

Mary Ogunmola

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EDUCATION

Ph.D., **University of Utah**
Computer Science (expected 2030)
Advisor: Professor Robert Ricci.
Research areas: Empirical systems research; performance variability and reproducibility; trustworthy measurement; confidential computing.
CGPA: 4.00

B.Sc., **Joseph Ayo Babalola University**
Computer Science (2023)
CGPA: 3.92

RESEARCH INTERESTS

My research centers on trustworthy and efficient computation. I study performance variability in cloud environments and develop methods for producing reliable, reproducible measurements. I also work on confidential computing, enabling secure execution on untrusted infrastructure without sacrificing performance. Broadly, my work aims to make both execution and measurement trustworthy at scale.

PUBLICATIONS

Under review **Mary Ogunmola**, Mugahed Izzedin, & Robert Ricci “Confidential5G: Trusted Execution of 5G Network Functions on Untrusted Clouds.” *ACM SIGOPS Annual Technical Conference (ATC)*. (Under review.)

RESEARCH EXPERIENCE

- 2025 – Present **Graduate Research Assistant**, Flux Research Group, University of Utah.
Advisor: Professor Robert Ricci.
Empirical systems and performance variability: Investigating performance variability in cloud environments to ensure that measurement results are representative rather than artifacts of environmental interference, and remain reproducible across settings.
Confidential computing for 5G: Researched secure execution of data-in-use for 5G core network functions deployed on third-party cloud infrastructure, while ensuring optimal performance.
- 2023 – 2024 **Undergraduate Research Assistant**, Joseph Ayo Babalola University.
Advisor: Dr. V. A. Olutayo.
Studied accessibility barriers in academic resource distribution by designing and evaluating a unified resource system; demonstrated over 120% improvement in accessibility.
Analyzed cloud-centric IoT transformations via an enterprise case study, characterizing cost, performance, and security trade-offs to inform migration strategies.

TALKS & PRESENTATIONS

- Jun 2023 Presenter, Joseph Ayo Babalola University Seminar — “Improving the Accessibility of Academic Resources in Educational Institutions.”

HONORS, AWARDS & FELLOWSHIPS

- 2025 University of Utah Graduate Fellowship.
- 2024 EducationUSA Opportunity Funds Award.
- 2023 Overall Best Graduating Student (Valedictorian), Joseph Ayo Babalola University; Dean’s Prize; University Scholar; Pro Chancellor’s Prize; Parent Forum’s Prize; Most Outstanding Student (Nigerian Association of Computing Students).

ACADEMIC SERVICE

- 2026 Judge, University of Utah Senior Capstone Project Showcase.
- 2026 Shadow Program Committee: ACM SIGMETRICS 2026.
- 2026 Artifact Evaluation Committee: ACM SOSP 2026; EuroSys 2026; Privacy Enhancing Technologies Symposium (PoPETs) 2026; ACM CCS 2026.
- 2025 Poster Evaluator, University of Utah Undergraduate Research Symposium.

TEACHING EXPERIENCE

- 2021 – 2023 **Tutor**, Nigerian Association of Computing Students, Joseph Ayo Babalola University. (*CS 314, CS 220*)
- 2022 **Technical Instructor**, JIT Solutions Technology. (*JavaScript, TypeScript*)

PROFESSIONAL EXPERIENCE

- 2024 – 2025 **Software Engineer**, i-Vantage Technology, Lagos, Nigeria.
- 2024 **Cybersecurity Analyst**, Hacktify.

TECHNICAL SKILLS

- Measurement:** Performance benchmarking and profiling (perf, eBPF, ftrace); system tracing and instrumentation.
- Reproducibility:** Reproducible experiment design; artifact packaging and evaluation.
- Confidential Computing:** Intel SGX; Intel TDX; Gramine; Kata; Confidential containers.
- Networking:** 5G core networks; Open5GS.
- Cloud native:** Kubernetes; Docker; AWS; GCP; Azure; Terraform; CI/CD.
- Programming:** C; Python; JavaScript; TypeScript; Linux systems programming.

MENTORSHIP & LEADERSHIP

- 2025 – Present **Secretary**, Graduate Student Advisory Council (GradSAC), Kahlert School of Computing, University of Utah.
- 2025 **Mentor**, EducationUSA Opportunity Funds Program (OFP) Scholars, Cohort 2025. Advised international applicants through graduate school applications.
- 2024 **Community Organizer**, AWS Nigeria User Group.
- 2024 **Member**, NYSC Medical Community Development Service Group.
- 2022 – 2023 **Team Leader**, Academic Committee, Nigerian Association of Computing Students (NACOS), JABU Chapter.

PROFESSIONAL AFFILIATIONS

Association for Computing Machinery (ACM); IEEE Computer Society; National Society of Black Engineers; Society of Women Engineers.