

Anna L. Beers

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Education

University of Washington, PhD, Human Centered Design & Engineering (2024).
Dissertation Title: “*The Measurement and Representation of Influencer Communities in United States Political Discourse on Social Media*”
Committee Chairs: Kate Starbird, Emma S. Spiro, Benjamin Mako Hill
Brown University, B.A. in Environmental Studies (2015). Magna Cum Laude.

Peer-Reviewed Publications

Beers, A., Nguyễn, S., Starbird, K., West, J. D., & Spiro, E. S.. Selective and deceptive citation in the construction of dueling consensuses. (2023). *Science Advances*.

Beers, A., Schafer, J. S., Kennedy, I., Wack, M., Spiro, E.S., & Starbird, K. Followback Clusters, Satellite Audiences, and Bridge Nodes: Coengagement Networks for the 2020 US Election. (2023). *International Conference on Weblogs and Social Media (ICWSM ‘23)*.

Beers A., Wilson T., & Starbird K. The Demographics of a Foreign Influence Operation Targeted at the United States. (2022). *Journal of Online Trust & Safety*.

Kennedy, I., Wack, M., Schafer J. S., **Beers A.**, Spiro E. S., & Starbird K. **Repeat Spreaders and Election Delegitimization: A Comprehensive Dataset of Misinformation Tweets from the 2020 U.S. Election.** (2022). *Journal of Quantitative Description*.

Bak-Coleman, J., Kennedy, I., Wack, M., **Beers A.**, Schafer J. S., Spiro, E. S., Starbird, K., & West, J. (2022). **Combining interventions to reduce the spread of viral misinformation.** *Nature Human Behavior*.

Lightly Reviewed Conference + Workshop Papers

Beers, A. & Spiro, E.S. Two Years of Influence: Tracking Changes in Twitter Influencer Diets in United States Politics. (2023). *9th International Conference on Computational Social Science (IC2S2 ‘23)*.

Beers, A. & Spiro, E.S. “Negative” Influencers in Social Networks: From Targeted Harassment to Controversy Cultivation (2023). *Sunbelt International Network for Social Network Analysis '23 (Sunbelt '23)*.

Beers A., Kennedy, I., Wack, M., Schafer J. S., Spiro E. S., & Starbird K. Repeat Offenders: Frequent and Influential Misinformation Sources During the 2020 United States Election. (2022). *International Studies Association (ISA)*.

Beers, A., Nguyễn, S., Spiro, E. S. & Starbird, K. Rejecting Science With Science: Boundary-Work in Anti-Mask Twitter Reply Threads During COVID-19. (2021). *AoIR Selected Papers of Internet Research*.

Beers, A. Misinterpretation and Ambiguity in Public-Facing Network Visualizations: A Case Study. (2021). *Networks 2021: Networked Justice Satellite*.

Beers, A., Nguyễn, S., Sioson, M., Mayanja, M., Ionescu, M., Spiro, E. S. & Starbird, K., The Firestarting Troll, and Designing for Abusability. (2021). *15th International Conference on Web and Social Media (ICWSM). Workshop on Information Credibility and Alternate Realities*.

Beers, A., Haughey, M. M., Arif, A., & Starbird, K. Examining the digital toolsets of journalists reporting on disinformation. (2020). *Computation + Journalism*.

Speaking and Other Writing

Beers, A, Ito, V., Orozco, A., & Tripodi, F. The Ethical, Social, and Democratic Implications of Data Voids in an AI-Search Environment. (2024). *Sociotechnical Consequences of AI: An Interdisciplinary Exploration of Ethical, Organizational, Social, and Computational Dimensions* at University of North Carolina at Chapel Hill.

Beers, A. Influencer Publics and the Divergent Construction of Social Media Realities. (2023). *Doctoral Consortium at Computer Supported Cooperative Work and Social Computing, CSCW '23*. New York, NY, USA: Association for Computing Machinery.

Beers, A. A year of influence: tracing narrative transmission between US political influencer communities. (2022). Talk at *Princeton Measuring Belief Systems Workshop*.

