Shaomei Wu

Web: www.shaomei.info Email: shaomei@aimpower.org

Research Interests

- AI & HCI: Research and design empowering AI technologies with marginalized communities.
- Accessibility: Push the envelope of accessibility beyond checklists and legal requirements.
- Computational Social Sciences: Understand collective behaviors and systematic marginalization online and offline.

EDUCATION

Cornell University

Ithaca, NY

Doctor of Philosophy, Information Science

2007 - 2012

Dissertation: The Dynamics of Information Diffusion on On-line Social Networks

Advisory committee: Michael Macy, Jon Kleinberg, Dan Cosley

University of California, Santa Barbara

Santa Barbara, CA

Master of Science, Computer Science

2005 - 2007

Tsinghua University

Bachelor of Science and Engineering, Computer Science

Beijing, China 2001 - 2005

WORK EXPERIENCE

Founder and CEO

AImpower.org

Mountain View, CA

Feb 2022 - Present

• Found and lead AImpower.org, a nonprofit 501(c)(3) organization that research and co-create technologies for and with marginalized communities to dismantle barriers, create benefits, and seek social justice.

MySpeech

Remote

Chief Technology Officer

Mar 2022 - Oct 2022

o Guide MySpeech - a stuttering support and advocacy organization - during its transition to a digital platform for people who stutter. Responsibilities include: define R&D roadmap; architect technical infrastructure; advise the executive team on technical issues and directions; set up task management system; onboard and lead technical staff and volunteers.

Facebook Menlo Park, CA

Staff Research Scientist

Mar 2013 - Nov 2021

- Instagram Equity: Tech lead various efforts in identifying platform equity gaps and building new products for Black users on Instagram
- Facebook AI: Found and lead the AI for inclusion initiative to build AI technologies that benefit marginalized and low-resourced communities through participatory design, rapid prototyping, and in-the-wide user studies.
- Core Data Science: Drive research and engineering innovations on accessibility (e.g. Automatic Alt-text on Facebook); research and model networked behaviors such as app adoption, reshare of misinformation, and user churn.

 \mathbf{Google}

Various Locations

Research and Engineering Intern

Jul 2006 - Dec 2011

- o Google.org: Work on Google Person Finder and Crisis Alerts. Sep 2011 Dec 2011
- o Google Research: Study the dynamics of user arrival and departures in a large social network. Jun 2011 Aug 2011
- o Google New York: Build classifiers to categorize and rank user generated data (MyMaps). May 2009 Aug 2009
- o Google New York: Build localized business classifiers for categorical search on Google Maps. May 2008 Aug 2008
- o Google Kirkland: Build ML classifiers to identify hub pages for instant crawler. Jun 2007 Aug 2007
- o Google China: Study online community structures and develop community detection algorithms. Jul 2006 Sep 2006

Yahoo Research

New York, NY

Research Intern

Research Intern

May 2010 - Oct 2010

Jul 2004 - Jul 2005

• Human Social Dynamics Group: Work with Duncan Watts to study communication patterns in Twitter.

Microsoft Research Asia

Beijing, China

• System Research Group: Design and implement a large-scale, low-latency peer-to-peer routing protocol.

