Gloire Rubambiza

Cornell Bowers Computing and Information Science (CIS)
120 Bill and Melinda Gates Hall
107 Hoy Rd, Ithaca, NY 14853
Email: **my_first_name [at] cs.cornell.edu** Web: **https://rubambiza.github.io**

Education

Cornell University	Ph.D., **Computer Science**	2018 - 2024 (Expected)
Cornell University	M.S., **Computer Science**	2018 - 2022
Grand Valley State University	B.S., **Computer Science**	2014 - 2018

Research Interests

Computer Systems & Networking, Human-Computer Interaction (HCI)

Publications

Refereed Conference and Journal Papers

- **Gloire Rubambiza**, Shiang-Wan Chin, Sachille Atapattu, Mueed Rehman, José F. Martínez, and Hakim Weatherspoon, "Comosum: An Extensible, Reconfigurable, and Fault-Tolerant IoT Platform for Digital Agriculture", USENIX ATC, 2023 (**To Appear)**
- **Gloire Rubambiza**, Fernando Romero Galvan, Ryan Pavlick, Hakim Weatherspoon, and Kaitlin M. Gold, "Towards Cloud-Native, Machine Learning Based Detection of Crop Disease with Imaging Spectroscopy", *Journal of Geophysical Research, Biogeosciences*, 2023
- **Gloire Rubambiza**, Phoebe Sengers, and Hakim Weatherspoon, "Seamless Visions, Seamful Realities: Anticipating Rural Infrastructural Fragility in Early Design of Digital Agriculture", CHI '22, New Orleans, LA, USA, May 2022

Workshop Papers

- **Gloire Rubambiza**, Phoebe Sengers, and Hakim Weatherspoon, "Paradoxes in Producing the Future of Farm Work: Anticipating Social Impact through the Lens of Early Adopters", *Automation Experience at the Workplace* Workshop at CHI '21, Yokohama, Japan, May 2021

Extended Abstracts

- **Gloire Rubambiza**, Hakim Weatherspoon, José F. Martínez, and Abraham Stroock, "WaterGuard: Toward Cheap Automated Irrigation Systems Powered by the Cloud and TV White Spaces", CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference (TAPIA '20), Dallas, TX, September 2020

- Martin Matias Perez, **Gloire Rubambiza**, Brandon Barker, Hakim Weatherspoon, and Julio O. Giordano,"Automated real-time integration of data from multiple sensors and nonsensor systems for prediction of dairy cow and herd status and performance", *Journal of Dairy Science*, Vol. 103, Suppl. 1, 2020

- Kolbeinn Karlsson, Danny Adams, **Gloire Rubambiza**, Zangyueyang Xian, Robbert Van Renesse, Hakim Weatherspoon, and Stephen Wicker, "Untethered: Deployable Blockchains for IoT Environments", *In Proceedings of the ACM Symposium on Cloud Computing (**SoCC '18**)*, Carlsbad, CA, October 2018

Presentations

Conference Talks

- Seamless Visions, Seamful Realities: Anticipating Rural Infrastructural Fragility in Early Design of Digital Agriculture. 2022

- Measurement and Statistical Analysis of Submarine Internet Cable Performance. Leadership Alliance National Symposium. 2017

- Improving African Internet Traffic through Maximization of Node Centrality. 22^{nd} Annual University at Buffalo McNair Summer Research Conference. 2016

Seminar Talks

- Towards Resilient Rural Networking Infrastructure for Digital Agriculture. University of Washington Systems Seminar. 2022

- Seamless Visions, Seamful Realities: Anticipating Rural Infrastructural Fragility in Early Design of Digital Agriculture. University of Washington ICTD Seminar. 2022

- Paradoxes in Producing the Future of Farm Work: Anticipating Social Impact through the Lens of Early Adopters. IBM Hybrid Cloud Academic Project Forum (Virtual). 2021

- Paradoxes in Producing the Future of Farm Work: Anticipating Social Impact through the Lens of Early Adopters. FarmBeats User Community Workshop (Virtual). 2021

- Towards a Software-Defined Farm. Cornell Life Sciences Lecture Series. 2019

Posters

- Toward Cheap Automated Irrigation Systems Powered by the Cloud and TV White Spaces. CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference. 2020
- An IoT-friendly Blockchain for Coordination and Accountability. The Cornell, Maryland, Max Planck Pre-doctoral Research School. 2019
- An IoT-friendly Blockchain for Coordination and Accountability. Public Safety Broadband Stakeholder Meeting (PSCR). 2019
- Measurement and Statistical Analysis of Submarine Internet Cable Performance. Grand Valley State University Student Scholars Day. 2018
- Measurement and Statistical Analysis of Submarine Internet Cable Performance. Michigan AGEP Alliance Fall Conference. 2017
- Improving African Internet Traffic through Maximization of Node Centrality. Grand Valley State University Student Scholars Day. 2017

Honors and Awards

Cornell Bowers CIS Distinguished Leadership in Service	April 2023
NSF-NRT Digital Plant Science Fellowship	2020 - 2022
Microsoft Cornell Digital Agriculture Fellowship	Summer 2020
NSF-GRFP Honorable Mention	2020
Diversifying LEAdership in the Professoriate (LEAP) Fellowship	2018 - 2024
Cornell University Fellowship	2018 - 2019
Upsilon Pi Epsilon Honor Society	2017 - 2018
Eric Jon Gillette Memorial Scholarship	2016 - 2018
Ronald E. McNair Scholar	2015 - 2018
Rivertown Community Commitment Scholarship	2014 - 2015

