Designed and initiated implementation of Non-Tenure Track Faculty initiative
- Led successful Southern Association of Colleges and School Commission on Colleges 5th Year Review (notification in 2016 and fully compliant)
- Developed Department Chair Workshop series
- Enrollment growth
 - Total: 12.5% increase over four years (2013 - 2017)
 - New Freshman: 29.7% increase over four years (2013-2017)
 - Transfer: 90.7% increase over four years (2013-2017)
 - First Time Fulltime Retention Rate: 3% increase for fall 2016 cohort

Faculty Member Department of Physics (2013–present)

1990 - 2013 - *University of Southern Mississippi*, Hattiesburg, MS

Dean (2010 -2013) and Interim Dean (2009 - 2010) College of Science and Technology: Provided strategic vision and operational leadership for all aspects of the College. Responsibilities included all matters related to academic leadership and administration, curriculum, budgeting, facilities, external development, faculty, staff and students. The College was composed of the Department of Biological Sciences, Department of Chemistry and Biochemistry, Department of Geography and Geology, Department of Human Capital Development, Department of Mathematics, Department of Physics and Astronomy, School of computing, School of Construction, School of Criminal Justice, School of Polymers and High Performance Materials, and Center for Science and Mathematics Education. In addition to the Hattiesburg Campus, the College utilized teaching and research sites in Ocean Springs, MS (Gulf Coast Research Laboratory), Long Beach, MS (Gulf Park Campus), and NASA’s Stennis Space Center.

Accomplishments include:

- Approval of the University’s first engineering degree program, bachelor’s degree in Polymer Science and Engineering, by the Board of Trustees of Mississippi Institutions of Higher Learning
- Revised and revamped faculty hiring process designed to attract research/scholarly active faculty in collaboration with the Provost and Vice President for Research
- Organized the first workshop on mentoring a diverse population of graduate research and teaching assistants
- Transitioned management of Chemical Store external vendor to reduce cost, enhance product availability, and enhance efficiency for faculty, staff, and student researchers
- Approval of master’s degree in Logistics, Trade, and Transportation
- Developed and implemented faculty raise process with discipline specific market, productivity, and equity components
- Scale up of “Math Zone” to include renovated facility to support emporium method of introductory mathematics instruction to enhance student success

Associate Dean, College of Science and Technology (2004 – 2009): Oversaw academic and curricular affairs of the College. Areas of primary focus included curriculum development and assessment, student success, and diversity and inclusion. Responsibilities included chairing the College Curriculum Committee, the body responsible for approval of curricular additions and modifications, coordination and oversight of student success and pre-professional programs. In addition, the associate dean provided campus level leadership of the University of Southern Mississippi's component of Louis Stokes Mississippi Alliance for Minority Participation, an NSF funded state-wide alliance to increase underrepresented minority participation in undergraduate STEM programs, and the Alliance for Graduate Education in Mississippi, an NSF funded AGEF program composed of comprehensive universities in the Mississippi Institutions of Higher Learning System with a goal to increase the number of underrepresented minorities receiving STEM doctoral degrees.

Accomplishments include:

- Approval of the bachelor's degree in Forensic Science with emphasis areas in anthropology, biological science, chemistry and biochemistry, and criminal justice
- Successful productivity reviews for the doctoral degree in Coastal Sciences, the master's degree in Geology, and the master's degree in Physics mandated by The Board of Trustees, Mississippi Institutions of Higher Learning.
- Supported creation of the pilot "Math Zone" project, to assess the emporium method of introductory mathematics instruction

Chair, Department of Physics and Astronomy (1998 – 2003): Provided leadership and administration for all matters related to administration, curriculum management, student success, budgeting, facilities, external development, research, and faculty/staff development.

Accomplishments include:

- Revision of undergraduate physics degree curriculum to enhance recruitment, student success, and employment readiness of graduates
- Revision of master's degree curriculum to enhance enrollment and employment readiness of graduates
- Revision of physics licensure emphasis of the undergraduate physics degree program

Faculty Member Department of Physics and Astronomy (1990–2013) and Department of Chemistry and Biochemistry (1993 – 2013)

2007 - 2013	Professor of Physics and Astronomy Professor of Chemistry & Biochemistry
1996 - 2007	Associate Professor of Physics and Astronomy Associate Professor of Chemistry & Biochemistry
1993 - 1996	Assistant Professor of Chemistry and Biochemistry

1990 - 1996

University of Southern Mississippi
Assistant Professor of Physics and Astronomy, University of
Southern Mississippi

Teaching and Mentoring:

- Designed and implemented the new course Foundations and Frontiers in Physics the first course for an undergraduate physics major designed to enhance student success through mathematical and problem solving skills development, and exposure to career paths in physics.
- Redesigned Elementary Modern Physics lecture and laboratory courses
- Redesigned Advanced Physics Laboratory (capstone course for the undergraduate major)
- Supervised pre-college, undergraduate, and graduate research assistants in hands on laboratory research
- Designed and implemented a new course in computational liquid crystals for the doctoral program in computational science

Research:

The research focus centered on processing, characterization, and materials development of liquid crystal and polymer dispersions (LCPDs) utilizing thermal analysis and laser light scattering. The research program included faculty and student collaborators from the School of High Performance Materials and the Department of Chemistry and Biochemistry

BOARD EXPERIENCE

Executive Committee (Class of 2017 and chair-elect for 2018), Council on Academic Affairs, Association of Public and Land-grant Universities

Gateway University Research Park Board of Directors (2013-2017)

Go Global NC, Board of Directors (2015-present)

Guilford Merchants Association, Board of Directors (2016-2017)

Hattiesburg Area Habitat for Humanity Board (2003-2006)

MCNC, Board of Directors (2016-present)

North Carolina School for Science and Mathematics, Board of Trustees (2014-2017)

AWARDS & HONORS

- 2010 Delta State University Alumni Hall of Fame
- 2001 New Millennium Award, Kent State University, Kent, OH
- 2000 Academic Hall of Fame, Picayune School District, Picayune, MS
- 1992 Golden Key National Honor Society
Sigma Pi Sigma National Physics Honor Society
- 1991 Sigma Xi Research Society
- 1991 NASA ASEE Fellow Stennis Space Center
- 1986 - 1987 Student Representative, Liquid Crystal Institute Executive Committee
- 1983 - 1986 Patricia Roberts Harris Fellow, Kent State University
- 1983 Omicron Delta Kappa Honor Society
- 1982 Faculty Scholar Nominee
- 1981 All Academic Gulf South Conference,
Delta State University (Football)

1 SCHOLARSHIP

1.1 Publications (Refereed Articles)

1. "Polymer Dispersed Liquid Crystals for Display Application," *Molecular Crystals and Liquid Crystals* **165**, 511-531 (1988), J.W. Doane, A. Golemme, J.L. West, J.B. Whitehead, Jr., and B.G. Wu.
2. "Wide Angle View PDLC Displays," *Society for Information Display Digest*, **Vol. XXI**, 224 (1990), J.W. Doane, J.L. West, J.B. Whitehead, Jr., and D.S. Fredly.
3. "Light Scattering from a Dispersion of Aligned Nematic Droplets," *Journal of Applied Physics* **73** (3), 1057-1065 (1 February 1993), J.B. Whitehead, Jr., S. Zumer, and J.W. Doane
4. "Anisotropic Network Formation by Photopolymerization of Liquid Crystal Monomers in a Low Magnetic Field," *Macromolecules* **27**, 3790 (1994), C.E. Hoyle; T. Watanabe, and J.B. Whitehead, Jr.
5. "Reorientation Dynamics of Liquid Crystal-Filled Porous Polymer Membranes," *Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals* **262** 1313-22 (1995), J.B. Whitehead, Jr., and G.P. Crawford.

