

Alyshia Bustos

PhD Research Assistant in the Hand and Machine Lab in the Computer Science at the University of New Mexico
Research at the intersection of human-computer interaction and computer science education.

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PROFESSIONAL APPOINTMENTS

2021 - current **Research Assistant in Computer Science** at the University of New Mexico (UNM)
Advisor: Leah Buechley, Hand and Machine Lab

EDUCATION

2021 - 2025 **PhD of Science in Computer Science** at the University of New Mexico (UNM)

2020 - 2021 **Master of Science in Computer Science** at the University of New Mexico (UNM)

2015 - 2020 **Bachelor of Science in Computer Science** at the University of New Mexico (UNM)

RESEARCH INTERNSHIPS

2021- 2023 **Research and Development Intern** at Sandia National Labs

Supervisor: Tyler Morrow

2019- 2021 **Software Developer Intern** at Health Care Partners Foundation

Supervisor: Rita Torrez

2016 - 2019 **Software Developer Intern** at Bohannon Huston

Supervisor: Moss Tryer

REFEREED PUBLICATIONS

Journal Articles

- [J.1] **Alyshia Bustos**, Nanibah Chacon, and Leah Buechley. 2023. "Interactive Murals: New Interactions and educational opportunities for diverse youth." *XRDS Summer 2023 Vol 29 No 4*.

Peer-Reviewed Conference Proceedings

- [C.4] Leah Buechley and **Alyshia Bustos**. 2023. "Characteristics of Conductive Paints and Tapes for Interactive Murals." *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT '23)*.
- [C.3] **Alyshia Bustos**, Nanibah Chacon, Mia Shaw, Fiona Bell, and Leah Buechley. 2024. "Ode to Barelhas: Supporting Youth Agency, Cultural Expression, and Community Engagement through an Interactive Mural." *Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS '24)*.
- [C.2] **Alyshia Bustos**, Nanibah Chacon, Mia Shaw, Fiona Bell, and Leah Buechley. 2024. "Interactive Murals: New Opportunities for Collaborative STEAM Learning." *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24)*. 26% Acceptance Rate.
- [C.1] Leah Buechley, **Alyshia Bustos**, Eleonora Edreva, Tyler Fenske, Reuben Fresquez, Samuel Hafer, Aislinn Handey, Michelle Louie, John Ng, Alan Shen, Randi Smith, Amber Sustaita, Michael Truong, Kai Vallon, and Kage Weiss. 2022. "A Computational Fabrication Course: Exploring Philosophical Reflection, Real-World Use, Personal Expression, and Social Connection". *Proceedings of the 7th Annual ACM Symposium on Computational Fabrication (SCF' 22)*.

Peer-reviewed Workshop Proposals

- [W.1] Fiona Bell, Camila Friedman-Gerlicz, Jamie Gould, Erin McClure, Deanna Gelosi, **Alyshia Bustos**, Monica Silva-Lovato, Jeff Suina, and Leah Buechley. 2024. "Demonstrating New Materials, Software, and Hardware from the Hand and Machine Lab." *Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24 EA)*.

Lightly Reviewed Conference Abstracts

- [A.3] **Alyshia Bustos**, Nanibah Chacon, Mia Shaw, Fiona Bell, and Leah Buechley. 2024. "Interactive Murals: Designing Community Art and Community Technology with Youth." Extended Abstract for *Advancing Creative Physical Computing Education: Designing, Sharing, and Taxonomizing Instructional Interventions Workshop at the Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS '24)*.
- [A.2] **Alyshia Bustos**, Nanibah Chacon, and Leah Buechley. 2024. "Designing Interactive Murals: Blending traditional mural-making practices and ubiquitous computing." *Open Hardware Summit Workshop Series (OHS '24)*.
- [A.1] **Alyshia Bustos**, Nanibah Chacon, and Leah Buechley. 2023. "Interactive Murals: Designing Culturally-Responsive Learning Activities to Empower Diverse Youth Through Collaboration and Self-Expression." *University of New Mexico Shared Knowledge Conference Poster Session (SKC '23)*.

AWARDS & HONORS

- 2024 Outstanding Graduate Student Award, University of New Mexico Computer Science Department
- 2022 Finalist for the NCWIT Collegiate Award
- 2021 National Intelligence Community Centers For Academic Excellence Scholar
Critical Technology Studies Program of the University of New Mexico
- 2019 2nd Place in the Great Minds In Science Hackathon (GMiS '19)
- 2018-2019 Outstanding Junior Award, University of New Mexico Computer Science Department

GRANTS & FUNDING

- 2024-2025 Zancada Graduate Fellowship
- 2024 Open Hardware Summit Fellowship - \$1,000

SERVICE

Academic Service

- 2025 AC Reviewer - CHI Papers
- 2024 Reviewer - DIS Papers
- 2024 Reviewer - TEI Papers

