

Bankole K. Fasanya, PhD, OHC

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PROFILE SUMMARY

Over ten years of research, industrial and teaching experiences in academia with strong focus on occupational safety, industrial accidents investigation, auditory research, ergonomics, human factors, acoustics, data analysis, quality, and human behavior. Academic strengths and skills include creative problem solving, industrial engineering, Six Sigma, Lean manufacturing, manufacturing management, environmental safety (in depth knowledge of STANDARD- 29 CRF), experimental design, statistical analysis, teaching/coaching, and teamwork. Possessed the ability to exhibit operational knowledge of general industry OSHA and other pertinent safety standard. Active member of America Society of Safety Professionals (ASSP) Greater Calumet Chapter, executive council member of NHCA. Author and co-author of many publications in top journals and conferences.

ACHIEVEMENTS & CERTIFICATIONS

Best Graduate Student Research Oral Presentation of the Year – NCA&T (2011), Xerox Minority Graduate Scholar (2012), Alfred P. Sloan Foundation Scholar (2010), Green belt certification – Six Sigma (2010), Lean Manufacturing Certification (2013), Computer Application (2000), OSHA #511 & 501 for general industry (10-30 HOURS) instructional certification (OSHA AUTHORIZED TRAINER), Hearing Conservationist (CAOHC-2016). Digital Learning Certification (2017), Association of College and University Educators (ACUE-2018)

EDUCATION

Ph.D., Industrial and Systems Engineering, August 2013

North Carolina Agricultural & Technical State University, Greensboro, NC (GPA = 3.90)

Research: Quantitative Analysis of Acceptable Noise Level for Air Conduction Listening

M.SE, Industrial, Manufacturing and Information Systems Engineering,

May 2008 Morgan State University, Baltimore, MD

(GPA = 3.36)

Research: Acceptable noise level (ANL): Listening to Monophonic and stereophonic signal in noise by normal listener

BSc, Mechanical Engineering,

The Polytechnic Ibadan, Nigeria (GPA = 3.12)

WORK EXPERIENCES

Assistant Professor, Construction Science and Organization Leadership Supervision (Environmental Health and Safety Track)

Purdue University Northwest, Hammond IN.

2016 - Present

□ Teach the following courses:

- Technology from Global Perspective (MET 52700) – Graduate level
- Research Method (TECH 64600) – Graduate level
- Ergonomics (OLS 24200)
- Accidents/Incidents Investigation (OLS 35500)
- Industrial Hygiene (OLS 33200)
- Environmental Health and Safety Legislations and Standards (OLS 33300)
- Undergraduate students Conference Leadership (OLS 47400).
- Fundamentals of Risk Assessment and Risk Management (OLS 33600)
- Undergraduate students Hazardous Materials (OLS 34300).
- Undergraduate students Fundamental of Self-Leadership (OLS 16300)

- Create lesson plans and oversee the course structure.
- Continually conduct research and publish papers.
- Mentor students.
- Involved in departmental management meeting to improve students' learning standard.

Senior Research Associate, Auditory Protection and Performance Division – U.S. Army Aeromedical Research Laboratory USAARL, Fort Rucker AL

Laulima Government Solution LLC

Aug. 2015 - 2016

- Research Associate Investigator.
- Worked on the following projects:
 - Effects of acoustic impulse on the middle ear
 - Middle-ear reflex classical conditioning using Laser Doppler Vibrometer
 - Shock tube Testing of Helmets with blast dampening
- Assisted in developing medical criteria for ear plug attenuation, sound localization and speech intelligibility
- Assisted the Principal Investigators on volunteer participant recruiting, obtaining and documenting volunteer informed consent, conduct of research protocols and test plans, data analysis, and manuscript review
- Maintained the Acoustics Division investigators records that required by the USAARL Regulatory Compliance Office
- Maintained the development and documentation of appropriate standard operating procedures for conducting research on the effects of impulsive sounds (blast) on the middle ear
- Ensured governmental compliance of safety issues related to the effective use of hearing protection devices (HPD)

Research/Teaching Faculty, Joint appointment with Department of Applied Engineering Technology/Department of Built Environment.

