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EDUCATION

Post-Graduate Certificate in Academic Leadership, Chicago School of Professional Psychology, 2014
Ph.D., Biomedical Engineering, Rutgers, The State University of New Jersey, May 2000
B. S., Electrical Engineering, University of Maryland, College Park, May 1993
Physics, Washington College, Chestertown, MD, 1988 - 1990

PROFESSIONAL EXPERIENCE & AWARDS

Morgan State University Department of Electrical and Computer Engineering
2015 – Present: IEEE ABET Engineering Accreditation Commission Program Evaluator
2014 NTA Technical Achiever Award for commitment and outstanding service in a technical field
2010 – 2016: *Associate Chair for Graduate Studies*
2008 – 2016: *Graduate Program Coordinator*
2006 – Present: *Associate Professor*
2001 – 2006: *Assistant Professor*

The Boeing Company

2008: *Boeing Welliver Faculty Fellow* – This fellowship was designed to provide faculty with exposure to the organization for an understanding of technical and workforce needs. Spent eight weeks at Boeing facilities in Washington, California and Missouri.

University of Pennsylvania Department of Radiology

2000: *Research Assistant* - Developed image processing software for ultrasound images.

TEACHING EXPERIENCE

Undergraduate Courses Taught/Project Supervision

- *Circuits*: Electric Circuits (Fall 2002, Spring 2003, Fall 2003, Fall 2004); Introduction to Electrical Laboratory (Fall 2001, Fall 2002, Spring 2003, Fall 2003, Spring 2004, Spring 2005)
- *Computer Engineering*: Introduction to Digital Logic (Fall 2001 – present, 1 – 3 sections/semester including one online-only section starting Fall 2010); Advanced Digital Design (Fall 2006, Fall 2007, Spring 2009, Spring 2010); Computer Organization (Spring 2012)
- *Other*: Introduction to Biomedical Engineering (Fall 2005, Spring 2006, Spring 2008); Introduction to Electrical Engineering (Fall 2001, Spring 2003, Spring 2005);
- *Projects*: Senior Projects (2003 – present, 37 projects supervised)

Graduate Course Taught/Project Supervision

- *Computer Engineering*: Advanced Digital Systems Design (Spring 2009, Spring 2010);
- *Projects*: Master's Projects (2006 – present, 9 projects supervised); Doctoral Students (2007 – present, 1 dissertation, 3 dissertation committees)