6. "Effect of Monomer Functionality on the Morphology and Performance of the Holographic Transmission Gratings Recorded on Polymer Dispersed Liquid Crystals," *Macromolecules* **36** (3), 630 – 638 (2003), M. De Sarkar, N.L. Gill, J.B. Whitehead, Jr., and G.P. Crawford.
7. "Polymer Dispersed Liquid Crystal Materials Fabricated with Frontal Polymerization," *Journal of Polymer Science, Part A (Polymer Chemistry)* **41** (1), 204-212 (2003), N. Gill, J.A. Pojman, J. Willis, and J.B. Whitehead, Jr.
8. "Probing the Supra-Nano-Scale and Micron Scale Structure of Liquid Crystal and Polymer Dispersions Using Laser Light Scattering," *Journal of the Society for Information Display*, **13**(9), 793-798 (2005), G.T. Warren, and J.B. Whitehead, Jr.
9. "Matrix Physical Structure Effect on the Electro-Optic Characteristics of Thiol-ene Based H-PDLC films," *Polymer*, **47**(8), 2741-2749 (2006), A.F. Senyurt, G.T. Warren, J.B. Whitehead, Jr., and C.E. Hoyle.
10. "Humidity-Responsive Polymeric Films Based on AOT-Water Reverse Microemulsions." *Journal of Applied Polymer Science*, **106**(3), 1957-1963 (2007) J.E. Marszalek, J.A. Pojman, K.L. Aultman, C.E. Hoyle, and J.B. Whitehead, Jr.

1.2 Publications (Non-Refereed Articles and Proceedings)

1. "Light Transmission and Scattering of Polymer Dispersed Liquid Crystals," *Liquid Crystal Chemistry, Physics, and Applications, SPIE*, **1080**, 250-257 (1989), J.B. Whitehead, Jr., S. Zumer, and J.W. Doane.
2. "Photopolymerization of Oriented Liquid Crystalline Monomers," *Proceedings of SPIE-The International Society for Optical Engineering* **1665**, 212-220 (1992), C.E. Hoyle, T. Watanabe, and J.B. Whitehead, Jr.
3. "Photopolymerization of Oriented Liquid-Crystalline Monomers," *RadTech '92 North Am. UV/EB Conf. Expo., Conf. Proc.* **2**, 751-757 (1992), T. Watanabe, C.E. Hoyle, and J.B. Whitehead, Jr.
4. "Photoinduced Generation of Macroscopically Oriented Liquid Crystalline Films," *Polymer Preprints*, **34**(1), 703-704 (March 1993), C.E. Hoyle; T. Watanabe, E. Brister, and J.B. Whitehead, Jr.
5. "Kinetics of Polymerization and Properties of Polymeric Thin Films Generated from Macroscopically Oriented Liquid Crystalline Monomers," *Proceedings of SPIE-The International Society for Optical Engineering*, **2042**, 115-124 (1994) C.E. Hoyle, J.B. Whitehead, Jr., E. Brister, and T. Watanabe.

6. "Photopolymerization of Polymer Dispersed Liquid Crystals in Microgravity," *Proceedings of SPIE-The International Society for Optical Engineering*, **3123**, 128-134 (1997), J.B. Whitehead, Jr., and M.M. Chandler.
7. "Photopolymerization of Bismaleimide and Divinyl Ether in the Presence of Liquid Crystal," *Polymer Preprints (American Chemical Society, Division of Polymer Chemistry)*, **39(2)**, 596-597 (1998) W. Kuang, D. Yang, J.B. Whitehead, Jr., C.E. Hoyle; and S. Jonsson.
8. "Characterization of the Phase Separation of the E7 Liquid Crystal Component Mixtures in a Thiol-ene-based Polymer," *Proceedings of SPIE-The International Society for Optical Engineering*, **4107**, 189-197 (2000) J.B. Whitehead, Jr., N.L. Gill, and C. Adams.
9. "Compositional Effects on Formation of Polymer Dispersed Liquid Crystalline Films," *RadTech 2000, The Premier UV/EB Conference & Exhibition, Technical Conference Proceedings Baltimore, MD, United States*, 795-803, (2000), M.L. Hladik, J.B. Whitehead, Jr., C.E. Hoyle, and W. Kuang.
10. "Liquid Crystal and Polymer Dispersions in a Microgravity Environment," *Polymer Preprints*, **41(1)**, 1066-1067 (2000), J.B. Whitehead, Jr. and G.P. Crawford.
11. "Characterization of the Phase Separation of the E7 Liquid Crystal Component Mixtures in a Thiol-ene-based Polymer," *Proceedings of SPIE-The International Society for Optical Engineering (Liquid Crystals IV)* **4107**, 189-197 (2000), J.B. Whitehead, Jr., and N.L. Gill.
12. "Photocuring of Polymer Dispersed Liquid Crystals Based upon Bismaleimides and Multifunctional Vinyl Ethers," *Technical Conference Proceedings - RadTech 2002*, 1059-1066 (2002), M.L. Hladik, C.E. Hoyle, and J.B. Whitehead, Jr.
13. "Liquid Crystal and Polymer Dispersions: Morphological Control," *Proceedings of SPIE-The International Society for Optical Engineering*, **5741**, 83-89 (2005), J.B. Whitehead, Jr., and N.L. Gill.

1.3 Publications (Abstracts)

1. "Electro-optic Response of Nematic Liquid Crystals Confined to Submicron-sized Cylindrical Cavities," *Bulletin of the American Physical Society*, **37** (7), 1650 (1992), J.B. Whitehead, Jr.
2. "Electro-optic Response of Nematic Liquid Crystals Confined to Submicron-sized Cylindrical Cavities," *Southeastern Section of the American Physical Society*, (August 1992) J.B. Whitehead, Jr.

