Morgan Vigil-Hayes

1295 S. Knoles Drive, Office 310
Flagstaff, AZ 86011
928.523.4863
morgan.vigil-hayes@nau.edu
vigil-hayes.github.io

RESEARCH INTERESTS

- Community Networks
- Broadband Advocacy
- Rural Computing
- Indigenous Information Systems
- Social Computing
- Participatory Action Research
- Participatory Design
- Social Media Analytics
- Network Analytics

EDUCATION

University of California, Santa Barbara, CA
Doctorate of Philosophy in Computer Science, June 2017
Dissertation: Community Networks for Challenged Environments
Advised by Elizabeth Belding

Westmont College, Santa Barbara, CA
Bachelor of Science in Computer Science, December 2011
Summa cum laude

POSITIONS HELD

Northern Arizona University, Flagstaff, AZ
Wolf Gumerman Chair, Honors College
August 2023-current

Associate Professor, School of Informatics, Computing, & Cyber Systems
August 2023-current

Assistant Professor, School of Informatics, Computing, & Cyber Systems
August 2017-May 2023

AWARDS & HONORS

2023 **Distinguished Scholar**
College of Engineering, Informatics, and Applied Sciences
Northern Arizona University

2021 **CSCW Best Paper Award**
"Integrating Cultural Relevance into a Behavioral mHealth Intervention for Native American Youth"
Awarded to top 1% of papers

CSCW Recognition for Contribution to Diversity & Inclusion
"Integrating Cultural Relevance into a Behavioral mHealth Intervention for Native American Youth"

2017 **CSCW Recognition for Contribution to Diversity & Inclusion**
"#Indigenous: Tracking the Connective Actions of Native American Advocates on Twitter"

Outstanding Graduate Student
Department of Computer Science
UC Santa Barbara

2013 **Graduate Women's Scholarship**
Microsoft

Graduate Research Fellowship (2013-2017)
National Science Foundation

2012 **Doctoral Scholar's Fellowship (2012-2017)**
UC Santa Barbara

Grace Hopper Award (Top Computer Science Graduate)
Department of Computer Science
Westmont College

2011 **David K. Winter Servant Leadership Award**
Westmont College

IN THE PRESS

2023 **"The Rockefeller Foundation Collaborates with Universities to Close America's Broadband Equity Gap"**
(02/2023) https://www.rockefellerfoundation.org/news/the-rockefeller-foundation-collaborates-with-universities-to-close-americas-broadband-equity-gap/

2022 **"Grant will fund computer science curriculum designed for Native American kids"**
(02/2022) https://www.knau.org/knau-and-arizona-news/2022-02-16/grant-will-fund-computer-science-curriculum-designed-for-native-american-kids

2021 **"Millions of Americans can't get broadband because of a faulty FCC map. There's a fix"**
(02/2021) https://www.cnet.com/home/internet/features/millions-of-americans-cant-get-broadband-because-of-a-faulty-fcc-map-theres-a-fix/

2019 **Technology Trends: Bridging the Digital Divide in Native American Communities**
(01/2019) https://www.socialworktoday.com/archive/JA19p6.shtml

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FUNDED GRANTS AND AWARDS

2023 **NSF Louis Stokes Alliance for Minority Participation in STEM (07/23-06/28; $3.5M; Co-PI/NAU Site Director; NSF 2307200)**

Louis Stokes STEM Pathways Implementation-Only Alliance: Southern Nevada Northern Arizona

Rockefeller Foundation (01/23-06/24; $500K; Co-PI)
CellWatch

2022 **NSF CAREER Award (08/22-07/27; $561K; Lead PI; NSF IIS 2145861)**
CAREER: A Community-based Approach to Empowered Information and Communication Technology Measurement

NSF Smart & Connected Communities Integrated Research Grant (10/22-09/26; $2.5M; Lead PI; NSF CNS 2224014)
SCC-IRG Track 1: Qöyangnuptu: Smart, Connected, and Culturally-centered System to Support the Well-being of Hopi/Tewa Youth

