## Felecia McInnis Nave, Ph.D.

## Provost and Vice President for Academic Affairs Professor, Chemical Engineering

## ACADEMIC BACKGROUND

**2005 Ph.D. in Engineering**, Department of Chemical and Environmental Engineering, University of

Toledo, Toledo, Ohio

Advisor: Dr. Maria R. Coleman

**Dissertation Title:** Impact of Mobile Phase Parameters on the Transport Properties of

Proteins in Immobilized Metal Affinity Hydrogel Membranes.

2001 M.S. in Chemical and Environmental Engineering, Department of Chemical & Environmental

Engineering University of Toledo, Toledo, Ohio

**1996** B.S. (cum laude) in Chemistry, Alcorn State University, Lorman, Mississippi

#### APPOINTMENTS AND POSITIONS

2014 – Present <u>Provost and Senior Vice President for Academic Affairs,</u>

Prairie View A&M University

2014 – Present Professor of Chemical Engineering, Prairie View A&M University

Responsibilities include full-time instruction at the undergraduate and graduate level for the Chemical Engineering Department and College of Engineering core courses. Additional responsibilities include committee assignments; grant writing, research and publication, student advisement as specified by the department chair, curriculum development, K-12 outreach, recruitment, organization advisement, and community college liaison.

2010 – 2014 Associate Provost & Associate Vice President for Academic Affairs,

Prairie View A&M University, Prairie View, Texas

Duties and Responsibilities:

- Supports the Provost & Senior Vice President for Academic Affairs in the
  areas of institutional and curricular planning; university strategic planning;
  the evaluation and assessment of student learning outcomes and curricula;
  accreditation compliance; academic advising, retention, and registration; and
  other support services including academic technology and enrollment
  management.
- Supervises a direct staff of two, serves as an integral member of the senior administrative leadership team in the Office for Academic Affairs, and works closely with academic program leaders, department heads, faculty, and students.

- Offers educational and leadership strategies to support efforts of academic units to excel their mission of research/creative activities, teaching and learning, and engagement.
- Conduct administrative reviews of the academic units, identifying and implementing on-going operational effectiveness initiatives, and development and implementation of initiatives aimed at general student success.
- Oversees the University Admissions and Academic Standards Committee, the University Academic Council, and Complaint and Appeals Committees.
- Serves as a member of the Texas A&M University System University Metrics (Empower U) Committee and Student Learning Outcomes (SLO) Committee. Also reviews, formulates, and recommends policies, procedures and processes that improve the academic quality of the University and the academic indicators of the student body.
- Engage in fundraising initiatives and serves as principal investigator for grants to increase student scholarships, professional development of female faculty at HBCUs, and basic and applied research.
- Holds the rank of Full Professor in the College of Engineering and Texas A&M University graduate faculty.
- Supervised the coordination and implementation of New Core 2014, including course development, faculty training, assessment and continuous improvement.

#### **Accomplishments:**

- Worked with leadership to design and implement processes that focus on improving retention and graduation rates, decreasing grade inflation, and improving student academic support services at the College and University
- Elected as a member of the Board of the American Association of Blacks in Higher Education (AABHE).
- Oversaw the TAMUS Board approval and implementation of the new Core as mandated by the Texas Higher Education Coordinating Board
- Secured revenue stream that provides more than \$700,000 per year to the Office for Academic Affairs
- Strengthened academic support services through the \$1M expansion of the testing center, tutoring center, and distance education
- Facilitated the implementation of two new content management systems to support the production of the undergraduate and graduate catalogs (Leapfrog) and University as well as discipline specific assessment (TaskStream)
- Facilitated the implementation of a new course assessment system, student grievance process, which has improved customer service and functionality in the Office for Academic Affairs
- Coordinated professional development diversity workshops for female STEM faculty

## 2009-2010 <u>Interim Assistant Dean, Roy G. Perry College of Engineering,</u>

Prairie View A&M University, Prairie View, Texas

#### Duties and Responsibilities:

• Supported the Dean of the College of Engineering in the areas of curricula planning; student support; budgeting; College strategic

- planning; retention; and support services including faculty development and outreach.
- Served as in integral member of the Dean's Leadership Council.
- Worked collaboratively with internal and external constituencies to develop new partnerships, programs, and professional relationships
- Oversight of existing student programs and activities and implementing new dynamic and innovative programs to support the academic and professional development of engineering students
- Identified and implemented academic curricula to strengthen and enhance student performance
- Oversight of recruitment and retention initiatives
- Engaged in fundraising initiatives and served as principal/coinvestigator for grants to increase scholarships and financial support to enhance access, international experiences, and College excellence.
- Managed the scholarship program and developed/update policies and guidelines.
- Wrote the Standard Operating Procedures for new initiatives and revised existing policies and procedures.
- Served as academic advisor for the Society of Women Engineers (SWE) and established a chapter of the Society of Hispanic Professional Engineers (SHPE).
- Oversight of all summer programs offered under the College umbrella.

#### **Accomplishments:**

- Serves as PI for the Prairie View A&M University/Texas A&M
   University ADVANCE PAID grant and as a member of the leadership
   team that provides leadership and counsel for female faculty at the 14
   HBCUs with ABET accredited Colleges or Schools of Engineering
- Wrote and revised policy and procedures guidelines for the College of Engineering student support services
- Coordinated all summer programs under the College umbrella.
   Implemented training and conducted workshops to assist PIs with understanding University guidelines and processes and coordinating successful summer programs
- Worked with the leadership to develop polices and programs that improved retention and graduation rates. Retention rates between the freshman and sophomore year improved by ~43%
- Worked with the leadership to implement a recruitment strategy that resulted in a ~40% increase in College enrollment 2008-2010
- Served as Co-PI (primary author) for the NACME Block grant renewal totaling \$168,000
- Established the Society of Hispanic Engineers to support the College's growing Hispanic population
- Developed and revised the marketing and recruitment materials for the College
- Published the first College of Engineering Newsletter and established the College of Engineering Celebration of Excellence Dinner

#### 2009- 2014

#### Associate Professor, Prairie View A&M University, Prairie View, Texas

Responsibilities include full-time instruction at the undergraduate and graduate level for the Chemical Engineering Department and College of Engineering core courses. Additional responsibilities include committee assignments; grant writing, research and publication, student advisement as specified by the department chair, curriculum development, K-12 outreach, recruitment, organization advisement, and community college liaison.