North Carolina Agricultural & Technical State University, Greensboro, NC

Jan. 2014 – 2016

Taught the following courses:

- Undergraduate senior students Industrial Health and Hygiene (OSH 413A).
- Introduction to Occupational Safety and Health (OSH 201A).
- Created lesson plans and oversee the course structure.
- Continually conduct research and publish papers.
- Mentored graduate students.
- Organized students for field trip (visit companies for practical exposures).
- Involved in management meeting to improve learning standard.
- Courses taught:
 - Graduate students Occupational Safety and Health - Noise Control (OSH 706 – Spring, 2015).
 - Graduate students Occupational Safety and Health Management with the implementation of STANDARD 29 CFR (Fall, 2014).
 - Undergraduate senior students Industrial Health and Hygiene (OSH 416A – Spring, 2015).
 - Undergraduate students computing technology (AET 121 – Spring, 2015).
 - Undergraduate senior students Industrial Health and Hygiene (Fall, 2014).
 - Undergraduate students blue print reading (Fall, 2014).
 - Computing Technology (Spring, 2014).
 - Industrial Materials & Processes (Spring, 2014).
 - Introduction to Occupational Safety and Health (two sessions - Spring, 2014).

Visiting Professor, University of Ibadan, Oyo-State, Nigeria; Industrial and Production Engineering,

Carnegie African Diaspora Fellowship Program

July 2014 – Aug. 2014

- Trained Federal employees (Emergency rescue team) safety issues related to their duties.
- Assisted in curriculum co-development for industrial and production engineering.
- Screened doctoral students for PhD program.
- Trained technologist on effective use on laboratory equipment.
- Assisted doctoral students to reshape their dissertation titles and research methodology.
- Taught design of experiment at graduate level.
- Participated in the development of marketing strategy for the industrial and production engineering (IPE) department.
- Involved in industry-academia collaboration (IPE, Leyland Technical Academy & Prototype Engineering Development Institute).
- Developed research topics on Ergonomics and Human Factors for the research team of the department.

Adjunct Instructor, Forsyth Technical Community College, Winston-Salem, NC, **Jan. 2012 – Dec. 2013**

- Taught Applied Mathematics, Conceptual Physics, Applied Physics, and Mathematics Idea courses.
- Created lesson plans and lab manuals, and oversee the management of the course structure.
- Managed the lab manual for entire college, and attend management meetings to improve student performance.
- Incorporated research into the teaching methodology within the Department.

Teaching/Research Assistant, North Carolina A&T State University, Greensboro, NC, **Jan.2010 – Aug. 2013**

- Taught students in a variety of courses, including Engineering Statistics, Production Planning and Scheduling, Methods of Engineering, Ergonomics, and Design of Experiment.
- Prepared students for laboratory assignments, and assisted instructors with course assignments.
- Used DMAIC principle to complete student project from conceptualization stage to the finished stage.
- Provided assistance to graduate students outside of classroom structure to enhance learning.
- Conducted research on operator performances in multitasking activities using different listening modalities.
- Researched bone conduction in conjunction with US Army research laboratory in Aberdeen, MD.
- Studied gender differences in visual and auditory activities using signal detection theory approach.
- Conducted research on workers safety in a noisy environment in compliance with OSHA and NIOSH safety regulation.
- Applied Lean Manufacturing principle to improved workers performances in mailing department at Rockwell-Collins Company.
- Used data mining processes to analyzed large data for food banks.
- Conducted several researches on auditory in an acoustic chamber.
- Conducted several research using acoustic booth and audiometer to determine human hearing threshold.

Research Assistant, University of North Carolina at Greensboro, Greensboro, NC, **June 2011 – Aug. 2011**

- Performed Auditory Brainstem Response (ABR) for the Department of Communication Sciences and Disorders.
- Designed experiments and recorded electrical activities of the human brain using electroencephalography (EEG) with 64 channels electrodes.
- Analyzed more than 15,000 data generated from the EEG equipment.
- Determined the part of the brain responsible for energy burst and compared different professions, revealing results that determined artists as more creative.