2021 **NSF CS4All Research-Practitioner Partnership Grant (09/21-08/24; $275K; Lead PI; NSF DRL 2122791)**
Towards Culturally Responsive and Computationally Rich Problem Based Learning for K-5 Students

NSF CISE Collaborative Research Infrastructure Award (10/21-09/24; $1.3M; Co-PI; NSF CNS 2120485)
Collaborative Research: CCRI: New: Distributed Sensing & Computing Over Sparse Environments (DISCOVER) Platform

NSF CIVIC Planning Grant Award (01/2021-08/2021; $50K; Lead PI; NSF CNS 2043526)
SCC-CIVIC-PG Track B: Digital Backpack: Enabling Offline Web-based Content Access to Promote Student Academic Resiliency in Acute and Chronic Disaster Situations

2020 **NSF Smart & Connected Communities Planning Grant (10/20-09/21; $150K; Lead PI; NSF CNS 1951911)**
SCC-PG: SUNRISE: Using Mobile Games in Rural Tribal Communities to Promote Social and Emotional Resilience in Youth

2018 **NSF Smart & Connected Communities Integrated Research Grant (10/18-09/21; $2M; Co-PI; NSF CNS 1831698)**
SCC: PuebloConnect: Expanding Internet Access and Content Relevance in Tribal Communities

NAU Southwest Health Equity Center Pilot Project Program (09/18-08/20; $60K; Lead PI)
ARORA: Using Augmented Realities to Gamify a Universal Social Learning Intervention

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PUBLICATIONS

2023 **Morgan Vigil-Hayes**. Indigenizing Social Computing: How Conceptualizations of Indigeneity Inform Next Steps. In CSCW 2023 Workshop on Conceptualizing Indigeneity in Social Computing. https://sites.google.com/view/indigeneity-social-computing/accepted-papers

Ann F. Collier, Shelby Hagemann, Susan B. Trinidad, **Morgan Vigil-Hayes**. 2023. Human-to-Computer Interactivity Features Incorporated Into Behavioral Health mHealth Apps: Systematic Search. In JMIR Formative Research 2023;7:e44926. doi: 10.2196/44926 PMID: 37389916 PMCID: 10365630

Dipto Das, Parboti Roy, Carlos Toxtli, Kagonya Awori Awori, **Morgan Vigil-Hayes**, Monojit Choudhury, Neha Kumar, Syed Ishtiaque Ahmed, and Bryan Semaan. "Conceptualizing Indigeneity in Social Computing." In *Companion Publication of the 2023 Conference on Computer Supported Cooperative Work and Social Computing*, pp. 501-505. 2023.

Md Nazmul Hossain and **Morgan Vigil-Hayes**. 2023. Woes, Workarounds, and Wishes of Users Living in a Multinetwork Reality. In Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems (CHI EA '23). Association for Computing Machinery, New York, NY, USA, Article 320, 1–7. https://doi.org/10.1145/3544549.3585795

Beatriz Palacios Abad, Michael Koohang, **Morgan Vigil-Hayes**, and Ellen Zegura. 2023. Alone and Together: Resilience in a Fluid Socio-Technical-Natural System. Proc. ACM Hum.-Comput. Interact. 7, CSCW1, Article 24 (April 2023), 26 pages. https://doi.org/10.1145/3579457

2022 Esther Showalter, **Morgan Vigil-Hayes**, Ellen Zegura, Richard Sutton, and Elizabeth Belding. "Pandemic-influenced human mobility on tribal lands in California: Data sparsity and analytical precision." PLOS One 17, no. 12 (2022): e0276644.