SCHOLARLY PUBLICATIONS

1. Y. Astatke, **J. O. Ladeji-Osias**, P. James, F. Moazzami, C. Scott, K. Connor, and A. Saka, "Improving and Expanding Engineering Education in the Middle East And Africa Using Mobile Learning Technology and Innovative Pedagogy", in *Advances in Engineering Education in the Middle East and North Africa. Current Status and Future Insights*, Ed. M. Abdulahed, M. O. Hasna, J. E. Froyd, Springer International Publishing, 2016, p. 235 – 260. DOI: 10.1007/978-3-319-15323-0.
2. **J. Ladeji-Osias**, C. F. Hohmann, S. Hargett, L. Brown, C. Hughes-Darden, and M. Reece, "The Impact of Undergraduate Research in STEM at Morgan State University on the Production of Doctoral Degrees in Engineering and the Sciences", in *Infusing Research into Historical Black Colleges and Universities Curricula* (Diversity in Higher Education, Volume 17), Ed. J. McClinton, M. A. Melton, C. R. Jackson, K. Engerman, Emerald Group Publishing Limited, 2015, p 143 - 175. DOI: 10.1108/S1479-364420150000017008.
3. **J. O. Ladeji-Osias**, L. Partlow, M. Head, R. Paudel, J. Farley and O. Muhammed, Minority Male Maker Program: Encouraging STEM Interest and Creativity in Middle School Boys. *Proceedings of Fall ASEE Middle Atlantic Section Conference, Bucknell University, September, 2015*. Available: <https://www.asee.org/papers-and-publications/papers/section-proceedings/middle-atlantic/fall-2015>
4. **J. O. Ladeji-Osias**, C. F. Homann, C. Hughes-Darden, and S. Hargett, Research Training Models Leading to Nationally Recognized Outcomes, *AACU Network for Academic Renewal Conference*, November, 2015.
5. Guangming Chen, **J. Ladeji-Osias**, Gbikeloluwa Oguntimein, and Young-Jae Lee, "Engaging Engineering Graduate Students in Applied Research at Morgan State University", *2015 American Society of Engineering Education (ASEE) Annual Conference*, June 2015.
6. C. F. Hohmann, **J. Ladeji-Osias**, M. Reece, C. Hughes-Darden, L. Brown, and S. Hargett, "Different training models - nationally recognized outcomes: Common denominator for successful STEM graduate school preparation in Engineering and the Life Sciences at Morgan State University", *7th Conference on Understanding Interventions that Broaden Participation in Science Careers*, San Diego, May 2015 (Symposium).
7. **J. O. Ladeji-Osias** and A. M. Wells, "Best Practices in Classroom Management for Today's University Environment", *2014 American Society of Engineering Education (ASEE) Annual Conference*, June 2014. (Featured in M. Lord, Driven to Distraction, *ASEE Prism*, October 2014. <http://www.asee-prism.org/driven-to-distraction-oct/>)
8. **J. Ladeji-Osias**, Gbikeloluwa Oguntimein, Guangming Chen, and Young-Jae Lee, "Creating a Community of Doctoral Scholars", *6th Conference on Understanding Interventions that Broaden Participation in Science Careers*, Baltimore, May 2014 (poster).
9. K. Nyarko, C. Scott, **J. Ladeji-Osias**, "Haptic Nanomanipulation within Semi-Immersive Environment", *Proceedings of World Scientific and Engineering Academy and Society*, September, 2013, Baltimore, USA.
10. P. Sissinto and **J. Ladeji-Osias**, "Bio-empirical mode decomposition: visible and infrared fusion using biologically inspired empirical mode decomposition", *Opt. Eng.* 52 (7), 073101 (July 08, 2013); doi: 10.1117/1.OE.52.7.073101.
11. C. Scott, Y. Astatke, P. James, **J. Ladeji-Osias**, Kofi Nyarko, "A Performance Assessment Framework for Measuring Online Student Learning Outcomes", *2013 American Society of Engineering Education (ASEE) Annual Conference*, June 2013.

