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## BIOGRAPHICAL SKETCH

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NAME: Prof. Cajetan M. Akujuobi, Ph.D., P.E., MBA, F.I.A.A.M.

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EMAIL: cmakujuobi@pvamu.edu

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POSITION TITLE: Professor of Electrical & Computer Engineering and Executive Director, Center of Excellence for Communication Systems Technology Research (CECSTR).

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EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, including postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

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INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Southern University, Baton Rouge, Louisiana	B.S.	12/1980	Electrical & Electronics Engineering
Tuskegee University, Tuskegee, Alabama	M.S.	05/1982	Electrical & Electronics Engineering
Hampton University, Hampton, Virginia	M.B.A.	05/1987	Business Administration
George Mason University, Fairfax, Virginia	Ph.D.	05/1995	Electrical Engineering

### A. Personal Statement

I have over 30+ years of progressive experience in teaching, research, research administration, and oversight of research programs, development, academic programs, policies, and initiatives to promote student growth and achievement. I have a broad background in data gathering and analysis, specializing in digital signal processing and communication systems using such tools as wavelets and wavelet transforms, artificial intelligence, and machine learning. I am skilled in engaging research throughout organizational levels, research innovation with industry partners, strategic oversight, commercialization strategies, and promoting learning, discovery, and engagement. Over the years, I have developed executive leadership experience serving thousands of students across multiple schools. I have expertise in developing, implementing, evaluating, and continuously improving challenging and inspiring curricula, demonstrating excellence in graduate mentoring, and fostering research improvements through leadership and coaching. I am a passionate education advocate who successfully drives regulatory and standards compliance; meets institutional needs through budget development, learning and development, and course curriculum; directs instructional programs to meet the needs of at-risk youth; and builds top-performing teams committed to each student's academic success. I have executed leadership in managing programs and services focused on improving productivity throughout multi-disciplinary research. I have coordinated research compliance operations, advocating for the development of creative projects aligned with strategic directives. I have established internal research compliance in alignment with federal, state, and university standards, leading to the successful expansion of programs. In addition, I have orchestrated executive-level leadership in managing research programs within graduate studies. I have directed research activities through collaborative communications, streamlining program analysis based on performance measurements, and introducing successful process improvements leading to student success. I have led the administration of programs and services supporting internal university research, promoting scholarship, project development, and academic leadership in alignment with organizational strategic plans. I have supervised various research and graduate studies, expanding program initiatives leading to organizational success. I have also managed all aspects of financial activities for the Office of Research and the Graduate School, introducing efficient performance measurements focused on improving operations. I will bring all these qualities to bear in my teaching, research, and service activities.

## **B. Positions and Honors**

### **Selected Positions and Employment**

2004-Present Professor of Electrical and Computer Engineering  
2014-Present Founder & Executive Director, the Center of Excellence for Communication Systems Technology Research (CECSTR), Prairie View A&M University, Prairie View, Texas.  
2015-Present Founder & Principal Investigator, SECURE Cybersecurity Center of Excellence – A TAMUS CRI-funded Center for Cybersecurity Research at Prairie View A&M University (PVAMU), Texas.  
2017-2018 Vice President for Research, Innovation & Sponsored Programs, Prairie View A&M University, Prairie View, Texas.  
2014-2017 Vice President for Research & Dean of Graduate Studies, Prairie View A&M University, Prairie View, Texas.  
2010-2014 Founding Professor & Dean, College of Science, Mathematics, Technology & Engineering, Alabama State University, Montgomery, Alabama.  
2004-2010 Department Head Engineering Technology & Professor, Electrical & Computer Engineering Department, Prairie View A&M University, Prairie View, Texas.

### **Selected Other Experiences and Professional Memberships**

1983-Present Member, America Society for Engineering Education  
1985-Present Senior Member, Instrument Society of America  
1986-Present Member, International Society for Optical Engineers  
1989-Present Member, Society of Industrial & Applied Mathematics  
1994-Present Member, American Association of University Professors  
1994-Present Member, Sigma XI Scientific Research Society  
2003-2015 Senior Member, Institute of Electrical & Electronics Engineers  
2010-Present Member, Tau Beta Pi Electrical Engineering Society  
2010-Present Member, Editorial Board, Frontiers in Science, Technology, Engineering and Mathematics  
2012-Present Member, Applied Science University Journal Board, Amman, Jordan  
2016-Present Senior Life Member, Institute of Electrical & Electronics Engineers  
2015-Present Member, Texas Biomedical Society Board of Directors  
2021 Member, Editorial Board, Journal of Electronics and Telecommunication Engineering (JETE)  
2021-2022 Co-Chair and Member of the Scientific Committee European Section of the Advanced Materials Congress (AMC, [www.advancedmaterialscongress.org](http://www.advancedmaterialscongress.org)).

### **Selected Honors**

2002 Prairie View A&M University, COLLEGE OF ENGINEERING, "EXCELLENCE IN RESEARCH AWARD".  
2005-2008 Appointed to the Curriculum Advisory Committee for Electrical Engineering Program at the Polytechnic University of Namibia in Namibia, Southern Africa.  
2005-2009 Appointed by Dr. Wright (President PVAMU) to serve on the PVAMU Infrastructure Technology Subcommittee.  
2010 Prairie View A&M University, "Leadership, Contribution, Dedication & Service EXCELLENCE AWARD".  
2010 Prairie View A&M University, Electrical Engineering Department, "DISTINGUISHED SERVICE AWARD".  
2012-Present Appointed as a Member of the Board for the Applied Sci. Univ. Journal, Amman, Jordan.  
2014 Featured on the Cover of the first ever Alabama State University (ASU) "Imagine STEM" Magazine as a tribute to my visionary leadership and programs that led to the high-demand careers in biomedical engineering and forensic science at ASU, ASU Imagine STEM, Inaugural Edition.  
2019-Present Elected Chair IEEE Houston Section Life Members Affinity Group (LMAG).  
2020-Present Named "IAAM Fellow Lecture of the International Association of Advanced Materials (IAAM Sweden)" for my contributions to strengthening the "Advancement of Materials", Sweden.  
2021-Present Appointed as Editorial Board Member, Journal of Electronics and Telecommunication

Engineering, (JETE), 2021  
 2021-2022 Nominated and Elected Co-Chair and Member of the Scientific Committee European Section of the  
 the Advanced Materials Congress (AMC, [www.advancedmaterialscongress.org](http://www.advancedmaterialscongress.org))  
 2021-Curent Named "IAAM Fellow of the International Association of Advanced Materials (IAAM, Sweden)",  
**for my contributions to strengthening the "Advancement of Materials"**, Sweden, 2020.