Esther Han Beol Jang, Nicola Bidwell, Jen Liu, Phoebe Sengers, Naveen Bagalkot, Nervo Verdezoto, Melissa Densmore, **Morgan Vigil-Hayes**, and Shaddi Hasan. 2022. Situating Network Infrastructure with People, Practices, and Beyond: A Community Building Workshop. In Companion Publication of the 2022 Conference on Computer Supported Cooperative Work and Social Computing (CSCW'22 Companion). Association for Computing Machinery, New York, NY, USA, 267–272. https://doi.org/10.1145/3500868.3560716

Morgan Vigil-Hayes, Md Nazmul Hossain, Alexander K Elliott, Elizabeth M. Belding, and Ellen Zegura. 2022. LoRaX: Repurposing LoRa as a Low Data Rate Messaging System to Extend Internet Boundaries. In Proceedings of the 5th ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies (COMPASS '22). Association for Computing Machinery, New York, NY, USA, 195–213. https://doi.org/10.1145/3530190.3534807

Beatriz Palacios Abad, Elizabeth Belding, **Morgan Vigil-Hayes**, and Ellen Zegura. 2022. Note: Towards Community-Empowered Network Data Action. In Proceedings of the 5th ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies (COMPASS '22). Association for Computing Machinery, New York, NY, USA, 585–588. https://doi.org/10.1145/3530190.3534836

Tarun Mangla, Esther Showalter, Vivek Adarsh, Kipp Jones, **Morgan Vigil-Hayes**, Elizabeth Belding, and Ellen Zegura. 2022. A Tale of Three Datasets: Characterizing Mobile Broadband Access in the U.S. Commun. ACM 65, 3 (March 2022), 67–74. https://doi.org/10.1145/3462672

2021 Marisa E. Duarte and **Morgan Vigil-Hayes**. "An Indigenous Feminist Approach to Digital Methods." *Indigenous Peoples Rise Up: The Global Ascendency of Social Media Activism* (2021): 93. Rutgers University Press.

Vivek Ardash, Michael Nekrasov, Udit Paul, Tarun Mangla, Arpit Gupta, **Morgan Vigil-Hayes**, Ellen Zegura, and Elizabeth Belding. "Coverage is Not Binary: Quantifying Mobile Broadband Quality in Urban, Rural, and Tribal Contexts," *2021 International Conference on Computer Communications and Networks (ICCCN)*, Athens, Greece, 2021, pp. 1-9, doi: 10.1109/ICCCN52240.2021.9522152.

Norman Makoto Su, Jean Hardy, **Morgan Vigil-Hayes**, Tiffany Veinot, and Rob Comber. 2021. Introduction: Performing Rurality with Computing. ACM Trans. Comput.-Hum. Interact. 28, 3, Article 16e (June 2021), 13 pages. https://doi.org/10.1145/3461832

Marisa Elena Duarte, **Morgan Vigil-Hayes**, Ellen Zegura, Elizabeth Belding, Ivone Masara, and Jennifer Case Nevarez. 2021. As a Squash Plant Grows: Social Textures of Sparse Internet Connectivity in Rural and Tribal Communities. ACM Trans. Comput.-Hum. Interact. 28, 3, Article 16 (June 2021), 16 pages. https://doi.org/10.1145/3453862

Morgan Vigil-Hayes, Ann Futterman Collier, Shelby Hagemann, Giovanni Castillo, Keller Mikkelson, Joshua Dingman, Andrew Muñoz, Jade Luther, and Alexandra McLaughlin. 2021. Integrating Cultural Relevance into a Behavioral mHealth Intervention for Native American Youth. Proc. ACM Hum.-Comput. Interact. 5, CSCW1, Article 165 (April 2021), 29 pages. https://doi.org/10.1145/3449239 **[BEST PAPER AWARD] [DIVERSITY AND INCLUSION RESEARCH AWARD]**

Esther Showalter, **Morgan Vigil-Hayes**, Ellen Zegura, Rich Sutton, and Elizabeth Belding. 2021. Tribal Mobility and COVID-19: An Urban-Rural Analysis in New Mexico. In Proceedings of the 22nd International Workshop on Mobile Computing Systems and Applications (HotMobile '21). Association for Computing Machinery, New York, NY, USA, 99–105. https://doi.org/10.1145/3446382.3448654