#### **Accomplishments:**

- Received more than \$3M in external and internal funding to support research and educational activities
- Revamped the Bioengineering concentration
- Developed Introduction to Chemical Engineering course
- 2009 Nominated for the National Society of Women Engineers Faculty Advisor Award
- 2009 Recipient of the Prairie View A&M University Student Organization Advisor of the Year
- Established Society of Biological Engineers
- Strengthened PVAMU partnership in the Synthetic Biology Research Center
- Coordinated professional development workshops on graduate school in partnership with GEM

#### **2008** – *present*

#### Texas A&M University Graduate Faculty, Texas A & M University System

Responsibilities include participation in graduate education at A&M System universities through serving on graduate committees, advising graduate students, and teaching graduate courses.

#### 2006 - 2008

# **Program Coordinator**, STEM-Prep Enrichment Camp, Prairie View A&M University, Prairie View, Texas

Responsibilities included the design, development, implementation, and assessment of the STEM-Prep Institute Summer Camp, a program funded by the Department of Education Minority Serving Institution Enrichment Program (MSIEP). Coordinate curricula and enrichment activities for 9<sup>th</sup>-12<sup>th</sup> grade students to encourage and increase the number of rural students, particularly women in pursuing careers in STEM disciplines. Additional responsibilities included administrative, management, and supervisory duties as assigned by the principal investigator.

#### 2005 - 2010

# <u>Freshman Faculty Advisor</u>, <u>Department of Chemical Engineering</u>, <u>Prairie View A&M University</u>, <u>Prairie View</u>, <u>Texas</u>

Responsibilities included advisement, mentorship and academic evaluation of incoming chemical engineering freshman and transfer students. Additional duties included evaluation of provisional student admits, team-teaching of Introduction to Chemical Engineering, Computer Science, and Technology course, and teaching of Introduction to Chemical Engineering & Laboratory course.

#### **Summer 2005**

# <u>Chemistry Coordinator</u>, Pre-College Institute Summer Program, Prairie View <u>A&M University</u>, Prairie View, TX

Designed and taught Chemistry lectures, laboratory and enrichment activities for 9<sup>th</sup>-12<sup>th</sup> grade students attending pre-college institute summer program.

#### **Summer 2004**

# <u>Visiting Teaching Scholar</u>, University of Missouri-Columbia Southwestern Bell Science Education Center, Columbia, MO

Responsibilities included observation and evaluation of summer teacher and student science and mathematics programs offered by the Center.

#### Summer 2004 Summer 2003

# <u>Professional Development Coordinator, Minority Introduction to Engineering and Science (MITES) Summer Program, Prairie View A&M University, Prairie View. Texas</u>

Designed and implemented activities aimed at introducing students to and encouraging interest in the fields of Engineering, Computer Science, and Technology. Additional responsibilities included coordination of field trips, speakers, and engineering project activities.

#### 2003 - 2005

# <u>Freshman Faculty Coordinator</u>, College of Engineering, Prairie View A&M University, Prairie View, Texas

Served as the College of Engineering faculty liaison to University College. Attended monthly meetings with University College counselors, administrative staff and faculty representatives to provide departmental updates and report on college policy changes. Additional duties included academic advisement during summer registration and periodic presentations to University College counselors on the advisement of engineering, technology, and computer science students.

#### 2003 - 2009

#### Assistant Professor, Prairie View A&M University, Prairie View, Texas

Responsibilities included full-time instruction at the undergraduate and graduate level for the Chemical Engineering Department and College of Engineering core courses. Additional responsibilities included committee assignments; grant writing, research and publication, student advisement as specified by the department chair, curriculum development, K-12 outreach, recruitment, organization advisement, and community college liaison.

#### Accomplishments:

- Tenured and Promoted
- Lead the development and implementation of a "new" Bioengineering concentration in the Department of Chemical Engineering effective fall 2008.
- 2008 Recipient Prairie View A&M University College of Engineering Outstanding Service Award

#### **AWARDS & HONORS**

- 2015 Top 30 Influential Women of Houston Award
- 2013 Diverse Issues Emerging Scholars Under 40
- 2009 Nominated for the National Society of Women Engineers Faculty Advisor Award
- 2009 Recipient of the Prairie View A&M University Student Organization Advisor of the Year
- 2008 Invitee to the Louis Stokes Council of Opportunity in Education Policy Summit, Washington, DC
- 2008 Recipient Prairie View A&M University College of Engineering Outstanding Service Award

2008 Prairie View A&M University Spotlight Women History Month 2008 Nominee for the Prairie View A&M University College of Engineering Outstanding Teacher 2006 - 2008 STEM Prep Summer Enrichment Camp Service Award, Prairie View A&M University 2006 Recipient of the Carl Storm Underrepresented Minority Fellowship Travel Award to the Gordon Research Conference -Membranes: Materials & Processes, Colby & Sawyer, New London, New Hampshire 2006 Recipient of the Texas A&M University Michael E. DeBakey Institute Summer Fellow 2005 Recipient Multi-Cultural Teaching Scholars Program, Visiting Scholar in the Southwestern Bell Science Education Center at the University of Missouri-Columbia 2001-2003 Recipient of the Office of Naval Research Historically Black Engineering College Future Faculty Fellowship, 1998-2001 Research Assistantship, Dept. of Chemical and Environmental Engineering, University of Toledo 1997-1998 Recipient of the Alcoa Fellowship, Dept. of Chemical Engineering, University Arkansas 1997-1998 Graduate School Fellowship, University of Arkansas 1997 graduated magna cum laude, Chemistry Department, Alcorn State University 1995 Who's Who Among American College Students, Alcorn State University 1994 Elected to Alpha Kappa Mu Honor Society, Alcorn State University 1992-1996 Recipient of Full-Academic Scholarship, Alcorn State University 1992 Recipient of the Jefferson Davis County Alumni Scholarship