### **C. Selected Contributions to Science and Engineering**

In one of the research projects I participated in with my research colleagues as the PI, the specific goal was to study the impact smart technologies could have in rural communities. Prairie View City (PVC) is a rural community that houses Prairie View A&M University. A lack of communication, low income, an aging population, and infrastructure are some challenges facing the area. We, therefore, adopted the PVC for our study. We engaged the community in many community engagement meetings and focus group meetings during the study period. In all cases, we had the full support of the City Council headed by the Mayor of Prairie View City.

The project sought to engage the community in order to complete an extensive needs and capability assessment that the smart technology researchers at PVAMU will use as the best way to implement smart technologies that will have the strongest effect on the citizens. We collected qualitative and quantitative data from the focus groups and surveys. We used the results to choose the best modern smart technologies that could be adapted to fit the needs of this rural community. The technology researchers worked alongside educational, health, and social behavioral specialists to integrate an appropriate educational plan into the implementation timeline. Appropriate benchmarks and metrics were used to gauge success and enable this process to serve as a model for other rural communities needing a smart and connected solution.

We learned from the study that most respondents were either strongly dissatisfied or dissatisfied with the healthcare services in the City of Prairie View. Of the four sectors (healthcare services, communication technology, safety, and emergency preparedness) that we investigated, healthcare services or lack of healthcare services received the lowest satisfaction ratings from respondents. Therefore, healthcare services needed the most improvement as our outcome of the findings. Alongside the community advancement, this project enabled interdisciplinary research. This project was data-intensive, with lots of data analytics and assessments.

The project engaged students and faculty in the research and development areas and provided training to students and community members. Further, the project utilized student researchers and their training to affect the social science, education, and engineering research fields. The project provided a unique opportunity to train student researchers in field research methods. Two of our students got the opportunity to attend focus groups and write extensive notes that were analyzed alongside the verbatim transcripts. By actively engaging students in planning, they learned first-hand how to develop and organize stakeholder inputs to optimize solutions. This project's community outreach helped increase interactions between the city and the university, fostering additional collaborations and possibilities.

### **D. Additional Information: Research Support and/or Scholastic Performance**

#### **Selected accomplishments**

- Managed all aspects of research compliance, developing action plans to meet and exceed performance goals as the Chief Research Officer, the Chief Innovation Officer, and the Chief Sponsored Programs Officer. I also served as the institutional official (IO) for all regulatory activities.
- Built positive relationships throughout organizational levels, fostering collaborative research while supervising the development and administration of fiscal resources.
- Achieved the design of performance goals throughout each research area, creating a culture of compliance with regulatory reporting rules to support internal program innovation.

- Secured for Prairie View A&M University five additional Chancellor's Research Initiative (CRI) research centers and awards totaling more than \$35 Million and established the Office for Undergraduate Research.
- Repeated success drafting fundraising grant proposals, securing over \$25M in research awards, designing a faculty endowment worth \$1M, and developing an undergraduate and graduate research assistantship endowment worth \$600K for CECSTR.
- Professor for many decades teaching electrical engineering undergraduate and graduate level courses.
- Provided curriculum and instruction for diverse students, teaching the Wavelet & Their Applications, Broadband Communication Systems, Advanced Digital Signal Processing, Advanced Digital Communication Systems, and Advanced Mixed Signal Systems courses.
- Contributed to strategic planning for programs across multiple areas of study, designing innovative marketing strategies for increasing enrollment and improving research opportunities.
- Served as the University Administrator, leading performance within the Innovation, Commercialization, and Entrepreneurship Program to effectively promote graduate studies within research.
- As the founding STEM College Dean at Alabama State University (ASU), I served as the Chief Academic Administrator for the assigned college, leading cross-functional teams in advocating student learning through innovative curriculum development and course design. Additionally, I created curriculum, lesson plans, educational activities, exams, tests, and assignments for students, serving as a Professor in teaching students. Led the designing and approval of the first-ever biomedical engineering, forensic biology, and MS forensic Science programs by the higher education board; contributed to strategic planning for programs across multiple areas of study, designing innovative marketing strategies and increased enrollment and research opportunities, achieving a 5% increase in enrollments in addition to a notable 10% increase in research expenditures in both Alabama State University and Prairie View A&M University.

## **RESEARCH INTERESTS**

- Signal/Image/Video Processing & Communication Systems
- Wavelets and Wavelet Transforms Analysis & Applications
- Cybersecurity
- Security Issues in Nanomaterials & Nanotechnology
- Smart Technologies for Smart & Connected Cities
- Analog and mixed Signal Testing and Design Using Wavelets and other Techniques
- Broadband (High Speed) Communication Systems
- Digital Signal Processing & Applications
- Fractals and Fractal Analysis of Signals, Images and Applications
- Multispectral Image Analysis Using Wavelets
- Health Monitoring of Aeroelastic Systems and Vibration Analysis
- Smart Card Applications and Security Issues

## **Selected Most Recent Publications (Out of Over 274 Book Chapters, Journals, Peer Reviewed Papers, and Technical Project Reports). PUBLISHED FOUR BOOKS (TEXTBOOK & SOLUTION MANUAL)**

