EMANUEL MOSS, PhD.

<u>Senior Research Scientist – Computing and AI / Intel Labs / Charlottesville, VA</u>

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APPOINTMENTS

Senior Research Scientist - Intelligent Systems Research, Intel Labs, 2022-present

Joint Postdoctoral Research Fellow, Digital Life Initiative at Cornell Tech and Data & Society Research Institute, 2021-2022

Researcher, Data & Society Research Institute, 2018-2021

EDUCATION

CUNY Graduate Center – PhD., Anthropology

Dissertation: "The Objective Function: Science and Society in the Age of Machine Intelligence". Committee: Karen Strassler, PhD. (chair), Dana-Ain Davis, PhD., Mandana Limbert, PhD., danah boyd, PhD.

Brandeis University – M.A., Global Studies

Thesis: "Monumental Identities: Nationalism, Globalization and the Monumentalization of

Heritage"

Advisor: Chandler Rosenberger, PhD.

University of Illinois at Urbana-Champaign – B.A., Anthropology

ADDITIONAL POSITIONS HELD

Adjunct Lecturer, University of Virginia School of Data Science
Computing Community Consortium (CCC) Council Member
Expert Working Group Member, NIST AI Safety Institute Consortium
Member, Global Task Force for Inclusive AI, Partnership on AI
Member, Expert Group on Responsible AI Management, Program on Data and Governance at Ohio State University Moritz School of Law
Expert Consultant, Ethical Resolve LLC
Research Analyst and Researcher, Data & Society (Partnership on AI, PERVADE)
Applied Data Science Writing Fellow at Cloudera Fast Forward Labs
Art Editor, Journal of Field Archaeology
Teaching Fellow, Baruch College (CUNY), Department of Sociology and Anthropology
Spatial Data and Digital Technologies Specialist, Gygaia Projects, Boston University

FELLOWSHIPS and AWARDS

2023	Research Grant, ND/IBM Data Ethics Lab
2022	Research Fellowship, Siegel Family Endowment (declined)
2018	Dissertation Fieldwork Grant, Wenner Gren Foundation
2016	Early Research Initiative Pre-Dissertation Fellowship, CUNY Graduate Center
2015	Advanced Research Collaborative Student Fellow, CUNY Graduate Center
2014	Graduate Student Paper Prize Finalist, Society for the Anthropology of Europe
2013 – 2015	Graduate Center Fellowship, CUNY Graduate Center
2012	Global Studies Travel Grant, Brandeis University
2011 – 2012	Graduate Fellowship, Brandeis University
2011	Center for German and European Studies Travel Grant, Brandeis University

PUBLICATIONS and OTHER WRITING

- * peer reviewed or juried submission
- *Manuvinakurike, R., Savur, C., **Moss, E.**, Watkins, E. A., Sahay, S., & Raffa, G. (2025). Automatic Agent Chaining for Multimodal Task Support. Accepted to *NeurIPS 2025 LLM Evaluation Workshop*. https://openreview.net/forum?id=lqqe0ANOoa.
- *Watkins, E., Moss, E., Manuvinakurike, R., Persaud, C., Raffa, G., & Nachman, L. (2025). "It Doesn't Know Anything about My Work": Participatory Benchmarking and AI Evaluation in Applied Settings. Accepted to NeurIPS 2025 LLM Evaluation Workshop. https://openreview.net/forum?id=lqqe0ANOoa.
- **Moss, E.**, Watkins, E., Persaud, C., Karunaratne, P., & Nafus, D. (2025). Controlling Context: Generative Al at Work in Integrated Circuit Design and Other High-Precision Domains. *arXiv preprint arXiv:2506.14567*.
- Manuvinakurike, R., **Moss, E.**, Watkins, E. A., Sahay, S., Raffa, G., & Nachman, L. (2025). Thoughts without Thinking: Reconsidering the Explanatory Value of Chain-of-Thought Reasoning in LLMs through Agentic Pipelines. Presented at ACM CHI Workshop on Human-Centered Explainable Al. *arXiv preprint arXiv:2505.00875*.
- *Sloane, M., **Moss, E.**, Kennedy, S., Stewart, M., Warden, P., Plancher, B., Reddi, V.J. 2025. Materiality and Risk in the Age of Pervasive Al Sensors. *Nature Machine Intelligence*. Vol. 7 pp. 334-345. https://www.nature.com/articles/s42256-025-01017-7.
- Watkins, E. A., **Moss, E.**, Raffa, G., & Nachman, L. (2025). What's So Human about Human-Al Collaboration, Anyway? Generative Al and Human-Computer Interaction. arXiv preprint arXiv:2503.05926.
- *Sloane, M., Danks, D., & Moss, E. (2024). Tackling AI Hyping. AI and Ethics, 4(3), 669-677.
- *Harvey, E., Sandhaus, H., Jacobs, A.Z., **Moss, E.**, and Sloane, M.. 2024. The Cadaver in the Machine: The Social Practices of Measurement and Validation in Motion Capture Technology. In *Proceedings of*