12. Y. Astatke, C. Scott, **J. Ladeji-Osias**, “Improving ECE Education in Developing Sub-Saharan African Countries Using the Mobile Studio Technology and Pedagogy”, *2013 American Society of Engineering Education (ASEE) Annual Conference*, June 2013.
13. Y. Astatke, F. Moazzami, C. Scott, **J. Ladeji-Osias**, “Using Online Video Lectures to Enhance Engineering Courses”, *Proceedings of Spring ASEE Middle Atlantic Section Conference, New York City College, April 2013*.
14. C. Scott, Y. Astatke, P. James, **J. Ladeji-Osias**, Kofi Nyarko, “Changing the Dynamic of Engineering Education Through Technological Advancements in Classroom Training Tools”, *18th Annual Sloan Consortium International Conference on Online Learning*, 2012.
15. K. Nyarko, P. James, C. Scott, Y. Astatke, **J. Ladeji-Osias**, Kofi Nyarko, “Assessment Techniques and Assessment of Student Learning Outcomes”, *Maryland Association for Institutional Research (MdaIR)*, October 19, 2012.
16. C. Scott, Y. Astatke, P. James, **J. Ladeji-Osias**, “Useful Strategies for Implementing an Online Undergraduate Electrical Engineering Program”, *2012 American Society of Engineering Education (ASEE) Annual Conference*, 2012.
17. Y. Astatke, C. Scott, **J. Ladeji-Osias**, “Online Delivery of Electrical Engineering Laboratory Courses”, *2012 American Society of Engineering Education (ASEE) Annual Conference*, , 2012.
18. Y. Astatke, C. Scott, **J. Ladeji-Osias**, P. James, “An Innovative Approach for Implementing Online Undergraduate Electrical Engineering Program for Community College Students”, *Proceedings of Spring ASEE Middle Atlantic Section Conference, University of Delaware, 2012*.
19. Y. Astatke, C. Scott, **J. Ladeji-Osias**, G. Mack, “Results of a Summer Enrichment Program for Pre-Freshmen Minority Engineering Students”, *Proceedings of Spring ASEE Middle Atlantic Section Conference, University of Delaware, 2012*.
20. **J. Ladeji-Osias**, C. Scott, G. Oguntimein, J. Wheatland, Y. Astatke, “Scholars in Engineering: A Scholarship Model for Student Mentoring and Recruitment”, *Proceedings of Spring ASEE Middle Atlantic Section Conference, University of Delaware, 2012*.
21. Y. Astatke, **J. Ladeji-Osias**, C. J. Scott, K. Abimbola, and K. Conner, “Developing and Teaching Sophomore Level Electrical Engineering Courses Completely Online”, *Journal of Online Engineering Education*, 2(2) 2011.
22. P. Sissinto, **J. Ladeji-Osias**, “Fusion of Infrared and Visible Images using Empirical Mode Decomposition and Spatial Opponent Processing,” *IEEE Applied Imagery Pattern Recognition Workshop, 2011*, pp. 1 - 6.
23. **J. Ladeji-Osias**, K. Abimbola, Y. Astatke, C. Scott, “Teaching a Sophomore Course with a Laboratory Component Online,” *Proceedings of Fall ASEE Middle Atlantic Section Conference, Temple University, 2011*.
24. R. Dukes, K. Nyarko, **J. Ladeji-Osias**, “Detecting Airport Runways using Image Processing Techniques,” *Proceedings of Fall ASEE Middle Atlantic Section Conference, Temple University, 2011*.
25. Y. Astatke, C. Scott, **J. Ladeji-Osias**, “Electric Circuits Online - Towards a completely Online Electrical Engineering Curriculum,” *2011 American Society of Engineering Education (ASEE) Annual Conference*, , 2011.
26. C. Scott, Y. Astatke, **J. Ladeji-Osias**, “Opening the Engineering Gateway: Can Differentiated Instruction Help Prepare Our Non-Traditional Students?” *2011 American Society of Engineering Education (ASEE) Annual Conference*, 2011.
27. **J. Ladeji-Osias**, R. Cerkovnik, W. Lawson, L. Xiang, “The Maryland Associate’s of Science in Electrical and Computer Engineering: Outcomes-Based Transfer Degrees” *2010 American Society of Engineering Education (ASEE) Annual Conference*, 2010.
28. C. Scott, **J. Ladeji-Osias**, Y. Astatke, C. White, “Engineering for the Rest of Us: Differentiated Instruction to Help Prepare Our Students,” *9th Annual ASEE Global Colloquium on Engineering Education*, Singapore, 2010.