- a. **C. M. Akujuobi** and M.N.O. Sadiku, "Fundamentals of Computer Networks," Publisher Springer, ISBN: ISBN 978-3-031-09416-3; December 2022.
- b. **C. M. Akujuobi**, "**Solution Manual on Fundamentals of Computer Networks.**" Publisher Springer, December 2022
- c. **C. M. Akujuobi**, "**Wavelets and Wavelet Transform Systems and Their Applications: A Digital Signal Processing Approach**", Publisher Springer, ISBN: 978-3-030-87527-5; January 2022.
- d. **C. M. Akujuobi**, "**Solution Manual on Wavelets and Wavelet Transform Systems and Their Applications: A Digital Signal Processing Approach.**" Publisher Springer, January 2022.
- e. **Cajetan M. Akujuobi**, "An Overview of the Detection of COVID-19 and Its Variants Using Nanomaterials and Nanotechnology", Advanced Materials Congress, Submitted for publication, [www.advancedmaterialscongress.org](http://www.advancedmaterialscongress.org) , Oct. 2022.

- f. Kelechi Eze, **Cajetan M. Akujuobi**, Shermar Hunter, Shumon Alam, Sarhan Musa and Justin Foreman, "A Blockchain-based Security Architecture for the Internet of Things", WSEAS Transactions on Information Science and Applications, DOI:10.37394/23209.2022.19.2, Vol. 19, E-ISSN:2224-3402 March 23, 2022, pp. 12-22.
- g. Yuzhong Yan and **Cajetan M. Akujuobi**, "A Review of Graph Signal Processing with Neural Networks", the International Journal of Circuits, Systems, and Signal Processing, E-ISSN: 1998-4464, Volume 16, Art. #91, DOI: 10.46300/9106.2022.16.91, Vol. 16, p.741-746, 2022,
- h. Nwosu, L. and **Akujuobi, C.M. (2021)**. "Engineering Solutions in the Era of COVID-19 Choosing a CNN Architecture for a Computer-Based Covid-19 Diagnosis", Journal of Electronics and Telecommunication Engineering, Pub.: Stechnolock, [www.stechnolock.com](http://www.stechnolock.com), Vol. 1, Issue 1, pp. 1-11.
- i. **Akujuobi, C.M. (2020)**. "Nanotechnology: An Overview of the Current Status of its Roles in the Era of COVID-19", Vid. Proc. Adv. Mater., Volume 1, Article ID 2020-0822. DOI: 10.5185/vpoam.2020.0822, Publication Date (Web): 02 Nov 2020.
- j. Eze, K. and **Akujuobi, C.M. (2020)**. "Design and Evaluation of a Distributed Security Framework for the Internet of Things", IEEE Internet of Things Journal, manuscript ID is IoT-13037-2020, Submitted.
- k. Asonye, E.A., Musa, S.M., **Akujuobi, C.M.**, Sadiku, M.N.O., and Foreman, J. (2020). "Realizing an IoT-Based Home Area Network Model Using ZigBee in the Global Environment", International Journal of Computing and Digital Systems, Int. J. Com. Dig. Sys. #, No.# (Mon-20.), ISSN (2210-142X), <http://journals.uob.edu.bh>.
- l. Alam, S., Agunsoye, G., Alam, Y., Cui, S., **Akujuobi, C.M.**, Chouikha, M. (2020). "Toward Developing a Realistic DDoS Dataset for Anomaly-based Intrusion Detection", IEEE International Conference on Consumer Electronics (ICCE).
- m. Eze, K.G., **Akujuobi, C.M.**, Sadiku, M.N.O. Chouikha, M., and Alam, S. (2019). "Blockchain and Internet of things: Use Cases and Integration Challenges", 22nd International Conf. on Business Information Systems, ETSI Informatica, University of Seville, Spain.
- n. Kandah, B.A and **Akujuobi, C.M. (2017)**. "Noise Removal of ECG Signals Using Discrete Wavelet Transform (DWT)," Proceedings of the 2017 Research Symposium, The College of Science, Technology, Engineering, and Mathematics and The College of Health Sciences Annual Research Symposium, Alabama State University, p. 29-30.
- o. Alam, S., Annamalai, A., **Akujuobi, C.M. (2017)**. "Optimizations of Cooperative Spectrum Sensing With Reporting Errors over Myriad Fading Channels," Proceedings of the IEEE CCWC 2017 Conf., Las Vegas.
- p. **Akujuobi, C.M. (2013)**. "What is Research Telling Us about Nanotechnology Safety in the Electronics & Telecommunication Industries?" *Proceedings of the 2013 Research Symposium*, College of Science, Mathematics and Technology, Alabama State University.

## E. SELECTED COURSES TAUGHT

Courses Taught	Semester	Course Title	Course Type	Dept.	College	University
ELEG 7602	Spring 2023, Fall 2022	Doctoral Dissertation II	Graduate	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 3302	Fall 2022 & Spr. 2022, 2023	Signals & Systems	Undergraduate	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 4304	Fall 2022, Spring 2023	Electronics II	Undergraduate	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 6101	Fall 2021	Doctoral Seminar I	Graduate (Lecture + Research)	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 6324-001	Fall 2021	Advanced Broadband Communication Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6021-001	Spring 2021	Doctoral Seminar II	Graduate (Lecture + Research)	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 6011-005	Fall 2020	Doctoral Seminar I	Graduate (Lecture + Research)	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 7916-002	Fall 2016, 2017, 2019, 2020 Summer 2017	Doctoral Dissertation I	Graduate (Doctoral Dissertation Supervision)	Electrical	Engineering	PVAMU
ELEG 7926-002	Sp.17, 08, 09, 10, 2019, 2020, 2021	Doctoral Dissertation II	Graduate (Doctoral Dissertation)	Electrical	Engineering	PVAMU