#### **PUBLICATIONS AND PRESENTATIONS**

(\*\*Indicates publications submitted and/or completed with undergraduate/ graduate students)

#### **Journal Publications**

- 1. Rice, D., Bonner, F., Lewis, C., Alfred, M., Nave, F., Frizell, S. (2016) Reversing the Tide in Science, Engineering, Technology and Mathematics (STEM): Academically Gifted African American Students in Historically Black Colleges & Universities. Journal of Research Initiatives 2(1).
- 2. Thompson, A., Nguyen, D.\* **Nave, F.M.** (2013) Characterization of PVA-IDA Hydrogel Crosslinked with 1.25%, 2.5% and 5% Glutaraldehyde. GSTF International Journal of Chemical Sciences. 2013:1(1).
- 3. Nave, F.M., Thompson, A., Kirksey, V\*. (2013) Functionalization and Characterization of Immobilized Metal Affinity Hydrogel Membranes. GSTF Journal of Engineering Technology: 2(1).
- 4. Cui, S., Wang, Y., Yang, Y., Nave, F., Harris, K. (2011). Connecting Incoming Freshman with Engineering Through Hands-On Projects. *American Journal of Engineering Education*, Vol. 2, No. 2.
- 5. Nafukho, F., Bonner, F., & Nave, F. (2010). Career Behavior Strategies for Minority Students in Adult Education, Career and Technical Education, Human Resource Development and STEM Disciplines *International Journal of Vocational Education and Training Volume 18, Issue 2*.
- 6. Frizell, S. & Nave, F. (2009). Increasing the Retention of Females of Color in Engineering and Technology Degree Programs through Professional Development Activities *Journal of Systemics*, *Cybernetics and Informatics*, Vol. 7.
- 7. Bonner, F., Alfred, A., **Nave, F.**, Lewis, C., & Frizell, S. (2009). Historically Black Colleges and Universities (HBCUs) and Academically Gifted Black Students in Science, Technology, Engineering and Mathematics (STEM): Discovering the Alchemy for Success. *Journal of Urban Education: Focus on Enrichment, Vol.6, No. 2.*

- 8. Nave, F.M., Y.Z. Luo, and M. R. Coleman. (2008) "Impact of Mobile Phase Parameters on Transport Properties of Metal Affinity Hydrogel Membranes", *Separation Science and Technology*, 43, *Issue* 16, 4075-4098.
- 9. **Nave, F.M.,** Frizell. S, Cui, S., Obiomon, P., & Perkins, J. (2008). Charting the Course: The Impact and Implications of the Mentoring Experiences of Female Faculty in the College of Engineering at a HBCU. *Faculty Resource Network Online Journal: Advancing Women and Minorities in the Academy*.
- 10. Jennings, M., Bonner, F., Lewis, C., & **Nave, F.** (2007). The historically black college and university: A question of relevance for the African American millennial college student? *National Association of Student Affairs Professionals (NASAP) Journal*, 10(1).

#### **Book Chapter**

- 1. \*\*Lewis, C., Bonner, F., Rice, D., Cook, H., Nave, F., Frizell, S. (2011) African American, Academically Gifted, Millennial Students in METS Disciplines at Historically Black Colleges and Universities (HBCUs): Factors that Impact Successful Degree Completion. In W. F. Tate & T. Frierson (Eds.), Beyond Stock Stories and Folktales: African Americans Paths to STEM Fields. UK: Emerald Group Publishing.
- 2. Nafukho, F., Bonner, F., & Nave, F. (2009). Career Behavior Enhancement Strategies for Minority Students in Adult Education, Career and Technical Education, Human Resource Development and STEM Disciplines. *Definitive Readings in the History, Philosophy, Practice and Theories of Career and Technical Education*. Zhejiang University Press.

#### White Paper

1. Bonner, F., Nafukho, F., **Nave, F**., and Green, L. (2011) The Houston Works USA STEM Institute: Bridging the "Gap" in Regional Workforce Participation. *Houston Works* 

#### **Proceedings**

- 1. **Nave, F.** (2011) Role Peers and Family Play in the Retention of African-American Students in Engineering at HBCUs. *Proceedings of 2011 Understanding Interventions Conference for Broadening Participation* (Nashville, TX, May 27-29).
- 2. \*\*Bonner, F., Nave, F., Frizell, S., Villa, C., and Cook, H. (2009). Internal Motivation as a Factor for the Success of African-American Engineering Students enrolled in a Historically Black College and University (HBCU). *Proceedings of the 2009 ASEE Annual Conference & Exposition*, Austin, TX.
- 3. Bonner, F., Alfred, A., Nave, F., Lewis, C., & Frizell, S. (2009). Historically Black Colleges and Universities (HBCUs) and Academically Gifted Black Students in Science, Technology, Engineering and Mathematics (STEM) disciplines at Historically Black Colleges and Universities. *Proceedings of the Excellence in Education 2008: Future Minds and Creativity Conference (pp. 749-761), International Centre for Innovation in Education (ICIE)*, Ulm, Germany.
- 4. **Nave, F.,** Gyamerah, M., & Osborne-Lee, I. (2008). Targeted Infusion Project: Implementation of a Bioengineering Concentration in the Department of Chemical Engineering at Prairie View A&M University. *Proceedings of 2008 Centennial American Institute of Chemical Engineering Annual Conference* (Philadelphia, PA, November 16-21, 2008).
- 5. Nave, F. & Frizell, S. (2008). Leaving: A Preliminary Assessment of Why Minority Students Leave Chemical Engineering. *Proceedings of 2008 Centennial American Institute of Chemical Engineering Annual Conference* (Philadelphia, PA, November 16-21, 2008). **Invitation Only Panel Session**
- 6. Frizell, S., & Nave, F. (2008). Work in Progress Reexamining the Problem of Engineering Persistence of African-American Students. *Proceedings of 38th ASEE/IEEE Frontiers in Education Conference*. (Saratoga Springs, NY, October 2008).