PUBLICATIONS

- Shaomei Wu. 2023. "The World is Designed for Fluent People": Benefits, Challenges, and Opportunities of Videoconferencing Technologies for People Who Stutter. In Proc. of the ACM CHI Conference on Human Factors in Computing Systems (CHI '23)
- Yu-Ru Lin, Shaomei Wu, Winter Mason. 2023. Mapping Language Literacy At Scale: A Case Study on Facebook. EPJ Data Science, 12, 13 (2023)
- Shaomei Wu, Lindsay Reynolds, Xian Li, Francisco (Paco) Guzman. 2019. Design and Evaluation of a Social Media Writing Support Tool for People with Dyslexia. In Proc. of the ACM CHI Conference on Human Factors in Computing Systems (CHI '19)
- Cole Gleason, Patrick Carrington, Lydia B Chilton, Benjamin M Gorman, Hernisa Kacorri, Andrés Monroy-Hernández, Meredith Ringel Morris, Garreth W Tigwell, and **Shaomei Wu**. 2019. **Addressing the Accessibility of Social Media**. CSCW 2019 Extended Abstract
- Lindsay Reynolds, Shaomei Wu. 2018. "I'm Never Happy with What I Write": Challenges and Strategies of People with Dyslexia on Social Media. In Proc. of the 12th International AAAI Conference on Web and Social Media (ICWSM). Best Paper Runner-up
- Yuhang Zhao, Shaomei Wu, Lindsay Reynolds, Shiri Azenkot. 2018. The Effect of Computer-Generated Descriptions on Photo-Sharing Experiences of People with Visual Impairments. In Proc. of the ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '18)
- Yuhang Zhao, Shaomei Wu, Lindsay Reynolds, Shiri Azenkot. 2018. A Face Recognition Application for People with Visual Impairments: Understanding Use Beyond the Lab. In Proc. of the ACM CHI Conference on Human Factors in Computing Systems (CHI '18)
- Shaomei Wu, Jeffrey Wieland, Omid Farivar, Julie Schiller. 2017. Automatic Alt-text: Computer-generated Image Descriptions for Blind Users on a Social Network Service. In Proc. of the 20th ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '17). The 14th most cited CSCW paper published from '16 '21 (Google Scholar).
- Violeta Voykinska, Shiri Azenkot, **Shaomei Wu**, and Gilly Leshed. 2016. **How Blind People Interact with Visual Content on Social Networking Services**. In *Proc. of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '16)* **The 20th most cited CSCW paper published from '16 '21** (Google Scholar).
- Isabel Kloumann, Lada Adamic, Jon Kleinberg, and Shaomei Wu. 2015. The Lifecycles of Apps in a Social Ecosystem. In Proc. of the 24th International World Wide Web Conference (WWW '15).
- Shaomei Wu, Lada Adamic. 2014. Visually Impaired Users on an Online Social Network. In Proc. of The ACM CHI Conference on Human Factors in Computing Systems (CHI '14).
- Shaomei Wu, Atish Das Sarma, Alex Fabrikant, Silvio Lattanzi, and Andrew Tomkins. 2013. Arrival and Departure Dynamics in Social Networks. In Proc. of the 6th ACM International Conference on Web Search and Data Mining (WSDM '13).
- Shaomei Wu, Chenhao Tan, Jon Kleinberg, and Michael Macy. 2011. Does Bad News Go Away Faster?. In Proc. of the 5th International AAAI Conference on Weblogs and Social Media (ICWSM '11).
- Shaomei Wu, Jake M. Hofman, Winter A. Mason, and Duncan J. Watts. 2011. Who Says What to Whom on Twitter. In Proc. of the 20th International World Wide Web Conference (WWW '11). Over 1000 citations by 2019.
- Shaomei Wu, Shenwei Liu, Dan Cosley, and Michael Macy. 2011. Mining Collective Local Knowledge from Google MyMaps. In Proc. of the 20th International World Wide Web Conference (WWW '11).

PUBLIC SPEAKING

- Panelist. Feb 16, 2024. Blocked by the System: How Current Voice AI Silences People Who Stutter. American Association for Advancement in Science (AAAS) Annual Meeting
- Online exhibition: "Multiverse: Disability, Technology, and Co-created Futures". Dec 2, 2023. Stuttering community can create their own technological future. Tsinghua University Science Museum & MIT Museum
- Keynote speaker. Oct 21, 2023. International Stuttering Awareness Day Virtual Conference. 口吃说(StammerTalk)
- Workshop moderator. Jul 6, 2023. Claim Your Virtual Presence. National Stuttering Association Annual Conference
- Invited speaker. May 6, 2023. 人工智能数据标注行业扫描 (AI Data Annotation Industry). 奇途无障碍- 数字经济与残障女性就业分享第05期 (Digital Economy and Employment Opportunities for Women with Disabilities Forum Vol. 05)
- Conference presentation. Apr 26, 2023. "The World is Designed for Fluent People":Benefits and Challenges of Videoconferencing Technologies for People Who Stutter. CHI '23
- Panelist. Apr 14, 2023. Sociotechnical Challenges in Voice-Activated AI. Voice-Activated AI for Stuttered Speech Convergence Symposium
- Computation Media Department Seminar. Mar 20, 2023. Designing Empowering Technologies for and with Marginalized Communities. University of California, Santa Cruz
- Guest lecture. Mar 8, 2023. AI and the Systematic Marginalization of People with Disabilities. University of Ottawa CSI5195/ELG5295/IAI5130 Ethics for Artificial Intelligence (winter 2023)
- Organizer Seminar Series. Jan 24, 2023. Break the Invisible Wall: Challenges and Opportunities for People Who Stutter to Participate in In-person and Virtual Conferences. Virtual Chair

- Podcast (in Chinese). Jan 26, 2023. AI x 无障碍设计(下)— 如何防止科技变成边缘化弱势群体的武器? (AI and Accessibility Part II: How to Deweaponize Technologies Against Marginalized Communities. 扩博智聊(Clobotics)
- Podcast (in Chinese). Jan 19, 2023. AI x 无障碍设计(上)— 她就是一位曾经在脸书用AI默默关怀视障群体的"杨紫琼" (AI and Accessibility Part I: She Built Meta's AI Accessibility Features for People with Visual Impairments). 扩博智聊(Clobotics)
- Panelist. Jan 10, 2023. Natural Language Processing for Media Accessibility. W3C Artificial Intelligence and Accessibility Research Symposium
- Invited talk. Dec 2, 2022. Finding Power From Shared Vulnerability. San Jose State University
- Invited talk. Nov 3, 2022. AI and the Empowerment of People with Disabilities. SheTek Women's Tech Conference 2022
- Invited talk. Oct 21, 2022. Acceptance and Empowerment as a Person Who Stutters. International Stuttering Awareness Day (China)
- Podcast (in Chinese). Oct 11, 2022. 从硅谷科学家到非盈利机构创始人-吴少玫 (From Silicon Valley Scientist to Nonprofit Founder Shaomei Wu). 口吃说 (Stammer Talk)
- Podcast (in Chinese). Jul 13, 2022. 在理科世界里摸爬滚打的女孩们 (Women in STEM). 故事FM
- Invited Talk. Apr 27, 2022. AI and Systematic Marginalization of Disabled People. Columbia University Data for Social Good Club