	Fall 2016 Summer 2017, Spring 2023		Supervision )			
ELEG 5996-001	Spring 2015 Fall 2016 Summer 2016 Spring 2015	Master's Thesis	Graduate (Masters Research Supervision )	Electrical	Engineering	PVAMU
ELEG 5966-002	Spring 2015, 2016 Fall 2017 Summer 2017 Spring 2016	Research	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 5391-P02	Engineering Project	Masters Project	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6333-001	Spring 2023, Fall 2014, 2015, 2017, 2019, 2020	Wavelets and Their Applications	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
MAT505	Fall 2010 – Fall 2013	Introduction to Computer Science	Graduate Course	Math & Comp. Sci.	CSMT	Alabama State University (ASU)
ELEG 7916-002	Fall 2007, 2009 Sp.07,08,10 Summer 2007	Doctoral Dissertation I	Graduate (Doctoral Dissertation Supervision )	Electrical	Engineering	Prairie View A&M Univ. (PVAMU)
ELEG 7926-002	Sp.23, 07, 08, 09, 10 Fall 2007 Summer 2007	Doctoral Dissertation II	Graduate (Doctoral Dissertation Supervision )	Electrical	Engineering	PVAMU
ELEG 7026-002	Sp.23, 07,08,09,10 Fall 2007 Summer 2007	Doctoral Research II	Graduate (Doctoral Research Supervision )	Electrical	Engineering	PVAMU
ELEG 5996-001	Spring 2008 Fall 2007 Summer 2007 Spring 2007	Master's Thesis	Graduate (Masters Research Supervision )	Electrical	Engineering	PVAMU
ELEG 5966-002	Spring 2008 Fall 2007 Summer 2007 Spring 2007	Research	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
GNEG 5893-007	Spring 2008 Fall 2007 Summer 2007 Spring 2007	Research	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6553-001	Spring 2007 Fall 2005 Fall 2003	Advanced Analog Mixed Signal Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6333-001	Fall 2007, 2014, 2015 Sp.04,06,10, Fall 2019, 2020	Wavelets and Their Application	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6423-001	Sp. 2019, 2005, 2008 Fall 2006, 2009, 2018	Advanced Broadband Communication Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6213-001	Summer 2005, Spring 2020, 2021	Adv. Digital Communication Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 3023-001	Spring 2005	Signals & Systems	Undergraduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 5423-001	Fall 2009 Sp. 2003, 2005	Advanced Broadband Communication Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 6553-001	Fall 2003	Advanced Analog Mixed Signal Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 4313-001	Fall 2003 Fall 2002	Broadband Communication Systems I	Undergraduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 5253-001	Fall 2002	Advanced Analog Mixed Signal Systems	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 5083-001	Spring 2002 Spring 1999	Advanced Digital Signal Processing	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 4003-001	Spring , 1999, 2000, 2002, Fall 1999, 2000	Communication Theory	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU

GNEG 5993-001	Spring 2002	Independent Study	Graduate (Research Project)	Electrical	Engineering	PVAMU
GNEG 5193-021	Fall 2001	Advanced Mixed Signal Techniques	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 4003-001	Fall 2001	Communication Theory	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 4273-001	Spring 2000 Fall 1999	Analog Mixed Signal Techniques	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
GNEG 5193-021	Fall 2000	Advanced Mixed Signal Techniques	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 4063-001	Spring 1999	Comm. Theory Lab	Undergraduate (Laboratory)	Electrical	Engineering	PVAMU

## F. SELECTED COURSES DEVELOPED

Courses Developed	Date	Taught/ Not Yet Taught	Course Title	Course Type	Dept.	College	University
ELEG 6333-001	Fall 2003	Taught Fall 2007, 2014 Spring 2004,06,10	Wavelets and Their Applications	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
MAT505	Fall 2010 – Fall 2013	Introduction to Computer Science	Graduate Course	Math & Comp. Sci.	MATH	CSMT	Alabama State University (ASU)
ELEG 5253/6553-001	Fall 2003	Taught Spring 2007 & more than 4 times	Advanced Mixed Signal Techniques	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 2083-001	Spring 2002	Not Yet Taught	Introduction to DSP Solutions	Undergraduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 4451-001	Spring 2002	Not Yet Taught	DSP Solutions Laboratory	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 4163-001	Spring 2002	Not Yet Taught	DSP Design and Testing Techniques	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 4273-001	Spring 2002	Taught more than 3 times	Analog Mixed Signal Techniques	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 4273-001	Spring 2002	Taught more than 3 times	Analog Mixed Signal Techniques I	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 4283-001	Spring 2002	Taught more than 3 times	Analog Mixed Signal Techniques II	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 4291-001	Spring 2002	Taught	Analog and Mixed Signal Techniques Laboratory	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
GNEG 5193-021	Fall 2001	Taught	Advanced Mixed Signal Techniques	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU
ELEG 4313-001	Fall 2002	Taught	Broadband Communication Systems I	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU

ELEG 4323-001	Fall 2002	Not Yet Taught	Broadband Communication Systems II	Undergraduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 5243-001	Spring 2002	Taught more than 3 times, Fall 2006	Advanced Broadband Communication Systems	Graduate (Lecture + Project)	Electrical	Engineering	PVAMU
ELEG 5193-021	Fall 2001	Taught	Advanced Mixed Signal Techniques	Graduate (Lecture + Research Project)	Electrical	Engineering	PVAMU

## G. PROFESSIONAL AFFILIATIONS

- Co-Chair and Member of Scientific Committee European Section of the Advanced Materials Congress (AMC, [www.advancedmaterialscongress.org](http://www.advancedmaterialscongress.org)) for 2021 – 2022.
- Member, Editorial Board, Journal of Electronics and Telecommunication Engineering, (JETE), 2021.
- Member, Editorial Board, Frontiers in Science, Technology, Engineering and Mathematics, 2010-Present
- Member, Texas Biomedical Society Board of Directors, 2015 to Present
- Member, Applied Science University Journal Board, Amman, Jordan, 2012 to Present
- Senior Life Member, Institute of Electrical & Electronics Engineers, 2016 to Present
- Member, Tau Beta Pi Electrical Engineering Society, 2010 to Present
- Senior Member, Institute of Electrical & Electronics Engineers, 2003 to 2015
- Member, Sigma XI Scientific Research Society, 1994 to Present
- Member, American Association of University Professors, 1994 to Present
- Member, Society of Industrial & Applied Mathematics, 1989 to Present
- Member, International Society for Optical Engineers, 1986 to Present
- Senior Member, Instrument Society of America, 1985 to Present
- Member, American Society for Engineering Education, 1983 to Present