- the CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA, Article 768, 1–23. https://doi.org/10.1145/3613904.3642004.
- **Moss, E.** 2023. Ethnographic Thinking: Anthropology as Product and Prescription. *American Ethnologist* 55(1) pp. 171-173. https://anthrosource.onlinelibrary.wiley.com/doi/abs/10.1111/amet.13230.
- *Metcalf, J. Singh, R., **Moss, M.**, Tafesse, E., and Watkins, E.A. 2023. Taking Algorithms to Courts: A Relational Approach to Algorithmic Accountability. In *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT '23)*. Association for Computing Machinery, New York, NY, USA, 1450–1462. https://doi.org/10.1145/3593013.3594092
- **Moss, E.** (2023). "Trust Is Not Enough: Accuracy, Error, Randomness, and Accountability in an Algorithmic Society." *ACM Communications* 66(6), pp. 42-44.
- *Sloane, M., **Moss, E.**, Awomolo, O., Forlano, L. (2022). "Participation Is not a Design Fix for Machine Learning." In *Proceedings of the ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO'22)*. Association of Computing Machines. Washington, DC.
- Sloane, M., **Moss, E.** (2022). "Introducing a Practice-Based Compliance Framework (PCF) for Addressing New Regulatory Challenges in the AI Field." *TechREG Chronicle*, March. https://www.competitionpolicyinternational.com/introducing-a-practice-based-compliance-framework-pcf-for-addressing-new-regulatory-challenges-in-the-ai-field/.
- Metcalf, J., **Moss, E.**, Singh, R., Tafese, E., Watkins, E. (2022). "A relationship and not a thing: A relational approach to algorithmic accountability and assessment documentation." *ArXiv:2203.01455 [Cs]*, March. http://arxiv.org/abs/2203.01455.
- *Cooper, A.F., Laufer, B., **Moss, E.**, Nissenbaum, H. (2022). "Accountability in an Algorithmic Society: Relationality, Responsibility, and Robustness in Machine Learning." In *2022 ACM Conference on Fairness, Accountability, and Transparency in Computer Science*. Association of Computing Machines. Seoul, South Korea. https://dl.acm.org/doi/fullHtml/10.1145/3531146.3533150
- *Sloane, M., **Moss, E.**, Chowdhury, R. (2022). "A Silicon Valley love triangle: Hiring algorithms, pseudoscience, and the quest for auditability." *Patterns*, *3*(2). https://www.cell.com/patterns/fulltext/S2666-3899(21)00308-1.
- Metcalf, J., Smith, B., **Moss, E.** (2022). "A New Proposed Law Could Actually Hold Big Tech Accountable for Its Algorithms." *Slate Future Tense*. https://slate.com/technology/2022/02/algorithmic-accountability-act-wyden.html.
- *Ganesh, M.I., **Moss, E.** (2022). "Resistance and refusal to algorithmic harms: Varieties of 'knowledge projects'." *Media International Australia, 182(2).* http://journals.sagepub.com/doi/10.1177/1329878X221076288.
- Fannuci, F., Wisniak, M., Skoric, V., Smith, B., Oduro, S., Metcalf, J., **Moss, E.**, and Tafese. E. (2021). "Recommendations for Assessing Al Impacts to Human Rights, Democracy, and the Rule of Law." European Center for Non-profit Law. https://ecnl.org/publications/recommendations-incorporating-human-rights-ai-impact-assessments.

