Veronica Rivera

Website: vrivera2017.github.io
Email: veariver@ucsc.edu

Research Interests: Human-computer interaction, social computing, future of work, safety, harm, and well-being in digitally-mediated work

EDUCATION

University of California, Santa Cruz | School of Engineering — Santa Cruz, CA
Ph.D. Student, Computational Media — 2017–2023 (Expected)

- **Committee:** Norman Makoto Su, David Lee (advisor), Chris Benner, Elizabeth Gerber, Elissa M. Redmiles

Harvey Mudd College — Claremont, CA
B.S. in Joint Computer Science and Mathematics; Concentration in Psychology — 2017

RESEARCH EXPERIENCE

Safety and Society Group, Max Planck Institute for Software Systems — Saarbrücken, Germany
Research Collaborator — 2021–

- Advisor: Elissa M. Redmiles
- Leading design and implementation of large-scale survey for understanding gig workers' safety mechanisms and the technologies they use to stay safe
- Using quantitative analysis techniques to analyze survey responses and create graphs
- Conducting in-depth literature review of safety in gig work

The University of British Columbia Computer Science Department — Vancouver, B.C
Research Collaborator — 2021–

- Advisors: Ning Ma & Dongwook Yoon
- Co-led (w/Ning Ma) study on women gig workers' experiences with and responses to bias and harassment
- Supporting an undergraduate student on study for understanding invisible labor in online freelancing

Tech4Good Lab, UC Santa Cruz — Santa Cruz, CA
Graduate Researcher — 2019–

- Advisor: David Lee
- Leading a study to understand role of social interactions on the success/failure of online freelancers and effects on mental health
- Leading studies on understanding career development in online crowdwork
- Conducted pilot study on students' experiences using an online learning platform to learn web development basics
- Leading teams of undergraduate research students in conducting user interviews, carrying out usability tests of online technology, and analyzing qualitative data

ASSIST Lab, UC Santa Cruz — Santa Cruz, CA
Graduate Researcher — 2017–2018

- Advisor: Sri Kurniawan (advisor & lab change in Jan. 2019)
- Researched educational classroom tools to support elementary school children with Autism Spectrum Disorder.
- Conducted classroom observations, interviews with educators and mentored 1 undergraduate student in designing a simple prototype for a social skills development game.

Harvey Mudd College Computer Science Department   Claremont, CA

Undergraduate Researcher   2016–2017

- Advisor: Lisa Kaczmarczyk and the MITRE Corporation
- Researched ways to make it more difficult for facial recognition algorithms to recognize unwanted individuals in an image to make facial recognition algorithms more secure.
- Helped develop an image de-identification algorithm that makes it harder for Local Binary Patterns and Dlib Deep Learning algorithms to recognize an individual in a photo. Regularly met and discussed with industry client to meet their needs for the project.

Harvey Mudd College Computer Science Department   Claremont, CA

Undergraduate Researcher   Summer 2015

- Advisor: Zachary Dodds
- Researched the strengths and drawbacks of the Matterport 3D camera for robotic spatial reasoning.
- I wrote a python script to compare images using OpenCV, created graphical simulations of robot's location within a 3D environment in Unity, and created an image matching system to assist drone in image comparison.

Claremont McKenna College Mathematics Department   Claremont, CA

High School/Undergraduate Researcher   2011–2015

- Advisor: Sam Nelson
- Studied topological knot theory and helped research various ways of defining knot invariants.
- I created link diagrams and wrote the Gauss code and Alexander-Conway Polynomial for each diagram, wrote MatLab script to construct biquandle brackets, and improved existing python code to compute skein invariants.

PUBLICATIONS

JOURNAL PUBLICATIONS

1. **Veronica A. Rivera**, David T. Lee. (2021). I Want to, but First I Need to: Understanding Crowdworkers' Career Goals, Challenges, and Tensions. *In Proceedings of the ACM-Human Computer Interaction (PACM-HCI).* To be presented at CSCW 2021.

2. Sam Nelson, Michael Orrison, **Veronica Rivera**. (2017). Quantum Enhancements and Biquandle Brackets. *The Journal of Knot Theory and its Ramifications*, 26(5).

3. Sam Nelson, **Veronica Rivera**. (2014). Quantum Enhancements of Involutory Birack Counting Invariants. *The Journal of Knot Theory and its Ramifications*, 23(7).

HEAVILY PEER-REVIEWED CONFERENCE PUBLICATIONS

1. D. Tenorio, **V. Rivera**, J. Medina, A. Leondar, M. Gaumer, Z. Dodds. (2015). Visual Autonomy via 2D Matching in Rendered 3D Models. In *Proceedings of the 11th International Symposium on Visual Computing* (ISVC 2015)(pp.373-385)

LIGHTLY PEER-REVIEWED WORKSHOP & CONSORTIA PAPERS

1. **Veronica A. Rivera**, David T. Lee. (2019). It Takes a Village to Change Jobs: Towards Workplace Relationships that Support Reskilling in Crowdwork. In *The Future of Work(places): Creating a Sense of Place for On-Demand Work.* Workshop conducted at the Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2019).