## H. SERVICE (SEE NEXT PAGE)



<i>Dates</i>	<i>Organization/ Committee Name</i>	<i>Committee Member or Chair</i>	<i>Department</i>	<i>College</i>	<i>University/ National</i>	<i>International</i>	<i>Major Accomplishments</i>
Summer 2021	ECE Dept. Head Search Committee	Member	Electrical & Computer Engineering Department				Successfully Completed the Assignment with the Search Team that resulted in the hiring of the New ECE Head.
2020 - Present	Awarded Fellow of International Association of Advanced Materials					International (Sweden)	In recognition for the contribution to "Advancement of Materials to Global Excellence" along with the entitlement to use the designatory letters "FIAAM".
2018- Present	IEEE Life Members Association Group	Chair, Houston IEEE LMAG			National	International	Responsible for the IEEE LMAG Activities , Houston Section
2008 to Present	Reviewer of many Journal and Conference Papers for publications.	Chair/and or Member				Nationally and Internationally	Advising on Worthy Papers for publications in my area of expertise.
June 2014 – Present	PVAMU Infrastructure Technology Subcommittee	Member			PVAMU		Representing the University in making Decisions that affect the Technology Infrastructure of the Campus
Spring 2012 - Present	Applied Science University Journal Board, Amman, Jordan	Member				Applied Science Univ., Amman, Jordan	Making advisory recommendations on issues concerning the applied university journal world-wide.
Oct. 2012 to Jan.2013	ASU President's Committee on Organizational Chart Revision	Member			ASU		Representing the ASU Community in Recommending Best Option for the Revision of the ASU Organizational Chart
Oct. 2012 to Jan.2013	ASU Provost/VP Academic Affairs Search Committee	Member			ASU		Representing the ASU Community in Recommending possible Candidates for the Position of Provost and VP for Academic Affairs
Sept. 2012 to Present	ASU Student Special Athletic Admissions Committee	Member			ASU		Representing the CSMT in the University-Wide Student Special Athletic Admissions Committee.
2010- Present	Dean's Academic Affairs Council	Member			ASU		Representing all of the College Departments
2010- Present	QEP Implementation Steering Committee	Member			ASU		Representing all of the College Departments
2010- Present	ASU Engineering Exploratory Committee for CSMT	Chair		College of Science, Mathematics, Technology & Engineering	ASU		Responsible for exploratory leading to ASU Engineering Programs
2010- Present	Member of the Advisory Board, Center of Excellence for Communication Systems Technology Research (CECSTR) at PVAMU	Member	Electrical Engineering & PVAMU	Engineering	PVAMU/TAM U		As the Founding Director of CECSTR helping to provided needed advise and contribution towards the growth of CECSTR.
2010- Present	ASU Committee on Distance Education Technology	Chair			ASU		Responsible for studying and recommending distance education policies to the Provost of ASU.
2010- Present	ASU Committee on International Affairs	Member			ASU		Responsible for studying and recommending international affairs issues and policies to the Provost of ASU.
2005 to 6/12/10	PVAMU Engineering Council	Member		Engineering			Representing all of the Engineering Departments at PVAMU
2005 –June 12, 2010	PVAMU Infrastructure Technology Subcommittee	Member			PVAMU		Representing the University in making Decisions that affect the Technology Infrastructure of the Campus

2003 to 2005	Planning Committee New EE Building Ribbon Cutting Ceremony	Member & Chair, Fund Raising		Engineering			Planned the Ceremony Activities and Responsible for Raising Money to Underwrite the Cost
2004 to 6/12/10	Faculty Search Committee	Chair	Electrical				Recruitment of EE New Faculty
Fall 2004 to Present	Post Tenure	Member	Electrical Engineering				Evaluation of Tenured Faculty
2003 to 2005	EE Engineering Building Committee	Member	Electrical Engineering				Consultation and Advisement on the New EE Building at PVAMU
2005 to 2008	University Faculty Senate	Member Faculty Senator	Electrical Engineering	Representing College of Engineering	Representing PVAMU		Representing the PVAMU Faculty in making Decisions, and recommending ideas to the University Administration.
Summer 2003 to 6/12/10	SEA/LLNL/HBCUs Alliance on Homeland Security	Member	Representing Electrical Engineering Department	Representing College of Engineering	Representing PVAMU		Putting Together a Homeland Security Proposal and Identifying Strengths of Each University.
Summer 2003- 6/12/10	SEASBC/HBCUs Alliance on Funding Sources, Contracts and Proposals	Member	Representing Electrical Engineering Department	Representing College of Engineering	Representing PVAMU		Collecting Information and Networking with Key Funding Agencies for the University.
June 1, 2003 to 6/12/10	Ph.D. Admissions & Exams Committee	Member	Electrical		PVAMU		Responsible for Evaluating and Recommending Potential Ph.D. Applicants for Admission & Exams.
Summer 2002 to 6/12/10	Faculty Search Committee	Member	Electrical		PVAMU		Recruitment of EE New Faculty
Fall 2002 to 6/12/10	Faculty Inquiry Committee	Member		Engineering	PVAMU		Recommended to the Dean, College of Engineering after summarizing the said Inquiry Facts as best as we can determine from the Results of our Inquiries Relating to some College of Engineering Faculty.
Spring 2002 to 6/12/10	Faculty Performance Evaluations Committee	Chair		Engineering	PVAMU		Recommended Faculty Evaluation Instrument to Dean, College of Engineering
Spring 2002	Faculty Performance Evaluations Committee	Chair	Electrical		PVAMU		Recommended Faculty Evaluation Instrument to Head, Electrical Engineering (EE)
1999 to 6/12/10	Electrical Engineering Strategic Planning Committee	Member	Electrical		PVAMU		The Committee Published an 80- Page Strategic Plan Update (1999- 2004) for Electrical Engineering Department
1999 to 6/12/10	Electrical Engineering Committee on Student Retention	Chair	Electrical		PVAMU		Recommendations sent to Head, EE and also presented findings to EE Advisory Board
1999 to 6/12/10	TI-Based Student Scholarship Committee	Chair	Electrical	Engineering	PVAMU		Awarded Over 30 Scholarships to Deserving Students
2000 to 6/12/10	SPRINT-Based Student Scholarship Committee	Chair	Electrical	Engineering	PVAMU		Awarded Over 9 Scholarships to Deserving Students
1998 to Present	Present	IEEE Standards Association (IEEE-SA), Industry Advisory Committee	Member	Electrical	Engineering	University, Nation, World- wide.	Advised on Key IEEE-SA Industry Related Standards and Policy Implementations. I was part of the T1E1.4 Working Group that developed the ANSI T1.413 ADSL Standard.
2000 to 6/12/10	2002	Search Committee for CECSTR Personnel	Chair	Electrical	Engineering		Resulted in three (3) CECSTR Personnels Hired.
Spring 2001 to Fall 2001	Fall 2001	Search Committee for EE Faculty	Chair	Electrical			Recommended Possible Candidates to Head, EE
2000 to 2001	2001	PVAMU 2000 Annual College day Program	Representative	Electrical	Engineering	University	Discussed and Explored Admission Issues to Potential High School Students

