Danaë Metaxa

Levine Hall
3330 Walnut St.
Philadelphia, PA 19104

metaxa.net
metaxa@upenn.edu
Pronouns: they/them

Ὄνομα, αντωνυμίες:
Δαναός, ο/του

RESEARCH AREAS

AI audits; Algorithmic justice; Human-centered AI; Human-computer interaction

APPOINTMENTS

2022-curr. **University of Pennsylvania**, Raj & Neera Singh Term Assistant Professor
Department of Computer & Information Science (primary)
Annenberg School for Communication (secondary)

2021-2022 **Stanford University**, Postdoctoral Scholar
Center for Philanthropy and Civil Society, Department of Political Science
PI: Nathaniel Persily (Stanford Law School)

EDUCATION

2015-2021 **Stanford University**
Ph.D. Computer Science
Advisors: James Landay (Computer Science), Jeff Hancock (Communication)

2015-2018 **Stanford University**
M.Sc. Computer Science

2011-2015 **Brown University**
B.A. Computer Science *with honors*
B.A. Science, Technology, and Society

GRANTS

2025 **Ford Foundation** — Co-PI (with Sorelle Friedler)
Core support for leading researchers to provide technical support for AI civil rights audits undertaken by federal enforcement agencies and associated research ($200,000)

2024 **National Science Foundation** | ITEST (Innovative Technology Experiences for Students and Teachers) — Co-PI (with Yasmin Kafai)
Auditing Machine Learning Applications for Algorithmic Justice with Computer Science High School Students and Teachers ($499,943)

2023 **National Science Foundation** | RAPID — Co-PI (with Yasmin Kafai)
Engaging High School Youth in Algorithmic Justice Through Audits of Designed and Everyday Machine Learning Applications ($200,000)

2021 **Stanford Human-Centered AI (HAI)** | Seed Grant — Project lead (with Jeff Hancock)
In(advert)ent: Investigating and countering disparities in race and gender representation in online advertising ($64,000)

2021 **Brown Institute for Media Innovation** | Magic Grant — Project lead (with Jeff Hancock)
In(advert)ent: Investigating and countering disparities in race and gender representation in online advertising ($50,000)

2020 **Stanford Human-Centered AI (HAI)** | Seed Grant — Graduate student (PI Jeff Hancock)
Explainable AI for All: A System for Studying Interpretable AI in Online Media Consumption ($75,000)

PUBLICATIONS
Manuscripts Under Review

[c.24] Wang, S., Wurth, R., Armstrong, L., **Metaxa, D.** "Auditing Race and Gender Discrimination in Food and Well-being Digital Advertisements" *(Under review)*

[c.23] Encarnación, R., Morales-Navarro, L., Kambhamettu, H., Fedorova, E., **Metaxa, D.** "Emergent AI Auditing: Users' Decentralized, Collective Knowledge Construction & the TikTok AI Manga Filter" *(Under review)*

[c.22] Morales-Navarro, L., Kafai, Y., Vogelstein, L., Yu, E., **Metaxa, D.** "Learning about algorithm auditing in five steps: scaffolding how high school youth can systematically and critically evaluate machine learning applications" *Under review*

[c.21] Armstrong, L., **Metaxa, D.** "Navigating Automated Hiring: Fairness Perceptions, Strategy Use, and Outcomes Among Young Job Seekers." *Under review.*

[c.20] Anigboro, F., Crawford, C. M., **Metaxa, D.**, Friedler, S.A. "Identity-related Speech Suppression in Generative AI Content Moderation" *(Under review)*

[c.19] Kadoma, K., **Metaxa, D.**, Naaman, M. "Generative AI and Perceptual Harms: Who's Suspected of using LLMs?" *(Under review)*

Refereed Conference Publications

[c.18] Mahomed, Y., Crawford, C. M., Gautam, S., Friedler, S. A., **Metaxa, D.** "Auditing GPT's Content Moderation Guardrails: Can ChatGPT Write Your Favorite TV Show?" FAccT 2024. Available here.

[c.17] Wang, S., Huang, S., Zhou, A., **Metaxa, D.** (2024). "Lower Quantity, Higher Quality: Auditing News Content and User Perceptions on Twitter/X's Algorithmic versus Chronological Timelines." CSCW 2024. Available here.

[c.16] Armstrong, L., Liu, A., MacNeil, S., **Metaxa, D.** (2024). "The Silicone Ceiling: Auditing GPT's Race and Gender Biases in Hiring." EEAMO 2024. *Forthcoming*

[c.15] Morales-Navarro, L., Kafai, Y., Konda, V., **Metaxa, D.** (2024). "Youth as Peer Auditors: Engaging Teenagers with Algorithm Auditing of Machine Learning Applications." IDC 2024. Available here.