Facilities Management Engineer, Maryland Motor Vehicles Administration, Glen-Burnie, MD, **Jan. '08 – Feb. '09**

- Applied environmental processes and practices in all MVA facilities statewide.
- Coordinated database creation for all drawings at all facilities in the Management and Engineering division.
- Performed workspace planning and conducted Environmental Impact Analysis for gas dispensers.

- Supervised MVA contractors working on office renovation projects.
- Prepared Standard Operation Procedure (SOP) for non-hazardous waste for safety purposes in compliance with MDE, OSHA and NIOSH safety regulation.
- Developed asbestos removal procedure for MVA building at Glen-Burnie in compliance with Maryland Department of Environments (MDE) and OSHA and NIOSH safety regulation.
- Applied principle of ergonomics to computer table layout within MVA offices.
- Implemented occupational safety training among MVA workers within the State Maryland.
- Assessed potential hazard related dispensers underground tanks.
- Managed MVA facilities within the State.
- Provided feedback to division manager and facilitate communication on contractors' progress.
- Incorporated OSHA regulation on MVA gas dispenser.
- Coordinated material handling and equipment for storage.

UNIVERSITY SERVICES

- Faculty Feedback on university administrators Committee Fall 2018
- Curriculum Revised committee Fall 2018
- Purdue – Teaching Incentive Program (TIP) Award Spring 2018- Present
- Purdue - Appeal Grade committee member for School of Technology Spring 2018 – Present
- NCAT - Senate member represent Department of Applied Engineering Technology Jan. 2014 – July 2015
- NCAT - Appeal Grade committee member for School of Technology Jan. 2014 – July 2015

INDUSTRIAL/PROFESSIONAL SERVICES

- Federal Signal Illinois - Ergonomics Evaluation team Spring 2017
- Safety Science - Review safety articles Spring 2016 – Present
- Safety at work - Review safety articles Spring 2015 – Present
- International Journal of Optimization and Control: Theories & Applications 2018 - Present

NATIONAL/INTERNATIONAL COMMITTEES SERVICES

- National Hearing Conservation Association (NHCA) 2020 - 2021
Executive Council member

PROFESSIONAL AFFILIATIONS

National Sleep Health Foundation, American Society of Safety Engineers (ASSE), American Society for Engineering Education (ASEE), National Society of Black Engineers (NSBE), Industrial Engineering Honors Society (ALPHA PI MU). Hearing Conservationist (CAOHC), National Hearing Conservation Association (NHCA).

COMPUTER SKILLS

Maple Math software, ARENA Simulation Software, Microsoft Office, Lindo & Lingo and SPSS, Statistical Analysis Software (SAS), SAS Enterprise Miner, Sound Forge, Audacity, MATLAB, Fireworks, and Visual Basic.

PUBLICATIONS & CONFERENCES

Refereed Journal Articles:

- **Fasanya, B. K.** (2019). Computational Analyses of Auditory Discriminability Using Data from Acceptable Signal-to-Noise Ratio Experiment. *Int. J. Human Factors and Ergonomics (IJHFE)*, 6(2), 143-159
- **Fasanya, B. K.**, Pope-Ford R, Shofoluwe M, and Olaniyi O. (2018). The Safety Concerns of Night Shift Schedule: Implications for Family, Homes and Human Health. *Med-Clin Res & Rev*, 2(5), 1-7.