1999 to 2000	2000	RADSCOM 2000, CARR Committee	Co-Chair	Electrical	Engineering		Implemented RADSCOM Issues.
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### **SERVICE & EXCELLENCE AWARD:**

- Featured on the Cover of the first ever Alabama State University (ASU) “Imagine STEM” Magazine as a Tribute to my Visionary Leadership and Programs that lead to the High-demand Careers in Biomedical Engineering and Forensic Science at ASU, ASU Imagine STEM, Inaugural Edition, 2014.
- Prairie View A&M University, “Leadership, Contribution, Dedication & Service EXCELLENCE AWARD”, Presented to Dr. Akujuobi, June, 2010.
- Prairie View A&M University, Electrical Engineering Department, “DISTINGUISHED SERVICE AWARD”, Presented to Dr. Akujuobi, June, 2010.
- Prairie View A&M University, “Center of Excellence for Communication Systems Technology Research (CECSTR) Leadership, Contribution, Dedication & Service EXCELLENCE AWARD”, Presented to Dr. Akujuobi, June, 2010.
- Prairie View A&M University, COLLEGE OF ENGINEERING, “EXCELLENCE IN RESEARCH AWARD”, Presented to Dr. Akujuobi, December 10, 2002.

### **IEEE SENIOR MEMBERSHIP AWARD**

- I was elevated to the **grade of Senior Member in the IEEE in September 2003. Only 7% of approximately 382,000 members of IEEE hold this grade which exemplifies professional experience, service to IEEE, professional maturity and significant professional achievements.**

### **UNIVERSITY LINKAGE ISSUES**

- I have represented and continue to represent Alabama State University & Prairie View A & M University and other Universities in area of University Outreach extended to the Federal University of Nigeria, Owerri (FUTO), in Imo State, Nigeria. The work performed while at FUTO included Undergraduate and Graduate Curriculum Development, Research, Graduate Thesis and Dissertation Advisement, Development of New Courses, Lecturing, Conducting Workshops and Seminars, etc.

### **EXPANDED SERVICE RELATED WORKS**

#### **International Level:**

1. Appointed as Editorial Board Member, Journal of Electronics and Telecommunications Engineering, 2021.
2. Nominated and Elected a Co-Chair and Member of Scientific Committee European Section of the Advanced Materials Congress (AMC, [www.advancedmaterialscongress.org](http://www.advancedmaterialscongress.org)) for 2021 – 2022.
3. Invited Talk: “Nanotechnology: An Overview of the Current Status of its Roles in the Era of COVID-19”, IAAM Fellow Lecture 2020, advanced materials lecture series, International Association of Advanced Materials, Sweden, September 2020.
4. Invited Speaker, 8th International Conference on Electronics, Communications and Networks (CECNet2018), November 12-19, 2018, in Bangkok, Thailand.
5. Invited Speaker, International Conference on Nanomaterials & Nanotechnology (ICNANO 2018), October 09-12, 2018, in Stockholm, Sweden.
6. Invited by two Universities in China (Yangzhou University and South China University) and one in Hong Kong (The University of Hong Kong) to give a talk in each of the Universities and discuss MOUs and Research Collaborative efforts (October 9-17, 2013).
7. Appointed as a Member of the Board for the Applied Science University Journal, Amman, Jordan, Spring 2012-Present.
8. Cited and Acknowledged by the Federal University of Technology Owerri, Nigeria; Office of the University Librarian for donating a total of 727 various titles (812 Volumes) of books to the University, FUTO /LB/GC/220, March 17, 2011.

