

Gloire Rubambiza

Cornell Bowers Computing and Information Science (CIS)
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Education

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| 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 Annual Technical Conference (**ATC '23**), 2023
- **Gloire Rubambiza**, Braulio Dumba, Andrew Anderson, and Hakim Weatherspoon, “EdgeRDV: A Framework for Edge Workload Management at Scale”, IEEE International Conference on Edge Computing and Communications (**Edge '23**), 2023
- **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”, ACM Conference on Human Factors in Computing Systems (**CHI '22**), 2022

Under Submission

- **Gloire Rubambiza**, Phoebe Sengers, Hakim Weatherspoon, Jen Liu, “Seam Work and Simulacra of Societal Impact in Networking Research: A Critical Technical Practice Approach”
- Lara Roeven, Steven Wolf, Phoebe Sengers, Jen Liu, **Gloire Rubambiza**, Donny Persaud, Hakim Weatherspoon, “Analyzing abstraction in critical agri-food studies and computer science: Toward interdisciplinary analysis of digital agriculture innovation”

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**, 2021

Technical Reports

- Danny Adams, **Gloire Rubambiza**, Pablo Fiori, Xinwen Wang, Hakim Weatherspoon and Robbert Van Renesse, “Tamperproof Provenance-Aware Storage for Mobile Ad Hoc Networks”, 2020

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**), 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**), 2018

Presentations

Conference Talks

- Towards Resilient Rural Networking Infrastructure for Digital Agriculture. Doctoral Consortium at CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference. Dallas, TX, September 2023
- Comosum: An Extensible, Reconfigurable, and Fault-Tolerant IoT Platform for Digital Agriculture. USENIX Annual Technical Conference (ATC). Boston, MA, July 2023
- EdgeRDV: A Framework for Edge Workload Management at Scale. IEEE International Conference on Edge Computing and Communications. Chicago, IL, July 2023
- Seamless Visions, Seamful Realities: Anticipating Rural Infrastructural Fragility in Early Design of Digital Agriculture. ACM Human Factors in Computing Conference (CHI). New Orleans, LA, May 2022
- Measurement and Statistical Analysis of Submarine Internet Cable Performance. Leadership Alliance National Symposium. Hartford, CT, August 2017
- Improving African Internet Traffic through Maximization of Node Centrality. 22nd Annual University at Buffalo McNair Summer Research Conference. Buffalo, NY, July 2016

Seminar Talks

- Towards Resilient Rural Networking Infrastructure for Digital Agriculture. UIUC CS Systems Seminar. Urbana-Champaign, IL, 2023 [scheduled December 2023]
- Towards Resilient Rural Networking Infrastructure for Digital Agriculture. University of Texas at Austin CS Systems Seminar. Austin, TX, 2023 [scheduled November 2023]
- Towards Resilient Rural Networking Infrastructure for Digital Agriculture. Stanford University HCI Lunch. Stanford, CA, 2023
- Comosum: An Extensible, Reconfigurable, and Fault-Tolerant Platform for Digital Agriculture. Northeastern University pre-OSDI/ATC Workshop. Boston, MA, 2023
- Towards Resilient Rural Networking Infrastructure for Digital Agriculture. University of Washington CSE Systems Seminar. Seattle, WA, 2022
- Seamless Visions, Seamful Realities: Anticipating Rural Infrastructural Fragility in Early Design of Digital Agriculture. University of Washington ICTD Seminar. Seattle, WA, 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. Ithaca, NY, 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 AGEF Alliance Fall Conference. 2017
- Improving African Internet Traffic through Maximization of Node Centrality. Grand Valley State University Student Scholars Day. 2017
- Improving African Internet Traffic through Maximization of Node Centrality. Grand Valley State University Summer Scholar Symposium. 2016

Honors and Awards

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| SUNY Provost Diversity Fellowship | Spring 2024 |
| Best Doctoral Presentation - Tapia Doctoral Consortium | September 2023 |
| NSF-NRT Digital Plant Science Fellowship | 2023 - 2024 |
| 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 | March 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

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| ACM Tapia Celebration of Diversity in Computing Conference | September 2023 |
| NextProf Nexus | August 2023 |
| USENIX Annual Technical Conference (ATC '23) | July 2023 |
| CSST Summer Research Institute (CSST '23) | June 2023 |
| USENIX Networked Systems Design and Implementation (NSDI '22) | April 2022 |
| ACM Symposium on Operating Systems Principles (SOSP '19) | October 2019 |
| Computing Research Association 2019 URMD Grad Cohort | March 2019 |
| ACM Symposium on Cloud Computing (SoCC 2018) | October 2018 |
| ACM Tapia Celebration of Diversity in Computing Conference | September 2018 |

Professional Service

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| CHI 2024 | Reviewer | October 2023 |
| SIGCOMM SNIP2+ | Workshop Co-organizer | September 2023 |
| CSCW 2023 | Reviewer | February 2023 |
| IEEE ICDSN | Student Volunteer | June 2017 |

Industry Experience

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| IBM | Research Intern | September 2022 - December 2022 |
| <ul style="list-style-type: none">• 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 |
| <ul style="list-style-type: none">• 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

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| Machine Learning Application to Plant Science (PLSCI 7202) | Fall 2021 |
| Pre-Sophomore Summer Program in Computer Science (CS 3410) | June 2020 |
| Computer System Organization and Programming (CS 3410) | Spring 2020 |
| SoNIC Summer Research Workshop | June 2019 |

Undergraduate Research Experience

University of Colorado Boulder SMART Program June 2017 - August 2017

Ronald E. McNair Scholars Summer Research Program May 2016 - August 2016

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

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

Samaritas Cultural Mentor/ESL Tutor September 2016 - December 2016

- Organized weekly English lessons for an immigrant family to strengthen their English speaking and writing skills
- Coordinated occasional trips to downtown Grand Rapids, MI and surrounding areas to familiarize the family with their new environment

GVSU Office of Undergraduate Research & Scholarship Session Host April 2016

- Provided ongoing welcome and direction to poster presenters and attendees
- Coordinated with the OURS office to keep presentation rooms on schedule