

# Emily Tseng

et397 [at] cornell.edu  
<https://emtseng.me>

## Research Interests

I study (a) how data-driven technology facilitates novel harms to safety, privacy, health and well-being; and (b) how technology designers and builders can enable consentful and participatory interventions with impacted communities. My work builds from *human-computer interaction* and *computational social science* to design, build, and deploy sociotechnical systems in real-world contexts, towards improving conditions for people marginalized within society. In my PhD, I have worked on privacy for survivors of intimate partner violence, worker-centered design for home care aides, and workplace surveillance and mental health.

## Education

- 2019-now **Ph.D. at Cornell University**, *Department of Information Science*  
Committee: Nicola Dell (chair), Deborah Estrin, Thomas Ristenpart, Karen Levy.
- 2017-19 **M.S. at Cornell Tech**, *Information Science - Health Tech* GPA: 3.9/4.0  
Relevant coursework: Applied Machine Learning, Deep Learning, Natural Language Processing, Human-Computer Interaction, Interactive Device Design.  
Advised by Nicola Dell and Deborah Estrin.
- 2010-14 **B.A. at Princeton University**, *Ecology & Evolutionary Biology (EEB)* GPA: 3.5/4.0  
Concentration in Global Health and Health Policy. Studied epidemiology, data journalism and social policy, with a focus on computational modeling of infectious disease epidemics.  
Advised by Bryan Grenfell and Tiffany Bogich.

## Awards & Honors

- 2023 Inaugural Outstanding Teaching Assistant Award, Cornell Tech (\$150)
- 2022 Rising Stars in EECS
- 2022 Best Paper Award, ACM CHI for [P4] (*top 1%*)
- 2021 Microsoft Research PhD Fellowship  
*Full support for 2 years of study, including tuition, health insurance and a \$42,000 stipend each year.*
- 2021 Digital Life Initiative Doctoral Fellowship (\$5,000 in research funding)
- 2020 Best Paper Award, ACM CSCW for [P7] (*top 1%*)
- 2020 Distinguished Paper Award, USENIX Security Symposium for [P8] (*top 1%*)
- 2020 Internet Defense Prize (third place), USENIX Security Symposium for [P8]  
*Included an unrestricted \$40,000 research award to PIs Dell, Ristenpart, Greenstadt.*
- 2019 Best Paper Honorable Mention, ACM CSCW for [P12] (*top 5%*)
- 2019 Advocate of New York City Award, Mayor's Office to End Domestic & Gender-Based Violence

- 2019 Cornell University Information Science Department Fellowship  
*First-year fellowship awarded for exceptional preparation & promise (top 1.5% of applicants).  
Full support for 1 year of study, including tuition, health insurance and a \$33,750 stipend.*
- 2017 Cornell Tech merit scholarship for Master's-level study
- 2014 Top Senior Thesis in Mathematical Modeling, Princeton EEB
- 2014 Society of Sigma Xi (scientific research honor society), Princeton University

## Conference and Journal Publications (Refereed)

\* indicates equal contribution, listed in alphabetical order by last name.