29. C. Scott, **J. Ladeji-Osias**, Y. Astatke, (Invited Paper) “Dimensions of Learning in Higher Education: Levels 12-16,” *The K—16 Model of Minority STEM Education Workshop: Innovations in Pedagogy and Approach*. Petersburg, VA, April 22-23, 2010.
30. S. Parker, **J. O. Ladeji-Osias**, “Implementing a Histogram Equalization Algorithm in Reconfigurable Hardware”. *Proceedings of Spring ASEE Middle Atlantic Section Conference, Lafayette University, 2010*.
31. **J. Ladeji-Osias**, et. al, “A Competitive Advantage for Boeing: Large Scale Systems Integration (LSSI)”, Final Report, 2008 Boeing Welliver Faculty Fellowship (Proprietary).
32. C. Scott, P. Leigh Mack, **J. Ladeji-Osias**, N. Jackson, S. Alao “Integrating Tablet PC Technology into the Dimensions of Learning Pedagogical Framework”, *The Impact of Tablet PCs and Pen-Based Technology in Education: Vignettes, Evaluations, and Future Directions*. Ed. D. A. Berque, J. C. Prey, R. H. Reed. Purdue University Press, 2006. 157 – 164.
33. K. Nyarko, O. Nare, C. Scott, **J. Ladeji-Osias**, “An Approximate Graph Matching Technique for Integrity Monitoring in Intelligent Integrated Flight Deck Applications”, *SAE General Aviation Technology Conference 2006*.
34. K. Nyarko, **J. Ladeji-Osias**, C. Scott, O. Nare, “A Graph Based Method of Integrity Monitoring of Digital Elevation Models for Synthetic Vision Systems Using X-Band Weather Radar Measurements”, *25th DASC*, 2006.
35. K. Nyarko, C. Scott, **J. Ladeji-Osias**, O. Nare, “Integrity Monitoring of Digital Elevation Models for Synthetic Vision Systems Using Approximate Graph Matching Techniques and X-band Weather Radar Measurements”, *RTCOMP’06, 2006 International Conference on Real-Time Computing Systems and Applications*, June, 2006.
36. **J. Ladeji-Osias**, A. Theobalds, O. Nare, K. Wandji, C. J. Scott, K. Nyarko. “Implementing a Shadow Detection Algorithm for Synthetic Vision Systems in Reconfigurable Hardware”. *Proceedings of the SPIE Defense and Security Symposium*, April 2006.
37. C. Scott, P. Leigh Mack, **J. Ladeji-Osias**, N. Jackson, S. Alao “Integrating Tablet PC Technology into the Dimensions of Learning Pedagogical Framework”, *Workshop on the Impact of Pen-Based Technology in Education, April 6-7, 2006*.
38. **J. Ladeji-Osias**. “Planning and Teaching an Undergraduate Course”. *Proceedings of the 2005 ASEE Annual Conference*. (Nominated for Best Conference Paper).
39. **J. O. Ladeji-Osias**, G. Wilkins, “Electrical Engineering Projects for Elementary School Students”. *Proceedings of Fall ASEE Middle Atlantic Section Conference, Stony Brook University, 2005*.
40. **J. O. Ladeji-Osias**, A. Theobalds “Hardware Implementation of a Shadow Detection Algorithm for Synthetic Vision Systems”. *Proceedings of 2005 Paradigm Shifting Conference, 2005*.
41. **J. O. Ladeji-Osias**, C. Johnson-Bey “Constructive Alignment in a Digital Logic Course”. *Proceedings of Spring ASEE Middle Atlantic Section Conference, Fairleigh Dickenson University, (CDROM), 2005*.
42. C. J. Scott, **J. Ladeji-Osias**, T. Capers, K. Nyarko. “The Development and Implementation of EM-Viz, a 3D Undergraduate Electromagnetic Engineering Visualization Application, with an Assessment of its Relative Efficacy for Minority Visual Literacy and Achievement”. *Computers in Education Journal*, 14(3):71-80, 2004.
43. **J. O. Ladeji-Osias**, G. Mack “K-12 Outreach from the Engineering Classroom”. *Proceedings of Fall ASEE Middle Atlantic Section Conference, Catholic University of America, (CDROM), 2004*.
44. C. Scott, K. Nyarko, T. Capers, **J. Ladeji-Osias**. “Network Intrusion Visualization with NIVA, Visual and Haptic Analyzer”. *Information Visualization*, 2(2):82-94, 2003 (Cited 10 times).
45. C. Scott, K. Nyarko, T. Capers, **J. Ladeji-Osias**. “Network Representation and Intrusion Visualization of Tactical Ad Hoc Mobile Networks”. *In: Proceedings of the Collaborative Technology Alliances Conference– 2003 (poster)*.
46. J. Scott, **J. Ladeji-Osias**, T. Capers, K. Nyarko. “The Development and Implementation of EM-Viz, a 3D Undergraduate Electromagnetic Engineering Visualization Tool, with an Assessment of its Relative Efficacy for Minority Visual Literacy and Achievement”. *Proceedings of the 2003 ASEE*

Annual Conference (<http://www.asee.org/conferences/proceedings/search.cfm>).