3. "Photopolymerization of Oriented Liquid Crystalline Monomers," *SPIE/SPE Symposium on Electronic Imaging, Science and Technology*, San Jose, CA (1992), T. Watanabe, C.E. Hoyle, and J.B. Whitehead, Jr.
4. "Electro-optic Response of Nematic Liquid Crystals Confined to Submicron-sized Cylindrical Cavities," *American Physical Society March Meeting*, Seattle, WA (1993), J.B. Whitehead, Jr., and L. Zhong.
5. "Photoinduced Generation of Macroscopically Oriented Liquid Crystalline Films," *Polymer Preprints*, Vol. **34(1)**, 703-704 (March 1993), C.E. Hoyle, T. Watanabe, E. Brister, and J.B. Whitehead, Jr.
6. "Kinetic Factors Influencing Polymerization of Liquid Crystalline Systems," *Symposium on Photopolymers and Applications, IS&T 47th Annual Conference* (May 15-20, 1994), C.E. Hoyle, J.B. Whitehead, Jr., D. Kang, C.P. Chawla, T. Watanabe, S.E. Williamson, and D. Sheng.
7. "Switching Times of Liquid Crystal-filled Cylinders," *15th International Liquid Crystal Conference*, Budapest, Hungary (July 3-8, 1994), J.B. Whitehead, Jr. and G.P. Crawford.
8. "Optical Properties of Liquid Crystal Dispersions," *Symposium on Optical and Electroactive Polymers*, Southeastern Section of the American Chemical Society, Birmingham, AL (October 16-19, 1994), J.B. Whitehead, Jr., G.P. Crawford, and S. Zumer.
9. "Optical Properties of Liquid Crystal Dispersions," *March Meeting of the American Physical Society*, San Jose, CA (1995), J.B. Whitehead, Jr., and G.P. Crawford
10. "Polymer Dispersed Liquid Crystals Produced Via Frontal Epoxy Curing," *Polymer Materials Science and Engineering*, **75**, 303-304, (1996), J.A. Pojman, N.L. Gill, J. Willis, and J.B. Whitehead, Jr.
11. "Photopolymerization of Polymer Dispersed Liquid Crystal Films in Microgravity," *16th International Liquid Crystal Conference*, Kent, OH, (1996) J.B. Whitehead, Jr., M.M Chandler, and L. Mathias.
12. "Polymer Dispersed Liquid Crystal Materials Produced Via Frontal Epoxy Curing," *212th American Chemical Society Meeting*, Orlando, FL, August 25-29, (1996), J.A. Pojman, N.L. Gill, J. Willis, and J.B. Whitehead, Jr.
13. "Thermal Investigation of Liquid Crystal Mixtures," *Mississippi Academy of Sciences Conference*, Biloxi, MS, Feb. 26-27 (1998), N.L. N.L. Gill Woullard, and J.B. Whitehead, Jr.
14. "Thermal Investigation of Binary Liquid Crystal Mixtures," *Mississippi Academy of Sciences Conference*, Biloxi, MS, Feb. 26-27 (1998), N. Woullard, N.L. Gill, and J.B. Whitehead, Jr.
15. "Thermal Studies of the Eutectic Liquid Crystal E7 with the UV Curable Norland Optical Adhesive 65," *Book of Abstracts, 215th American Chemical Society National Meeting*, Dallas, March 29-April 2 (1998), N.L. Gill, J.B. Whitehead, Jr., and N. Woullard.

16. "Investigation of Multifunctional Maleimide/Vinyl Ether Photopolymerization by Computer Simulation," *Polymer Preprints*, **40**(2), 932-933 (1999), R.B. Pandey, Y. Danning, L. Yimin, C.E. Hoyle, S. Jonsson, and J.B. Whitehead, Jr.
17. "Characterization of Binary Eutectic Liquid Crystalline Mixtures," *American Chemical Society National Meeting*, New Orleans, LA (August 1999), N.L. Gill, J.B. Whitehead, Jr., and N. Woullard.
18. "A Thermal Investigation of Binary Liquid Crystalline Mixtures," *Mississippi Academy of Sciences*, Tupelo, MS (February 1999), N.L. Gill, J.B. Whitehead, Jr., and N. Woullard.
19. "Kinetics of Formation and Electro-optic Properties of Polymer Dispersed Liquid Crystal Networks made from Maleimide/Vinyl Ethers," *American Chemical Society National Meeting*, New Orleans, LA (August 1999), C.E. Hoyle; M.L. Hladik, J.B. Whitehead, Jr., and W. Kuang.
20. "Liquid Crystal and Polymer Dispersions in a Microgravity Environment," *Book of Abstracts, 219th ACS National Meeting, POLY-620*, San Francisco, CA (March 2000), J.B. Whitehead, Jr., and G.P. Crawford.
21. "Phase Separation in Polymer-dispersed Liquid Crystals," *Polymer Materials Science Engineering*, **82**, 336-337 (2000), C.E. Hoyle, J.B. Whitehead, Jr., N.L. Gill, M.L. Hladik, and W. Kuang.
22. "Compositional Effects on Formation of Polymer Dispersed Liquid Crystalline Films," *RadTech 2000, The Premier UV/EB Conference & Exhibition, Technical Conference Proceedings*, Baltimore, MD, April 9-12 (2000), M.L. Hladik, J.B. Whitehead, Jr., C.E. Hoyle, and W. Kuang.
23. "Phase Separation and Self-assembly of Liquid Crystals and Polymer Dispersions: A Ground-based Feasibility Study for Microgravity," *Microgravity Materials Science Conference*, Huntsville, AL (June 2000), J.B. Whitehead, Jr., and G.P. Crawford.
24. "Characterization of PDLCs Composed of the Single Liquid Crystal Component, K21, in a Thiol-ene-based Polymer," *Proceedings of SPIE-The International Society for Optical Engineering*, **4463** (Liquid Crystals V), 188-197 (2001), J.B. Whitehead, Jr., and N.L. Gill.
25. "Liquid Crystals and Polymer Dispersions in a Microgravity Environment," *National Society of Black Physicists Annual Meeting*, (2002), J.B. Whitehead, Jr., and G.P. Crawford.
26. "Photocuring of Polymer Dispersed Liquid Crystals Based Upon Bismaleimides and Multifunctional Vinyl Ethers," *RadTech 2002*, Indianapolis, IN (Apr. 28-May 1, 2002) M.L. Hladik, C.E. Hoyle, and J.B. Whitehead, Jr.
27. "Liquid Crystal and Polymer Dispersions: Tailoring the Morphology," *Particles 2003 Conference*, Toronto, Canada, (August 23-26, 2003), J.B. Whitehead, Jr., and N.L. Gill.

28. "Liquid Crystal and Polymer Dispersions: Tailoring the Morphology," *Marshall Space Flight Center* (March 3, 2004), J.B. Whitehead, Jr.
29. Liquid Crystal and Polymer Dispersions: Morphological Control," *Photonics West*, San Jose, CA (January 26, 2005), J.B. Whitehead, Jr., and N.L. Gill. **(Invited)**

1.4 Publications (Book Chapters)

1. G.P. Crawford, J.B. Whitehead, Jr., and S. Zumer, "Optical Properties of Polymer Dispersed Liquid Crystals," in *The Optics of Thermotropic Liquid Crystals*, edited by S. Elston and R. Sambles (London: Taylor and Francis, 1998).
2. J.B. Whitehead, Jr. and G.P. Crawford, "Liquid Crystal and Polymer Dispersions in a Microgravity Environment," in *Polymer Research in Microgravity: Polymerization and Processing*, ACS Symposium Series No. 793, edited by J.P. Downey and J.A. Pojman, (Washington, DC: American Chemical Society, 2001).
3. M. Hladik, A. F. Senyurt, C. E. Hoyle, J.B. Whitehead, Jr., C. M. Werneth, and G. T. Warren, "Maleimide-vinyl ether-based polymer dispersed liquid crystals," in *Stimuli-Responsive Polymeric Films and Coatings*, ACS Symposium Series No. 912, edited by M. Urban (Washington, DC: American Chemical Society, 2005).

1.5 Publications (Reports and Manuscripts)

1. "Infrared Imaging of Nitrous Oxide for Hydrogen Leak Detection," NASA/ASEE Summer Faculty Fellowship Program Final Report, Stennis Space Center, Bay St. Louis, MS, 1991.
2. "Infrared Imaging of Nitrous Oxide for Hydrogen Leak Detection," Final report for NASA Contract Number SSC-043 NAS113-330, 1992.
3. "Evaluation of Polymer Dispersed Liquid Crystal Devices," NASA Grant NAG13-28 (final report) 1997.
4. "Optimization of Polymer Dispersed Liquid Crystals," Department of Defense EPSCoR Grant F49620-98-1-0132 (final report) 1998.
5. "Phase Separation and Self-Assembly," NASA Grant NAG8-1684 (final report) 2005.