- **Fasanya, B.K.**, & Dada, E. A. (2016). Workplace violence and Safety issues in Long-term Facilities: Nurses perspectives. *Journal of Safety and Health at Work (SHAW)* vol.7 p.97-101.
- Jones, H. G., Greene, N. T., **Fasanya, B. K.**, Hollonbeck, S. A., & Ahroon, W. A. (2016). Assessment of the middle-ear assumption of the auditory hazard assessment algorithm for humans. *The Journal of the acoustical Society of America*, 140(4), 3273-3273.
- **Fasanya, B. K.** (2016). Effects of multitasking on operator performance using computational and auditory tasks. *International journal of occupational safety and ergonomics*, 22(3), 405-41.
- Kornegay, A., **Fasanya, B.K.**, Fazarro, D., Wright, j., Watson, G., & Sowell, E. (2015). Technology Driven Innovation — Strengthening Industry and Academia Partnerships for Advanced Manufacturing Gains. *Technology Interface International Journal (TIIJ)*, 15(2) 62- 66
- **Fasanya, B. K.**, & Dada, E. A. (2015). Caregivers' Concerns—Age-Group Issues on Workplace Violence. *Procedia Manufacturing*, 3, 227-233.
- **Fasanya, B. K.** Uzochukwu, B. M. & Idoye, E. P. (2014). Importance of Just-Noticeable-Differences (JNDs) in Auditory Signal Detection Task-Gender Differences. *International Journal of Engineering Research and Innovation (IJERI)*, 5(2) 81-87.
- **Fasanya, B.K.**, Omotoso, S., & Fasanya, O. A. (2013). Effect of Age on Inter and Intra-Subject Variability in Acceptable Noise Level (ANL) in Listeners with Normal Hearing. *Growing Science Journal*, 3(2) 385-394.
- **Fasanya, B.K.**, McBride, M., Pope-Ford, R., & Ntuen, C., (2012). Gender Differences in Auditory Perception and Computational Divided Attention Tasks. *Journal of Computer Technology and Application (JCTA)*, 3(9) 636-641.

Conference Proceedings

- **Fasanya, B.K.**, De La Cruz Jr, J., Abad, K., Wang, S., and Wang, W. (2020 July). Mobile phones and Laboratory: Effects on Laboratory Users Performances. Accepted for *International Conference on Applied Human Factors and Ergonomics. San Diego CA 2020*.
- **Fasanya, B.K.** and Reeves E. (2020 Feb.). Correlations between Headphones output in Decibel and Electronic Devices Volume. Accepted for National Hearing Conservation Association Annual Conference (NHCA) Destin Fl. 2020.
- **Fasanya, B. K.** and Guna Sreeja Kallepalli (2020 July). Research on Public Views of Electronic Sideview Mirror System (ESMS) in the 21st Century Cars. Accepted for *International Conference on Applied Human Factors and Ergonomics San Diego CA 2020*.
- **Fasanya, B. K.** (2019, July). Human Listener's Misperception Between Signal Comprehension in Noise and Noise Acceptability. In *International Conference on Applied Human Factors and Ergonomics* (pp. 397-404). Springer, Cham.
- **Fasanya, B. K.**, Avula, Y., Keshavula, S., Aragattu, S., Kurra, S., & Kummari, B. (2019, July). Human Factors Concerns: Drivers' Perception on Electronic Sideview System in 21st Century Cars. In *International Conference on Applied Human Factors and Ergonomics* (pp. 556-563). Springer, Cham.
- **Fasanya B. K.**, and Fathizadeh, M. (2019). Clustering from Grouping: A Key to Enhance Students' Classroom Active Engagement. *Proceedings of the Annual Conference of the American Society for Engineering Education*, Tampa, Florida, June 16-19, 2019
- **Fasanya, B.K.**, Zamojski, H.L., and Chukwurah, S. D. (2019). Tele-Presence Technology: Proposed Tool for Multi-Campuses Effective Learning and Colleges Cost Saving. Accepted for CLUTE international conference proceeding (Jan, 2019), Lahaina, Hawaii.
- **Fasanya, B. K.**, & Strong, J. D. (2018, July). Younger Generation Safety: Hearing Loss and Academic Performance Degradation Among College Student Headphone Users. In *International Conference on Applied Human Factors and Ergonomics* (pp. 522-531). Springer, Cham.
- **Fasanya, B. K.**, & Shofoluwe, M. (2018, July). Occupational ergonomics: emerging approaches toward improved worker productivity and injury reduction. In *International Conference on Applied Human Factors and Ergonomics* (pp. 522-531). Springer, Cham.

Factors and Ergonomics (pp. 385-395). Springer, Cham.

