Veronica A. Rivera

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https://vrivera2017.github.io

Research Overview

I study digital safety, bridging human-computer interaction and computer security to defend against digital threats both online and offline. Using qualitative and quantitative methods (interviews, participatory design, and large-scale surveys) I characterize harm, assess protections, improve system design, and guide policy, to create a safer on/offline ecosystem.

Appointments

Stanford University, *Embedded Ethics Postdoctoral Fellow, Institute for Human-Centered AI (HAI) & McCoy Family Center for Ethics in Society*   Fall 2023-
Advisor: Zakir Durumeric

National Domestic Workers Alliance, *Consultant*   Fall 2024-
AI Ethics and Carework Curriculum Expert

University of Florida, *Visiting Researcher, Computer and Information Science and Engineering*   2023

Max Planck Institute for Software Systems, *Visiting Researcher, Safety and Society Group*   2022-2023

Education

PhD, University of California Santa Cruz, *Computational Media*   2017-2023
Dissertation: Safety & Harm in Social Computing Systems that Support Matching Markets
Committee: David Lee, Chris Benner, Elizabeth Gerber, Elissa M. Redmiles, Norman Makoto Su

BSc, Harvey Mudd College, *Joint Computer Science and Mathematics*   2013–2017
Minor in Psychology

Publications

* indicates equal first-authorship, listed alphabetically by last name
† indicates student authors I advised

Peer-Reviewed Conference & Journal Papers

Rivera, V.A.., Wilkinson, D., Augusta, A., Li, S., Redmiles, E.M., Strohmayer, A. *Safer Algorithmically-Mediated Offline Introductions: Harms and Protective Behaviors*. *To appear*. Proceedings of the ACM on Human-Computer Interaction.   CSCW 2024

Huang, J., Ma, N.F., **Rivera, V.A.**., Somani, T., Lee, P., McGrenere, J., Yoon, D. *Design Tensions in Online Freelancing Platforms: Using Speculative Participatory Design to Support Freelancers' Relationships with Clients*. Proceedings of the ACM on Human-Computer Interaction.   CSCW 2024

Rivera, V.A., Su, N.M *Teaching Ethics and Activism in a Human-Computer Interaction Professional Master's Program*. The 2024 ACM Technical Symposium on Computer Science Education   SIGCSE 2024

Ma, N.F.*, **Rivera, V.A.***, Yao, Z., Yoon, D. *"Brush it Off": How Women Workers Manage and Cope with Bias and Harassment on Gender-agnostic Gig Platforms*. The 2022 ACM Conference on Human Factors in Computing Systems.   CHI 2022

Rivera, V.A., Lee, D.T. *I Want to, but First I Need to: Understanding Crowdworkers Career Goals, Challenges, and Tensions.* Proceedings of the ACM on Human-Computer Interaction. — CSCW 2021

Nelson, S., Orrison, M., **Rivera, V.** *Quantum Enhancements and Biquandle Brackets.* The Journal of Knot Theory and its Ramifications. — JKTR 2017

Tenorio, D., **Rivera, V.**, Medina, J., Leondar, A., Gaumer, M., Dodds, Z. *Visual Autonomy via 2D Matching in Rendered 3D Models.* The International Symposium on Visual Computing. — ISVC 2015

Nelson, S., **Rivera, V.** *Quantum Enhancements of Involutory Birack Counting Invariants.* The Journal of Knot Theory and its Ramifications — JKTR 2014

Papers in Submission

Ruth, K., **Rivera, V.A.**, Akiwate, G., Kelley, P.G., Fass, A., Thomas, K., Durumeric, Z. *"Perfect is the Enemy of Good": The CISO's Role in Enterprise Security as a Business Enabler* — 2024

Works in Progress

Rivera, V.A., Han, C., Li, T.Q†., Kim, H†., Redmiles, E.M., Durumeric, Z. *Beyond Justice-Seeking: Goals and Safety Considerations of Sharing Experiences with Labor Abuse Digitally* — 2024

Munyendo, C., Hu, J., Tweneboah, E., **Rivera, V.A.**, Redmiles, E.M., Zou, Y. *A Cross-Country Exploration of Security and Privacy Concerns and Advice in Ten Majority World Countries* — 2024

Peer-Reviewed Workshop & Consortia Papers

Rivera, V.A., Lee, D.T. *It Takes a Village to Change Jobs: Towards Workplace Relationships that Support Reskilling in Crowdwork.* The Future of Work(places): Creating a Sense of Place for On-Demand Work. Workshop at ACM CSCW. — CSCW 2019

