Abayomi AJOFOYINBO, *Ph.D*
Department of Engineering
Texas Southern University,
3100 Cleburne Street, Houston, Texas 77004
Email: ajofoyinboa@tsu.edu;

EDUCATION
Ph.D., Systems Engineering (embedded systems and control). -- *2003-2008.*
M.S., Engineering Analysis -- *1996-1998.* ***Passed with Distinction****.*

UNIVERSITY SCHOLARSHIP
Gulf Oil Company of Nigeria (now Chevron) University Scholarship: 1987 –1990.

RESEARCH AREAS
(a) Embedded systems and control engineering
(b) Wireless communications and wireless sensor networks
(c) Artificial Intelligence
(d) Software engineering

EMPLOYMENT HISTORY
1. **Visiting Assistant Professor** : September 2014 – Present.
   Department of Engineering
   Texas Southern University,
   Houston, Texas

   Major responsibilities: Teaching and Research

   Courses taught:
   (a) ECE 430   -- Applied Electromagnetics
   (b) ECE 436   -- Artificial Intelligence
   (c) ECE 330   – Engineering Mathematical Analysis
   (d) ECE 130   – Programming for Engineering Applications
   (e) CMET 436   – Applied Microprocessor Software
   (f) ELET 442   – Special Projects
   (g) ELET 431   – Microprocessor Interfacing (Lecture)
   (h) ELET 413   – Microprocessor Interfacing (Laboratory)
   (i) CMET 435   – Advanced Microcomputer Networks (Lecture)
   (j) CMET 415   – Advanced Microcomputer Networks (Laboratory)
   (k) ELET 215   – Digital Systems
   (l) ELET 130   – Introduction to Structured Programming with C++

2. **Postdoctoral Fellow** : September 2013 – August 2014.
   NSF-CREST Centre for Research on Complex Networks
   Texas Southern University, Houston, Texas.

   Major responsibilities: Research on wireless communications and wireless sensor networks

3. **Senior Lecturer**   :   October 2012 – August 2013
    Department of Systems Engineering,
    Faculty of Engineering
    University of Lagos, Nigeria.

    Major responsibilities: Teaching and research

4. **Lecturer I**   :   November 2008 –October 2012.
    Department of Systems Engineering,
    Faculty of Engineering
    University of Lagos, Nigeria.

    Major responsibilities: Teaching and research

5. **Lecturer II**   :   July 2004 – November2008.
    Department of Systems Engineering,
    Faculty of Engineering
    University of Lagos, Nigeria.

    Major responsibilities: Teaching and research

6. **Manager, Technology Consulting Group**   :   April 2001 – June 2004
    ROE Limited, Nigeria

7. **Manager/Project Coordinator**   :   September 1999 – March 2001
    Standard Petrochemical Industries Limited (SPIL), Lagos, Nigeria
    [*Joint Venture Operator for: Nigerian National Petroleum Corporation (Nigeria), Ferrostaal AG (Germany), Lurgi AG (Germany), ABB Lummus (USA) and SPIL (Nigeria)*]
    Joint Venture Project: *Methanol Project*

8. **Systems Engineer**   :   October 1991 – June 1995
    Maintenance Department
    Shell Petroleum Development Company Limited (SPDC),
    Warri, Bendel State (now Delta State), Nigeria

9. **National Service**   :   October 1990 – September 1991
    Shell Petroleum Development Company Limited (SPDC), Western Division
    Warri, Bendel State (now Delta State), Nigeria

PUBLICATIONS

1) David O. Olowokere and Abayomi M. Ajofoyinbo, "Energy-efficient MAC Protocol using directional antennas in IEEE 802.11-based wireless sensor networks", *International Journal of Electronics Communication and Computer Engineering,* 2015, vol. 6, no. 5, pp. 548-557.
2) Ajofoyinbo A.M. and Li W.W. (2015). "Directional antennas MAC protocol for energy-efficient wireless sensor networks with mobile sink". *International Journal of Communications Systems,* DOI.10.1002/dac.3007.

3) Ajofoyinbo A.M. and Olowokere D.O. (2015). "Markov decision process –based structural health monitoring model for civil infrastructure systems using energy-efficient wireless smart sensor networks" . *International Journal of Modern Engineering,* Spring/Summer 2015, vol. 15, no. 2, pp. 45-56.