- **Fasanya, B. K.**, Pope-Ford R, Shofoluwe M, and Olaniyi O. (2018). The Safety Concerns of Night Shift Schedule: Implications for Family, Homes and Human Health. 4th Edition of International Conference on Occupational Health and Safety. May 28-29, 2018 London, UK. DOI: 10.21767/2574-2825-C2-005. <http://www.imedpub.com/conference-abstracts-files/2574-2825-C2-005-017.pdf>
- **Fasanya, B.K.**, Gregorec, J.L., and Shofoluwe, M. (2017). Relationships between Temperature and Noise on Construction Job Sites: Implications for Construction Workers' Health. International Conference for Technology Management (ICTM-2017 August) Chicago Illinois, USA. Available from: <http://www.seipub.org/pdf/ICTM2017.pdf>
- **Fasanya, B. K.**, & Pope-Ford, R. (2017, July). The Effects of Night Shift Schedule on Workers' Life and Wellbeing: Gender Differences. International Conference on Applied Human Factors and Ergonomics (pp. 557-563). Springer, Cham.
- Kornegay, A., **Fasanya, B.K.** (2016). Nanomanufacturing Utilizing the Triple-Helix Concept for Workforce Development. Proceedings of the 2016 IAJC-ISAM Joint International Conference ISBN 978-1-60643-379-9.
- William A. Ahroon, Heath G. Jones, **Bankole K. Fasanya**, and Gregory A. Flamme (2016). The effects of impulsive noise on the middle ear using laser-Doppler vibrometry technologies. Japan-US Technical Information Exchange Forum On Blast Injury (JUFBI-2016) Tokyo, Japan, 13-15 Jun 2016.
- Kornegay, L.A. and **Fasanya, B. K.** (2015). Redirect Focus of Industry and Academic Relationships. ATMEA 2015 conference proceeding. Pittsburgh PA, USA. Available at https://cdn.ymaws.com/www.atmae.org/resource/resmgr/Event_Materials/2015_ATMAE_Proceedings.pdf
- **Fasanya, B. K.**, Kornegay, L.A., Shofoluwe, M., & Dada, E. (2015). Workers' perception of nightshift schedule. ATMAE 2015 conference proceeding. Pittsburgh PA, USA. Available at https://cdn.ymaws.com/www.atmae.org/resource/resmgr/Event_Materials/2015_ATMAE_Proceedings.pdf
- **Fasanya, B.K.**, & Dada, E. A. (2015). Caregivers' Concerns – Age-Group Issues on Workplace Violence. Accepted for 6th International Conference on Applied Human Factors and Ergonomics conference proceeding. July, 2015, Las Vegas, USA.
- **Fasanya, B.K.** (2014). Effects of Sound Waves Transmission Pathways on Acceptable Noise Level (ANL). International Association of Journals and Conferences. September, 2014, Orlando FL.
- Kornegay, A., **Fasanya, B.K.**, Fazarro, D., Wright, j., Watson, G., & Sowell, E. (2014). Technology Driven Innovation — Strengthening Industry and Academia Partnerships for Advanced Manufacturing Gains. International Association of Journals and Conferences. September, 2014, Orlando FL.
- **Fasanya, B.K.**, McBride, M., Idoye, E. P., & Ntuen, C. (2013). The Role of Gender in the Detection of Auditory Signal Changes. Proceedings of the ISERC 2013 Conference, San Juan (Puerto Rico).
- McBride, M., **Fasanya, B.K.**, Tran, P., & Letowski, T.R., (2013). Monotic and Diotic Speech Recognition of Bone Conducted Speech. Proceedings of the ISERC 2013 Conference, San Juan (Puerto Rico).
- **Fasanya, B.K.**, McBride, M., Pope-Ford, R., & Ntuen, C., (2011). Gender Differences in Auditory Perception and Computational Divided Attention Tasks. Proceedings of the CIE41. 2011 Conference, Los Angeles CA
- **Fasanya, B.K.**, Pope-Ford, R., McBride, M., & Ntuen, C., (2011). Auditory Perception and Computational Divided Attention Tasks: a Psychophysical Study. Proceedings of the IERC 2011 Conference, RENO NEVADA.
- **Fasanya, B.K.**, and Letowski, T (2009). Acceptable Noise Levels (ANLs) for speech and music for young people with Normal hearing. Proceedings of the HPEE 2009 Conference, San Antonio TX.
- Kattel, B., **Fasanya, B.K.**, and Letowski T. (2008). Acceptable Noise Level (ANL) for music listened in the background of different types of noise. Proceedings of the ISOES 2008 Conference, Chicago IL.
- Kattel, B., **Fasanya, B.K.**, Letowski, T., & Hargrove K. S. (2008). The Effect of Background Noise on the Acceptable Noise Levels in Individuals with Normal Hearing. Proceedings of the IJIE 2008 Conference, Las Vegas

Book Chapter

- Hand Hygiene Practices in Restaurants Restrooms: Effects and Proposed Solutions. IntechOpen Textbook (2020).