Rivera, V. *A New Approach to Testing Children with Autism Spectrum Disorder Using Affect.* Doctoral Consortium at the International Conference on Intelligent Tutoring Systems. — ITS 2018

Policy White Papers

Elissa M. Redmiles, Sarah Adel Bargal, Grace (Natalie) Brigham, Nina Grgic-Hlaca, Tadayoshi Kohno, Jaron Mink, **Veronica A. Rivera**, Carmela Troncoso, Lucy Qin, Miranda Wei. *Formal Response on NIST AI Executive Order.* Published via the Georgetown University McCourt School of Public Policy's Massive Data Institute. — Georgetown MDI 2024

Teaching Experience

Instructor of Record

Ethics in Technology, *Stanford University Pre-Collegiate Summer Institutes*, Summer 2023
10 day intensive high school course I designed based on my UCSC HCI 220 course

Ethics & Activism in Technology & Design, *UCSC HCI 220*, Spring 2022; Winter 2023
I designed the course in Spring 2022 as an elective in the HCI Professional Master's program; it was made a required course in the program after the first offering

Teaching Assistant

Human-Centered Design Research, *UCSC CMPM 178*, Winter 2021; Winter 2022

Data Structures for Interactive Media, *UCSC CMPM 35*, Fall 2021

Beginning Programming in Python, *UCSC CSE 20*, Spring 2021

Introduction to Programming, Accelerated, *UCSC CMPS 12A*, Fall 2018

Introduction to Programming in Java, *UCSC CMPS 5J*, Winter 2018; Spring 2018

Introduction to Computer Science, *Harvey Mudd College CS 05*, Fall 2014

Embedded Ethics Teaching Fellow (Curriculum development and instruction)

Programming Methodology, *Stanford University CS 106A*, Fall 2024; Winter 2024

Programming Abstractions, *Stanford University CS 106B*, Fall 2024; Spring 2024

Computer Organization and Systems, *Stanford University CS 107*, Spring 2024; Winter 2024; Fall 2023

From Languages to Information, *Stanford University CS 124*, Winter 2024

Human-Centered Product Management, *Stanford University CS 177*, Fall 2023

Artificial Intelligence: Principles and Techniques, *Stanford University CS 221*, Fall 2024; Spring 2024; Fall 2023

Guest Lectures

Needfinding: Lessons for Programming Language Design, *Stanford University CS 343S (Domain Specific Language Design Studio)*, April 2024

Data Ethics: Choices and Values, *Stanford University CS 106A (Programming Methodology)*, March 2024

Privacy and End-to-End Encryption, *Stanford University CS 106A (Programming Methodology)*, February 2024

Ethics and Problem Selection in Security, *Stanford University CS 356 (Topics in Computer and Network Security)*, December 2023

Fellowships and Awards

"A Cross Country Exploration of Security & Privacy Advice", *Stanford Internet Observatory Grant for Expanding Online Trust & Safety Research*, **Collaborator**, PI: Collins W. Munyendo, $15,000	2024
Rising Star in AI Ethics, *Women in AI Ethics (WAIE)*	2024
ARCS Scholarship, *UC Santa Cruz*, excellence in academics and STEM research	2021
Chancellor's Graduate Internship Fellowship, *UC Santa Cruz* 1 out of 5 recipients in the university	2019
CRA Travel Scholarship, *CRA*, To attend CRA-W Grad Cohort Workshop for Women	2019
CRA Travel Scholarship, *CRA*, To attend CRA-URMD Grad Cohort Workshop for underrepresented students	2019
Summer Regent's Fellowship, *UC Santa Cruz*	2018
President's Scholarship, *Harvey Mudd College*, 4-year full-tuition 1 out of 8 recipients in the graduating class of 2017	2013

Academic Service

Program Committees

USENIX Security Symposium , *Program Committee*	2025
CSCW, *Associate Chair*	2024

External Reviewer

USENIX Security Symposium, *Paper sub-reviewer*	2024
CSCW 2024, *Paper reviewer*, Outstanding reviewer recognition x3	2023
New Media and Society, *Invited paper reviewer*	2023
IMC 2023, *Student travel grant application review committee*	2023
CHI 2022, *Paper reviewer*, Outstanding reviewer recognition	2021
CSCW 2021, *Paper reviewer*, Outstanding reviewer recognition	2021
CSCW 2020, *Paper reviewer*	2020
CSCW 2019, *Paper reviewer*	2019
Human-Computer Interaction Journal, *Invited paper reviewer*	2019