47. D. Watkins, C. Scott, P. L. Mack, **J. Ladeji-Osias** “Impact of Mobile Computing on Freshman Minority Engineering Students”. *Proceedings of Fall ASEE Middle Atlantic Section Conference, Morgan State University, (CDROM), 2003.*
48. K. Nyarko, T. Capers, C. Scott, **K. Ladeji-Osias**. “Network Intrusion Visualization with NIVA, an Intrusion Visual Analyzer with Haptic Integration”, in: *10th Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems (HAPTICS 2002), HAPTICS Proceedings*, pp. 277 – 284, 2002. (Cited 55 times)
49. **J. Ladeji-Osias**, C. J. Scott, Y. Feggins, T. Adalore. “Handheld Computers in Engineering Education”, in: *Proceedings ASEE Middle Atlantic Section Conference, Manhattan College, CDROM Proceedings, 2002.*
50. **J. O. Ladeji-Osias**, N. A. Langrana. “Three Indentor FEA to Identify Tumors within Soft Tissue”, *Advances in Bioengineering American Society of Mechanical Engineers, Bioengineering Division, BED 43:15-16, 2000.*
51. **J. O. Ladeji-Osias**, N. A. Langrana. “Analytical Evaluation of Tumors Surrounded by Soft Tissue”. in: *Proceedings of the 22nd Annual EMBS International Conference of the IEEE*, (3): 2114 – 2117, 2000 (IEEE Student Paper Competition Finalist).
52. **J. O. Ladeji-Osias**, N. A. Langrana. “Design and Development of a Multi-Prong Soft Tissue Indentor”. in: *Proceedings of 1999 Bioengineering Conference, ASME Publication, BED 42:301-302, 1999.*
53. N. Langrana, G. Burdea, **J. Ladeji**, M. Dinsmore. “Human Performance Using Virtual Reality Tumor Palpation Simulation”. *Computers & Graphics*, 21(4):451-458, 1997.
54. N. A. Langrana, W. Fan, **J. Ladeji**. “Parametric Study on Virtual Tumor Detection within Soft Tissue”. *Advances in Bioengineering American Society of Mechanical Engineers, Bioengineering Division, BED 36:255-256, 1997*
55. M. Dinsmore, N. Langrana, G. Burdea, **J. Ladeji**. “Virtual Reality Training Simulation for Palpation of Subsurface Tumors”. *Proceedings IEEE Virtual Reality Annual International Symposium 1997*. pp. 54-60, 1997

EXTRAMURAL FUNDING

1. National Science Foundation (EEC) - #1542744, *Exploring Advanced Placement Opportunities in Engineering: A Workshop on Designing a Universal, Exchangeable and Transferable (DUET) Credit*, 10/1/2015 – 9/30/2015, \$297,964 (Co-Principal Investigator)
2. National Science Foundation (EEC) - #1550777, *EAGER: The Professional Development and Instruction of Design Comparing both Distance Learning and Face-to-Face Delivery Methods*, 10/1/2015 – 9/30/2015, \$299,599 (Co-Principal Investigator)
3. National Science Foundation (EEC) - #1553791, *Moving Toward Stronger Communities of Inclusion: Identifying Challenges and Approaches Associated with Introductory Engineering Offerings*, 09/01/15 – 8/31/16, \$50,000 (Co-Principal Investigator)
4. National Science Foundation (HRD) - #1549562, *The SEaRCH: STEM Education Research Consortium at Historically Black Colleges and Universities (HBCUs)* (Collaborative), 08/15/15 – 07/31/16, \$60,000 (Principal Investigator)
5. The Verizon Foundation, *Verizon Minority Male Maker Program*, 05/01/15 – 09/01/17, \$400,000 (Principal Investigator)
6. National Science Foundation (HRD) - #1458930, *RISE: Embedded Systems Security via Reverse Engineering and Countermeasures*, 04/01/2015 – 03/31/18, \$999,450. (Co-Principal Investigator)