Poster Presentation

- Jones, H. G., **Fasanya, B. K.** and Ahroon, W.A. (2016). Assessment of the Middle-ear Assumption of the Auditory Hazard Assessment Algorithm for the Human Ear (AHAHAH). Military Health System Research Symposium 2016 conference, Orlando FL.
- Kornegay, A., **Fasanya, B.K.** (2016). Nanomanufacturing Utilizing the Triple-Helix Concept for Workforce Development. *Proceedings of the 2016 IAJC-ISAM Joint International Conference ISBN 978-1-60643-379-9*
- Seong, Y., Alfaleh, A., Codjoe, E., deMattos, P., **Fasanya, B.K.**, Tabbakh, S., (2012). Predictive Students' Performance in Math Class: Lens Model Perspective. IIE conference 2012. Orlando, FL.

JOURNAL AND CONFERENCE PAPERS SUBMITTED

- **Fasanya, B.K.**, & Shofoluwe M. (2020). The Impacts of Indoor Temperature and Noise Interaction on Worker Performance. Journal of the American Society and Safety Professional
- Fasanya, B.K, Reeves, E & Francis A. (2020). The Impacts of Indoor Temperature and Noise Interaction on Worker Performance. XXII world congress on health and safety at work-ILO. Toronto Canada.
- **Fasanya, B.K.** & Adegbite, M. (2020). safety and ergonomics concerns of human public restrooms. XXII world congress on health and safety at work-ILO. Toronto Canada.
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Editorial Board

Chief Editor for IntechOpen on Safety and Health for Workers - Theory and Applications, Textbook.
(<https://www.intechopen.com/profiles/214494/Bankole-Fasanya>)

Responsibilities:

- Created the textbook title
- Developed textbook description and all chapter topics
- Review and approve all chapter proposal as well as full chapter document.

Proposal Funded

- Developing a sustainable hybrid material for traffic noise reduction (\$11,000 – Funded)
- Correlation in Decibel between different cell phones Volume Outputs via Headphones. PNW Internal grant (Funded \$7,000).
- Workplace Safety Alert App for Workers' Performance Effectiveness and Accident Control. PNW Internal Grant (Funded - \$3,961)
- Hands-On Demonstration on Dangerous Decibel (Hearing Protection) for 8-12 Students. Indiana Space Grant Consortium (INSGC) 2017 (\$10,003- Funded).
- Auditory Dangers among College Students: Headphones Usage and Its Impacts. Purdue Research Fund 2018 (\$8,000)
- Mental health degradation among midlife adults as a result of workplace violence. PNW Internal Grant 2017. (\$3,000).

Proposal Submitted for Funding

- Workplace Safety Alert App for Workers' Performance Effectiveness and Accident Control (\$25,000)
- Training on Occupational Noise Exposure (TONE). Occupational Safety and Health Administration (OSHA), Susan Harwood Grant. (\$158,388.00)
- Demonstration of the Physics of Sound and Hearing (POSH) STEM Summer Camp for K-12 Science Teachers and Students (\$37,503)

Grant proposal in progress

- The psychological and Occupational costs of midlife adults experiencing workplace Aggression. NIH. (\$300,000).
- Relationship between headphones Usage and cognitive tasks performance and hearing threshold shift among college students. (\$200,000).

UNDERGRADUATE RESEARCH MENTORED PROPOSALS

- Modern applications (apps) for monitoring and tracking industrial permits (\$300 – Funded)
- American Family Insurance Habitational Loss Control Booklet Enhancement (\$295- Not funded)
-