

## Morgan Vigil-Hayes

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CONTACT INFORMATION	(928) 523-4863 SICCS 306 Northern Arizona University Flagstaff, AZ 86011 morgan.vigil-hayes@nau.edu
TEACHING & RESEARCH INTERESTS	Network analysis, wireless networks, online social networks, community networks, rural computing
EDUCATION	<b>University of California</b> , Santa Barbara, CA Ph.D., Computer Science, June 2017 Thesis Topic: <i>Community-based Networks for Challenged Environments: Characterizing Opportunities and Designing Solutions</i> Advisor: Elizabeth Belding, Ph.D. <b>Westmont College</b> , Santa Barbara, CA B.S., Computer Science, December 2011 <i>Summa Cum Laude</i>
ACADEMIC POSITIONS	<b>Assistant Professor</b> August 2017 to current School of Informatics, Computing, and Cyber Systems College of Engineering, Informatics, and Applied Sciences Northern Arizona University <b>Research Assistant</b> September 2012 to June 2017 Department of Computer Science, University of California Supervisor: Elizabeth Belding, Ph.D. <b>Research Assistant</b> June 2013 to August 2013 Department of Computer Science, University of Washington Supervisor: Gaetano Borriello, Ph.D.
PEER REVIEWED PUBLICATIONS	<ol style="list-style-type: none"><li>1. Showalter, E., Moghaddas, N., Belding, E., <b>Vigil-Hayes, M.</b>, Zegura, E., “Indigenous Internet: Nuances of Native American Internet Use.” <i>to appear in Proceedings of the Tenth International Conference on Information and Communications Technologies and Development: Notes</i>, Ahmedabad, India, January 2019.</li><li>2. <b>Vigil-Hayes, M.</b>, Matthews, J., Acker, A., and Carter, D., “Reflections on Alternative Internet Models and How They Inform More Mindful Connectivity.” <i>to appear in ITU Journal ICT Discoveries</i>, vol. 2, no. 1, December 2018.</li><li>3. Duarte, M. and <b>Vigil-Hayes, M.</b>, “#Indigenous: A Technical and Decolonial Analysis of Activit Uses of Hashtags Across Social Movements.” <i>Media Tropes</i>, vol. 7, no. 1, December 2017. 166–184.</li><li>4. Flikkema, P. and <b>Vigil-Hayes, M.</b> “Self-Adaptive and Resilient Urban Networking Infrastructure for Disasters and Smart City Services,” <i>Proceedings of the IEEE International Workshop on Smart Cities 2017</i>, Boston, MA, USA. December 2017.</li><li>5. ElSherief, M., <b>Morgan Vigil-Hayes, M.</b>, Belding, E. “Who to Query? Spatially-Blind Participatory Crowdsensing under Budget Constraints,” <i>CrowdSenSys 2017</i>, Delft, Netherlands. October 2017.</li></ol>

6. **Vigil-Hayes, M.**, Belding, E., Zegura, E. “FiDO: A Community-based Web Browsing Agent and CDN for Challenged Environments,” *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, vol. 1, no. 3, article 108. 2017.
7. **Vigil-Hayes, M.**, Duarte, M., Parkhurst, N.D., Belding, E., “*#Indigenous*: Tracking the Connective Actions of Native American Advocates on Twitter,” *CSCW 2017* Portland, OR, USA. March 2017.
8. Schmitt, P., **Vigil, M.**, and Belding, E. “A Study of MNVO Paths Performance,” *PAM 2016*, Heraklion, Crete, Greece. March 2016.
9. **Vigil, M.**, Belding, E., Rantanen, M., “Repurposing FM: Radio Nowhere to OSNs Everywhere,” *CSCW 2016*, San Francisco, CA, USA. March 2016.
10. Brunette, W., **Vigil, M.**, Pervaiz, F., Levari, S., Borriello, G., Anderson, R. “Optimizing Mobile Application Communication for Challenged Network Environments,” *ACM DEV 2015*, London, England, UK. December 2015.
11. Zheleva, M., Schmitt, P., **Vigil, M.**, Belding, E. “Internet Bandwidth Upgrade: Implications on Performance and Usage in Rural Zambia.” *Information Technologies & International Development (ITID)*. 11:2, 1–18. Spring 2015.
12. **Vigil, M.**, Rantanen, M., Belding, E., “A First Look At Tribal Web Traffic.” *WWW '15*, Florence, Italy. May 2015.
13. Zheleva, M., Schmitt, P., **Vigil, M.**, Belding, E., “The Increased Bandwidth Fallacy.” *ACM DEV '13*, Cape Town, South Africa. December 2013.
14. Zheleva, M., Schmitt, P., **Vigil, M.**, Belding, E., “Bringing Visibility to Rural Users in Ivory Coast.” *ICTD '13*, Cape Town, South Africa. December 2013.
15. Zheleva, M., Schmitt, P., **Vigil, M.**, Belding, E., “Community Detection in Cellular Network Traces.” *ICTD '13*, Cape Town, South Africa. December 2013.
16. Schmitt, P., Zheleva, M., **Vigil, M.**, Belding, E., “Communication Flow Patterns in the Orange Telecom D4D Dataset.” *NetMob '13*, Boston, MA. January 2013.