- *Shilton, K., Moss, E., Gilbert, S. A., Bietz, M. J., Fiesler, C., Metcalf, J., Vitak, J., & Zimmer, M. (2021). Excavating awareness and power in data science: A manifesto for trustworthy pervasive data research. *Big Data & Society, 8*(2). https://doi.org/10.1177/20539517211040759.
- Moss, E., Watkins, E.A., Singh, R., Metcalf, J. 2021. Assembling Accountability: Algorithmic Impact Assessment for the Public Interest. Data & Society Research Institute Report.

 https://datasociety.net/library/assembling-accountability-algorithmic-impact-assessment-for-the-public-interest/.
- *Watkins, E.A., **Moss, E.**, Metcalf, J., Singh, R., Elish, M.C. 2021. "Governing Algorithmic Systems with Impact Assessments: Six Observations." In *Proceedings of the 2021 AAAI Conference on AI, Ethics, & Society (AIES2021)*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3846300.
- Sloane, M., **Moss, E.**, Chowdhury, R. 2021. "A Silicon Valley Love Triangle: Hiring Algorithms, Pseudo-Science, and the Quest for Auditability." In CHI '21: ACM CHI Virtual Conference on Human Factors in Computing Systems, May 8-13, 2021, Yokohama, JN. ACM, New York, NY, USA.
- *Metcalf, J., **Moss, E.**, Watkins, E.A., Singh, R., Elisch, M.C. 2021. "Algorithmic Impact Assessments and Accountability: The Co-construction of Impacts". In *FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*. pp. 735-746. Toronto, ON. https://doi.org/10.1145/3442188.3445935.
- **Moss, E.** 2021. Review of "Technologies of Speculation: The Limits of Knowledge in a Data-Driven Society," *Journal of Cultural Economy*, 14(3). https://doi.org/10.1080/17530350.2021.1882539.
- *Moss, E. and Metcalf, J. 2020. "High Tech, High Risk: Tech Ethics Lessons for the COVID-19 Pandemic Response". *Patterns*, 1(7). https://www.cell.com/patterns/fulltext/S2666-3899(20)30136-7.
- Metcalf, J. and Moss, E. 2020. "Looking for Race in Tech Company Ethics". Data & Society Points Blog.
- Sloane, M. **Moss, E.**, Awomolo, O., and Forlano, L. 2020. "Participation is not a Design Fix for Machine Learning". Participatory Approaches to Machine Learning Workshop of the 37th International Conference of Machine Learning. Vienna, Austria.
- **Moss, E.** and Metcalf, J. 2020. *Ethics Owners: A New Model of Organizational Responsibility in Data-Driven Technology Companies*. Data & Society Research Institute Report. https://datasociety.net/pubs/Ethics-Owners.pdf.
- **Moss, E.** and Metcalf, J. 2019. <u>The Ethical Dilemma at the Heart of Big Tech Companies</u>. *Harvard Business Review*, 14 November 2019.
- Kroll, J. and **Moss, E.** 2019. *Conceptions, Definitions, and Practices of Fair, Transparent, and Accountable (FTA) AI.* Partnership for AI. Whitepaper. (forthcoming)
- *Sloane, M. and **Moss, E.** 2019. Al's Social (Science) Deficit Has Consequences. *Nature Machine Intelligence*, 1(8).
- *Metcalf, J., **Moss, E.**, boyd, d. 2019. Owning Ethics: Corporate Logics, Silicon Valley, and the Institutionalization of Ethics. *Social Research*, 86(2).