2 EXTERNAL FUNDING

1. "ACE Implementation Project: Data Science and Analytics Advancing STEM Education at North Carolina A&T State University"
Organization: North Carolina A&T State University
PI: Tang; Co-PI: Byrd, Kanipes, Whitehead, and Dozier
(\$1,275,794, National Science Foundation, 2017)

2. “Planning Project: Data Science and Analytics Advancing STEM Education at North Carolina A&T State University”
 Organization: North Carolina A&T State University
 PI: Whitehead; Co-PI: Tang, Byrd, Dozier, Wilson-Kennedy
 (**\$350,000**, National Science Foundation, 2016)

3. “Implementation Grant: TALENT-21 Interdisciplinary Undergraduate Program at the Interface of Mathematics and Biology”
 Organization: North Carolina A&T State University
 PI: Whitehead; Co-PI: Smith, Tang, and Simkins
 (**\$2,088,832**, National Science Foundation, 2010)
 *Assumed PI duties in 2013

4. “NCA&T ADVANCE Institutional Transformation: Catalyzing Gender, Leadership, and Scholarship Equity through Institutional Change for All”
 Organization: North Carolina A&T State University
 PI: Whitehead; Co-PI: Wilson-Kennedy, Byrd, Kanipes, Cogger, and Luster-Teasley (**\$3,638,881**, National Science Foundation, 2014)

5. “NCLSAMP Bridge to the Doctorate Fellowship Program”
 Organization: North Carolina A&T State University
 PI: Whitehead; Co-PI: Sarin, and Byrd
 (**\$987,000**, National Science Foundation, 2013)

6. “A Multinational Partnership to Incite Innovation via New Generation Tailored Polymers for Interfaces”
 Organization: University of Southern Mississippi
 PI: Lochhead; Co-PI: Burge, Whitehead, Morgan, Graben, and Patton
 (**\$599,715**, National Science Foundation, 2009)

7. “North Carolina LSAMP Bridge to the Doctorate Program at NCA&T (2015-2017)”
 Organization: North Carolina A&T State University
 PI: Whitehead; Co-PI: Sarin, and Williams
 (**\$986,982**, National Science Foundation, 2015)

8. “EBEE: Enhancing Bioscience and Engineering Education through Curriculum Integration and Research Experiences in Systems Biology”
 Organization: North Carolina A&T State University
 PI: Whitehead*; Co-PI: Williams, Goins, and Sarin
 (**\$1,249,155**, National Science Foundation, 2010)
 * Assumed PI duties in 2013

9. “North Carolina Louis Stokes Alliance for Minority Participation”
 Organization: North Carolina A&T State University
 PI: Whitehead; Co-PI: Williams
 (**\$3,999,821**, National Science Foundation, 2012)

10. “Louis Stokes Mississippi Alliance for Minority Participation”
Organization: University of Southern Mississippi component of statewide project led by Jackson State University
PI: Whitehead
\$230,000, National Science Foundation, 2010)
11. “NASA Space Grant”
PI: Whitehead
Organization: University of Southern Mississippi component of statewide project led by University of Mississippi
(**\$30,000**/year, National Aeronautical and Space Administration)
12. “PFI: A Multinational Partnership to Incite Innovation via New Generation Tailored Polymers for Interfaces”
Organization: University of Southern Mississippi
PI: Lochhead; Co-PI: Burge, Whitehead, Morgan, Graben, and Patton
(**\$599,715**, National Science Foundation, 2009)
13. “IGERT: Entrepreneurship at the Interface of Polymer Science and Medicinal Chemistry”)
PI: Whitehead*; Co-PI: Malone, Williamson, Wicks, Mathias, Avery, and Otaigbe
Organization: University of Southern Mississippi in collaboration with University of Mississippi
(**\$3,755,080**, National Science Foundation, 2003)
* Assumed PI duties in 2007
14. “Louis Stokes Mississippi Alliance for Minority Participation”
PI: Whitehead
Organization: University of Southern Mississippi component of statewide project led by Jackson State University
(**\$303,645**, National Science Foundation, 2007)
15. “Alliance for Graduate Education in Mississippi”
PI: Whitehead; Co-PI: Siltanen
Organization: University of Southern Mississippi component of statewide project led by University of Mississippi
(**\$900,000**, National Science Foundation, 2004)
16. “Louis Stokes Mississippi Alliance for Minority Participation”
PI: Whitehead
Organization: University of Southern Mississippi component of statewide project led by Jackson State University
(**\$131,859**, National Science Foundation, 2004)

17. "Space & Missile Materials Technology,"
 PI: Whitehead
 Organization: University of Southern Mississippi
 (\$20,000, United States Army Space & Missile Defense, 2001)

18. "Phase Separation and Self-Assembly of Liquid Crystals and Polymer Dispersions: A Ground-based Feasibility Study for Microgravity"
 PI: Whitehead; Co-PI: Crawford (Brown University)
 Organization: University of Southern Mississippi
 (\$310,000, NASA, 2000)

19. "Optimization of Polymer Dispersed Liquid Crystals"
 PI: Whitehead; Co-PI: Hoyle, and Pandey
 Organization: University of Southern Mississippi
 (\$360,000, Department of Defense (AFOSR/EPSCoR) 1997)

20. "Acquisition of Thermo-Analytical Instrumentation for Materials"
 PI: Griffin; Co-PI: Khanna, Pojman, Creed, and Whitehead
 Organization: University of Southern Mississippi
 (\$141,139, National Science Foundation (Academic Research Infrastructure Program), 1995)

21. "Evaluation of Polymer Dispersed Liquid Crystal Devices"
 PI: Whitehead
 Organization: University of Southern Mississippi
 (\$218,268, NASA, 1993)

22. "Infrared Imaging of Nitrous Oxide for Hydrogen Leak Detection"
 PI: Whitehead
 Organization: University of Southern Mississippi
 (\$15,000, NASA: Stennis Space Center, 1992)

23. "Mississippi Alliance for Minority Participation (MAMP)"
 PI: Whitehead
 Organization: University of Southern Mississippi component of statewide project led by Jackson State University
 (\$302,000, National Science Foundation, 1991)

3 PRESENTATIONS

3.1 Research

1. "Toroidal-Bipolar Configuration in Index Matched Epoxy Films," *Workshop on Polymer Dispersed Liquid Crystals I*, General Motors Internal Progress Report on PDLC Symposium 1 (General Motors Research Laboratory, Warren, MI: February 1989), G. P. Crawford, J. B. Whitehead Jr., and J. W. Doane.