2020 Marisa Elena Duarte, **Morgan Vigil-Hayes**, Sandra Littletree, Miranda Belarde-Lewis. Of Course, Data Can Never Fully Represent Reality. *Human Biology*, 91(3), 163-178, (9 June 2020) https://doi.org/10.13110/humanbiology.91.3.03

2019 **Morgan Vigil-Hayes**, Nicholet Deschine Parkhurst, Marisa Elena Duarte. 2019. Complex, Contemporary, and Unconventional: Characterizing the Tweets of the #NativeVote Movement and Native American Candidates through the 2019 U.S. Midterm Elections. Proc. ACM Hum.-Comput. Interact. 3, CSCW, Article 103 (November 2019), 27 pages. https://doi.org/10.1145/3359205 **[DIVERSITY AND INCLUSION RESEARCH AWARD]**

Jean Hardy, Chanda Phelan, **Morgan Vigil-Hayes**, Norman Makoto Su, Susan Wyche, and Phoebe Sengers. 2019. Designing from the rural. Interactions 26, 4 (July-August 2019), 37–41. https://doi.org/10.1145/3328487

Morgan Vigil-Hayes, Ann Futterman Collier, Giovanni Castillo, Davona Blackhorse, Nikole Awbery, and John-Paul Abrahim. 2019. Designing a Mobile Game That Develops Emotional Resiliency in Indian Country. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems

(CHI EA '19). Association for Computing Machinery, New York, NY, USA, Paper LBW2122, 1–6. https://doi.org/10.1145/3290607.3312790

Esther Showalter, Nicole Moghaddas**, Morgan Vigil-Haye**s, Ellen Zegura, and Elizabeth Belding. 2019. Indigenous Internet: Nuances of Native American Internet Use. In Proceedings of the Tenth International Conference on Information and Communication Technologies and Development (ICTD '19). Association for Computing Machinery, New York, NY, USA, Article 45, 1–4. https://doi.org/10.1145/3287098.3287141

2018 **Morgan Vigil-Hayes**, Jeanna Matthews, Amelia Acker, and Daniel Carter. 2018. Reflections on alternative Internet models and how they inform more mindful connectivity. ITU Journal: ICT Discoveries, Article 2 (November 2018). 9 pages. https://www.itu.int/dms_pub/itu-s/opb/journal/S-JOURNAL-ICTS.V1I2-2018-14-PDF-E.pdf

2017 Marissa Elena Duarte and **Morgan Vigil-Hayes**. 2017. #Indigenous: A technical and decolonial analysis of activist uses of hashtags across social movements. MediaTropes., 7(1).

Paul G. Flikkema and **Morgan Vigil-Hayes**, "Self-adaptive and resilient urban networking infrastructure for disasters and smart city services," 2017 IEEE International Conference on Big Data (Big Data), Boston, MA, USA, 2017, pp. 4074-4079, https://ieeexplore.ieee.org/document/8258424

Mai ElSherief, **Morgan Vigil-Hayes**, Ramya Raghavendra, and Elizabeth Belding. 2017. Whom to Query? Spatially-Blind Participatory Crowdsensing under Budget Constraints. In Proceedings of the First ACM Workshop on Mobile Crowdsensing Systems and Applications (CrowdSenSys '17). Association for Computing Machinery, New York, NY, USA, 31–37. https://doi.org/10.1145/3139243.3139249

Morgan Vigil-Hayes, Elizabeth Belding, and Ellen Zegura. 2017. FiDO: A Community-based Web Browsing Agent and CDN for Challenged Network Environments. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 1, 3, Article 108 (September 2017), 25 pages. https://doi.org/10.1145/3132030

Morgan Vigil-Hayes, Marisa Duarte, Nicholet Deschine Parkhurst, and Elizabeth Belding. 2017. #Indigenous: Tracking the Connective Actions of Native American Advocates on Twitter. In Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '17). Association for Computing Machinery, New York, NY, USA, 1387–1399. https://doi.org/10.1145/2998181.2998194 **[HORABLE MENTION FOR BEST PAPER AWARD]**