Travel Grants

ACM Tapia Celebration of Diversity in Computing Conference	September 2023
CSST Summer Research Institute	June 2023
Networked Systems Design and Implementation (NSDI 2022)	April 2022
ACM Symposium on Operating Systems Principles (SOSP 2019)	October 2019
Computing Research Association 2019 URMD Grad Cohort	March 2019
ACM Symposium on Cloud Computing (SoCC 2018)	October 2018

Professional Service

CSCW 2023	Reviewer	February 2023
SIGCOMM SNIP2+	Workshop Co-organizer	September 2023

Industry Experience

IBM Research Intern September 2022 - December 2022

- Architected scalable methods for data and workload management on millions of edge devices
- Filed patent application (pending) on state and workload management at the edge

Meta (Facebook) UX Research Intern May 2022 - August 2022

- Improved engineering experience with code deletion projects using internal tools
- Executed new research on engineering pain points at the intersection of code and data deletion

IBM Research Intern May 2021 - August 2021

- Implemented a Kubernetes-native data mining platform for dozens of AI hardware engineers
- Research results uncovered $11,000 in potential AWS cloud consumption savings per week

Collective Idea Software Development Intern August 2016 - December 2016

- Developed a predictive cron job failure algorithm for the Dead Man's Snitch application
- Pair-programmed with senior developers on in-house projects such as add.a.lingua

Teaching Experience

Machine Learning Application to Plant Science (PLSCI 7202) Fall 2021

- Led student troubleshooting sessions in weekly office hours
- Supported in-class lab sections

Pre-Sophomore Summer Program in Computer Science (CS 3410) June 2020

- Led 5 lab sections and office hours
- Delivered a mini-lecture on C pointers

Computer System Organization and Programming (CS 3410) Spring 2020

- Led 2 weekly lab sections and office hours
- Coordinated projects and exam review sessions with a team of four undergraduate TAs

SoNIC Summer Research Workshop June 2019

- Conducted user account administration
- Delivered a lecture on parsing Ethernet frames

Undergraduate Research Experience

University of Colorado Boulder SMART Program June 2017 - August 2017
Advisor: Dr. Dirk Grunwald, Area: Systems
Submarine cables handle approximately 95% of inter-continental Internet traffic. This project aims to elucidate the performance of submarine cables through analysis of metrics such as available bandwidth and packet latency.

Ronald E. McNair Scholars Summer Research Program May 2016 - August 2016
Advisor: Dr. Jerry Scripps, Area: Networks
For most African nations, a broadband Internet subscription is more than the average per capita yearly income. This project attempts to improve the intra-African Internet traffic using strategic fiber-optic link addition algorithms to increase the closeness of a sample network.

Mentoring and Service

Cornell CIS Diversity Council Graduate Representative Jan. 2019 - Mar. 2021

- Advising CIS leadership on diversity and inclusion climate
- Coordinating the Diversity Breakfast during Cornell CS Ph.D Visit Days

GSGIC/WICC/GradSWE Graduate School Panel Panelist April 2021

- Discussed issues of mental health and imposter syndrome as a PhD student
- Offered tips on success before and during the PhD process

Cornell CS PhD Mentoring Program Mentor Aug. 2019 - August 2020

- Acted as a resource to first-year Ph.D. students in their graduate school transition
- Helped mentees navigate and find other resources on campus

Cornell URMC Career Fair Prep Graduate Reviewer September 2019

- Critiqued and developed strategies for powerful résumés
- Offered tips on concise and effective elevator pitches

Cornell, Maryland, Max Planck Summer School Cornell Representative August 2019

- Engaged top students on the process of applying to Ph.D programs
- Facilitated student introductions to world class faculty at Cornell

SoNIC Summer Research Workshop Graduate Panelist June 2019

- Provided insights on life as an underrepresented graduate student in Computer Science
- Discussed strategies for successful graduate school applications

Cornell McNair Scholars Graduate Application Panel Graduate Panelist October 2018

- Discussed Ph.D application tips for former McNair Scholars
- Offered negotiation strategies for Ph.D admission offers

Volunteering and Leadership Experience

Skype A Scientist Graduate Student Volunteer March 2020 - December 2021

- Coordinating with K-12 teachers on appropriate guest lecture material
- Delivering guest lectures on computer systems research

IBM P-TECH Program Presenter July 2021

- Highlighted mindfulness at work and bias in AI/ML to high school sophomores
- Led discussion on diversity, equity, and inclusion in the computing workforce

The Village at Ithaca Student Achievement Coach January 2019 - February 2019

- Introduced new tutors to the structure of community-based learning environments
- Fostered a positive academic learning environment for local K-12 students through one-on-one tutoring support and empowerment through trust based connections

IEEE Computer Society Registration Desk Volunteer June 2017

- Helped registrants with checking in and answering any questions pertaining to the 47th IEEE/IFIP International Conference on Dependable Systems and Networks

The Immigrant Connection Citizenship Class Tutor January 2017 - March 2017

- Familiarized local immigrants with the U.S citizenship process
- Improved the future citizens' confidence and English literacy through quizzing on American civics and history in anticipation for the U.S. citizenship test