## EXPANDED SERVICE RELATED WORKS CONTINUED

9. Invited to FUTO as a Visiting Professor. Represented and continue to represent Prairie View A & M University in area of University Outreach extended to the Federal University of Nigeria, Owerri (FUTO), in Imo State, Nigeria. The work performed while at FUTO included Undergraduate and Graduate Curriculum Development, Research, Graduate Thesis and Dissertation Advisement, Development of New Courses, Lecturing, Conducting Workshops and Seminars, etc., December 18, 2009- January 15, 2010; & December –January 7, 2011.
10. Appointed Director of Technology Operations, member Disputes Resolution Committee, Owerri People's Congress, Houston, Texas USA, 2005-2009.
11. Reviewer, International Journal on Network Security (IJNS), 2007-Present.
12. Invited to Serve as Editor of a New E-Book or E-Book Series, Bentham E-Books, Bentham Science Publishers, September 11, 2008 to Present.
13. Invited to FUTO as a Visiting Professor. Represented and continue to represent Prairie View A & M University in area of University Outreach extended to the Federal University of Nigeria, Owerri (FUTO), in Imo State, Nigeria. The work performed while at FUTO included Undergraduate and Graduate Curriculum Development, Research, Graduate Thesis and Dissertation Advisement, Development of New Courses, Lecturing, Conducting Workshops and Seminars, etc., November 2004-January 2005.
14. Chair of sessions in several conferences Worldwide
15. Appointed to the Curriculum Advisory Committee for Electrical Engineering Program at the Polytechnic University of Namibia in Namibia, Southern Africa. **This appointment is for a period of 3 years starting fall 2005.**
16. Participant and Exhibitor at the Second World Space Congress, Houston, Texas, October 2002.

### National Level:

1. Invited Talk: "Graduate Program Issues", 2020 America East Symposium for Graduate Programs in Engineering and Computing", America East Conference, December 2020.
2. Invited and attended and presented a Paper at the American Society for Engineering & STEM Education Dean's Conference, Vancouver, Canada, June 26-29, 2011.
3. Invited as one the Keynote Speakers in the first ever HBCU ADVANCE Program Conference on "Women focused on increasing the participation and advancement of women in Academic Science, Technology and Mathematics (STEM) Careers", Houston, Texas, May 19-22, 2011.
4. Invited as one the Keynote Speakers in the first ever HBCU Conference, ASU, March 8-11, 2011.
5. Appointed Board member, the Center of Excellence for Communication Systems Technology Research (CECSTR), Prairie View A&M University, Prairie View, Texas, 2010-Present.
6. Session Chair, Testing & Testable Systems, MWSCAS2006, San Juan, Puerto Rico, 2006.
7. Appointed to many Conference Review and Publication Committees by ASEE, IEEE in 2005-Present.
8. Invited as a Panelist for NASA in the Research Proposal Review and Evaluation Process, 2007-Present.
9. Invited to several Times to serve as one of the NSF Panelists in Washington, DC from Feb. 9-12, 2006.
1. Reviewer for ASEE Publications and Conference Papers
2. Book Reviewer for CRC Press/Taylor & Francis Publishers
3. Chair, Digital Systems – Selection, Design & Project Management of ISA Computer Technology Society, ISA, 1986
10. Founding IEEE Student Faculty Advisor for Norfolk State University
11. Reviewer for IEEE Potentials Journal
12. Reviewer for IEEE Transactions on Education
13. Reviewer for IEEE Transactions on Circuits and Systems
14. Reviewer for IEEE Transactions on Selected Topics in Signal Processing
15. Reviewer for the Technology Interface, the Electronic Journal for Engineering Technology

## EXPANDED SERVICE RELATED WORKS CONTINUED

### National Level Continued:

16. Reviewer for IEEE Transactions on Circuits, Systems and Signal Processing (CSSP), 2005-Present.
  17. NSF Volunteer, Graduate Research Fellowship Program, 2006-Present.
  18. Invited by Shell Oil Company to represent Prairie View A&M University and the Center of Excellence for Communication Systems Technology Research (CECSTR) for a town hall meeting to discuss the future of energy security in the United States, Hilton College Station & Conference Center, College Station, November 2, 2007.
  19. One of the organizers and a Session Chair for the MWSCAS2006 Technical Conference in San Juan, Puerto Rico, August 2006.
  20. Judge for School Science Projects in Tidewater area Schools
  21. Author/Workshop Developer/Speaker DSP World featuring ICSPAT , 1998
  22. Head Judge/Judge, Engineering Projects, Tidewater Science Fair, 1994- 1995
  23. Session Chair, Wavelets IEEE Southeastern Conference, 1996
  24. Session Chair, Modeling & Simulation Conference, 1986 – 1990.
  25. Chair, Digital Systems – Selection, Design & Project Management of ISA Computer Technology Society, ISA, 1986.
  26. Head Judge/Judge, Engineering Projects, Tidewater Science Fair, 1994- 1995
  27. Session Chair, Modeling & Simulation Conference, 1986 – 1990.
  28. NASA & NSF Peer Review Panels (see Honor and Awards).
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### State Level

1. Member, Texas Higher Education Commission Board for Higher Education Research, 2014 - Present
2. External Proposal Technical Reviewer, State of Louisiana, Department of Education, Baton Rouge, Louisiana, 2002 - Present.
3. Judge/Panelist, Hampton Roads Section of IEEE, Student Paper Contest , 1987

### University Level

1. I have engaged professionally by helping produce advancements in the state-of-the-art in my profession by attracting funds and developing state-of-the-art research and instructional laboratories in the College of Science, Mathematics, Technology and Engineering at Alabama State University in the history of the University. These state-of-the-art laboratories are: Signal/Image/Video Processing & Digital Forensic Imaging Research Lab; Unmanned Aerial Vehicles (UAVs) & Aerial Forensic Dynamics Research Lab.; Communication Systems and Sensing & Forensic Infrared Sensing Research Lab., Software Engineering and Complex Systems Research Facility; Digital Biomedical Engineering Modeling and Simulation Research Facility; Cyber Security and Virtual Environments Research Facility; Energy Modeling and Simulation Research Facility and Advanced Computing and Informatics Modeling Research Facility.
2. Chair, Alabama State University (ASU) Distance Education Technology Report, 2010-2011
3. Member of the Alabama State University's Dean's Council, ASU, 2010 – Present
4. Chair, Alabama State University (ASU) Distance Education Technology Report, 2010-2011
5. Committee Member, Session Chair, 5<sup>th</sup> Annual Research Symposium, College of Juvenile Crime Justice and Psychology, PVAMU, 2008.
6. Through the grants that I have brought to Prairie View A&M University, I have been able to create the following job positions that could help change the lives of people – **Research Associate Position, Research Assistant Position and Administrative Assistant Position**. All these positions are fully paid by my grants to PVAMU.