- 7. Frizell, S, & Nave, F. (2008). Increasing the Retention of Females of Color in Engineering and Technology Degree Programs through Professional Development Activities. *Proceedings of The 6<sup>th</sup> International Conference on Education and Information Systems, Technologies and Applications: EISTA 2008* (Orlando, FL, July 2-4, 2008). Best Paper Award in the session 'Educational Research, Theories, Practice and Methodologies'.
- 8. Bonner, F., Alfred, M. Nave, F., Lewis, C., & Frizell, S. (2008). Educating African-American Gifted and Talented in STEM programs at HBCU's. *Proceedings of The International Centre for Innovation in Education (ICIE) Conference* (Paris, France, July 2-4, 2008).
- 9. **Nave, F.,** Gyamerah, M., & Osborne-Lee, I. (2008). Development of a Bioengineering Concentration in the Department of Chemical Engineering at Prairie View A&M University: Outcomes and Lessons. *Proceedings* of the *American Society of Engineering Education 2008 Conference* (Pittsburgh, PA, June 2008).
- 10. Frizell, S. & Nave, F. (2008). An Investigation of Factors Affecting the Persistence of African-American Women in Engineering Degree Programs. *Proceedings of the American Society for Engineering Education 2008 Conference* (Pittsburgh, PA, June 2008).
- 11. **Nave, F.,** Frizell. S, Cui, S., Obiomon, P., & Perkins, J. (2006). Prairie View A & M University: Assessing the impact of the STEM-Enrichment Program on Women of Color. *Proceedings of Women in Engineering Programs and Advocates Network Proceedings* (Pittsburgh PA, June 2006).

#### **Refereed Presentations**

- 1. Bonner, F., **Nave, F.,** Alfred, M., Lewis, C., Frizell, S. (2008). Academically Gifted Black Students in Science, Technology, Engineering, and Mathematics. *Texas Association for the Gifted & Talented 31*<sup>st</sup> Annual Professional Development Conference (Dallas, TX, November 12-14, 2008).
- 2. Bonner, F., Nave, F., Alfred, M., Lewis, C., & Frizell, S. (2008). An Empirical Investigation of the Success Factors Influencing Academically Gifted (High-Achieving) African American Student Success in Science, Technology, Engineering, and Mathematics (STEM) disciplines. 55th Annual Convention of the National Association for Gifted Children (poster, Tampa, Florida, October 30-November 2, 2008).

#### Presentations (abbreviated)

- 1. Bonner, F, **Nave, F**., Banda, R., Flowers, A. (2014) Identifying the Factors for Success: Academically Gifted (High-Achieving) African American and Latino Student Success in Engineering. *The Hawaii International Conference on Education* (Wakkikii, Hawaii, January 5-9, 2014).
- 2. Nave, F., Bonner, F, Lewis, C, Frizell, S., and Alfred, M. (2013) Social Capital & STEM Education. *American Educational Research Association Annual Conference* (San Francisco, CA, April 27-May 1).
- 3. Grant, C. Nave, F. Escobar, I. (2013) More than a Data Point. *Keeping Our Faculty of Color Conference IV* (Minneapolis, MN, April 14-16).
- 4. **Nave, F.** and Bonner, F. (2012) Academically Gifted African American College Students in STEM: Factors of Success in Black Colleges. *International Science and Technology Conference* (Dubai, United Arab Emirates, December 13-15).
- 5. **Nave, F.** (2012) Successful Strategies for Managing a Family and a Career in Academic. *Society of Women Engineers* (Houston, TX, November 8-12). **Panel**
- 6. **Nave, F**. (2012) Small Changes, Major Impact: Strategies for increasing scholarly productivity of female faculty at HBCUs. *Historically Black College University Faculty Network* (Orlando, FL, October 18-21).