4) Ajofoyinbo A.M and Olowokere D.O. (2015). "Fuzzy control model for structural health monitoring of civil infrastructure systems". *Journal of Control Science and Engineering*, vol. 3, no. 1, pp. 9-20.

5) Olowokere D.O. and Ajofoyinbo A.M. (2015).   "A framework for integrating intelligent sensors measurement data into engineering education". 122nd Annual Conference of the *American Society for Engineering Education (ASEE)*, Seattle WA, June 14-17, 2015.

6) Ajofoyinbo A. and Olowokere D.O. (2014). "Health monitoring and control of civil infrastructures using wireless smart sensor networks". *Bulletin of Electrical Engineering and Informatics*, vol. 3, issue 3, pp. 201-212.

7) Ajofoyinbo A.M. and Olowokere D.O. (2014). "Discounted semi-Markov decision process based structural health monitoring model for civil infrastructure systems using wireless smart sensor networks". *European Journal of Scientific Research*, vol. 121, issue 4, pp. 347-362.

8) Ajofoyinbo A.M. (2013); "On Ultra Extended Cyclic Prefix in Orthogonal Frequency Division Multiplexing (OFDM) Systems: The Case of LTE Downlink"; *Journal of Communications and Networks*; vol. 5; pp. 280 - 287.

9) Ajofoyinbo A.M. (2013); "Energy efficient Packet-Duration-Value based MAC Protocol for wireless sensor networks"; *Journal of Wireless Sensor Networks*; vol. 5, no. 10, pp. 194 – 202.

10)   Ajofoyinbo A.M. and Orolu K. (2012); "Optimal allocation of radio resource in Cellular LTE downlink based on truncated dynamic programming under uncertainty"; *Journal of Communications, Network and Systems Sciences*; vol. 5, no. 2, pp. 111-120.

11) Olunloyo V.O.S., Ajofoyinbo A.M. and Oye Ibidapo-Obe (2011); "On Development of Fuzzy Controller: The case of Gaussian and triangular membership functions", *Journal of Signal and Information Processing;* vol. 2, pp. 257-265.

12) Ajofoyinbo A.M. and Orolu K. (2011); "An adaptive multi-user dynamic scheduling technique for multi-class traffic in Long-Term Evolution (LTE) cellular downlink", *Proceedings of the International Conference on Innovations in Engineering and Technology* (IET 2011), University of Lagos, Nigeria. August 8-10, 2011; pp. 229-245.

13) Ajofoyinbo A. M. and Orolu K. (2011); "A dynamic programming based technique for optimal allocation of radio resource in multi-user cellular Long-Term Evolution (LTE) downlink", *Proceedings of the 10th World Scientific and Engineering Academy and Society (WSEAS) International Conference on Telecommunications and Informatics (TELE-INFO 2011),* Lanzarote, Canary Islands, Spain, May 27-29, 2011, pp. 107-113.

14) Olunloyo V.O.S. and Ajofoyinbo A.M. (2010); "*On the systematic computation of union and intersection of triangular Fuzzy sets*", European Journal of Scientific Research; vol. 41, no. 1, pp. 135 – 149.

15) Olunloyo V.O.S. and Ajofoyinbo A.M. (2010); "A new admission control algorithm for performance improvement in General Packet Radio Service (GPRS) network"; *European Journal of Scientific Research*; vol. 41, No. 1, pp. 122-134.

16) Olunloyo V.O.S and Ajofoyinbo A.M. (2010); "Factors influencing reliability of interconnected industrial systems: The case of irregular electrical power supply"; *University of Lagos Journal of Engineering Research*; vol. 15, no. 1, pp. 1-10.

17) Olunloyo V.O.S and Ajofoyinbo A.M. (2009); "A model for real time leakage detection in pipelines: A case of an integrated Global Positioning System (GPS) Receiver"; *Proceedings of*

the 3rd North Atlantic University Union (NAUN) and World Scientific and Engineering Academy and Society (WSEAS) International Conference on Circuits, Systems and Signals (CSS'09), Athens, Greece, December 29-31, 2009. pp. 216-221.