[c.14] Kambhamettu, H., **Metaxa, D.**, Johnson, K., Head, A. (2024). "Explainable Notes: Examining How to Unlock Meaning in Medical Notes with Interactivity and Artifical Intelligence." CHI 2024. Available here.

[c.13] Kadoma, K., Le Quéré, M.A., Fu, J., Munsch, C., **Metaxa, D.**, Naaman, M. (2024). "The Role of Inclusion, Control, and Ownership in Workplace AI-Mediated Communication." CHI 2024. Available here.

[c.12] Sampson, P., Encarnación, R., **Metaxa, D.** (2023). "Representation, Self-Determination, and Refusal: Queer People's Experiences with Targeted Advertising." FAccT 2023. Available here.

[c.11] Lam, M.S., Pandit, A., Kalicki, C.H., Gupta, R., Sahoo, P., **Metaxa, D.** (2023). "Sociotechnical Audits: Broadening the Auditing Lens to Investigate Targeted Advertising." CSCW 2023. Available here. Best paper honorable mention.

[c.10] Lam, M. S., Gordon, M. L., **Metaxa, D.**, Hancock, J. T., Landay, J. A., & Bernstein, M. S. (2022). "End-User Audits: A System Empowering Communities to Lead Large-Scale Investigations of Harmful Algorithmic Behavior." CSCW 2022. Available here.

[c.9] **Metaxa, D.**; Gan, M.; Goh, S., Hancock, J.; Landay, J.A. "An Image of Society: Gender and Racial Representation and Impact in Image Search Results for Occupations." CSCW 2021. Available here.

[c.8] Xiao, S.; **Metaxa, D.**; Park, J.S.; Karahalios, K., Salehi, N. "Random, Messy, Funny Raw: Finstas as Intimate Reconfigurations of Social Media." CHI 2020. Available here. Best paper honorable mention.

[c.7] **Metaxa, D.**; Park, J.S.; Landay, J.A.; Hancock, J. "Search Media and Elections: A Longitudinal Investigation of Political Search Results in the 2018 U.S. Elections." CSCW 2019. Available here.

[c.6] **Metaxa, D.**; Maas, P.; Aldrich, D. "How Social Ties Influence Hurricane Evacuation Behavior." CSCW 2018. Available here.

[c.5] Che, X.; **Metaxa, D.**; Hancock, J. "Fake News in the News: An Analysis of Partisan Coverage of the Fake News Phenomenon." CSCW 2018. Available here.

[c.4] **Metaxa, D.**; Wang, K.; Landay, J.A.; Hancock, J. "Gender-Inclusive Design: Stereotypes and Biases in Web Interfaces." CHI 2018. Available here.

[c.3] Daskalova, N.; **Metaxa, D.**; Tran, A.; Nugent, N.; Boergers, J.; McGeary, J.; Huang, J. "SleepCoacher: A Personalized Automated Self-Experimentation System for Sleep Recommendations." UIST 2016. Available here.

[c.2] **Metaxa, D.**; Rusak, G.; Teevan, J.; and Bernstein, M. "The Web is Flat: The Inflation of Uncommon Experiences Online." CHI 2016. Available here. Best short paper award.

[c.1] Papoutsaki, A.; Guo, H.; **Metaxa, D.**; Gramazio, C.; Rasley, J.; Xie, W.; and Huang, J. "Crowdsourcing from Scratch: A Pragmatic Experiment in Data Collection by Novice Requesters." HCOMP 2015. Available here. Best paper runner-up.

Journal Articles

[j.1] Zhou, A., **Metaxa, D.**, Jaidka, K., Kim, Y. M. (2024) User-Centric Behavioral Tracking: Lessons from Three Case Studies with Do-It-Yourself Computational Pipelines, Journal of Advertising Available here.

Books

[b.1] **Metaxa, D.**, et al. (2022) Auditing Algorithms: Understanding Algorithmic Systems from the Outside In, Foundations and Trends in Human-Computer Interaction 14 (4). Available here.

Book Chapters

[bc.1] **Metaxa, D.**, Raji, D. "A Tale of Two Audits: Investigating the Politics of Algorithm Audit Evaluations" in AI // Assembly edited by Bernholz, L. *(In press with Stanford University Press)*

Non-Archival Conference Papers

[n.1] Wang, S., Huang, S., Zhou, A., **Metaxa, D.** "Lower Quantity, Higher Quality: Auditing News Content and User Perceptions on Twitter/X's Algorithmic versus Chronological Timelines." Association for Education in Journalism and Mass Communication (AEJMC) 2024. First Place Faculty Paper, Political Communication Division.