Other

- 2024 Computer Science Student Conference Organizer at UNM
- 2023-2024 National Center for Women & Information Technology (NCWIT) Campus Representative
- 2023-2024 Computer Science Graduate Student Association (CSGSA) Vice President at UNM
- 2023 Computer Science Student Conference Organizer at UNM
- 2022 - 2023 National Center for Women & Information Technology (NCWIT) Campus Representative
- 2022 - 2023 Women in Computing (WinC) Website Technology Officer at UNM
- 2022 - 2023 Computer Science Graduate Student Association (CSGSA) Website Technology Officer at UNM
- 2022 Computer Science Student Conference Organizer at UNM
- 2021 - 2022 National Center for Women & Information Technology (NCWIT) Campus Representative
- 2021 - 2022 Women in Computing (WinC) President at UNM
- 2021 - 2022 Computer Science Graduate Student Association (CSGSA) President at UNM
- 2021 Computer Science Student Conference Organizer at UNM
- 2020 - 2021 Women in Computing (WinC) Website Technology Officer at UNM
- 2020 Computer Science Student Conference Organizer at UNM
- 2019 - 2020 Women in Computing (WinC) Undergraduate Lead at UNM
- 2019 - 2020 Hispanic Engineering Science Organization (HESO) Website/Technology Officer
- 2019 Computer Science Student Conference Organizer at UNM
- 2018 - 2019 Women in Computing Undergraduate Lead at UNM
- 2018 - 2019 Hispanic Engineering Science Organization (HESO) Member at UNM
- 2017 - 2018 Society of Women Engineers (SWE) Member at UNM

TEACHING EXPERIENCE

Teaching Assistant

- Spring 2021 Introduction to Computer Systems (CS 341)
UNM, Instructor: Tyler Morrow
Led in-class discussions, helped students through lab projects, and graded assignments for an undergraduate-level engineering course focused on the lower-level structures of computer systems.
- Fall 2020 Introduction to Computer Systems (CS 341)
UNM, Instructor: Soraya Abad-Mota
Led in-class discussions, helped students through lab projects, and graded assignments for an undergraduate-level engineering course focused on the lower-level structures of computer systems.
- Summer 2020 Data Organization (CS 241)
UNM, Instructor: Jeff Sharpe
Led in-class discussions, helped develop course curriculum, and graded assignments for an undergraduate-level engineering course
- Spring 2020 Introduction to Computer Systems (CS 341)
UNM, Instructor: Tyler Morrow
Led in-class discussions, helped students through lab projects, and graded assignments for an undergraduate-level engineering course focused on the lower-level structures of computer systems.
- Fall 2019 Introduction to Computer Systems (CS 341)
UNM, Instructor: Soraya Abad-Mota
Led in-class discussions, helped students through lab projects, and graded assignments for an undergraduate-level engineering course focused on the lower-level structures of computer systems.

MENTORSHIP

Master Student Research Supervision

- Fall 2024 Erin McClure (Computer Science) at UNM

Undergraduate Student Research Supervision

- 2022 - 2024 Alyssa Johnson (Art Education) at UNM
- 2020 - 2021 Kayla Potter (Computer Science) at UNM
Bethany Pena (Computer Science) at UNM
Adina Abudushalamu (Computer Science) at UNM
Elektra Caffrey (Computer Science) at UNM

Peer Advising

- 2019-2020 Computer Science Peer Tutoring/Advising for 100, 200, and 300-level CS classes at UNM
- 2018-2019 Computer Science Peer Tutoring/Advising for 100 and 200-level CS classes at UNM

INVITED TALKS

- 2024 "Open Source Hardware For Interactive Murals"
Open Source Hardware Association, **Show and Tell for Open Hardware Month**, Host: Sid Drmay
- 2024 "Developing Interactive Murals"
University of New Mexico, **Computer Science Colloquium**, Host: Trilce Estrada
- 2024 "Student Panel: Internships"
University of New Mexico, **Computer Science Colloquium**, Host: Trilce Estrada
- 2023 "Interactive Murals"
ATLAS Institute, **Sketching in Hardware**, Hosts: Leah Mckibin and Michael Kuniavasky
- 2020 "Homegrown Scientists"
University of New Mexico, **Advancing Women in Science (AWS)**, Host: Stephanie Fox
- 2019 "Women In Tech Spotlight"
Albuquerque, **New Mexico Girls Who Code Club**, Host: Samina Kabir

ART INSTALLATIONS

- 2024 "Nunca Olvides" - *Convergence x Crossroads Exhibitions*
National Hispanic Cultural Center, Albuquerque, New Mexico
- 2023 "PAHTIA"
National Hispanic Cultural Center, Albuquerque, New Mexico
- 2022 "Flora and Fauna: A Luminscent Ode to Barelás"
Working Classroom, Albuquerque, New Mexico