2. "Light Transmission and Scattering of Polymer Dispersed Liquid crystals," J.B. Whitehead, Jr. Department of Physics & Astronomy, *University of Southern Mississippi*, September 14, 1990.
3. "Light Transmission and Scattering of Polymer Dispersed Liquid crystals," J.B. Whitehead, Jr. Department of Chemistry and Biochemistry, *University of Southern Mississippi*, November 2, 1990.
4. "Optical Studies of Liquid Crystal Materials Confined to Small Cavities," J.B. Whitehead, Jr., Department of Polymer Science, *University of Southern Mississippi*, September 27, 1991.
5. "Optical Studies of Liquid Crystal Materials Confined to Small Cavities," J.B. Whitehead, Jr., Department of Physics, *University of New Orleans*, October 2, 1991.
6. "Liquid Crystals: The Fourth Phase of Matter," J.B. Whitehead, Jr., Sigma Xi Research Society, *University of Southern Mississippi*, October 31, 1991.
7. "Photopolymerization of Oriented Monomeric Liquid Crystals," T. Watanabe, C.E. Hoyle, and J.B. Whitehead, Jr., *RadCure '92*, Boston, MA, February 1992.
8. "Light Transmission and Scattering of Polymer Dispersed Liquid crystals," J.B. Whitehead, Jr., Department of Physics, *Mississippi State University*, March 22, 1992.
9. "Photopolymerization of Oriented Liquid Crystalline Monomers," T. Watanabe, C.E. Hoyle, and J.B. Whitehead, Jr., *SPIE/SPE Symposium on Electronic Imaging, Science and Technology*, San Jose, CA, 1992.
10. "Electrooptic Response of Nematic Liquid Crystals Confined to Submicron-sized Cylindrical Cavities," J.B. Whitehead, Jr., and L. Zhong, March Meeting of the American Physical Society, Seattle, WA, March 22-26, 1993.
11. "Photoinduced Generation of Macroscopically Oriented Liquid Crystalline Films," C.E. Hoyle, T. Watanabe, E. Brister, and J.B. Whitehead, Jr., *Denver American Chemical Society Meeting*, April 1993. **(Invited)**
12. "Kinetics of Polymerization and Properties of Polymeric Thin Films Generated from Macroscopically Oriented Liquid Crystalline Monomers," C.E. Hoyle, J.B. Whitehead, Jr., E. Brister, and T. Watanabe, *SPIE Symposium on Photopolymer and Applications in Holography, Optical Data Storage, Optical Sensors, and Interconnects*, Quebec City, Canada, August 16-20, 1993.
13. "Light Transmission and Switching Times of Liquid Crystal-Filled Cylinders," J.B. Whitehead, Jr., Department of Physics and Astronomy, *University of Southern Mississippi*, Hattiesburg, MS, October 1, 1993.
14. "Photopolymerization of Liquid Crystalline Monomers-Kinetics and Anisotropic Network Formation," T. Watanabe, C.E. Hoyle, and J.B. Whitehead, Jr., *RadTech Asia '93*, Tokyo, Japan, November 10-13, 1993.
15. "Kinetic Factors Influencing Polymerization of Liquid Crystalline Systems," C.E. Hoyle, J.B. Whitehead, Jr., D. Kang, C.P. Chawla, T. Watanabe; S.E.

- Williamson, and D. Sheng, *Symposium on Photopolymers and Applications, IS&T 47th Annual Conference*, May 15-20, 1994.
16. "From Bathing to Computer Displays: The World of Liquid Crystals," J.B. Whitehead, Jr., Blue Cross Blue Shield Lecture, *University of Southern Mississippi*, Hattiesburg, MS, October 19, 1994.
 17. "Optical Properties of Liquid Crystal Dispersions," J.B. Whitehead, Jr., G.P. Crawford, and S. Zumer, Symposium on Optical and Electroactive Polymers, *Southeastern Section of the American Chemical Society*, Birmingham, AL, October 16-19, 1994.
 18. "Switching Times of Liquid Crystal-Filled Cylinders," J.B. Whitehead, Jr., and G.P. Crawford *15th International Liquid Crystal Conference*, Budapest, Hungary, July 3-8, 1994.
 19. "Optical Properties of Liquid Crystal Dispersions," J.B. Whitehead, Jr. and G.P. Crawford, *March Meeting of the American Physical Society*, San Jose, CA, 1995.
 20. "Characterization of Liquid Crystal Polymer Dispersions (LCPD) Produced in Propagating Fronts of Epoxy Curing," N.L. Gill, J.B. Whitehead, Jr. and J.A. Pojman, *American Chemical Society*, Memphis, TN, 1995.
 21. "Electro-optic Studies of Liquid Crystals," J.B. Whitehead, Jr., Department of Chemistry, *Mississippi State University*, Starkville, MS, January 1996.
 22. "Surface Interactions of Liquid Crystals Confined in Nuclepore Membranes," E.L. Robinson, J.B. Whitehead, Jr., and G.P. Crawford, *Mississippi Academy of Sciences*, Jackson, MS, February 1996.
 23. "A Comparative Study of Polymer Dispersed Liquid Crystal Films Photopolymerized in Both a Microgravity and a Terrestrial Environment," M.M. Chandler, J.B. Whitehead, Jr., and L. Mathias, *Mississippi Academy of Sciences*, Jackson, MS, February 1996.
 24. "Mathematical Analysis of Reorientation Dynamics of Liquid Crystals Confined to Micron-sized Cylindrical Pores," K. Thornton, T. Pickett, and J.B. Whitehead, Jr., *Mississippi Academy of Sciences*, Jackson, MS, February 1996.
 25. "Reorientation Dynamics of Liquid Crystal-Filled Porous Polymer Membranes," J.B. Whitehead, Jr., Department of Physics, *Jackson State University*, Jackson, MS April 4, 1996.
 26. "Photopolymerization of Polymer Dispersed Liquid Crystals Films in a Microgravity Environment," J.B. Whitehead, Jr., M.M. Chandler, and L. Mathias, *16th International Liquid Crystal Conference*, Kent State University, Kent, OH, June 24-28, 1996.
 27. "Surface Interactions of Liquid Crystals Confined in Nuclepore Membranes," E.L. Robinson, J.B. Whitehead, Jr., and G.P. Crawford, *16th International Liquid Crystal Conference*, Kent State University, Kent, OH, June 24-28, 1996.

28. "Polymer Dispersed Liquid Crystal Materials Produced Via Frontal Epoxy Curing," J.A. Pojman, N.L. Gill, J. Willis, and J.B. Whitehead, Jr. *212th ACS Meeting*, Orlando, FL, August 25-29, 1996.
29. "Characterization of Liquid Crystal Polymer Dispersions (LCPD) Produced in Propagating Fronts of Epoxy Curing," N.L. Gill, J.B. Whitehead, Jr., and J.A. Pojman, *Mississippi Academy of Sciences*, Biloxi, MS, February 20-21, 1997.
30. "Surface Interactions of Liquid Crystals Confined to a Nuclepore Membrane," E.L. Robinson, J.B. Whitehead, Jr., and G.P. Crawford, *Mississippi Academy of Sciences*, Biloxi, MS, February 20-21, 1997.
31. "Phase Separation Studies of Polymer Dispersed Liquid Crystals," K. Williams and J.B. Whitehead, Jr., *Mississippi Academy of Sciences*, Biloxi, MS February 20-21, 1997.
32. "Liquid Crystal Studies at the University of Southern Mississippi, J.B. Whitehead, Jr. Department of Physics, *University of Mississippi*, April 15, 1997.
33. "Characterization of Liquid Crystal/Polymer Dispersions," J.B. Whitehead, Jr., *Liquid Crystal Institute/Kent State University*, Kent, OH, November 5, 1997.
34. "Polymer Dispersed Liquid Crystals and Traveling Fronts," N.L. Gill and J.B. Whitehead, Jr., *EPSCoR Conference*, January 21-22, 1998, Jackson, MS.
35. "Thermal Investigation of Liquid Crystal Mixtures," N.L. Gill, N. Woullard and J.B. Whitehead, Jr., *Mississippi Academy of Sciences*, February 26-27, 1998, Biloxi, MS.
36. "Thermal Investigation of Binary Liquid Crystal Mixtures," N. Woullard, N.L. Gill, and J.B. Whitehead, Jr., *Mississippi Academy of Sciences*, February 26-27, 1998, Biloxi, MS.
37. "Thermal Studies of the E7 Component Mixture," N.L. Gill, J.B. Whitehead, Jr., and N. Woullard, *American Chemical Society Meeting*, Mar. 29 – April 2, 1998, Dallas, TX.
38. "Investigation into the Phase Separation of Polymer Dispersed Liquid Crystals," J.B. Whitehead, Jr., *Department of Chemistry*, Jackson State University, Dec. 20, 1998.
39. "A Thermal Investigation of Binary Liquid Crystalline Mixtures," N.L. Gill, J.B. Whitehead, Jr., and N. Woullard, *Mississippi Academy of Sciences*, Tupelo, MS, February 1999.
40. "Liquid Crystal and Polymer Dispersions," J.B. Whitehead, Jr., *University of South Alabama*, Mobile, Al, February 5, 1999.
41. "Kinetics of Formation and Electro-optic Properties of Polymer Dispersed Liquid Crystal Networks Made from Maleimide/Vinyl Ethers," C.E. Hoyle, M.L. Hladik, J.B. Whitehead, Jr., and W. Kuang, *218th American Chemical Society National Meeting*, New Orleans, LA, August 1999.
42. "Investigation of Multifunctional Maleimide/vinyl Ether Photopolymerization by computer Simulation," R.B. Pandey, Y. Danning Y. Liu, C.E. Hoyle, S.