- 7. **Nave, F**. and Thompson, A. (2012) Characterization and Comparison of Hydrogels Anchored with a Tridentate, Tetra dentate and Pent dentate Chelators. *Euro membrane Conference* (London, England, September 23-27).
- 8. Bonner, F. and **Nave, F**. (2012) Academically gifted African American College students in science, technology, engineering and mathematics: Identifying factors for success. 30<sup>th</sup> International Congress of Psychology (Cape Town, South Arica, July 22-27, 2012).
- 9. **Nave, F**. (2012) Delivering an Effective Poster Presentation. *North American Membrane Society* Annual Conference (New Orleans, LA June 8-11).
- 10. \*\*Nguyen, D., Harris, D., Thompson, A., and **Nave, F.** (2012) Characterization of Thin Film Poly (vinyl alcohol) Hydrogels with Different Immobilized Ligand Groups. *North American Membrane Society Annual Conference* (New Orleans, LA, June 9-12).
- 11. \*\*Masood, Amir, Thompson, A., and **Nave, F**. (2012) Impact of N- (2-hydroxyethyl) ethylenediamine N-N'-N'-triacetic acid (HEDT) on Properties of Membrane based Immobilized Metal Affinity. *TAMUS 2012 Louis Stokes Alliance for Minority Participation Symposium* (Kingsville, TX, March 22-24). 2<sup>nd</sup> place
- 12. \*\*Kirksey, Veniece, Thompson, A., and Nave, F. (2012) Characterizing Solubility in Metal Affinity Hydrogel Membranes with Nitrilotriacetic acid Nickel. 2012 Emerging Researchers National (ERN) Conference in STEM (Washington, DC, March 22-24).
- 13. \*\*Harris, D., Thompson, A., and **Nave, F**. (2012) Characterization of Mobile Phase Parameters using Hydrogel Membranes with Metal Affinity for Protein Purification 2012 Emerging Researchers National (ERN) Conference in STEM (Washington, DC, March 22-24).
- 14. **Nave, F**. (2012) Developing and Maintaining Undergraduate Research at a Predominately Teaching Institution. *Council on Undergraduate Research* (Trenton, New Jersey, April 23-25).
- 15. Bonner, F., and **Nave, F**. (2012) Framing and Maintaining a Research Agenda. *American Association for Blacks in Higher Education* (Atlanta, GA March 22-24). **Interactive Session**.
- 16. **Nave, F.** & Loretta Moore (2011) Highlights of ADVANCE projects at MSI. Annual ADVANCE Conference (Alexandria, VA, November 13-15) **Invitation only panel**.
- 17. **Nave, F.** (2011) ADVANCE Highlights. 2011 Council of Arts and Sciences Deans Annual Conference (Montreal, CA, November 2-4). **Invitation only panel.**
- 18. **Nave, F.** (2010) Career Options for Women at HBCUs. *Society of Women Engineers Annual Conference* (Orlando, FL, November 4-6, 2010).
- 19. **Nave, F.** (2010) Best Practices from PVAMU/TAMU ADVANCE-PAID. *Society of Women Engineers Annual Conference* (Orlando, FL, November 4-6, 2010).
- 20. Bonner, F., Nave, F., Alfred, M., Lewis, C., & Frizell, S. (2009). Academically Gifted African American Students in Historically Black Colleges and Universities (HBCUs): Challenges and Opportunities in Science, Technology, Engineering, and Mathematics (STEM) disciplines. A Symposium presented at the Association for the Study of Higher Education, (Vancouver, BC).
- 21. Bonner, F., Nave, F., Lewis, C, Alfred, M., and Frizell, S. (2009). Academically Gifted Black Students in Science, Technology, Engineering and Mathematics (STEM): A Focus on Success in Historically Black College and University (HBCU) Contexts. Presentation at the *Blacks in Higher Education Conference*, Annual National Conference on Blacks in Higher Education, Atlanta, GA.
- 22. Kirby, K. & Nave, F. (2008). Minority Science and Engineering Improvement Program: STEM Prep Summer Institute. 2008 Historically Black College A University- Undergraduate Program Annual Conference (Atlanta, GA, October 23-25, 2008).
- 23. **Nave, F.,** Lewis, C., Bonner, F., Alfred. M, & Frizell, S. (2008). Gifted African American in STEM at HBCUs: An Empirical Investigation Examining the Keys to Success. *2008 Think Tank for African American Progress* (Memphis, TN, October 1-4, 2008).
- 24. **Nave, F.**, Bonner, F., & Stevenson, T. (2008). The Impact of Climate on Minority Student Success in Engineering at Predominately White Institutions: Minority Directors' Perspectives *America Society for Engineering Education 2008 Conference Proceedings* (Pittsburgh, PA, June 2008).

25. \*\*Davis, V., Jennings, B., Nave, F., & Quick C. (2008). Alternative Procedure To Control Pressure In The Microvasculature Of The Pallid Bat's Wing. *Presented at The 2008 Annual National Organization for the Professional Development of Black Chemist and Chemical Engineers (NOBCHEE)*, Orlando, Fl.

#### Invited Talks/Workshops (abbreviated)

- 1. **Nave, F**. (2013) Data Trends: Women of Color. Women of Color Summit at Mississippi State University (Starkville, MS, February 8).
- 2. **Nave, F.** (2012) Mentoring and Networking Opportunities in Science. *India-US Workshop Women in Science Workshop* (New Delhi, India, December 10).
- 3. Nave, F. (2012) Women Entering Leadership in the Academy. Texas A&M University ADVANCE Scholars Symposium (Prairie View, TX, October 12). Panel
- 4. Nave, F. (2012) Nuts and Bolts of Landing Dream Job, "A" Job. Prairie View A&M University Society of Hispanic Professional Engineers Workshop. (Prairie View, TX, September 11)
- 5. Nave, F. (2012) Mentoring. Jackson State University ADVANCE Workshop. (Jackson, MS April 11).
- 6. **Nave, F**. (2012) Balancing Professional Aspirations and Personal Responsibilities. *Purdue Women of Color STEM Conference*. (West Lafayette, IA, April 1-3)
- 7. **Nave, F**. (2012) Crossroads: Identifying Your Path to Success. *Jefferson Davis School District* (Prentiss, MS, March 5)
- 8. Nave, F. (2011) Alcorn State University Chemistry Department (Alcorn, MS, November 17, 2011)
- 9. **Nave, F**. (2011) Cultivating Diverse Faculty Leadership in the STEM Disciplines: Best Practices. *Council of Colleges Arts & Science Deans* (Montreal, Canada, November 5-8).
- 10. **Nave, F**. (2011) Highlights of Minority Serving Institutions (MSIs) with ADVANCE Grants (panel co-chair). *2011 Annual ADVANCE Program Meeting*. (Alexandra, VA November 13-15, 2011)
- 11. Nave, F. (2011). Alcorn State University Chemistry Department (Alcorn, MS, April 1, 2011)
- 12. **Nave, F.** (2011). Forging Pathways of Success: The Engineer In You. *Jefferson Davis School District* (Prentiss, MS, February 15, 2011).
- 13. **Nave, F.** (2008). Graduate Education Selecting the Best Graduate Program. 2008 National Society of Black Engineers Region V Fall Regional Conference (Dallas, TX, October 31-November 2, 2008).
- 14. **Nave, F.** (2008). Education Research Project: An Empirical Investigation of the Factors that Affect the Success of African American Students in Engineering and Technology at HBCUs. 2008 Historically Black College And University- Undergraduate Program Annual Conference (Atlanta, GA, October 23-25, 2008).
- 15. **Nave, F.**, & Bonner, F. (2007). Understanding How Minority Engineering Students Experience College: A Glimpse at The James Worth Bagley College of Engineering. *Presented at Mississippi State University Bagley College of Engineering Faculty Workshop* (Starkville, MS, September 2007).