2016 Paul Schmitt, **Morgan Vigil-Hayes**, Elizabeth Belding. 2016. A Study of MVNO Data Paths and Performance. In: Karagiannis, T., Dimitropoulos, X. (eds) Passive and Active Measurement. PAM 2016. Lecture Notes in Computer Science, vol 9631. Springer, Cham. https://doi.org/10.1007/978-3-319-30505-9_7

Morgan Vigil, Elizabeth Belding, and Matthew Rantanen. 2016. Repurposing FM: Radio Nowhere to OSNs Everywhere. In Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing

(CSCW '16). Association for Computing Machinery, New York, NY, USA, 1260–1272. https://doi.org/10.1145/2818048.2820001

2015 Waylon Brunette, **Morgan Vigil**, Fahad Pervaiz, Shahar Levari, Gaetano Borriello, and Richard Anderson. 2015. Optimizing Mobile Application Communication for Challenged Network Environments. In Proceedings of the 2015 Annual Symposium on Computing for Development (DEV '15). Association for Computing Machinery, New York, NY, USA, 167–175. https://doi.org/10.1145/2830629.2830644

Mariya Zheleva, Paul Schmitt, **Morgan Vigil**, and Elizabeth Belding. "Internet Bandwidth Upgrade: Implications on Performance and Usage in Rural Zambia." *Information Technologies & International Development* 11, no. 2 (2015): pp-1.

Morgan Vigil, Matthew Rantanen, and Elizabeth Belding. 2015. A First Look at Tribal Web Traffic. In Proceedings of the 24th International Conference on World Wide Web (WWW '15). International World Wide Web Conferences Steering Committee, Republic and Canton of Geneva, CHE, 1155–1165. https://doi.org/10.1145/2736277.2741645

2013 Mariya Zheleva, Paul Schmitt, **Morgan Vigil**, and Elizabeth Belding. 2013. The Increased Bandwidth Fallacy: Performance and Usage in Rural Zambia. In Proceedings of the 4th Annual Symposium on Computing for Development (ACM DEV-4 '13). Association for Computing Machinery, New York, NY, USA, Article 2, 1–10. https://doi.org/10.1145/2537052.2537060

Mariya Zheleva, Paul Schmitt, **Morgan Vigil**, and Elizabeth Belding. 2013. Community detection in cellular network traces. In Proceedings of the Sixth International Conference on Information and Communications Technologies and Development: Notes - Volume 2 (ICTD '13). Association for Computing Machinery, New York, NY, USA, 183–186. https://doi.org/10.1145/2517899.2517932

Schmitt, Paul, **Morgan Vigil**, Mariya Zheleva, and Elizabeth M. Belding. 2013. Communication Flow Patterns in the D4D dataset. NetMob Session on Data for Development (D4D)

INVITED TALKS & PANELS

2023 ***Weaving a New Web: Lessons for Information Infrastructure from Indigenous Knowledge, Networks, and Action***
10/2023 Gumerman Lecture Northern Arizona University (Flagstaff, AZ)

Indigenizing Social Computing: How Conceptualizations of Indigeneity Inform Next Steps
10/2023 CSCW Workshop on Conceptualizing Indigeneity in Social Computing (Minneapolis, MN)

Exploring Computer Science through the Lens of Internet Citizen Scientists
07/2023 CSTA Four Corners Computer Science Convening (Durango, CO)

The Future is Multinetworked
02/2023 Michigan State University Rural Computing Speaker Series (Lansing, MI)

2022 ***Panel Speaker: S&CC and Rural Communities***
04/2022 NSF Smart & Connected Communities Annual PI Meeting (Washington, DC)

2021 ***There and Back Again: A Journey Applying Quantitative Methods to Indigenous Data***
09/2021 Keynote for Workshop de Colaboração Online: WCO2021(Virtual)

Mixed Methods Approaches to Characterizing Indigenous Social Media Usage
04/2021 University of Washington Applied Indigenous Research Methods (Virtual)