- P1. Malgaroli, M, **Tseng E**, Hull, TD, Jennings E, Choudhury TK, Simon NM. *Association of Healthcare Work with Anxiety and Depression During the COVID-19 Pandemic: A Structural Topic Modeling Study*. JMIR AI. 07/09/2023:47223 (forthcoming/in press). [online](#).
- P2. Dinh A, **Tseng E**, Yin AL, Estrin D, Greenwald P, Fortenko A. 2023. *Perceptions of Augmented Reality in Remote Medical Care: Interview Study of Emergency Telemedicine Providers*. JMIR Formative Research 2023;7:e45211. [pdf](#). [online](#).
- P3. Adler, D.\*, **Tseng, E.\***, Moon, K.C., Young, J.Q., Kane, J.M., Moss, E., Mohr, D.C., and Choudhury, T. 2022. *Burnout and the Quantified Workplace: Tensions around Personal Sensing Interventions for Stress in Resident Physicians*. Proc. ACM Hum.-Comput. Interact., CSCW (Nov. 2022). [pdf](#). [online](#).
- P4. Ming, J., Kuo, E.F., Go, K., **Tseng, E.**, Kallas, J., Vashistha, A., Sterling, M., and Dell, N. "I Go Beyond and Beyond": Examining the Invisible Work of Home Health Aides. Proc. ACM Hum.-Comput. Interact. 7, CSCW1, Article 59 (April 2023). [pdf](#). [online](#).
- P5. **Tseng, E.**, Sabet, M., Bellini, R., Sodhi, H., Ristenpart, T., and Dell, N. 2022. *Care Infrastructures for Digital Privacy and Security in Intimate Partner Violence*. In Proc. ACM Conf. on Human Factors in Computing Systems (CHI '22). [pdf](#). [online](#). [video](#). **Best Paper Award**.
- P6. Chen, J.X.\*, McDonald, A.\*, Zou, Y.\*, **Tseng, E.**, Roundy, K.A., Tamersoy, A., Schaub, F., Ristenpart, T., and Dell, N. 2022. *Trauma-Informed Computing: Towards Safer Technology Experiences for All*. In Proc. ACM Conf. on Human Factors in Computing Systems (CHI '22). [pdf](#). [online](#).
- P7. **Tseng, E.**, Freed, D., Engel, K., Ristenpart, T., and Dell, N. 2021. *A Digital Safety Dilemma: Analysis of Computer-Mediated Computer Security Interventions for Intimate Partner Violence During COVID-19*. In Proc. ACM Conf. on Human Factors in Computing Systems (CHI '21). [pdf](#). [online](#). [video](#).
- P8. Bellini, R., **Tseng, E.**, McDonald, N., Greenstadt, R., McCoy, D., Ristenpart, T. and Dell, N. "So-called privacy breeds evil": Narrative Justifications for Intimate Partner Surveillance in Online Forums. Proc. ACM Hum.-Comput. Interact., Issue CSCW. 2020. [pdf](#). **Best Paper Award**.
- P9. **Tseng, E.**, Bellini, R., McDonald, N., Danos, M., Greenstadt, R., McCoy, D., Dell, N. and Ristenpart, T. 2020. *The Tools and Tactics Used in Intimate Partner Surveillance: An Analysis of Online Infidelity*

Forums. 29th USENIX Security Symposium. [pdf](#). [online](#). *Distinguished Paper Award & Internet Defense Prize, third place.*

- P10. Sterling, MR, **Tseng, E**, Poon, A, Cho, J, Avgar, AC, Kern, LM, Ankuda, CK, Dell, N. 2020. *Experiences of Home Health Care Workers in New York City During the Coronavirus Disease 2019 Pandemic: A Qualitative Analysis*. JAMA Internal Medicine. [pdf](#). [online](#).
- P11. **Tseng, E.**, Okeke, F., Sterling, M., and Dell, N. 2020. "We can learn. Why not?": Designing Technologies to Engender Equity for Home Health Aides. In Proc. ACM Conf. on Human Factors in Computing Systems (CHI '20). [pdf](#). [online](#).
- P12. Sterling, M. R., Dell, N., Piantella, B., Cho, J., Kaur, H., **Tseng, E.**, Okeke, F., Brown, M., Leung, P. B. K., Silva, A. F. , Shaw, A. L., Kern, L. M. 2020. *Understanding the Workflow of Home Healthcare for Patients with Heart Failure*. Journal of General Internal Medicine. [pdf](#). [online](#).
- P13. Freed, D.\*, Havron, S.\*, **Tseng, E.**, Gallardo A., Chatterjee, R., Ristenpart, T., and Dell, N.. 2019. "Is my phone hacked?" Analyzing Clinical Computer Security Interventions with Survivors of Intimate Partner Violence. Proc. ACM Hum.-Comput. Interact.: Vol. 3, Issue CSCW, Article 202. [pdf](#). [online](#). *Best Paper Honorable Mention.*
- P14. Okeke, F., **Tseng, E.**, Piantella, B., Brown, M., Kaur, H., Sterling, M., and Dell, N. 2019. *Technology, Home Health Care, and Heart Failure: A Qualitative Analysis with Multiple Stakeholders*. ACM SIGCAS Conference on Computing & Sustainable Societies (COMPASS 2019). [pdf](#). [online](#).