#### PROFESSIONAL DEVELOPMENT WORKSHOPS/CONFERENCES ORGANIZED

- 1. Co-Chair, North American Membrane Society (NAMS) Annual Conference, May 2014 Houston, TX.
- 2. Chair, NSF PVAMU/TAMU ADVANCE-PAID Professional Development Workshop, "Launching Tomorrows Leaders", May 16-18, Houston, TX.
- 3. Chair, GEM GRAD Lab, Prairie View A&M University, March 1-2, 2013. Over 80 student attendees from Prairie View, Rice, Texas Southern, majoring in STEM.
- 4. Chair, PVAMU/TAMU ADVANCE-PAID Luncheon, *Intersectionality: Examining the Conflation of Race and Gender in Academia*, November 5, 2012, Prairie View A&M University. Over 55 attendees from PVAMU representing faculty, staff, and administrators.
- 5. Co-Organizer, SynBERC Career Symposium: What You Can Be with a Ph.D.: Navigating Interdisciplinary Research in Engineering and Life Sciences, November 7, 2012, Prairie View A&M University. Sponsored in collaboration with Massachusetts Institute of Technology, Berkley

- University, and Stanford University (NSF Synthetic Biology Engineering Research Center) attended by 100 STEM students.
- 6. Chair, NSF PVAMU/TAMU ADVANCE-PAID Professional Development Workshop, "Reaching Back To Move Forward", May 17-20, 2012 Houston, TX. Over 55 attendees representing 14 HBCUs with ABET accredited Engineering Colleges or Schools.
- 7. Chair, GEM GRAD Lab, Prairie View A&M University, April 2012. Over 70 student attendees from Prairie View, Rice, and Texas A&M University, majoring in STEM.
- 8. Chair, NSF PVAMU/TAMU ADVANCE-PAID Professional Development Workshop, "Successfully Navigating Your Career", May 16-19, 2012 Houston, TX. Over 40 attendees representing 12 HBCUs with ABET accredited Engineering Colleges or Schools.
- 9. Co-Chair, SynBERC Annual Symposium, February 2010, Prairie View A&M University. Sponsored in collaboration with Massachusetts Institute of Technology, Berkley University, and Stanford University (NSF Synthetic Biology Engineering Research Center) attended by over 90 STEM students.

#### **GRANTS & CONTRACTS**

#### **Externally Funded Grants and Contracts**

- 1. **Felecia M. Nave** (PI) and Audie Thompson (Co-PI). Thurgood Marshall College Fund on behalf of Department of Defense (\$25K). *PVAMU REU in Membrane Separation*, **\$25,000**, June 1, 2013 September 39, 2013.
- 2. **Felecia M. Nave** (PI), AAAS-WIRC: International Travel Award (\$20K) *PVAMU/Jordan International Travel Award: Development & Characterization of Multifunctional Membranes*, **\$20,000**, October 1, 2012 September 31, 2013.
- 3. **Felecia M. Nave (PI)**, Karen Butler-Purry, Kendall Harris, Pamela Barber-Freeman, & Chandra Elbert (Co-PIs). National Science Foundation, *ADVANCE-PAID: Successfully Navigating Your Career: Advancing Women Faculty in Engineering & Technology at Historically Black Colleges and Universities (HBCUs), \$50,000 supplement, September 2012 through August 2013.*
- 4. **Felecia M. Nave** (**PI**), Fred Bonner, Sherri Frizell, Mary Alfred & Chance Lewis (Co-PIs). National Science Foundation, HBCU-UP *Education Research Project: Empirical Investigation of the Success Factors Impacting African-American Students in Engineering and Technology at Historically Black Universities, \$46,000 supplement, September 2011 through August 2012.*
- 5. Kendall T. Harris (PI) and **Felecia M. Nave** (**Co-PI**). National Action Council for Minorities Engineering (NACME) Block Grant, \$168,000, September 2010 through August 2013.
- 6. **Felecia M. Nave (PI)**, Karen Butler-Purry, Kendall Harris, Pamela Barber-Freeman, & Chandra Elbert (Co-PIs). National Science Foundation, *ADVANCE-PAID: Successfully Navigating Your Career: Advancing Women Faculty in Engineering & Technology at Historically Black Colleges and Universities (HBCUs), \$850,000, September 2009 through August 2013.*
- 7. Z. Zhou (PI), **Felecia M. Nave** (Co-PI), Xia Peng, Hua-jun Fan, Richard Wilkins, Alice Pendleton (Co-PIs). Department of Education, MSEIP: Integrating Nanotechnology, **\$424,000**, August 2009 through July 2012.
- 8. **Felecia M. Nave (PI)** & Sherri Frizell (Co-PI), Lockheed Martin, *PVAMU Society of Women Engineers: Leadership Series for Women of Color in the College of Engineering*, **\$2000**, Spring 2008.
- 9. **Felecia M. Nave** (**PI**), Fred Bonner, Sherri Frizell, Mary Alfred & Chance Lewis (Co-PIs). National Science Foundation, HBCU-UP *Education Research Project: Empirical Investigation of the Success Factors Impacting African-American Students in Engineering and Technology at Historically Black Universities, \$1,007,146, September 2007 through August 2010.*