Workshop Papers

[w.1] Deng, W. H., Lam, M. S., Cabrera, Á. A., **Metaxa, D.**, Eslami, M., Holstein, K. (2023, October). Supporting User Engagement in Testing, Auditing, and Contesting AI. In Companion Publication of the 2023 Conference on Computer Supported Cooperative Work and Social

Computing (pp. 556-559). Available here.

White Papers

[wp.4] **Metaxa, D.** Bias and Discrimination in Digital Advertising. PolicyLink 2023. In *Digital advertising: Discrimination, bias, and strategies for equity.*

[wp.3] Garton Ash, T.; Gorwa, R.; **Metaxa, D.**, Glasnost! Nine ways Facebook can make itself a better forum for free speech and democracy. 2019. Reuters Institute for the Study of Journalism.

[wp.2] Sheuerman, M. K. et al. HCI Guidelines for Gender Equity and Inclusivity. 2019.

[wp.1] **Metaxa, D.**; Torres-Echeverry, N. Google's Role in Spreading Fake News and Misinformation. SSRN. 2017.

Popular Press

[p.3] Gorwa, R.; **Metaxa, D.** Here's how Mark Zuckerberg can save Facebook from itself. *Wired UK.* March 4, 2019

[p.2] Hancock, J.; **Metaxa, D.** Park, J. S. Are Google search results politically biased? *The Guardian.* September 6, 2018.

[p.1] Aldrich, D. P.; **Metaxa, D.** How your social network could save you from a disaster. *The Conversation.* July 16, 2018.

TEACHING

FA2023, FA2024	CIS4120/5120: Introduction to Human-Computer Interaction (Penn)
SP2023, SP2024	CIS7000: Algorithmic Justice (Penn)
FA2022	CIS3990: Introduction to Human-Computer Interaction (Penn)
SP2021	CS347: Human-Computer Interaction Research (Stanford, co-taught with Parastoo Abtahi)
W2017, W2018	CS181: Computers, Ethics, and Public Policy (Stanford, Graduate TA)
SP2014, SP2015	CS8: A First Byte of Computer Science (Brown University, Head TA)
FA2014	CS130: User Interface Design and Evaluation (Brown University, TA)
FA2013	CS111: Introduction to Computer Science (Smith College, TA)
FA2012	CS17: Introduction to Computer Science (Brown University, TA)

HONORS

2019	EECS Rising Stars Participant, University of Illinois at Urbana-Champaign
2018	Stanford McCoy Center for Ethics in Society Grad Student Fellowship
2017	NSF Graduate Research Fellowship (Declined)
2015	Stanford Graduate Fellowship (5-Year Fellowship)
2015	Google Anita Borg Memorial Scholarship
2015	Brown University Outstanding Computer Science Undergraduate Award
2014	CRA Outstanding Undergraduate Researcher (Runner Up)
2014	CRA Distributed Research Experiences for Undergraduates (DREU)
2013	Box Engineering Diversity Scholarship
2013	Brown University Undergraduate Teaching and Research Award

INVITED TALKS

2024   **University of Pennsylvania** | Center for Information Networks and Democracy, 2024 Workshop on Political and Information Networks. "Research Priorities in the Era of AI" Panelist.
AERA 2024 | "Perspectives on Promoting Algorithmic Justice in Artificial Intelligence and Machine Learning Education in K-12" Discussant.
Cornell Tech | CS5382: Practical Principles for Designing Fair Algorithms.

2023   **Princeton University** | Center for Information Technology Policy (CITP). "The Future of Auditing is Sociotechnical." Available here.
University of Southern California | Media As SocioTechnical Systems (MASTS) Seminar. "The Future of Auditing is Sociotechnical."
University of Pennsylvania | ASSET Seminar. "The Future of Auditing is Sociotechnical."
Nobel Prize Summit | International Panel on the Information Environment (IPIE) Guest Panelist
PepsiCo | "In(advert)ent: Potential Biases in Digital Advertising."

2022   **University of Pennsylvania** | Penn SEAS Board of Advisors Spring Meeting. "Auditing Algorithms and Sociotechnical Systems."
Simon Fraser University | Mellon-Digital Democracies Institute - Experimental Algorithmic Futures Working Group. "In(advert)ent: Sociotechnical Audits and Targeted Advertising."