*Moss, E. and Schuur, F. 2018. How Modes of Myth-Making Affect the Particulars of DS/ML Adoption in Industry. Proceedings of the *Ethnographic Praxis in Industry Conference 2018*. Honolulu, HI.

Fast Forward Labs. 2018. Multi-Task Learning. Research Report FF08. (Ch. 6 – Ethics)

Fast Forward Labs. 2017. Interpretability. Research Report FF07. (Ch. 6 – Ethics)

*Roosevelt, C.H., Cobb, P., **Moss, E.** Olsen, B.R., Ulusoy, S. 2015. Excavation is Destruction Digitization: Advances in Archaeological Practice. *Journal of Field Archaeology, 40*(3).

TEACHING EXPERIENCE

INSTRUCTOR

2025 University of Virginia

Data Ethics and Policy (DS 2004)

2022 Cornell Tech

Values at Play (TECH 5010)

2021 University of California-Berkeley

Behind the Data: Humans and Values (MIDS w231)

2014 – 2017 Baruch College

Introduction to Anthropology (ANT 1001)

TEACHING ASSISTANT

2013 Massachusetts Institute of Technology

Anthropology 21A.00: Introduction to Anthropology (with Prof. Graham Jones)

2011 – 2012 Brandeis University

Anthropology 1A: Introduction to the Comparative Study of Human Society

(with Prof. Sarah Lamb, Prof. Jonathan Anjaria)

International and Global Studies 10A: Introduction to International and Global Studies

(with Prof. Kerry Chase)

GUEST LECTURER

2022	Cambridge University – Guest speaker on AI Ethics and Society
2021	Cold Spring Harbor Laboratory – Invited Lecture on AI Ethics
2021	NYU Center for Urban Science and Progress – Capstone Lecture on Data Research Ethics
2021	NYU AI & Society – Lecture on Ethics in Industry

PRESENTATIONS, CONFERENCE ACTIVITIES and INTERVIEWS

2022 "Trustworthiness in Social Data Science: Excavating Awareness and Power". Invited presentation to the UW Data Science Seminar (co-presented with Katie Shilton). University of Maryland Social Data Symposium. February 9, 2022.

2021 "Engaging the Ethics of Public Data' in Social Media Research" Tutorial. (co-presented with Casey Fiesler, Katie Shilton, Michael Zimmer, and Katharina Kinder-Kurlanda). ICWSM 2021. 2021 "So You Want to Be a Tech Ethicist (No Scrubs edition)" (co-presented with Jacob Metcalf). MozFest 2021. 2020 "Corporate Logics of Silicon Valley and the Institutionalization of Ethics" (co-presented with Jacob Metcalf). Invited talk at 2020 American Sociological Association Annual Meeting. San Francisco, CA. 2020 NPR Marketplace Tech: "Tech companies should make it someone's job to think about ethics". Aired on July 6, 2020. 2020 Stanford Institute for Human-Centered Artificial Intelligence (HAI) Weekly Seminar: "Owning Ethics: Organizational Responsibility and the Institutionalization of Ethics in Silicon Valley" (co-presented with Jacob Metcalf). Palo Alto, CA [webcast]. 2020 Discussant for Data & Society Workshop: Contested Data. New York City, NY. 2020 "Positionality-Aware Machine Learning: Translation Tutorial" (co-presenter). 2020 ACM Conference on Fairness, Accountability, and Transparency (ACM FAT*). Barcelona, ES. 2019 "Minding the Gap: Between Fairness and Ethics" Workshop (co-organizer and moderator). 2019 2019 NeurIPS Conference. Vancouver, BC. 2019 "Tutorial: Ethics in Data-Driven Industries" (co-presented with Friederike Schüür). 2019 Ethnographic Praxis in Industry Conference. Providence, RI. 2019 "Lightning Talk: Ethical AI Starts with the Data" (co-presented with Michael Zimmer). Good Systems: Ethical AI for CSCW Workshop. 22nd ACM Conference on Computer-Supported Cooperative Work and Social Computing. Austin, TX. 2019 "Assessing Algorithmic Impacts" (co-presented with Jacob Metcalf) at REAL ML: Research, Engagement, Advocacy and Lived Experiences with Machine Learning Systems Workshop. Berlin, DE. 2019 "Becoming FAT: The Formation of Algorithmic Fairness, Accountability, and Transparency". Annual Meeting of the Society for the Social Studies of Science. New Orleans, LA. STS Summer School: Expertise, Trust, and Democracy. Harvard University. Cambridge, MA. 2019 2019 Discussant for Data & Society Workshop: Lessons from the Field. New York City, NY. 2019 "Owning Ethics: Doing ethics inside a tech company" (co-presented with Jacob Metcalf). Strata Data Ethics Summit. San Francisco, CA. 2019 "Tutorial: Toward a Theory of Race for Fairness in Machine Learning," 2019 FAT* Conference. Atlanta, GA. [webcast] 2018 "Deep Learning and Shallow Play: New Essentialisms in the Machine Age" (coauthored with Lily Hu). Annual Meeting of the American Anthropological Association. San Jose, CA. Page 6 of 8