## Teaching and Advising

**Cornell University**, Ithaca, NY (hybrid due to COVID-19)

Teaching Assistant, Summer School on Designing Technology for Social Impact	Summer 2021
Teaching Assistant, CS 1340 / INFO 1260: Choices and Consequences in Computing, Profs. Jon Kleinberg and Karen Levy	Spring 2021

**Cornell Tech**, New York, NY

Teaching Assistant, INFO 5375: Machine Learning in Health, Prof. Fei Wang	Spring 2023
Guest Lecturer, CS / INFO 5600: AI & Healthcare, Prof. Rajalakshmi Nandakumar	Fall 2021
Teaching Assistant, CS 5682 / INFO 6410: HCI & Design, Prof. Nicola Dell	Fall 2020
Research Internship Supervisor, Technion + Cornell Tech Intern Program	Fall 2019
Grader, CS 5740: Natural Language Processing, Prof. Yoav Artzi	Spring 2019
Lead Teaching Assistant, Product Studio, Prof. Deborah Estrin	Fall 2018

**Weill Cornell Medical College**, New York, NY

Guest Lecturer, HCPL 8101: Digital Health, Prof. Deborah Estrin	Summer 2020
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**Fullstack Academy**, New York, NY

Software Engineering Teaching Fellow	Summer 2017
- Taught and mentored 80+ students at a selective software engineering bootcamp.	
- Delivered 10-minute talk on inclusive design and web accessibility [ <a href="#">video</a> ]	

## Presentations and Workshops

### Invited Talks

- 2023** Google, Workshop on Protecting At-Risk Users, keynote
- 2022** University of Chicago, People and Technology Seminar  
AnitaB.org Grace Hopper Celebration, Research Showcase  
Google, Trust & Safety Research Speaker Series  
Microsoft Research, Project Green Workshop: Community-Driven Innovation & Health Equity  
Stanford University, HCI Seminar
- 2021** Microsoft Research, PhD Fellowship Showcase  
Cornell Tech, Digital Life Initiative Seminar  
MIT Visualization Group  
CUNY School of Law, Students Against Cyber Sexual Abuse, [panelist](#)
- 2020** United Hospital Fund/Greater New York Hospital Association Annual Symposium  
MIT CSAIL Security Seminar  
Facebook Research  
Cornell Tech, Precision Behavioral Health Initiative

### Invited Conference and Workshop Presentations

- 2023**, Privacy Law Scholars Conference, selected for presentation
- 2022**, Joel R. Reidenberg Northeast Privacy Scholars Workshop, selected for lightning session
- 2022**, Care Infrastructures for Digital Security and Privacy in IPV, ACM CHI [\[video\]](#)
- 2021**, A Digital Safety Dilemma, ACM CHI [\[video\]](#)
- 2020**, The Tools and Tactics of Intimate Partner Violence, USENIX Security Symposium [\[video\]](#)

### Invited Workshop Participation

- 2023**, Consortium for the Science of Sociotechnical Systems (CSST) Summer Research Institute.
- 2022**, Rising Stars in EECS.
- 2022**, Data & Society, Care + Tech Convening.
- 2022**, Human-Computer Interaction Consortium.
- 2022**, Data & Society, The Social Life of Algorithmic Harms. Invited Discussant.
- 2021**, CRA-WP Grad Cohort for Women (*postponed due to COVID-19, attended in 2021*)

## Academic and University Service

- 2022-23**, Cornell Information Science PhD Student Mentoring Program, Organizer
- 2021-22**, Diversity, Equity and Inclusion Strategic Committee at Cornell Tech, PhD Representative
- 2021-22**, Faculty Hiring Committee at Cornell Tech, PhD Coordinator
- 2021**, ACM CHI, Student Volunteer (fully remote conference)
- 2020**, PhDs at Cornell Tech, Co-President