2021   **University of Pennsylvania** | Annenberg Conversations on Gender. "From Algorithm Audits to Accountability." Available here.
Virginia Commonwealth University | Camp Qmunity Mobile Data Management Conference. Diversity and Inclusion Session.
Cornell University | Graduate Students for Gender Inclusion in Computing Group. "Bias and Representation in Sociotechnical Systems."
Carnegie Mellon University | Human-Computer Interaction Institute. "Bias and Representation in Sociotechnical Systems."
University of Pennsylvania | Computer and Information Science Department. "Bias and Representation in Sociotechnical Systems."
University of Texas at Austin | School of Journalism and Media. "Bias and Representation in Sociotechnical Systems."
Johns Hopkins University | Computer Science Department. "Bias and Representation in Sociotechnical Systems."
University of Washington | Information School. "Bias and Representation in Sociotechnical Systems."
Simon Fraser University | Computer Science Department. "Bias and Representation in Sociotechnical Systems."

2019   **University of Illinois at Urbana-Champaign** | CS598RK: Human-Computer Interaction for Machine Learning. "Inclusive Design from the Lab to the Classroom."
Stanford University | CS247i: Design for Understanding. "Inclusive Web Design."
Stanford University | Democracy & Internet Scholars Workshop. "Search Media and Elections: Investigating Partisanship in Political Search Results.

2018   **Stanford Law School** | Project on Democracy and Internet Seminar Series. "Algorithm Audits and Political Bias in Web Search."

PROFESSIONAL SERVICE

Editorial Boards

2020-curr. Journal of Online Trust and Safety

Conference Leadership

2024-2025 FAccT 2025 General Chair

2019-2021 CSCW Conference Steering Committee | Graduate student member

2017-2018 ICWSM 2018 Conference | Web Chair

Conference Reviewing

FAccT '24 (AC), CSCW '24, CSCW '23, FAccT '23 (AC), CSCW '22, FAccT '22 (AC), CSCW '21, FAccT '20, CSCW '20, CHI '20, ICWSM '20, CSCW '19, CHI '18, ICWSM '18

Professional Affiliations

2023-curr. International Panel on the Information Environment (IPIE) | Member

2023-curr. AI at Wharton | Faculty Affiliate

2023-curr. Penn Cognitive Science Dept MindCORE | Faculty Affiliate

University service

2024-2026 Penn Community Standards and Accountability | Hearing Panelist

2023-curr. Penn School of Engineering and Applied Science's Diversity, Equity, and Inclusion Committee | CIS Dept. Liaison

2023-24 Penn CIS Department | Milestones Committee

2015-2020 Stanford CS PhD Social Committee | Founder and Chair

2015-2016 Stanford CS PhD Liaison to the Faculty | Liaison

2020-2021 Stanford HCI Qualifying Exam Equity & Justice Update | Lead volunteer

2020-2021 Stanford CS PhD Applicant Student Support Program, Volunteer

2020-2021 Stanford Out in STEM | Mentor

2020-2021 Underrepresented in Stanford Computer Science program | Mentor

2017-2019 Stanford Enhancing Diversity in Graduate Education (EDGE) | Mentor

Other Service

2017-2018 Stanford Alpine Club | President

2015-2016 Stanford Hellenic Student Association | Board Member

ADVISING

Current Doctoral Students

2024-curr. Mialy Rasetarinera (co-advised with Konrad Kording, UPenn Bioengineering)

2023-curr. Ekaterina Fedorova (co-advised with Chara Podimata, MIT Sloan)

2023-curr. Stephanie Wang

2023-curr. Ro Encarnación

2022-curr. Princess Sampson

Current Undergraduate Students

2022-curr. Lena Armstrong, Penn'23 (now Harvard PhD student)

2022-curr.   Sam Jung, Penn'26

PAST ADVISEES
Doctoral

2021-2023   Michelle Lam (Stanford PhD student)

Non-Doctoral (all Stanford undergraduates unless otherwise noted)
Melanie Zhou
Keitany Alison Jelagat
Alison Kim, Swarthmore undergraduate
Janine Fleming
Hannah Kim
Ayush Pandit
Colin Kalicki
Su Goh, McGill undergraduate
Michelle Gan
Justin Tinker
Aayush Agrawal
Joon S. Park, Swarthmore post-bacc.
Bec Smith
Michelle Park
Kelly Wang, Brown undergraduate
Xunru Rainy Chen, Northwestern undergrad
Mo Tiwari, Engineer at Meta; later Stanford PhD
Jared Bitz
Gili Rusak, high schooler

INDUSTRY EXPERIENCE

2017   Intern, Core Data Science Team, Facebook
2015   Intern, MetaMind

Updated October 10, 2024