7. National Science Foundation (DUE) - #1259493, *Doctoral Scholars in Engineering*, 08/01/13 – 07/31/18, \$627,101. (Principal Investigator)
8. Ventura Solutions, *HAWKSNEST*, 02/11/13 – 06/30/13, \$307,347 (Co-PI)
9. Ventura Solutions, *Software Defined Radio Information Assurance and Spectrum Management Lab*, 2/11/13 -10/31/13, \$103,656 (equipment), (Co-PI)
10. National Science Foundation (DUE) - #0965942, *Scholars in Engineering, SiE*, 03/01/10 – 02/28/16, \$600,000. (Principal Investigator)
11. National Aeronautics and Space Administration, *Chesapeake Information Based Aeronautics Consortium*, 09/01/03 - 08/31/12, \$27,000,000. (Participating Researcher)
12. Maryland Higher Education Commission, *Morgan State University Online Electrical Engineering Program*, 01/01/11 - 12/31/11, \$85,913. (Co-Principal Investigator)
13. Maryland Higher Education Commission, *Morgan State University Online - Plus Two Electrical Engineering Program*, 01/01/10 - 12/31/10, \$85,913. (Co-Principal Investigator)
14. National Science Foundation - #053739, *Developing an Integrated, Flexible, Adaptable and Viable Curriculum in Electrical and Computer Engineering*, 09/01/05 - 8/31/07, \$100,000. (Co-Principal Investigator)

PROFESSIONAL AND SERVICE ACTIVITIES

American Society for Engineering Education – Middle Atlantic Section

- Executive Committee: Nominations Chair (2014), Awards Chair (2013), Past-Chair (2012), Chair (2011), Chair-Elect (2010), Vice-Chair (2009)
- Secretary/Treasurer (2005 – 2009) , Secretary/Treasurer Elect (2004)
- Conference Chair, Fall 2003 ASEE Middle Atlantic Section Conference

State of Maryland Associate of Science in Engineering Initiative

An initiative between public and private two-year and four-year higher education institutions in the State of Maryland that developed outcomes based articulation for the Associates of Science in Electrical Engineering and Computer Engineering. <http://www.mhec.state.md.us/ASE/>

- Co-Chair, Continuous Review Committee, (2010– present)
- Member, Electrical and Computer Engineering Faculty Disciplinary Committee (2007 – 2009)
- Developed a model for outcomes-based transfer between two- and four-year colleges and universities in Maryland.

Preparing Critical Faculty for the Future – American Association for Colleges and Universities

- External Advisor, Reverse Site Visits (April, 2015)
- Cohort II - AAC&U leadership and professional development around STEM education at HBCUs
- Started a campus-wide initiative around Interdisciplinary research and education for campus faculty https://sites.google.com/a/morgan.edu/msu_transstem/

K-12 Outreach

Worked with promote engineering and creativity among middle and elementary school students (100+ hours per year).

- Baltimore County 4-H: Created a new after-school robotics club in northern Baltimore County for elementary and middle school students (2013 – present). <http://huntvalleyrobotics.wordpress.com>
- The Park School of Baltimore: Develop and lead an afterschool robotics club for up to 30 middle school students that meets 2 -3 times per month using SeaPerch and Arduino (2012 – present).

- Lutherville Elementary School: Lead a team of up to seven elementary school students to solve a Destination Imagination challenge (2009 – 2013)

Reviewer

- Proposals & Fellowships Panels
 - AAUW Selected Professions Fellowships Review Panel (2007– 2012), Panel chair (2011, 2012); Air Force Summer Faculty Fellowship (2009 -2011); National Science Foundation (2010 - present); NASA Aeronautics Scholarship Program (2011) ; SMART (2010)
- Publications and Conferences
 - Workshop on the Impact of Pen-based Technology on Education ; American Society for Engineering Education Annual Conference and Exposition; Frontiers in Education Conference; WEPAN National Conference; International Journal of Engineering Education; John Wiley (Electric Circuits and Digital Logic textbooks)

Campus Contributions

- Institutional:
 - Graduate Council (2008 – present); Student Learning and Assessment (2007 - present); University Council (2003 – 2006)
- School of Engineering:
 - Strategic Planning Committee (2011)
- Departmental:
 - Promotion and Tenure Committee: 2009–present (Electrical and Computer Engineering, Transportation Studies, Nutritional Sciences); Faculty Search Committee: 2009 – present (multiple); Curriculum Committee: 2006– present; Assessment Committee: 2006– present (Coordinated assessment for ABET accreditation visit); Awards Committee: 2005– 2009

Branch Counselor, Morgan State University IEEE Student Branch, 2006 - 2012