PAPERS IN  
SUBMISSION

1. ElShereif, M., **Vigil-Hayes, M.**, Belding, E. “On the Limits of Computing for Street Harassment Prevention.” *Communications of the ACM, In submission*

PAPERS IN  
PREPARATION

1. **Vigil-Hayes, M.**, Belding, E., Rantanen, M. “Community content delivery over the FM Radio Broadcast Data System.”
2. **Vigil-Hayes, M.**, Krueger, K., Hayes, C., Triggs, M., Shih, B., Casado, M., “Deploying a 2.5 GHz LTE testbed.”
3. **Vigil-Hayes, M.**, ElSherief, M., Belding, E. “How social networks address information gaps in news deserts.”

GRANTS

NSF CNS-1831698 SCC: PuebloConnect: Expanding Internet Access and Content Relevance in Tribal Communities  
 Role: Co-PI  
 Duration: October 2018–September 2021  
 Award amount: \$2 million

NAU Southwest Health Equity Center Pilot Project Program ARORA: Using Augmented Reality to Gamify a Universal Social Learning Intervention

Role: PI

Duration: October 2018–September 2020

Award amount: \$60,000

Mural Net Collaboration Deploying Small-scale LTE for Last-mile Internet Access in the Colorado Plateau

Role: PI

Duration: May 2018–August 2019

Award amount: \$40,000

#### AWARDS

University of California, Santa Barbara

Computer Science Graduate Student of the Year, 2017

Doctoral Scholars Fellowship, 2012–2017

NSF Graduate Research Fellowship Program Fellowship, 2013–2016

Microsoft Graduate Women’s Scholarship, 2013

N2Women Fellowship for HotMobile, 2017

Honorable Mention for Best Paper Award at CSCW 2017

Westmont College

Grace Hopper Award for Top Computer Science Graduate, 2012

David K. Winter Servant Leader Award, 2011

Presidential Scholar, 2008–2011

NSF Computer Science Scholarship, 2008–2011

#### PRESENTATIONS

Technical Conferences

FiDO, *UbiComp 2017*, Maui, HI, USA

September 2017

#Indigenous, *CSCW 2017*, Portland, OR, USA

March 2017

FiDO, *HotMobile 2017*, Sonoma, CA, USA

March 2017

Repurposing FM, *CSCW 2016*, San Francisco, CA, USA

March 2016

First Look at Tribal Web Traffic, *WWW 2015*

May 2015

Localized Content for Village Schools, *MobiSys 2015*

May 2015

Social Media Locality in a Tribal Network, *ACM DEV 2014*

December 2014

Technical Symposia

Can Radio Kill the Coverage Gap?, *CWIC SoCal*, Ventura, CA, USA

April 2016

Localized Content for Rural Schools, *CWIC SoCal*, Carlsbad, CA, USA

April 2014

#### TEACHING

**CS 499 - Network Science**

#### EXPERIENCE

School of Informatics, Computing, and Cyber Systems,  
Northern Arizona University

**CS 460 - Computer Networks**

School of Informatics, Computing, and Cyber Systems,  
Northern Arizona University

**CMPSC 16 - Problem Solving with Computers (C++)**

Department of Computer Science,

University of California, Santa Barbara

#### SERVICE

Academic Community

IMC

2018

*Shadow Reviewer*

ACM COMPASS <i>PC Member and Financial Manager</i>	2018
CHI <i>Appointed reviewer</i>	2018
ICTD <i>Appointed reviewer</i>	2017
HotMobile <i>Chair, Student Travel Grant Committee</i>	2017
INFOCOM <i>Appointed reviewer</i>	2014
University	
NAU Women Who Compute <i>Faculty advisor</i>	2018 – current
UCSB American Indians in Science and Engineering Society (AISES) <i>Co-advisor</i>	2015 – 2017
College	
NAU Residential College <i>CEIAS Faculty Liaison</i>	2018 – current
Department	
UCSB First Winter Research Colloquium for students <i>Program organizer</i>	February 2015
UCSB Graduate Admissions Committee <i>Student representative</i>	January 2015 – May 2015
Women in Computer Science (WiCS) <i>Co-president and outreach coordinator</i>	October 2012 – May 2015
UCSB Graduate Student Workshop Committee (GSWC) <i>Program organizer and reviewer</i>	2013–2014