Clinton O. Enwerem

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Research Interests

Robotics, Control Theory, Machine Intelligence.

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.

Teaching

Robotics & Artificial Intelligence Nigeria — **Ibadan, Nigeria**
Tutor — Oct 2020
• Advanced Control Theory for Mobile Robots - Taught a class on Iterative Gradient Descent for supervised machine learning. *Faculty: Dr. Olusola Ayoola*

Professional Experience

Kognitive Robotics — **Lagos, Nigeria**
Robotics Engineer — Apr 2021 – July 2021
• Led launch efforts for the MVP (a turnkey ground robot platform for robotics research) and developed a modular and custom PCB for the robot's controller and power circuitry. (*Tools: Altium Designer*).

Robotics & Artificial Intelligence Nigeria — **Ibadan, Nigeria**
Robotics Trainee — Mar 2020 – Feb 2021
• Engineering co-lead for the autonomous **G**round **Ro**bot **Me**ssenger (GRoMe) 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.
• **Computer-aided design/Engineering**: SolidWorks, Fusion 360, Simulink, Altium Designer, 3D printing, Sensors, MCUs.
• **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).
• 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