- Jonsson, and J.B. Whitehead, Jr., *218th American Chemical Society National Meeting*, New Orleans, LA, August 1999.
43. "Characterization of Binary Eutectic Liquid Crystalline Mixtures," N.L. Gill, J.B. Whitehead, Jr., and N. Woullard, *218th American Chemical Society National Meeting*, New Orleans, LA, August 1999.
 44. Henry, M.; Martray, C.; Miller, A.; J.B. Whitehead, Jr., *AAHE Conference on Faculty Roles and Rewards*, New Orleans, LA, February 5, 2000.
 45. "Liquid Crystal and Polymer Dispersions in a Microgravity Environment," J.B. Whitehead, Jr. and G.P. Crawford, *American Chemical Society National Meeting*, San Francisco, CA, March 2000.
 46. "Phase Separation in Polymer-Dispersed Liquid Crystals," C.E. Hoyle, J.B. Whitehead, Jr., N.L. Gill, M.L. Hladik, and W. Kuang, *American Chemical Society National Meeting*, San Francisco, CA, March 2000.
 47. "Liquid Crystal and Polymer Dispersions in a Microgravity Environment," J.B. Whitehead, Jr., and G.P. Crawford, *American Chemical Society National Meeting*, San Francisco, CA, March 2000.
 48. "Compositional effects on formation of polymer dispersed liquid crystalline films," M.L. Hladik, J.B. Whitehead, Jr., C.E. Hoyle, and W. Kuang, *RadTech 2000*, Baltimore, MD, United States, April 9-12, 2000.
 49. "Liquid Crystals and Polymer Dispersions in a Microgravity Environment," J.B. Whitehead, Jr., *Alcorn State University*, Lorman, MS, April 17, 2000.
 50. "Liquid Crystal and Polymer Dispersions," J.B. Whitehead, Jr., *Liquid Crystal Multi-University Research Initiative Meeting*, California Institute of Technology, Pasadena, CA, June 23, 2000.
 51. "Characterization of the Phase Separation of the E7 Liquid Crystal Component Mixtures in a Thiol-ene-based Polymer," J.B. Whitehead, Jr., N.L. Gill, and C. Adams, *SPIE-The International Society for Optical Engineering*, July 2000.
 52. "Liquid Crystals and Polymer Dispersions in a Microgravity Environment," J.B. Whitehead, Jr., *Brown University*, Providence, RI, October 12, 2000.
 53. "Liquid Crystal and Polymer Dispersions: A Microgravity Investigation," J.B. Whitehead, Jr., and G.P. Crawford, *University of the South*, Sewanee, TN, October 22, 2001.
 54. "Liquid Crystal and Polymer Dispersions: Tailoring the Morphology," J.B. Whitehead, Jr. and N.L. Gill, *Particles 2003 Conference*, Toronto, Canada, August 23-26, 2003. **(Invited)**.
 55. "Liquid Crystal and Polymer Dispersions: Tailoring the Morphology," J.B. Whitehead, Jr., *Marshall Space Flight Center*, Huntsville, AL, March 3, 2004.
 56. "Liquid Crystal and Polymer Dispersions: Morphological Control," J.B. Whitehead, Jr. and N.L. Gill, *Photonics West*, San Jose, CA, January 26, 2005. **(Invited)**.

57. "Liquid Crystal and Polymer Dispersions," J.B. Whitehead, Jr., Department of Physics and Astronomy, *University of Southern Mississippi*, Hattiesburg, MS, November 4, 2005.
58. "The World of Liquid Crystals," J.B. Whitehead, Jr., 15th Annual Elliott-Nowell-White-Science Symposium: The Roy Lee Wiley Lectures, *Delta State University*, Cleveland, MS, October 13, 2006.

3.2 Outreach

1. "Liquid Crystals," *Mississippi School for Math and Science*, Columbus, MS, October, 1991
2. "The Atomic Bomb and Liquid Crystal Shutters," Sixth Grade Science class, *Lillie Burney Elementary School*, Hattiesburg, MS, February 13, 1992
3. "Science Careers," Eight Grade Class, *Travillion Attendance Center*, Hattiesburg, MS, February 27, 1992
4. Physics Demonstrations, Physics Class, *Forrest County AHS*, Brooklyn, MS, April 16, 1992
5. "Physics in Action: Liquid Crystals," Advanced Chemistry & Physics students: *Picayune Memorial High School*, Picayune, MS, January 9, 1992
6. "Preparation for College," *Cruisin Toward a Career Program*, Hattiesburg, MS May 5, 1992
7. "Increasing Minority Participation in Physics," South Mississippi Alliance for Physics, *Harrison Central High School*, Gulfport, MS, May 9, 1992
8. Demonstrations: Eight Grade Physical Science Class, *Hawkins Junior High School*, Hattiesburg, MS, May 19, 21, and 26, 1992
9. "Careers in Science," J.B. Whitehead, Jr. College Discovery Program, *University of Southern Mississippi*, Hattiesburg, MS, June 8, 1992
10. Assembly Speaker, *Moss Point High School*, Moss Point, MS, November 15, 1992.
11. Physics Demonstrations, *Long Beach High School*, Long Beach, MS, November 15, 1992
12. Demonstrations: Science Class, *Hattiesburg High School*, Hattiesburg, MS, January 28, 1993
13. "Cholesteric Liquid Crystals," *Mississippi School for Math and Science*, Columbus, MS, March, 1993
14. "Careers in Science," Hattiesburg High School Career Day, *Hattiesburg High School*, Hattiesburg, MS, May 1993
15. "Youth Motivation Task Force," *Stillman College*, Tuscaloosa, AL, February 9-11, 1994
16. Speaker: Black History Month Program, *Pearl River Community College*, Poplarville, MS, February 15, 1994