Panel Speaker: Community Planning, Education and the Workforce
04/2021 NSF Smart & Connected Communities Annual PI Meeting (Virtual)

2020 ***Addressing LTE Coverage Inaccuracies in Indian Country*** with E. Zegura and E. Belding
10/2020 Internet Society Indigenous Connectivity Conference (Virtual)

2018 ***A New Narrative: Rural Agency and Culture at the Center***
10/2019 CSCW Workshop on Rural Computing

TEACHING EXPERIENCE

Courses Taught

Computer Networks	Taught at the undergraduate and graduate level at NAU for a total of six offerings.
Network Analysis	Taught at the undergraduate and graduate level at NAU for a total of four offerings.
Network Security	Taught at the undergraduate and graduate level at NAU for a total of two offerings.
Introduction to Programming	Taught once at the undergraduate level in C++ at UCSB.

Courses Developed (Not Taught)

Social Computing	Developed for graduate and undergraduate offerings at NAU. Focuses on the analysis and critique of online social interactions as well as the design and implementation methods that enable the creation of novel online social interactions. Will be offered for first time as an undergraduate elective in Spring 2024.

Cyber Ethics Seminar	Developed as an interdisciplinary seminar for students in the Honors College at NAU. The goal of this course is to introduce students to critical thought surrounding ethical questions that emerge around new and endemic digital technologies with the goal of asking: *"What makes digital technology good?"* Will be offered for the first time in Spring 2024.
Computing Tools I-III	Developed for undergraduate students as a three-part seminar sequence focused on introducing undergraduate students to standard computing tools such as Linux utilities, version control, IDEs, virtual machines, cloud-based services, and containerization. Sequence has been taught by other instructors five times since 2021.

Graduate Students Advised & Supervised

Shelby Hagemann PhD Informatics & Computing Chair	Started Fall 2023 Working dissertation title: *"Facilitating Work between Cultural Knowledge Holders and Large Language Models"*
Italo Santos PhD Informatics & Computing Committee Member	Started Fall 2022 Working dissertation title: *"Gamifying an Open Source Environment to Support Newcomers During the Contribution Process*"
Beatriz Palacios Abad PhD Computer Science Georgia Tech Co-supervised with E. Zegura & Committee Member	Started Fall 2019 Working dissertation title: *"Broadband Data Action for Empowered Communities"*
Felicity Escarzaga PhD Informatics & Computing GRA Supervisor	GRA Spring 2023 Working dissertation title: *"Adaptive Prosthetics using Predictive EMG Signal Processing"*
Md Nazmul Hossain PhD Informatics & Computing Chair	Started Fall 2019 Working dissertation title: *"Supporting User Navigation through the Logistics of Multinetworked Environments"*
Saloni Jain PhD Informatics & Computing Committee Member	Started Fall 2019 Working dissertation title: *"Cryptographic key recovery with challenge response pair mechanisms"*
Lakshmi Panguluri MS Computer Science Co-chair with A. Amresh	Defended: November 2023 Thesis title: *"Comparative Analysis of Content: Human Expert vs. Artificial Intelligence in an Exploratory Study"*

Rishabh Mahajani MS Computer Science Georgia Tech Co-supervised with E. Zegura	Graduated 2020
Md Ashiqul Amin MS Computer Science Chair	Defended: July 2020 Thesis title: *"WOLFF: A LoRa-based Network Architecture to Extend Internet Service in Remote Areas"*

Undergraduate Students Mentored in Research & Project-based Learning

NAU	Bailey McCauslin ('24), Nicole Sylvester ('24), Dayra Quinonez ('24), Shelby Hagemann ('23), Jack Normand ('23), Quinton Jasper ('23), Kylie Cook ('22), Elena Umbria Macaron ('22), Zane Fink ('21), Joseph Vargovich ('21), Andrew Muñoz ('21), Keller Mikkelson ('20), Kainoa Boyce ('20), Adam Paquet ('19), Daniel Williams ('18), Tyler Thatcher ('18)
ASU	Harry DeCecco ('24)
Georgia Tech	Alexander Elliott ('22)