2. **Veronica Rivera**. (2018). A New Approach to Testing Children with Autism Spectrum Disorder Using Affect. In *Proceedings of the 14th International Conference on Intelligent Tutoring Systems* (ITS 2018).

UNDER REVIEW

1. Ning F. Ma*, **Veronica A. Rivera***, Zheng Yao, Dongwook Yoon. (2021)."Brush it Off": How Women Workers Manage and Cope with Bias and Harassment in Gender Agnostic Gig Platforms

* Both authors contributed equally to the project and paper. Names are displayed alphabetical by last name.

Fellowships, Honors, and Awards

- ARCS Scholarship   2021
- Obtained Graduate Student Leadership Certificate from UCSC Division of Graduate Studies   2020
- UC Santa Cruz Chancellor's Graduate Internship Fellowship (1 of 5 recipients)   2019
- Invited to The White House to attend The JobKit Developers Conference   2019
- Invited member of the Human-Computer Interaction Consortium on the Futures of Work   2019
- Full travel scholarship to the 2019 CRA Grad Cohort Workshop for Women   2019
- Full travel scholarship to the 2019 CRA-URMD Workshop   2019
- UC Santa Cruz Summer 2018 Regent's Fellowship   2018
- Harvey Mudd College 4-year full-tuition President's Scholarship (1 of 8 recipients)   2013

Teaching

- **Data Structures for Interactive Media (CMPM 35)**, UC Santa Cruz School of Engineering   Fall 2021
  Teaching Assistant
  - Hold weekly office hours, present lectures, and meet weekly with course staff to help students learn data structures and Javascript programming
- **Beginning Programming in Python (CSE 20)**, UC Santa Cruz School of Engineering   Spring 2021
  Teaching Assistant
  - Held weekly office hours, graded assignments, and met weekly with course staff to support students in learning Python
- **Human-Centered Design Research (CMPM 178)**, UC Santa Cruz School of Engineering   Winter 2021
  Teaching Assistant
  - Hold weekly office hours, grade assignments, provide written feedback and support students in learning IDEO research methods
- **Introduction to Programming, Accelerated (CMPS 12A)**, UC Santa Cruz School of Engineering   Fall 2018
  Teaching Assistant
  - Held weekly office hours, led lab section, graded exams and assignments, oversaw undergraduate course tutors
- **Introduction to Programming in Java (CMPS 5J)**, UC Santa Cruz School of Engineering   Spring 2018
  Teaching Assistant
  - Held weekly office hours, led lab section, graded assignments, met weekly with course staff to discuss student progress
- **Introduction to Programming in Java (CMPS 5J)**, UC Santa Cruz School of Engineering   Winter 2018
  Teaching Assistant
  - Held weekly office hours, led lab section, graded assignments, met weekly with course staff to discuss student progress

Research Mentoring

- **Sonia Atre**, UC Santa Cruz undergraduate
- **Ashvini Bhupatiraju**, UC Santa Cruz undergraduate
- **Jason Chan**, UC Santa Cruz undergraduate
- **Colin Chen**, UC Santa Cruz undergraduate
- **Mark Gonzales**, UC Santa Cruz undergraduate
- **Gurdikhia Kaur**, UC Santa Cruz undergraduate

- **Sonali Malik**, UC Santa Cruz undergraduate
- **Taylor McPherson**, UC Santa Cruz undergraduate
- **Aidan Nguyen**, UC Santa Cruz undergraduate
- **Benjamin Paulsen**, UC Santa Cruz undergraduate
- **Mathew Raju**, UC Santa Cruz undergraduate
- **Victoria Shu**, UC Santa Cruz undergraduate
- **Puja Vasan**, UC Santa Cruz undergraduate
- **Melanie Wong**, UC Santa Cruz undergraduate
- **Saki Yokokawa**, UC Santa Cruz undergraduate
- **Su Zin**, UC Santa Cruz undergraduate

SKILLS

- **UX Research:** Semi-structured interviewing, survey design, think-aloud protocol, participant observations, usability testing, qualitative coding methods (e.g., thematic analysis, grounded theory), participant recruitment, paper prototyping, high-fidelity prototyping (Figma), user-centered design methods
- **Development:** Python, Java, JavaScript, HTML/CSS, R
- **Spoken Languages:** Spanish (Native speaker), English, French (conversational)

SERVICE

- UC Santa Cruz Computational Media Assistant Community Manager   2020–2021
- Reviewer, CSCW (*special recognition for outstanding reviews 2021*)   2019, 2020, 2021
- Reviewer, Human-Computer Interaction Journal   2019
- Harvey Mudd College Alumni Admission Interviewer   2018, 2020
- UC Santa Cruz Computational Media Graduate Student Mentor   2018

SELECTED PRESS

- **Harvey Mudd College Magazine, Summer 2019**. "New Tech Assists Learning"   2019