

# Clinton Enwerem

## Academic CV

### Research Interests

Systems & Control, Statistical Learning, Robotics.

### Education

- 2021-Date **PhD, Electrical & Computer Engineering**, *University of Maryland*, College Park, MD, USA  
Expected May 2026. Advisors: Professor John S. Baras and Professor Calin Belta.
- 2014-2018 **B.Eng., Electrical Engineering**, *University of Nigeria*, Nsukka, Enugu, Nigeria  
GPA: 3.84/4 (*First-Class Honors*). Emphasis: Control Theory.

### Selected Publications

#### Preprints/Articles In Review

- 2024 **Clinton Enwerem**, Erfaun Noorani, John S. Baras, and Brian M. Sadler. Robust Stochastic Shortest-Path Planning via Risk-Sensitive Incremental Sampling, 2024. *To appear in the Proceedings of the 2024 Conference on Decision and Control (CDC)*.

#### In Conference Proceedings

- 2024 **Clinton Enwerem** and John S. Baras. Safe Collective Control under Noisy Inputs and Competing Constraints via Non-Smooth Barrier Functions, 2024. *In the Proceedings of the 2024 European Control Conference*.
- 2023 **Clinton Enwerem** and John S. Baras. Consensus-Based Leader-Follower Formation Tracking for Control-Affine Nonlinear Multiagent Systems. *9th International Conference on Control, Decision and Information Technologies*, 2023.

#### Journal Articles

- 2024 **Clinton Enwerem** and John S. Baras. Formation Tracking for a Class of Uncertain Multiagent Systems: A Distributed Kalman Filtering Approach. *IEEE Control Systems Letters*, volume 8, 2024.

### Research Experience

#### Institute for Systems Research (ISR), University of Maryland

- 8/2021-Date **Graduate Research Assistant**  
*Research Foci*: Safety-Critical Control, Risk-Sensitive Optimization, PGM-Based Learning.
- 9/2018-3/2021 **Research Assistant**  
*Research Topics*: Robust Control, Observer-Based Compensator Design, Feedback Linearization.
- 8-10/2017 **Undergraduate Research Assistant**  
*Research Topics*: Feedback Control, Time-Delayed Systems, System Identification.

### Professional Experience

#### Institute for Systems Research, College Park, MD

- Jun.-Aug. 2023 **Research Assistant**  
Formulated a multi-agent safety-critical control problem as a chance-constrained and dynamic mathematical program, wrote software to validate approach, and prepared a research paper to summarize results.  
*Supervisor*: Professor John S. Baras.

## ISR & University System of Maryland at Southern Maryland, California, MD

### 6.-8/2022 **Research Intern**

Worked in collaboration with the MATRIX Lab (<https://matrix.umd.edu>) on problems encompassing multi-agent cooperative control, formation control, and target tracking under sensor uncertainty.  
*Supervisor: Dr. Danilo Romero.*

### Robotics & Artificial Intelligence Nigeria (RAIN), Ibadan, Nigeria

*RAIN is Nigeria's premier robotics and AI research institute.*

### 3/2020-2/2021 **Robotics Trainee**

Saw varied robotics and IoT projects through hardware and software development stages comprising computer-aided design, prototyping, firmware development, and product testing.

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## Honors & Awards

- 2024 IEEE CSS Student Travel and Workshop Support: Conference travel award to attend CDC'24.
- 2022 2022-2023 Microsoft Diversity in Robotics & Autonomy PhD Fellowship.
- 2022 ROSCon Diversity Scholarship: Travel grant to attend ROSCon 2022 in Kyoto, Japan.
- 2021 Finalist, Engineers' League, Pan-African Robotics Competition, Rwanda.
- 2021 CIT Dean's Fellowship, Carnegie Mellon University, Africa Campus, Kigali, Rwanda.
- 2021 Dean's Fellowship, University of Maryland, College Park, MD, United States.
- 2020 Scholar, Stanford Exposure to Research & Graduate Education, Stanford University, CA, USA.
- 2020 EducationUSA Opportunity Funds Program Scholarship, U.S. Consulate General, Lagos, Nigeria.
- 2020 Sole Recipient (Nationwide), Door Foundation Leadlight Scholarship, RAIN.
- 2016-2018 Agbami Science & Technology Scholarship, Chevron: Merit-based undergraduate scholarship.
- 2015-2018 MTN Foundation Scholarship: Nationwide merit-based undergraduate scholarship.

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## Technical Skills

<b>Robotics</b>	<i>Tools:</i> ROS/ROS2, Gazebo/Ignition, RViz2. <i>Robots:</i> Crazyflie 2.X, Turtlebot2, UR5.	<b>Statistics</b>	JAGS.
<b>Programming</b>	Python, Matlab, C++, Bash, $\text{\LaTeX}$ , Tk, R.	<b>Optimization</b>	Gurobi, Pyomo, Mosek.
<b>Frameworks</b>	Jupyter, TensorFlow, OpenCV.	<b>Web</b>	HTML, CSS, JS, Markdown.
<b>Engineering</b>	MCUs, Prototyping, CAD, Simulink.	<b>OS</b>	Linux, Windows.
		<b>Version Control</b>	git, GitHub, GitLab.

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## Talks

- 2024 "Safe Collective Control under Noisy Inputs and Competing Constraints via Nonsmooth Barrier Functions." Delivered at the European Control Conference, Stockholm, Sweden.
- 2023 "Consensus-Based Leader-Follower Formation Tracking for Control-Affine Nonlinear Multiagent Systems." Delivered at the 9<sup>th</sup> International Conference on Control, Decision, and Information Technologies.

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## Relevant Courses

### Doctoral

- Fall 2023 Decision-Making for Robotics.
- Spring 2023 Network Control Systems, Decision Making Under Uncertainty: RL, Control, & Games.
- Fall 2022 Random Processes in Communication & Control, Advanced Digital Signal Processing.
- Spring 2022 Nonlinear Control Systems, Optimal Control.
- Fall 2021 System Theory, Convex Optimization.

### Open Courseware

- Summer 2023 Bayesian Statistics I & II by the University of California San Diego (*with honors*).
- Summer 2022 Autonomous Navigation for Flying Robots by the Technical University of Munich.
- Spring 2022 Principles of Robot Autonomy I & II by Stanford University.

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## Academic Service

- 2023 Peer Reviewer: Heliyon, MED'23, ECC'24.

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