PROFESSIONAL SERVICE

Conferences

ACM CHI	Associate Chair: 2023, 2024 Reviewer: 2019, 2020, 2021, 2022
Situating Network Infrastructure with People, Practices, and Beyond (SNIP) (Workshop Series)	Co-organizer: 2022 PC Member: 2023
Conceptualizing Indigeneity in Social Computing Workshop (CSCW Workshop)	Co-organizer: 2023
ACM CSCW	Awards Co-Chair: 2024 Associate Chair: 2019-2020
ACM COMPASS	Treasurer: 2022, 2018 PC Member: 2018, 2019, 2020, 2021, 2022
CHInclusion: Working toward a more inclusive HCI community (CHI Workshop)	Co-organizer: 2019

ACM DIS	Associate Chair: 2021, 2022
IEEE Global Humanitarian Technology Conference	Track Chair: 2022
IEEE/ACM MobiCom	Posters Co-Chair: 2019

Associate Editor

ACM Journal on Computing and Sustainable Societies	2022-current
ACM ToCHI	Special Issue Associate Editor: 2020-2021

University Service

NAU SICCS PhD Recruitment Committee	Chair: 2023-current
NAU Institute for Native-serving Educators	Advisory board member: 2022-current
NAU Diversity Curriculum Committee	2022-current Indigenous Peoples Sub-committee
NAU SICCS Faculty Search Committee	2018-current 6 tenure track searches; 8 non-tenure track searches
NAU SICCS Computer Science Program and Curriculum Committee	2018-current
NAU Women Who Compute Faculty Advisor	2018-current
UCSB American Indians in Science and Engineering Society (AISES) Co-advisor	2015-2017
UCSB Women in Computer Science Co-President	2012-2015

COMMUNITY OUTREACH

Culturally-Responsive Computer Science Teaching Workshop *Flagstaff, Hopi, and White Mountain Apache*	October 2023 Led a two-day workshop for six Native-serving educators from Northern Arizona region at NAU. Designed method that adapted the Culturally-Responsive Assessment of Indigenous Schooling Tool (CRAIS) to a process K-8 teachers could use to modify CS lessons found online.

Women in STEM Panelist
Flagstaff STEM Week

September 2023
Participated in a panel on women in STEM careers, focusing on challenges, resilience, and experiences.

Data Wrangling Workshop
Navajo Technical University

April 2023
Led a one day workshop for 30 environmental science students at Navajo Technical Workshop. Designed curriculum using DISCOVER CCRI platform and Google Research Colab with Python.

Internet Measurement Workshops
Santa Clara Pueblo and Flagstaff Unified School District

December 2020, February 2020 & May 2019
Led 1-2 hour workshops with curriculum I designed surrounding computer networking, network performance, and network measurement.

Hope Tutoring Navajo Computer Science Camps
Leupp, Birdsprings, and Flagstaff

2017-2019
Led six-week sessions for four semesters. Camps met for four hours on weekends at Navajo Chapter Houses. I modified the CS Unplugged curriculum to introduce students

Board Member
Santa Barbara American Indian Health & Services
Santa Barbara

2016-2017
Monthly board meetings and annual strategic planning retreat. Consulted on youth-facing services and communication strategies.

ODK Submit Open-Source Workshop
Grace Hopper 2015

October 2015
Helped organize and lead a workshop focused on getting women involved in open-source coding using the ODK Submit code base.

K-12 CS Fundamentals Workshops
Flagstaff Unified School District
Girls, Inc. Santa Barbara
Santa Barbara Unified School District

2013-2023
I led annual outreach to local schools, science fairs, and community programs in Santa Barbara using MIT Scratch and CS Unplugged curricula.

Computer Science Camp
Santa Barbara High School

2010-2011
I organized fellow CS undergrad students and led a weekly computer science camp for high school students. This camp introduced students to programming concepts using CS Unplugged, Ruby, and Java.