18) Olunloyo V.O.S. and Ajofoyinbo A.M. (2009); "Performance improvement in General Packet Radio Service (GPRS) network based on priority queue oriented admission control". *Proceedings of the 8th World Scientific and Engineering Academy and Society (WSEAS) International Conference on Telecommunications and Informatics (TELE-INFO '09)*, Istanbul, Turkey, May 30 – June 1, 2009. pp. 179-186.

19) Olunloyo V.O.S., Ajofoyinbo A.M. and Ibidapo-Obe O. (2009); "Design and implementation of embedded Fuzzy controllers based on Fourier computation of membership functions"; *Proceedings of the 8th World Scientific and Engineering Academy and Society (WSEAS) International Conference on Electronics, Hardware, Wireless and Optical Communications*, University of Cambridge, U.K.; pp. 133-142. (**Best Paper of the Conference**).

20) Olunloyo V.O.S., Ajofoyinbo A.M. and Badiru A. B. (2008); "An alternate approach for computing the union and intersection of Fuzzy sets: A basis for design of robust Fuzzy controllers"; Proceedings of the 7th World Scientific and Engineering Academy and Society (WSEAS) International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases (AIKED' 08), University of Cambridge, U.K.; pp. 301-308. (**Best Student Paper**).

21) Olunloyo V.O.S., Ajofoyinbo A.M. and Femi Agboola (2007); "Irregular electrical power supply as a major risk factor in an emerging industrial economy". *Proceedings of the 7th International Conference on Power Systems Operation and Planning (7th ICPSOP);* January 22-25, 2007. Cape Town, South Africa.pp. 203-212.

22) Olunloyo V.O.S. and Ajofoyinbo A. M. (2007). "Intelligent processing in cultural context: The African perspective". *Proceedings of the 6th International Conference on Intelligent Processing and Manufacturing of Materials* (IPMM '07), Salerno, Italy. CD-ROM.

23) Olunloyo V.O.S. and Ajofoyinbo A.M. (2006). "*Fuzzy*-stochastic maintenance model: economic health index as a measure of engineering performance". *Special Issue of the Communication of Dependability and Quality Management: An International Journal*; vol. 9, no. 1, pp. 30-37.

24) Olunloyo V.O.S. and Ajofoyinbo A.M. (2005). "A new approach for treating *Fuzzy sets'* intersection and union: A basis for design of intelligent machines"; *Proceedings of the 5th International Conference on Intelligent Processing and Manufacturing of Materials (IPMM'05).* July 19-23, California, USA, July 19-23, 2005. CD-ROM.

25) Olunloyo V.O.S and Ajofoyinbo A. M. (2005). "Fuzzy-stochastic maintenance model: A tool for maintenance optimization". *Proceedings of the International Conference on Stochastic Models in Reliability, Safety, Security and Logistics.* Beer Sheva, Israel, Feb 15-17; pp. 266-271.

26) Olunloyo V.O.S., Ajofoyinbo A.M. and Badiru A.B. (2004). "NeuroFuzzy mathematical model for monitoring flow parameters of Natural Gas". *Applied Mathematics and Computation*; Elsevier Science, vol. 149, pp. 747-770.

SOFTWARE ENGINEERING
I have expertise in the following programming languages:
(a) C/C++ Programming Language
(b) Java Programming Language
(c) C-Sharp Programming Language

(d) Assembly Language
(e) Ladder Language / Statement List
(f) MATLAB

AFFILIATION WITH PROFESSIONAL BODIES
(a) Institute of Electrical and Electronic Engineers, New York, USA
(b) The Nigerian Society of Engineers
(c) Computer Professional Registration Council of Nigeria
(d) The Nigerian Economic Society

PROFESSIONAL TRAINING

Courses attended	-	Country
(a) Entrust Training & Certification (Entrust Identity Guard)	-	UK
(b) Robust Design by Reliability, Fiability and Fatigue	-	France
(c) Riverbed Technology Technical Training (Bandwidth optimisation)	-	UK
(d) SUN Java Enterprise Systems (JES) Identity Management	-	Czech Republic

JOURNAL REVIEW
Reviewer for:
(a) EURASIP Journal of wireless communications and networking.
(b) Journal of Communications and Networks