17. "African American Scientists," 2nd Grade Class, *Thames Elementary School*, Hattiesburg, MS, February 23, 1994
18. "Rap Session," Advance Placement Chemistry Class, *Picayune Memorial High School*, Picayune, MS, December 9, 1994
19. Presentation to Pearl River County Retired Teachers Association, *Crosby Memorial Library*, Picayune, MS, October 6, 1999
20. "Snell's Law," Lectured Physics classes (3) *Picayune Memorial High School*, Picayune, MS, October 26, 1999
21. "Hands-on Science Workshops," *New Medina*, Marion County, MS, July 2004
22. "Diversity, Culture, and Religion in Science," University of Notre Dame, South Bend, IN, November 2012 and November 2013

3.3 Conferences/Workshops

1. "Minority Participation in Science," *National Science Foundation Regional Physics Workshop*, University of Southern Mississippi, Hattiesburg, MS, July, 1991. (Presenter)
2. "Minorities and Women: Increasing Participation in Science," *National Science Foundation Physics Regional Workshop*, University of Southern Mississippi, Hattiesburg, MS, August 8, 1992. (Presenter)
3. "Hands-on Liquid Crystal Workshop," South Mississippi Alliance for Physics, *University of Southern Mississippi*, Hattiesburg, MS, November 7, 1992, J.B. Whitehead, Jr. and G.P. Crawford.
4. "Polymers in Microgravity," L. Mathias, J.A. Pojman, and J.B. Whitehead, Jr., *University of Southern Mississippi*, Hattiesburg, MS, May 31- June 2, 1995.(Organizer)
5. "A CCLI Reviewers Perspective," Course Curriculum and Laboratory Improvement Workshop, Office of Research and Sponsored Programs, *University of Southern Mississippi*, Hattiesburg, MS, April 18, 2001 (Presenter).
6. "GRE Preparation," Alliance for Graduate Education in Mississippi Summer Research Program, *University of Southern Mississippi*, Hattiesburg, MS, July 26, 2001(Presenter).
7. "GRE Preparation," Alliance for Graduate Education in Mississippi Summer Research Program, *University of Southern Mississippi*, Hattiesburg, MS, June 26, 2003. (Presenter)
8. "Course Curriculum and Laboratory Improvement Workshop," Office of Research and Sponsored Programs, *University of Southern Mississippi*, Hattiesburg, MS, April 14, 2003. (Presenter)
9. "Course Curriculum and Laboratory Improvement Workshop," Office of Research and Sponsored Programs, *University of Southern Mississippi*, Hattiesburg, MS, May 5, 2004. (Presenter)

10. “Course Curriculum and Laboratory Improvement Workshop,” Office of Research and Sponsored Programs, *University of Southern Mississippi*, Hattiesburg, MS, March 31, 2005. (Presenter)
11. Discussion Leader: 2007 *Gordon Conference on Liquid Crystals*, New Hampshire, June 2007
12. “Resonances in Liquid Crystals,” Liquid Crystal Institute, *Kent State University*, September 17, 2010. (**Invited**)

4 Teaching and Mentoring

4.1 Undergraduate Instruction (University of Southern Mississippi)

(AST111-2003) “General Astronomy I,” Introduction to early astronomy, tools, of astronomers, and the solar system

(PHY111-1993, 1999) “General Physics I,” Algebra and trigonometry-based introductory physics

(PHY112-2000) “General Physics II,” Continuation of Algebra and trigonometry-based introductory physics

(PHY190*-2001, 2002) “Frontiers and Foundations in Physics,” The first course for a physics major that surveys the scope and breadth of the discipline

(PHY201- 1991, 1992, 1994) “General Physics with Calculus I,” Calculus-based introductory physics course recommended for physics majors

(PHY202-1990, 1991, 1995) “General Physics with Calculus II,” Continuation of PHY201 Calculus-based introductory physics recommended for physics majors

(PHY341*-1992, 1993, 1998) “Optics,” Rays, refractive and reflective surfaces, lens design, and the electromagnetic theory of light

(PHY341L*-1992, 1993, 1998) “Optics Laboratory,” Laboratory for Optics

(PHY350-1995, 1998) “Mechanics I,” Mathematical treatment of the dynamics of particles and rigid bodies

(PHY351-1996, 1999) “Mechanics II,” A continuation of PHY350

(PHY361*-1990, 1991, 1992, 1997, 1998, 2000, 2003) “Elementary Modern Physics I,” Survey of atomic particles, radiation, and X-rays, Optical Spectra

(PHY361L*-1999, 2000, 2003, 2004, 2006, 2005) “Elementary Modern Physics I Laboratory,” Laboratory to accompany Elementary Modern Physics I

(PHY460*-1991, 1992, 1994, 1998, 2001, 2002, 2004, 2005) “Advanced Physics Laboratory,” Advanced experiments in modern physics (Capstone course)

(PHY464-1993) “Fundamentals of solid State Physics,” The basic physical processes which occur in solids and semiconductors

*New course development or significant course modification

4.2 Graduate Instruction

(PHY564-1993) “Fundamentals of solid State Physics,” The basic physical processes which occur in solids and semiconductors

(PHY601-1996, 2007) “Classical Mechanics,” A formal mathematical development of graduate level mechanics

(SC713*-1996) “Liquid Crystals: A Computational Approach,” Fundamentals of liquid crystals from a computational perspective

*New course development or significant course modification

4.3 Pre-College Research Experiences

Nine (9) high school research assistants were mentored within the research program while at the University of Southern Mississippi. One of the high school research assistant led projects resulted in a provisional patent.

4.4 Undergraduate Research Experiences

Twenty (20) undergraduate research assistants were mentored within the research program at the University of Southern Mississippi. The collection of undergraduate research assistants hailed from majority and minority serving institutions with a goal of enhancing underrepresented minority participation in STEM disciplines. In addition, a number of the undergraduate research assistants were members of the University of Southern Mississippi Honor’s College and completed honor’s theses.

4.5 Masters Graduates

(Mentored/advised students in the Department of Physics and Astronomy, Chemistry and Biochemistry, and co-advised students in the School of Polymers and High Performance Materials)

Thazin Aung (Physics & Astronomy, 2008) University of Southern Mississippi
(Non-thesis option)

Sarah Hicks (Physics & Astronomy, 2006) University of Southern Mississippi
Thesis Title: “Investigation into the electro-optic Properties of Thiol-ene

Based PDLC”

Mallika Dhar (Physics & Astronomy, 2008) University of Southern Mississippi
Thesis Title: “Studies of Thermally Induced Phase Separation of Liquid Crystal/Pre-polymer Mixtures”

Edwin Robinson (Chemistry & Biochemistry, 1997) University of Southern Mississippi
Thesis Title: “Surface Interactions of Liquid Crystals Confined in Nuclepore Membranes”

Tracy Pickett (Physics & Astronomy, 1995) University of Southern Mississippi
Thesis Title: “Liquid Crystal Director Configurations in Confined Geometries”

Li Zhong (Physics & Astronomy, 1993) University of Southern Mississippi
Thesis Title: “Electro-optic Study of Confined Liquid Crystals”

4.6 Doctoral Graduates

Carl Drake (Science Education, 2009) University of Southern Mississippi
Dissertation Title: “African American College Student Attitudes toward Physics and Their Effect on Achievement”

Tracy Pickett (Science Education, 2002) University of Southern Mississippi
Dissertation Title: “Mathematical Preparation and success in introductory Physics”

Nicole Gill (Chemistry and Biochemistry, 2002) University of Southern Mississippi
Dissertation Title: “Investigation into the Phase Separation of PDLCs”

5 SERVICE

5.1 Professional Service

5.1.1 Workshops

1. “The Future of Materials Science and Materials Education,” (Organizing Committee) September 2008