- 10. **Felecia M. Nave (PI)** & Sherri Frizell, Society of Women Engineers –National, Sisters Speak: Professional Development Program for Women of Color in the College of Engineering at Prairie View A&M University, \$4,150, June 2006 through May 2007.
- 11. Irvin Osborne-Lee (PI), **Felecia M. Nave (Co-PI, primary author)**, & Michael Gyamerah (Co-PI). National Science Foundation-Supplement, FAST Team, **\$46,500**, May through August 2007 and May through August 2008.
- 12. Sherri Frizell (PI) & Felecia M. Nave (Co-PI), Engineering Information Foundation, *The Identification of Factors Affecting the Retention and Attrition of African-American Female Students in Computer Science and Engineering*, \$24,032, January through December 2007.
- 13. Irvin Osborne-Lee (PI), **Felecia M. Nave (Co-PI, primary author)**, & Michael Gyamerah (Co-PI), National Science Foundation, *Targeted Infusion Project: Development of Bioengineering Concentration in the Department of Chemical Engineering at Prairie View A&M University*, **\$149**, **718**, September 2006 through August 2008.
- 14. **Felecia M. Nave (PI)**, United Negro College Special Programs- Department of Defense, *Synthesis and Characterization of Nanostructured Hybrids for Separation of Bioactive Compounds*, **\$22,529**, September 2006 through August 2007.
- 15. **Felecia M. Nave** (**PI**) & Sherri Frizell (Co-PI), ExxonMobil Foundation, *Society of Women Engineers Leadership Workshop*, \$4,500, January through December 2006.
- 16. Michael Gyamerah (PI), **Felecia M. Nave**, Remi Oki, Gloria Regisford, Jorge Gabitto (Co-PIs), National Science Foundation, *Major Research Instrumentation Grant: Acquisition of research instrumentation for applied research and training in biotechnology and bioprocess engineering,* **\$201,116**, September 2004 through January 2006.

#### Internally Funded Grants & Contracts

- 17. **Felecia M. Nave** (PI), PVAMU Summer Research Mini Grant (\$20K) Development and Characterization of Multifunctional Membranes for Water Purification and Bio sensing Technologies, **\$20,00**0, June 1, 2013 August 31, 2013.
- 18. Felecia M. Nave (PI), Department of Education Title III (administered by Prairie View A&M University Office of Research & Development), Developing a Membrane and Thin Film Synthesis and Characterization Laboratory, \$143,000, October 2009 September 2010.
- 19. **Felecia M. Nave** (**PI**), Prairie View A&M University Mini-Grant Research & Development. Development of supported metal affinity hydrogel membranes for protein separation and purification, \$3,053, January through May 2004.
- 20. **Felecia M. Nave (PI)**, Prairie View A&M University Office of Biomedical and Behavioral Research, *Student Conference Travel Award*, **\$742**, October 2003.
- 21. **Felecia M. Nave (PI)** & Sherri Frizell, NASA, Marshall Chevrolet, PVAMU Assistant Dean and Computer Science Department, *Society of Women Engineers Poster/Essay Contest for area K-8 grade students*, \$780, March 2004.

#### PROFESSIONAL MEMBERSHIPS

North American Membrane Society (NAMS)
American Institute of Chemical Engineers (AICHE)
National Society of Black Engineers (NSBE) not active 2013
Society of Women Engineers (SWE)
American Chemical Society (ACS)
National Organization for the Professional Development of Black Chemist and Chemical Engineers
(NOBCCHE) not active 2013
American Society for Engineering Education (ASEE)
American Association for Blacks in Higher Education (AABHE)

#### **BOARD MEMBERSHIP**

Member, American Association for Blacks in Higher Education (AABHE) Board, 2012 – 2015

AD	VIS	SOF	RY	BC	)AR	DS
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- Jackson State University ADVANCE-IT External Advisory Board, 2012-present
- Purdue Women of Color Conference, Planning Committee, Spring 2012

#### NATIONAL CONSULTANCIES

- □ Houston Works, Houston, Texas, 2011
- □ Mississippi State University, Starkville, Mississippi, 2007

#### **TEACHING, ADVISING & MENTORING**

#### Course Teaching Experience

- ☐ Introduction to Engineering, Computer Science, and Technology (FR)
- ☐ Introduction to Chemical Engineering Laboratory (FR)
- ☐ Engineering Application Lab II for Math (FR)
- Modern Engineering (FR)
- □ Material Science and Engineering (SO)
- ☐ Materials & Energy Balance (SO)
- ☐ Thermodynamics I (SO)
- ☐ Biochemical Engineering Fundamentals (SO-co-developed)
- ☐ Thermodynamics II (JR)
- ☐ Equilibrium Separations (JR)
- □ Reaction Kinetics (JR)
- □ Process, Synthesis, and Design (SR)
- □ Professional Engineering (SR)
- □ Senior Design I & II (SR)

#### POST-DOCTORAL, GRADUATE, AND UNDERGRADUATE STUDENTS:

#### Post Doctoral/Visiting Assistant Professor

1. Dr. Audie Thompson Chemical 2011-2016

Doctoral Committee MemberDepartmentStatus1. Delores RiceAdult Education2010& Human Resource Development

**Texas A&M University** 

#### Master's Advisor

1. Dawn Harrison Chemical May 2013

**Thesis Title:** Impact of the Degree of Crosslinking on the Transport Properties of Immobilized Metal Affinity Hydrogels

2. John Miles Chemical December 2014

# **Thesis Title:** Development of Hybrid Composite Asymmetric Bi-layer PVA-Cellulose Ultrafiltration Membranes for Water Desalination

#### Master's Committee Member

1.	Quincy Johnson	Mechanical	2015
2.	Julian Norman	Mechanical	2013
3.	Henry Gonzalez	Mechanical	2011
4.	Darrell Brightmon	Mechanical	2011
5.	Julia Coleman	Mechanical	2011
6.	Uwagbae Eghobamien	Mechanical	2010
7.	Shubha Kyatsandra	Electrical	2009
8.	Akotunde Atunda	Chemical	2008
9.	Ajiboye Benga	Chemical	2007
10.	Jessica Carey	Civil	2005

#### Undergraduate and Graduate Student Research Advising

Supervised <u>four</u> (4-5 member) Senior Design Groups. Supervised <u>forty</u> (40) undergraduate student research projects. Supervised <u>two</u> Master thesis and served as a member on <u>ten</u> thesis committees and <u>one</u> doctoral committee. Publications and presentations completed with undergraduate students are designated by an asterisk (\*).

