Niyem M. Bawana

Tel: 813-327-2419 | bawana@gatech.edu | linkedin.com/in/bawana2020 | https://niyem.github.io/

Education

Georgia Institute of Technology
PhD in Electrical Engineering **2021–2026**
- Area of Interest 1: Sensor Technology; Displays and VR/AR.
- Area of Interest 2: Digital and Analog Electronics; Filter Design; Power Electronics.

University of South Florida
Master of Science in Electrical Engineering **2017–2019**
- Concentration: Rotating Machines.
- GPA 3.75

Summary

Aspiring for a summer internship or Co-Op, I am particularly interested in exploring roles within sensor technology, product development, hardware, control, or optical engineering. My goal is to leverage my academic background and hands-on experience in electrical and mechanical engineering to contribute meaningfully to innovative projects while preparing for a career in these dynamic fields.

Skills

- Instrumentation and Measurement
- Analog electronics design and troubleshooting
- Circuit analysis and simulation
- Hardware testing and verification
- Control theory
- Matlab and, Python programming
- Data Analytics and Machine Learning Algorithms implementation
- Excellent organizational skills, and ability to work independently and as a team member.
- Strong verbal and written communication skills.

Work Experience

SOS Energy Togo **2016-2017**
Applied Scientist
- Conducted experimental data collection and analysis for different stove types.
- Performed efficiency analysis for various stove designs.
- Provided insights into stove efficiency, aiding in the development of sustainable cooking solutions.

Solar Thermal Energy Research Group, Stellenbosch University **2015**
Intern
- Engaged in data collection and analysis for solar thermal energy projects.
- Conducted experimental research on the performance and efficiency of solar thermal systems.
- Performed efficiency analysis using statistical modeling techniques.
- Provided insights into the optimization of solar thermal systems through data-driven approaches.

ECE 3741: Experiments in Analog Electronic + Electronic & Analog Electronic Circuits **Georgia Tech, Atlanta**
Teaching Assistant *Fall and Summer 2022; Spring 2023*
- Introduced students to Essential lab equipment and breadboard wiring and circuit troubleshooting.
- Supervised laboratory topics such as First-Order and Second-Order circuits Op-Amps; Diodes Filters; MOSFET and BJT Amplifiers; PWM; Audio Amplifier; Relaxation Oscillators; Op-Amps; Filters; Diode Circuits; Relaxation Oscillators.

Selected Projects

Fabrication of Smart Sensors, Fall 2019 **New Mexico Tech**
Research Assistant *Fall 2019*

- Involved in creating innovative smart sensors.
- Explore and implement novel manufacturing processes for sensor development.
- Used advanced coating, thin-film deposition, and lithography processes for sensor fabrication.
- Developed smart sensors with improved performance and capabilities, advancing sensor technology.

Thermal Response of Three-Phase Induction Machines **University of South Florida**
MS Thesis *August 2017–July 2019*

- Investigated thermal failure scenarios of induction machines under various conditions.
- Developed thermal models of induction machine.
- Developed a model predictive control algorithm to prevent overheating in an induction machine.

Fluid and Thermal Systems Laboratory **New Mexico Tech**
Teaching Assistant *Fall 2020*

- Supervised student during aircraft aerodynamic testing using a wind tunnel.
- Administrated and graded lab quizzes and exams.

Relevant Coursework

- Sensor Technology
- Power Electronics
- Integrated Circuit
- Control Systems Design
- Modern Control
- Optimal Control
- Networked Control

Awards

- **Fulbright Scholarship:** U.S. Department of State, 2017–2019. Prestigious scholarship awarded for academic excellence and international exchange.
- **Pafroid Scholarship:** European Union funded fellowship, 2015. Merit-based scholarship recognizing innovative ideas in the field of science and engineering for developing countries. I spent a year at Stellenbosch University's Department of Mechanical Engineering.
- **Global Achievement Awards**, University of South Florida, Tampa, 2018.

Professional Memberships

- **IEEE:**The Institute of Electrical and Electronics Engineers.
- **ASME:**The American Society of Mechanical Engineers.
- **ASTN:**The American Society for Nondestructive Testing.
- **NSBE:**The National Society of Black Engineers.