2018	"How Modes of Myth-Making Affect the Particulars of DS/ML Adoption in Industry" (coauthored with Friederike Schüür) 2018 Ethnographic Praxis in Industry Conference. Honolulu, HI.
2018	<u>Computational Social Science Summer School</u> . University of Southern California. Los Angeles, CA
2018	<u>Technology, Law & Society Summer Institute</u> . University of California. Irvine, CA.
2018	"Digital Technology, Digital Practices: Incorporating Digital Techniques into Archaeological Excavation and Interpretation". Annual Meeting of the Society for American Archaeology. Washington, DC.
2018	"Addressing Conceptual Gaps in Big Data Research Ethics," PRISMA Ethics & Innovation Conference, Warwick University, UK.
2017	Discussant for Data & Society Workshop: Lessons from the Field. New York City, NY.
2017	"Personal Information as Private Property: Proprietary Datasets in the Information Age," American Ethnological Society Annual Meeting. Stanford University. Palo Alto, CA.
2015	"Thick Traces: Three-Dimensional Modeling in Archaeology," Annual Meeting of the Society for Social Studies of Science. Denver, CO.
2015	"Digital Imaging and Spatial Analysis in Archaeology: Problems and Prospects," (coauthored with Brandon Olsen). Mobilizing the Past for a Digital Future Workshop, Wentworth Institute of Technology. Boston, MA.

ACADEMIC SERVICE

PEER REVIEW

2024	Papers Committee Member for Ethnographic Praxis in Industry Conference (EPIC)
2024	Area Chair for ACM FAccT Conference
2022 – 2023	Program Committee member for ACM FAccT Conference
2021 – 2022	Reviewer for ACM CHI Conference.
2021	Area Chair for NeurIPS 2021: Datasets and Benchmarks Track
2020	Reviewer for ACM Communications
2020 – 2021	Reviewer for Patterns Journal
2020	Reviewer for Manning Publications
2020	Reviewer for Frontiers in Big Data
2019	Reviewer for Journal of the Association for Information Science and Technology
2019	Reviewer for Engaging Science, Technology, and Society
2019	Reviewer for Designing Interactive Systems (DIS) Conference
2015 – 2016	Reviewer for Journal of Field Archaeology

INFORMAL CONSULTATION

• Ada Lovelace Research Institute

- Responsible Innovation Team Facebook
- Queer in AI Bias bounties initiative
- Al Ethics Team Google Research
- ACM US Technology Policy Council
- The Office of Senator Amy Klobuchar
- National Institute of Standards and Technology (NIST) Identifying and Managing Bias in Artificial Intelligence (NIST Special Publication 1270)
- IEEE P3119 Working Group