### Workshop and Panel Organization

- 2023**, ACM CSCW, Community-Collaborative Visions for Computing Research, Student Organizer.
- 2023**, ACM FAccT, CRAFT on Community-Collaborative Visions for Computing Research (24/68 selected). Student Organizer and Panel Moderator.
- 2021**, ACM CSCW, Subtle CSCW Traits: Tensions Around Identity Formation and Online Activism in the Asian Diaspora. Student Organizer. [\[proposal\]](#)

### Program Committee Membership

2023, ACM Designing Interactive Systems (DIS), Associate Chair, Critical Computing Subcommittee.

### Reviewing

ACM CHI, Special Recognition for Outstanding Reviews, 2022, 2023

ACM CSCW, Special Recognition for Outstanding Reviews, 2021, 2022

ACM Transactions on Human-Computer Interaction (TOCHI)

ACM Fairness, Accountability, and Transparency (FAccT)

USENIX Symposium on Usable Privacy and Security (SOUPS)

Usable Security and Privacy (USEC) Symposium, co-located with the Network and Distributed System Security (NDSS) Symposium

HEALTHI Workshop on Healthy Interfaces, co-located with ACM Intelligent User Interfaces (IUI)

AAAI Conference on Web and Social Media (ICWSM)

ICML Workshop on Generative AI and the Law (GenLaw@ICML)

IEEE S&P Workshop on Security for Harassment Online, Protections, and Empowerment (SecHOPE)

### Past Research

Extracting family history from unstructured clinical notes

- Developed a model (LSTM-CRF) extracting family history from unstructured text in patient forms.
- Awarded student travel grant to present at the OHNLP/BioCreativ workshop at ACM-BCB 2018.

Evaluating the usability of a personal data filtering interface

PI: Deborah Estrin, Ph.D. (Cornell Tech)

- Usability study of an interface for filtering sensitive data from a Google Takeout.

Modeling the dynamics of enterovirus-71 in Taiwan: An application of the TSIR model

PI: Bryan Grenfell, Ph.D. (Princeton University)

- Developed a time-series model of the impact of vaccination on EV-71 infection rates in Taiwan.
- Thesis awarded departmental prize for excellence in mathematical modeling. [[poster](#). [pdf](#).]

### Relevant Industry Experience

**Microsoft Research**, remote due to COVID-19

Spring and Summer 2022

*Research Intern*

- Mentored by Senior Principal Researcher Mary L. Gray within the Social Media Collective.

**Pfizer, Inc.**, New York, NY

*Summer Associate, Digital Health Product Development*

Summer 2018

- Led a team of UX researchers and technologists to synthesize user stories, product requirements and storyboards for a care navigation product addressing health disparities within the Welsh NHS.
- Interviewed domain experts on the feasibility of a consumer voice product for patient support.

**Biomeme, Inc.**, Philadelphia, PA

*Product & Business Development Associate*

2014 - 2016

- Developed an at-home sexual health diagnostic for a national reproductive healthcare provider.
- Piloted a point-of-care influenza diagnostic with a clinic network in Nairobi, Kenya.
- Conducted UX studies to guide development of a consumer-facing tool for personal DNA analysis.

**The Daily Princetonian**, Princeton, NJ

*Managing Editor*

2013 - 2014

- Led 100+ staff of a collegiate news organization publishing in print 5x/week and online 24/7.
- Built web and data journalism departments, and expanded the paper's multimedia capabilities.

**Oxford University Clinical Research Unit (OUCRU)**, Ho Chi Minh City, Vietnam

*Research Intern*

Summer 2013

- Conducted literature reviews, performed data analyses (R) and mapped patient enrollment (GIS, Illustrator) for ongoing clinical studies at a tertiary tuberculosis hospital.
- Funded by the Gates Foundation Global Health Grand Challenge.

**Doctors Without Borders / Medecins Sans Frontieres (MSF)**, New York, NY

*Editorial & Multimedia Intern*

Summer 2011, 2012

- Produced audio, video & web features on MSF field staff at humanitarian aid sites worldwide.