(Canceled). **Teaching Media Manipulation and Misinformation Workshop.** (2022). *American Sociological Association Annual Meeting*. Conference Attended.

Beers, A. et al. (first author, not credited due to security concerns). Beyond Twitter: The Election 2022 Social Media Ecosystem. (2022). *Election Integrity Partnership Rapid Response*.

Beers, A., Graham, M., Kreiss, D., Li, J., Lukito, J., Nagler, J., & Starbird, K. Theory & Methods. (2022). Participation in a panel at the “*The Capitol Coup: One Year Later.*” George Washington University.

Center for an Informed Public, Digital Forensic Research Lab, Graphika, & Stanford Internet Observatory. **The Long Fuse: Misinformation and the 2020 Election.** (2021). Report.

Beers, A. State of Our Vote. (2021). Talk at *City Club of Portland*.

Beers, A. et al. (first author, not credited due to security concerns). **Repeat Offenders: Voting Misinformation on Twitter in the 2020 United States Election.** (2020). *Election Integrity Partnership Rapid Response*.

Haughey-McClure, M., **Beers, A.** and Starbird, K. **Media Largely Frames Trump’s Victory Declaration as False in Headlines.** (2020). *Election Integrity Partnership Rapid Response*.

Kennedy, I., **Beers, A.**, et al. **Emerging Narratives Around ‘Mail Dumping’ and Election Integrity.** (2020). *Election Integrity Partnership Rapid Response*.

Teaching

Transgender Pseudoscience Research Group (Winter 2024) – For credit research group alternating between a group archiving project of science used in the anti-trans legal movement, and a journal club reviewing literature on anti-trans movements.

Guest Lectures, Intellectual Foundations of Informatics (2023-24) – Gave 90-minute guest lectures on misinformation to an undergraduate course with ~200 students over multiple quarters.

Negative Affect Research Group (Spring/Fall 2023) – For credit. Developed a weekly reading curriculum with speakers on papers in political communication and HCI, and led students in a collaborative qualitative coding project spanning multiple quarters.

Designing Trustworthy Information Systems (Fall 2021) – Teaching assistant with Dr. Kate Starbird. Facilitated discussions for a 20+ person seminar, lectured, and graded weekly responses essays for a class focuses on mis- and disinformation on the internet.

Tracking The Rise and Fall of Mask-Related COVID-19 Theories (Winter 2021) – For credit. With another graduate student, developed a weekly reading list and speaker series relating to science communication and misinformation related to COVID-19.

Tools for Exploratory Analysis of Social Media Communities (Winter 2020) – For credit. Led a software design workshop where students created their own tools for exploratory visualization of social media data.

Introduction to Deep Learning and Medical Imaging (2018-2019) – Two series of classes teaching deep learning with Python as applied to medical imaging. The first iteration was aimed towards .NET programmers, and the second towards more experienced Python programmers among the clinicians, professors, and researchers of Massachusetts General Hospital and Harvard Medical School. [Link to class lectures.](#)

Guest Lecture, MIT Winter Session (2018) – Gave a pair of lectures on computer vision and feature extraction at MIT.

Open-Source Software & Technical Skills

Can readily teach courses in R, SQL, MATLAB, and Python, including machine learning packages such as TensorFlow and PyTorch and data-scraping packages such as BeautifulSoup. Experienced with JavaScript (particularly D3.js) and C++. Capable Linux sysadmin with prior experience in high-performance computing, including setting up local and cloud-based GPU servers.

[Coengagement Networks](#) – A Dockerized command-line tool for producing network visualizations, built on top of Gephi. In use in projects at the University of Washington.

[The Russian Ad Explorer & Datasets](#) – An online visualization and preprocessed datasets of malicious political Facebook and Instagram ads purchased by the Russian Internet Research Agency (IRA).

[DeepNeuro](#) – Open-source deep learning Python package for medical imaging. DeepNeuro is an open-source, extensible framework for all of QTIM Lab's deep learning projects.

[DeepZine](#) – A digital art project using generative adversarial networks (GANs) to create synthetic book pages.