## **EXPANDED SERVICE RELATED WORKS CONTINUED**

### ***University Level Continued***

7. I have helped not only promote but to transform the welfare of talented men and women that could not have otherwise been able to finish college due to lack of finance to pay their tuition by offering scholarships to deserving students through scholarship grants that I brought to PVAMU. To date over 60 students have benefited from such activities.
8. I have also engaged professionally by helping produce advancements in the state-of-the-art in my profession by attracting funds and developing state-of-the-art research and instructional laboratories in the Electrical Engineering Department at PVAMU in the history of the university. These state-of-the-art laboratories are: **Mixed Signal Research Laboratory, DSP Solutions Research Laboratory and Broadband Access Technologies Research Laboratory.**
9. Appointed by Dr. Wright (President PVAMU) to serve on the PVAMU Infrastructure Technology Subcommittee, 2005-Present.
10. Supervised seven student posters contributed to the Texas A&M University System's 1<sup>st</sup> Annual Pathways to Success Symposium, Galveston, Texas, November 2006. My Students WON the 2nd and 3rd Overall Prizes for Best Research Projects and Presentations of ALL the Texas A&M University Systems Schools.
11. Supervised six student posters contributed to the Texas A&M University System's 1<sup>st</sup> Annual Pathways to Success Symposium, Galveston, Texas, November 2003.
12. Faculty Tenure Appeal Committee, June 2003 to 2005
13. Founding IEEE Student Faculty Advisor for Norfolk State University
14. IEEE Counselor, Norfolk State University Branch, 1985-1988, 1993-1996
15. ASEE Campus Representative, Norfolk State University, 1985 – 1996
16. Judge for School Science Projects in Tidewater area Schools
17. Chair of sessions in several conferences

### ***College Level***

1. Chair, for the College of Science, Mathematics, and Technology's (CSMT's) Exploratory Committee for Engineering Education at ASU.
2. Coordinated a joint proposal between the College of Engineering and the Department of Chemical Engineering at PVAMU and the Department of Nuclear Engineering at Texas A&M University and the Department of Physics at Texas A&M University – Kingsville to the Department of Energy. This program has been funded by DOE for \$60,000./year for 3 years starting 9/01.
3. ABET Advisory Committee at Different Universities; 1984 - to Present.
4. Curriculum Committee at Different Universities (1984 - Present)
5. Technical Committee for the PVAMU Engineering Symposia (2000)

### ***Department Level***

1. Developed numerous courses and serves a member of the ECE Department.
2. Developed an Advertisement for the Ph.D. Program in Electrical Engineering.
3. Put together Application Materials for Prospective doctoral students.
4. Organized a Texas Instruments Recruitment and Presentation event at PVAMU October 18-19, 2007.
5. Made PowerPoint Presentations for Advertising the new Ph.D. program in Electrical Engineering.
6. Traveled to Lamar University to recruit potentials for the new Ph.D. program.
7. Participated in Student Recruitment Efforts in Several Local High Schools and Universities within the State of Texas and across the Nation (2003 – Present).
8. Gave and continue to give occasionally on invitations graduate student seminar to Electrical Engineering Ph.D. students, 2004 to Present.
9. Helped prepare documents for the Ph.D/M.S. in Electrical Engineering degree program application to the Texas Higher Education Co-coordinating Board, 2000-2002.

## **EXPANDED SERVICE RELATED WORKS CONTINUED**

### ***Departmental Level Continued***

10. Overseeing the Communications and Signal Processing, Wireless, Mixed Signal Systems and DSP Solutions Laboratory specifications and design for the New Electrical Engineering Building (2000-2004).
11. Serving or have served as Chair or Committee Member on over 20 Master's thesis committees and advisor for over 3 master's projects (1999-present).
12. Supervising or have supervised over 100 undergraduate research projects, mostly electrical engineering majors (1999-present).
13. Chair, Electronics Engineering Curriculum Development and Accreditation Committee, Norfolk State University, 1984 – 1988
14. Developer/Coordinator, Microprocessor Learning Resource Center, Hampton University, 1984 – 1985
15. Search Committee for new Electrical Engineering Faculty Members, 2002-present.
16. Professor & Head, Engineering Technology Department, July 1, 2005 - Present
17. Director, Center of Excellence for Communication Systems Technology Research (CECSTR) 2001-Present
18. Professor, Electrical Engineering, Prairie View A&M University , September 2004-Present
19. Senior Member Status, IEEE, 2003
20. Chair, Electronics Engineering Curriculum Development and Accreditation Committee, Norfolk State University, 1984 – 1988
21. Have supervised over 15 undergraduate summer research interns during 2004-Present.
22. Developed laboratory plans for the Center of Excellence for Communication Systems Technology Research (CECSTR), 1999-2003.
23. Invited to Conduct and Present to Graduate Engineering Seminars 2000 to Present.
24. Academic Advising "Bridging the Gap" Workshop, Prairie View A&M University, 2005 - 2006.
25. Contributed to the 2002-2007 and 2008 - 2013 Strategic Plans.
26. Have supervised student participation in off-campus outreach and research activities from NASA Langley, Argonne National Laboratory, to Texas Instruments (1996-present).
27. Representative to many Industrial Affiliates Meeting of the Electrical and Computer Engineering Department and CECSTR.
28. Taught some courses in the Department at no charge from Spring 1999 – Spring 2007.

### **Community Service:**

1. Numerous visits to local pre-school, elementary and secondary classes to give talks and demonstrations on science, engineering and technology, (1999-Present).
2. Career Day Presentation, Waller High School, Langham High School & Cy-Fair ISD, (2005-Present)
3. Career Day Presentations, Barbra Jordan High School for Careers, Houston, Texas, (2001, 2002 & 2003).