5.1.2 Panel Reviews

1. National Science Foundation Curriculum, Course, and Laboratory Improvement (1999)
2. National Science Foundation (Division of Materials Research (1994)
3. National Science Foundation (Small Business and Innovative Research Review) 8/ 20-22/1991

5.1.3 Proposal Reviews

1. Eisenhower Title II Summer Institutes (Mississippi Institutions of Higher Learning) (1999)
2. Petroleum Research Fund (1999)
3. National Science Foundation

5.1.4 Manuscript Reviewer (Past and Present)

Applied Physics Letters, CHAOS, Journal of Applied Physics, Journal of the Optical Society of America, Materials Research Society, Mississippi Academy of Sciences, Molecular Crystals and Liquid Crystals, Physics Essays, Physical Review

5.1.5 Articles and Symposia

Polymer Processing in Microgravity ACS Symposium Series (2000)
Reviewed Article for “Liquid Crystal Display Technology” John Wiley & Sons (2000)

5.2 University Service

5.2.1 North Carolina A& T State University

1. University Space Committee, Chair (2013- 2017)
2. Chief Information Officer Search Committee, Co-Chair (2016 – 2017)

5.2.2 University of Southern Mississippi

1. Head Football Coach Search Committee (2011)
2. Vice-President for Research Search Committee (2009 -2010)
3. Presidential Inauguration Committee (2008)
4. Chair, College of Arts and Letters Deans Search Committee (2007-2008)
5. Center for Black Studies, Board Member (2007)
6. Southeastern Universities Research Association (SURA) Jefferson Lab Committee (2003 - 2007)
7. Space Utilization and Allocation Committee (2002 - 2007)
8. Eagle Dining Advisory Committee (2007)
9. University Appeals Committee (1999 - 2007)
10. Alliance for Graduate Education in Mississippi (AGEM); Executive Board Member (2001 - 2005)
11. NCAA Self-study Committee (2004-2005)
12. National Institute for Undersea Science and Technology (NIUST) Director Search Committee (2004)
13. Science and Technology Dean's Search Committee (2003)

14. McNair Scholars Review Panel (1999 - 2003)
15. Campus Advisory Committee: USM Presidential Search (2001- 2002)
16. Tenure Appeals Committee (1998 - 2001)
17. Steering Committee: NCAA Interim Report (1999 - 2000)
18. Sub-Committee: Fiscal Integrity (NCAA Interim Report) (1999)
19. Search Committee (Interim Scientific Computing Coordinator) (1999)
20. Search Committee (Faculty position in Computer Science) (1999)
21. Council of Chairs (1999)
22. Proposal Writing Workshop (Panel Member) (6/25/19 98)
23. Search Committee for the Vice-President for Research (1998)
24. DEPSCoR Campus Review Committee (1998)
25. Graduate Admissions and Credits Committee(1998 - 2008)
26. Recreational Sports Advisory Committee(1998 - 1999)
27. Strategic Planning Committee (1998 - 1999)
28. Athletic Council (1998 - 2005)
29. Academic Council: Chair; By-Laws Committee (1994)
30. Faculty Senate (1993-1995)
31. United Way Campaign: Team Captain, University of Southern Mississippi (1993)
32. NASA EPSCoR Task Force: Mississippi Research Consortium (1993)
33. USM Football Recruitment Saturday (1992)
34. Cultural Diversity Committee (1991-1992)
35. Environmental Committee (1991)

5.3 College Service

5.3.1 University of Southern Mississippi

1. National Society of Black Engineering Students, Advisor (1990-1993, 1999, 2000, 2004, 2005, 2007 - 2012)
2. Chair Curriculum Committee College of Science and Technology (2004-2009)
3. Advisor, Future Doctors of America (2004 - 2005)
4. Organized Mentoring Workshop for College of Science and Technology Faculty (2007)
5. Organized CoST Presidential Scholar Interviews (2004 - 2005)

6. Chair, Department of Physics and Astronomy Chair Search Committee (2004)
7. Curriculum Committee College of Science and Technology (1998 - 2003)
8. Rueben Hall Dedication and Technology Installation Committee, Chair (2001)
9. College of Science and Technology, Interim Dean Search Committee (2001)
10. College of Science and Technology Space Utilization Committee (1999)
11. Annual College of Science and Technology Phonathon (1999)
12. Unit Captain, USM United Way Campaign(1999-2000)
13. Hattiesburg Clinic Lecture Series, Speaker Evaluation Committee (1995)
14. Site Coordinating Committee (1994)
15. MCSR Summer Stipend Awards Committee (School of Mathematical Sciences) (1994)
16. Ad Hoc Committee on Organization (School of Mathematical Sciences) (1994-1995)
17. NASA Space Grant Committee(School of Mathematical Sciences) (1991-1995)
18. Mississippi Alliance for Minority Participation, Site Coordinator (1990-1992)
19. Summer Faculty Research Awards Committee (1991)

5.4 Departmental Service

5.4.1 University of Southern Mississippi

1. Chair, Department of Physics and Astronomy Optics Search Committee (2005)
2. Chair, Department of Physics and Astronomy Chair Search Committee (2004)
3. Library Liaison Dept. of Physics and Astronomy (2000-2003)
4. Faculty Advisor Sigma Pi Sigma (2000)
5. Faculty Advisor Society of Physics Students (2000)
6. Organized the 2000 St. Clair Scholarship Competition (2000-2003)
7. Organized the USM/NASA High School Physics Competition (1999-2003)
8. Physics Electives Committee Chair (1994)
9. Developed Physics Teacher Certification Curriculum (1994)
10. Graduate Committee (1994)

11. Governance Committee(1992)
12. Design, fabrication, and oversight of Ethernet based computer network (1992)
13. Undergraduate Committee Chair (1993)
14. Designed new undergraduate recruitment brochure (1990-1993)
15. Society of Physics Students Advisor (1990-1993)
16. Undergraduate Recruiter (1990-1993)

5.5 Student Committee Service (member)

5.5.1 University of Southern Mississippi

1. Polymer Science (11 doctoral committees)
2. Chemistry & Biochemistry (8 doctoral committees and 2 master's committees)
3. Science and Mathematics Education (1 doctoral committee)
4. Physics and Astronomy (3 master's committees)
5. Engineering Technology (1 master's committee)
6. Kent State University, Department of Physics (1 dissertation committee)

5.6 Outreach

5.6.1 University of Southern Mississippi

1. Judge, Petal High School Senior Projects (2006-2007)
2. Habitat for Humanity Board (2003-2006)
3. Shadow Day (Oak Grove Middle School) (4/24/2003)
4. Hattiesburg Middle School Career Day (3/3/2000)
5. Diversity Advisory Panel, Hattiesburg American Newspaper (Spring 2000)
6. Science Fair Judge, Oak Grove Upper Elementary (2/3/2000)
7. Presentation to Class of High School Counselors 6/29/ 2000)
8. Hosted Visitors from Stewpot Community Services (1999)
9. Organized Breakfast for forum speaker Brian Green (10/5/99)
10. Television interviews for WDAM and WHLT; Bolide siting (7/7/99)
11. Volunteer, Oak Grove Elementary POW WOW Day (5/8/98)
12. Oak Grove Elementary Science Fair Judge (1995)
13. Goldberg Contest Judge for South Mississippi Alliance for Physics, Gulfport, MS (1994)
14. Minority Science Day, College of Science and Technology (1992)

15. Modern Physics Laboratory Experience Day, Advanced Physics Class:
Brookhaven High School (1994)