[Segmentation Wizard \(3D Slicer\)](#) – I contribute a module to 3D-Slicer, an open-source platform for medical imaging software. Includes tools for drawing tumor annotations via intensity thresholding via differences between treatment time points. Used for clinical studies at MGH before being supplanted by DeepNeuro.

Awards

Honorable Mention (2020), National Science Foundation Graduate Research Fellowship Program

Best Research Project (2015), Institute at Brown for Environment and Society.

Library Innovation Prize (2015), Brown University

Service

Reviewer, *Computer Supported Collaborative Work (CSCW)*. 1 Special Recognition for Outstanding Review.

Reviewer, *ACM Conference on Human Factors in Computing Systems (CHI)*

Reviewer, *International Conference on Weblogs and Social Media (ICWSM)*

Reviewer, *Journal of Quantitative Description*

Reviewer, *Nature Scientific Reports*

Reviewer, *Medical Physics*

Reviewer, *Collective Intelligence*

Press

[A report sheds light on how Jan. 6 happened—And how to avoid a repeat.](#) **Washington Post.**

[Trump Isn't the Only One.](#) **The New York Times.**

[Fixing What the Internet Broke.](#) **The New York Times.**

[Tracking QAnon: How Trump turned conspiracy-theory research upside down.](#) **Nature News**

[AI Beats Experts At Diagnosing Childhood Disease.](#) **Oregon Public Broadcasting**

Professional Employment

Center for Information, Technology, and Public Life (CITAP) - Chapel Hill, NC, Postdoctoral Research Fellow (2024-)

Center for an Informed Public (CIP) - Seattle, WA, Graduate Research Assistant (2020-2024)

Shorenstein Center, Harvard Kennedy School - Boston, MA, Researcher (2023)

Quantitative Tumor Imaging Lab, Center for Machine Learning @ the MGH/HST Martinos Center for Biomedical Imaging - Boston, MA, Research Assistant (2016-2017), Programmer (2017-19)

MedGIFT, University of Applied Science in Western Switzerland (HES-SO) - Sierre, Switzerland (Summer 2018)

American Civil Liberties Union - Boston, MA, Researcher (2014), New York, NY, Online Production Assistant (2015-16)

Cedar Creek Ecosystem Science Reserve - Bethel, MN, Research Intern (2015)

Brown University Center for Environmental Studies - Providence, RI,
Research Assistant (2014-15)

Planned Parenthood (National Office) - Washington, DC, Intern (2013)

Selected Publications from Neuroimaging Career

From 2016-2019, I worked in a research lab focused on applying deep learning and computer vision techniques to problems in radiology, particularly as applied to brain disorders. Though I later shifted my focus to the study of digital media, I list some example publications from this time period here.

Beers, A., Brown, J., Chang, K., Hoebel, K., Patel, J., Ly, K. I., Tolaney, S. M., Brastianos, P., Rosen, B., Gerstner, E. R., & Kalpathy-Cramer, J. (2020). DeepNeuro: An open-source deep learning toolbox for neuroimaging. *Neuroinformatics*.

Chang, K., **Beers, A.**, Brink, L., Patel, J. B., Singh, P., Arun, N. T., [...] & Kalpathy-Cramer, J. (2020). **Multi-institutional assessment and crowdsourcing evaluation of deep learning for automated classification of breast density.** *Journal of the American College of Radiology*

Chang, K., **Beers, A. (first co-author)**, L., Bai, H. X., Brown, J. M., Ly, K. I., [...], Kalpathy-Cramer, J. (2019). **Automatic assessment of glioma burden: A deep learning algorithm for fully automated volumetric and bidimensional measurement.** *Neuro-Oncology*.

Beers, A., Chang, K., Brown, J., Gerstner, E., Rosen, B., & Kalpathy-Cramer, J. (2018). Sequential neural networks for biologically informed glioma segmentation. *SPIE Medical Imaging*.

Beers, A., Brown, J., Chang, K., Campbell, J. P., Ostmo, S., Chiang, M. F., & Kalpathy-Cramer, J. (2018). High-resolution medical image synthesis using progressively grown generative adversarial networks. *Arxiv*.