Department and University Service

Ethics & Society Review Coordinating Panelist, *Stanford University, HAI Seed Grants Review Committee*	2023
Assistant Community Manager, *UC Santa Cruz Computational Media Department*	2020-2021
Alumni Admissions Interviewer, *Harvey Mudd College*	2018, 2020
Graduate Student Mentor, *UC Santa Cruz Department of Computational Media*	2018
Helped first year graduate student navigate the department and grad school	

Research Mentoring

Tracy Li, *Stanford University CS '28*
CURIS Summer Intern

Makenzy Caldwell, *Stanford University Tech, Ethics, and Policy Rising Scholar*

Hannah Kim, *Stanford University CS BS/MS '25*

Sasha Ronaghi, *Stanford University CS BS/MS '25*

Annika Lin, *Georgetown University CS BS '24*, Now: Analyst at Charles River Associates
Thesis committee member

Betros Abraha, *UC Santa Cruz BS '23*, Now: Software Engineer at U.S. Army Corps of Engineers

Ashvini Bhupatiraju, *UC Santa Cruz BS '22*, Now: Software Engineer at Wells Fargo

Jason Chan, *UC Santa Cruz BS '20*, Now: Product Designer at Adobe

Mark Gonzales, *UC Santa Cruz BS '22*, Now: Electronic Engineer at ZaiNar Tech

Gurdikhia Kaur, *UC Santa Cruz BS ' 19*, Now: MSc Student at UCL

Sonali Malik, *UC Santa Cruz BS '21*, Now: Product Manager at Microsoft

Taylor McPherson, *UC Santa Cruz BS '20*, Now: Frontend Engineer at Hightouch

Benjamin Paulsen, *UC Santa Cruz BS '23*, Now: Associate Game Designer at Blizzard

Mathew Raju, *UC Santa Cruz BS '24*

Saki Yokokawa, *UC Santa Cruz BS '23*, Now: Web Developer at Cubic Transportation

Celeste Zhao, *UC Santa Cruz BS '22*, Now: MS Student at Univeristy of Washington HCDE

Su Zin, *UC Santa Cruz BS '23*

Invited Talks

Safety in Algorithmically-Mediated Offline Introductions
- Stanford Computer Forum Security Workshop (April 2024)
- Stanford HAI Fellows Workshop (March 2024)
- NSF Site Visit, Center on Privacy & Security of Marginalized & Vulnerable Populations (March 2024)
- Georgetown University Massive Data Institute Tea Time (February 2024)
- University of Maryland HCIL Brown Bag Lunch Seminar (February 2024)
- Stanford University HCI Lunch (February 2024)

Safety in Algorithmically-Mediated Offline Introductions: Lessons for Research, Design, and Policy
- Stanford Women in CS Meeting (May 2024)
- Stanford University Tech Ethics and Policy Career Pathways (May 2024)

Post-Digital Safety in Digitally-Mediated Offline Interactions
- UC San Diego HCI Seminar (March 2023)
- Stanford University Security Lunch (February 2023)
- Stanford University Computing & Society Seminar (Janurary 2023)
- Mensch und Computer (MuC) Workshop on Inclusive Security by Design (September 2022)

Long-Term Worker Well-Being in the Future of Work
- Stanford University HCI Lunch (April 2022)

Invited Panel Moderator
- Stanford University, Beyond Content Moderation Workshop (November 2023)

Professional Development

Teaching for Equity Certificate, UC Santa Cruz Center for Innovations in Teaching and Learning	2021
Graduate Student Leadership Certificate, UC Santa Cruz Graduate Division	2020
Invited workshop attendee, JobKit Developer's Conference at the US White House	2019
Invited workshop attendee, Human-Computer Interaction Consortium on the Futures of Work	2019

References

Elissa M. Redmiles
Assistant Professor of Computer Science
Georgetown University

Zakir Durumeric
Assistant Professor of Computer Science
Stanford University

David T. Lee
Assistant Professor of Computational Media
University of California, Santa Cruz

Norman Su
Associate Professor Computational Media, Vice Chair for the Human Computer Interaction MS program
University of California, Santa Cruz