Veronica Rivera

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Research Interests: Human-computer interaction, social computing, future of work, digital harm in online work environments, use of digital technologies to support work and learning

Education

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

- Advisor: David Lee

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

Research Experience

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

- Advisor: David Lee
- Researching career development in online on-demand labor platforms and how students learn using socio-technical systems.
- I conduct user interviews, carry out usability tests of online technology, analyze qualitative and quantitative data and have significant project management experience leading teams of undergraduate students in doing this research.

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

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

Undergraduate Researcher — Claremont, CA
Harvey Mudd College Computer Science Department — 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.

Undergraduate Researcher — Claremont, CA
Harvey Mudd College Computer Science Department — 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.

High School/Undergraduate Researcher Claremont, CA
Claremont McKenna College Mathematics Department 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. **Rivera, Veronica**., Lee, David. (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. Nelson, Sam., Orrison, Michael., **Rivera, Veronica**. (2017). Quantum Enhancements and Biquandle Brackets. *The Journal of Knot Theory and its Ramifications*, 26(5).
3. Nelson, Sam., **Rivera, Veronica**. (2014). Quantum Enhancements of Involutory Birack Counting Invariants. *The Journal of Knot Theory and its Ramifications*, 23(7).

HEAVILY PEER-REVIEWED CONFERENCE PUBLICATIONS

1. Tenorio, D., **Rivera, V**., Medina, J., Leondar, A., Gaumer, M., Dodds, Z. (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. **Rivera, Veronica**., Lee, David. (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. **Rivera, Veronica**. (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).

Teaching

- **Teaching Assistant**, UC Santa Cruz School of Engineering Winter 2021
  Human-Centered Design Research (CMPM 178)
  - Hold weekly office hours, grade assignments, provide written feedback and support students in learning IDEO research methods
- **Teaching Assistant**, UC Santa Cruz School of Engineering Fall 2018
  Introduction to Programming, Accelerated (CMPS 12A)
  - Held weekly office hours, led lab section, graded exams and assignments, oversaw undergraduate course tutors
- **Teaching Assistant**, UC Santa Cruz School of Engineering Spring 2018
  Introduction to Programming in Java (CMPS 5J)
  - Held weekly office hours, led lab section, graded assignments, met weekly with course staff to discuss student progress
- **Teaching Assistant**, UC Santa Cruz School of Engineering Winter 2018
  Introduction to Programming in Java (CMPS 5J)
  - 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
- **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
- **Victoria Shu**, UC Santa Cruz undergraduate
- **Puja Vasan**, UC Santa Cruz undergraduate
- **Melanie Wong**, UC Santa Cruz undergraduate

Fellowships, Honors, and Awards

- 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

Skills

- **UX Research:** Semi-structured interviewing, experiment 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–
- 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