Clinton O. Enwerem

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Research Interests

Robotics, Control Theory, Machine Learning.

Education

University of Maryland, College Park — MD, USA
Ph.D., Electrical & Computer Engineering — Expected May 2026
- Specialization: Robotics.

Advisor: Professor John S. Baras.

University of Nigeria, Nsukka — Enugu, Nigeria
Bachelor of Engineering, Electrical Engineering, Highest Honors — Graduated Aug 2018
- Majors: Control Theory, Electrical Drives.

Advisor: Udoka C. Nwaneto, MSc, EIT.

Research Experience

University of Maryland, College Park — MD, USA
Graduate Research Assistant, Institute for Systems Research — Aug 2021 – Present
- Research Focus: Dexterous Grasping & Manipulation, Trusted Autonomous Systems.
- Advisor: Professor John S. Baras, *Distinguished University Professor & Endowed Lockheed Martin Chair in Systems Engineering*.

University of Nigeria, Nsukka — Enugu, Nigeria
Graduate Research Assistant, Control & Instrumentation Lab – EE Department — Sep 2018 – Dec 2020
- Research Themes: Robust Control, Observer-Based Compensator Design, Feedback Linearization.
- Supervisor: Ihechiluru Okoro, MSc.

Undergraduate Research Assistant, Control & Instrumentation Lab – EE Department — Aug – Oct 2017
- Research Themes: Feedback Control, Time-Delayed Systems, System Identification.
- Supervisor: Ihechiluru Okoro, MSc.

Professional Experience

University System of Maryland, Southern Maryland — **MD, USA**
Summer Intern — June 2022 – Present
- Theme: Intelligent control of a swarm of unmanned micro aerial vehicles.
- Supervisor: Dr. Danilo Romero

Robotics & Artificial Intelligence Nigeria — Ibadan, Nigeria
Robotics Trainee — Mar 2020 – Feb 2021
- Engineering co-lead for the autonomous Ground Robot Messenger project: Carried out the high-level design, hardware development, and visual SLAM project aspects (*Tools: Python, ROS, Bash, OpenCV, MS Visio*).
- Prototyped a low-cost flight control and communications system for a quadrotor delivery drone as part of a team (*Tools: C++, SolidWorks, MultiWii*).
- Developed software for an obstacle-avoiding, teleoperable, and ROS-compliant mini ground vehicle equipped with a single-board computer and a ranging sensor (*Tools: Python, ROS, Bash*).

Skills

- Robotics Tools: ROS, Gazebo, RViz, MoveIt!, CoppeliaSim, MuJoCo.
- Programming languages and math packages: Matlab, Python, C++, Git, LaTeX, Bash, Web (HTML5/CSS), OpenCV.
- Control: System Identification, SISO and MIMO Controller Design.

Publications

Journal Papers

- I. Okoro and **C. Enwerem**, "Robust Control of a DC Motor," *Heliyon*, vol. 6, no. 12, pp. 1-8, 2020, doi: 10.1016/j.heliyon.2020.e05777.

Conference Papers

- I. Okoro and **C. Enwerem**, "Model-based Speed Control of a DC Motor Using a Combined Control Scheme," *2019 IEEE PES/IAS PowerAfrica*, Abuja, Nigeria, 2019, pp. 1-6, doi: 10.1109/PowerAfrica.2019.8928856.

Coursework

- Doctoral: Convex Optimization, System Theory (Fall 2021); Nonlinear Control Systems, Optimal Control (Spring 2022).
- Postbaccalaureate Training: Advanced Control Theory for Mobile Robots, AI for Humanoid Robotics, Control Theory & IoT (2020).

Honors & Awards

- Finalist, Engineers League, Pan-African Robotics Competition, Rwanda - Team Kognitive Robotics. 2021
- CIT Dean's Fellowship, Carnegie Mellon University, Africa Campus ($14000 in tuition for an MS in ECE). 2021
- Dean's Fellowship, University of Maryland, College Park, MD, United States. 2021
- Scholar, Stanford Exposure to Research and Graduate Education (SERGE), Stanford University, CA, USA. 2020
- Recipient, Opportunity Funds Program Scholarship, EducationUSA, US Consulate General. 2020

Extracurricular Activities

- Member, Black in Robotics – a U.S. organization that promotes Black representation in robotics. Oct 2020 – Present