POPULAR BLOG POSTS & OTHER PUBLICATIONS

- Shaomei Wu. 2018. Using AI to help people with visual impairments share images on Facebook. Facebook Research Blog.
- Shaomei Wu, Lindsay Reynolds. 2018. Designing a face recognition application for people with visual impairments. Facebook Research Bloq
- Shaomei Wu. 2016. How blind people interact with visual content on social networking sites. Facebook Research Blog
- Shaomei Wu, Darío García García, Manohar Paluri. 2016. Under the hood: Building accessibility tools for the visually impaired on Facebook. Facebook Engineering Blog
- Shaomei Wu, Hermes Pique, Jeffrey Wieland. 2016. Using Artificial Intelligence to Help Blind People 'See' Facebook. Facebook Newsroom

Selected Press Coverage

- Work on automatic alt-text featured in "Facebook Just Launched AI-Powered Technology That Reads Photos to the Blind", Fortune, April 5, 2016.
- Research on Twitter featured in "The New York Times and Twitter", The New York Times, March 29, 2011.
- Research on Twitter featured in "The Twittersphere is Dominated By Less than One Percent of Twitter Users", *Time*, March 29, 2011.

SERVICES

- Industry Advisory Board: UC Santa Cruz, Computational Media Department, since August 2023
- Program Co-Chair: WebForAll (W4A) 2023
- Accessibility Challenge Co-Chair: W4A 2022
- Doctorate Consortium Co-Chair: W4A 2021
- Associate Chair: the ACM CHI Conference on Human Factors in Computing Systems (CHI) 2018, 2020, 2021, 2022
- Senior Program Committee: the International AAAI Conference on Web and Social Media (ICWSM) 2016 2024
- Dataset Co-Chair: ICWSM 2022
 Tutorial Co-Chair: ICWSM 2021
- Workshop Co-Chair: ICWSM 2019
- Program Committee: International Conference on Computational Social Science (IC2S2) 2023
- Program Committee: The Web Conference (TWC, formally WWW) 2019, 2021, 2022
- Program Committee: the International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS) 2015 -2023
- Program Committee: ICWSM 2013, 2014
- Workshop Organizer: Addressing the Accessibility of Social Media Workshop @ CSCW 2019
- Panel of Judges: W4A Accessibility Challenge 2020, 2021
- Reviewer: the ACM Transactions on Accessible Computing, the ACM International Conference on Web Search and Data Mining (WSDM) (2012), CHI (2016, 2017, 2019, 2023, 2024), the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) (2018, 2019, 2020, 2021), the ACM Symposium on User Interface Software and Technology (UIST) (2019), New Media & Society

TEACHING EXPERIENCE

Cornell University

- Teaching Assistant
 - o INFO 4302/6302: Web Information Systems. Spring 2011
 - PSYCH/COGST/INFO 214/614: Computational Cognitive Psychology. Fall 2007

University of California, Santa Barbara

- Teaching Assistant
 - o CS10: Object Oriented Programming in Java. Winter 2007
 - o CS276: Graduate Networking. Fall 2006
 - o CS290F: Large-scale Networked Systems. Spring 2006
 - o CS5JA: Introduction to Computer Programming. Winter 2006
 - o CS170: Operating Systems. Fall 2005

MENTORING EXPERIENCES

- Siddharth Bajaj (MPS student, Cornell Information Science)
- Jiang Jian (MPS student, Cornell Information Science)
- Violeta Voykinska (MPS student at Cornell Information Science, now Senior Design Researcher at Designit)
- Isabel Kloumman (PhD Intern, now Research Manager at Facebook)
- Yuhang Zhao (PhD Intern, now Assistant Professor at University of Wisconsin, Madison)
- Kinyetta Nance (PhD Intern, co-mentor, now Researcher at Twitter)
- Kelly Mack (Undergrad Intern, co-mentor, now PhD student at University of Washington)
- Rose Hong (Undergrad Intern, now senior at Harvard University)
- Michela Paganini (Postdoc Researcher at Facebook AI Research, now Research Scientist at DeepMind)
- Roman R\u00e4dle (Visiting Researcher at Facebook / Assistant Professor at Aarhus University, now Software Engineer at Facebook)
- Xinyue Zhang (Software Engineer at Facebook)
- Xinyu Li (Software Engineer at Facebook)
- Ming Sun (Applied Research Scientist at Facebook)
- Greg Price (Master student, University of Ottawa)
- Monica Tjen (Master student, University of Ottawa)
- Colson Pettipas (Master student, University of Ottawa)
- Jennina Mae Pascual (Master student, University of Ottawa)
- Harshank Pathak (Master student, University of Ottawa)
- Aishwarya Pai (Master student, Santa Clara University

REFERENCES

A full list of references is available upon request.