#### SCHOLARLY AND PROFESSIONAL ACTIVITIES

American .	Association of Blacks in Higher Education
	Reviewer, Doctoral Student Awards (AABHE) Applications, 2012
American	Institute for Chemical Engineers
	Chair, Biomedical Applications in Bioengineering, 2008
	Member, Minority Affairs Committee, 2007-2008
	Co-Chair, Poster Session-Membranes, 2007

### American Society for Engineering Education

 $\hfill \Box$  Peer reviewer of scholarly articles for Chemical Engineering Education section, 2008

#### Frontiers In Engineering

□ Peer reviewer of scholarly articles, 2008

#### **National Science Foundation**

<u> </u>	cience i dundation
	Peer reviewer of proposals for GRFP, 2013
	Peer reviewer of proposals for International Engineering, 2012
	Peer reviewer of proposals for GRFP, 2012
	Peer reviewer of proposal for HBCU-UP solicitation, 2011
	Peer reviewer of proposal for AIR solicitation, 2011
	Peer reviewer of proposal for Chemical Transport Division solicitation, 2010
	Peer reviewer of proposal for Nanotechnology Education solicitation, 2010
	Peer reviewer of proposals for Transforming Undergraduate Education, 2009
	Peer reviewer of proposals for Nanotechnology Exploratory Research solicitation,
	2009
	Peer reviewer of proposals for Chemical Transport Division solicitation, 2009
	Peer reviewer of proposals for Course Curriculum Laboratory Improvement, 2007

	Peer reviewer of proposals for Nanotechnology Exploratory Research solicitation, 2006
	Peer reviewer of proposals for Chemical Transport Division solicitation, 2006
North Ame	erican Membrane Society
	Chair, Membrane Characterization, 2011
	Chair, Characterization and Prediction of Fouling, 2008
	Chair, Monitoring and Mitigation of Fouling II, 2007
	Chair, Bioseparation of Pharmaceuticals, 2006
	Member, Education Committee, 2004- present
	Naval Research Future Engineering Faculty Fellowship Program
	Reviewer of candidate applications, 2003-2006
Society of	Women Engineers
	Reviewer SWE-National Outstanding Student Award, 2008
	Reviewer SWE-National Outstanding Graduate Student Award, 2007
	Vice-President for Career Development SWE-HA Professional Chapter, 2004-2005
	Chair, SWE-Houston Area Chapter Award and Recognition Banquet, 2004
	Reviewer for SWE-Houston Area Chapter Women of Science and Engineering Essay
_	Contest, 2004
	Faculty Advisor, 2003- 2010
Society of	Hispanic Professional Engineers
	Faculty Advisor, 2009- 2010
SERVICE	
TAMU System	W 1 G . G . W 2012
	Member, System Success and Learning Outcomes Committee, 2012-present
	Member, System Student Success Metrics Committee, 2011-2012
University and Con	<del></del>
	Chair, VP Research and Dean of the Graduate School Committee, 2013
	Member, University Information Technology Committee, 2012 - present
	Chair, Director of Student Success Committee, 2012
	Chair, University Academic Council, 2010-present
	Senator for College of Engineering, Faculty Senate, 2008-2010
	Committee, Member, College of Engineering Dean Search Committee, 2007
	Representative, LSU
	Judge, Honors Research Symposium, 2005
C-11	Judge, NIH Bridges to Baccalaureate, 2004
College	Chair Associate Dean Search Committee 2011
	Chair, Associate Dean Search Committee, 2011
	Co-organized, Outreach Harmony Math & Science School, 2011
	Member, Tenure & Promotion Manual Committee, 2009  Member, Meth Applications Course Development Committee, 2008
	Member, Math Applications Course Development Committee, 2008
	Member, Ad-Hoc Proposal Review Committee, 2008  Committee Member, Mechanical Engineering Faculty Search Committee, 2008
	Committee Member, Mechanical Engineering Faculty Search Committee, 2008
	Co-organized, Outreach Bailey Middle

	<ul> <li>Committee Member, Boeing Engineering and Computer Science Teacher Award, 2003</li> <li>Faculty Advisor, Society of Women Engineers, 2003-2008</li> </ul>			
	Department Website Updates, 2008 Laboratory Improvement Committee, 2008, 2009, 2010 Coordinator/Presenter, Chemical Engineering Session for College of Engineering "Engineering Science Concepts Institute" Summer Program, 2006 Freshman Faculty Advisor, 2005-2010 Faculty Liaison, Houston Community College Northeast-Prairie View A&M University Articulation Partnership, 2005-2011 Career Day Speaker, Waller High School, 2005, 2004 Dept. Representative, PVAMU Pantherland Day, 2005, 2004 Member, Department Scholarship Committee, 2005, 2004 Faculty Liaison, Chemical Engineering Industrial Advisory Council, 2004-2009 Member, Dept. Chemical Engineering Scholarship Committee, 2004-2008 Dept. Representative, General Recruiting, 2003-present			
<u>PR</u>	ESS RELEASE			
	http://www.msstate.edu/web/media/detail.php?id=5870; http://www.msstate.edu/web/snapshot/?id=3250; http://www.msstate.edu/web/media/detail.php?id=5891  Diversity in the classroom Bagley College of Engineering, MS State  NSF Awards PVAMU \$1 Million to Fund Research to Study Gifted Black Students  A&M faculty participate in research study (2007, September 26), <i>The Battalion</i> , \$1 million NSF grant helps unravel secrets of African-American students' success (2007, September 18), <i>Texas A&amp;M University Aggie Hotline</i> Black students focus of study: A&M researchers win grant to identify factors in success (2007,			
	September 6), <i>The Bryan-College Station Eagle</i> Education faculty awarded \$1 Million NSF grant for gifted African Americans. (2007, September 3), <i>Texas A&amp;M University Aggie Hotline</i>			
	NSF Awards PVAMU \$1 Million to Fund Research to Study Gifted Black Students October 24-27, 2007			
	Spotlight Prairie View A&M Celebrates Women's History Month, October 11, 2007 NSF Awards Prairie View A and M University \$1 Million to Fund Research to Study Gifted Black Students, October 2007			