GEORGE MOORE

Cambridge, Massachusetts | https://www.linkedin.com/in/george-moore-ii/

EDUCATION

- Research Scientist, Mechanical Engineering, Massachusetts Institute of Technology, *present*
- Postdoctoral Fellow, Mechanical Engineering, Massachusetts Institute of Technology, 2022-2025
- PhD, Mechanical Engineering, University of California, Berkeley, 2022
- MS, Mechanical Engineering, University of California, Berkeley, 2019
- BS, Mechanical Engineering, University of South Alabama, 2016

LEADERSHIP ROLES

- Co-Founder, Peoples Public Lab (peoplespubliclab.org/), *[2023 - Present]*
- Innovation Architect, NASA CAS Discovery Project (nasa.gov/directorates/armd/tacp/cas/cas-discovery/), *[January 2024 - Present]*
- President and Vice President, Black Graduate Engineering and Science Students, *[2019 - 2022]*
- Project Manager, SMASH Rising (smash.org/risingscholarintern), *[Summer 2020, 2021]*

RELEVANT EXPERIENCE

Tools for Assessing Recombinant Innovation in Design **NASA Langley Research Center**
Design and User Researcher *June 2024 - Present*

- Constructing assessment tools that compute a quantitative value for key products of design innovation: such as Problems Statements, Insights, and Ideas.
- Curating and Leading a research study plan that (1) communicates value to the NASA CAS Discovery leadership and (2) documents contributions to design research communities via manuscript publications
- Key tools and frameworks: **Python, Mural, ChatGPT, and R**

Investigating Human-AI Collaboration among NASA Engineering and Design Professionals **NASA Langley Research Center**
UX Researcher *Jan 2024 - Present*

- Designed a comprehensive user journey map illustrating and categorizing the activities that the NASA design team engaged with
- Conducted several **1-on-1 semi structured interviews** with NASA engineers and design professionals, unpacking their engagement with AI tools in their design workflow
- Coded and analyzed **7 interview transcripts** to identify emergent strategies and factors that influence GenAI among the NASA engineering and design team
- Authored a peer-reviewed manuscript that has been accepted for publication in ASME IDETC 2024 conference proceedings

Investigating Student Engagement with Design & Making Activities **MIT**
Postdoctoral Fellow and UX Researcher *Fall 2022 to Present*

- Coded several **R studio** scripts for conducting statistical tests (**ANOVA, t-tests, Kruskal-Wallis, etc**) and data visuals for an ongoing 4-year study on student makerspace engagement. (study includes n=600+, 9 demographic factors, 6 behavioral constructs, and additional survey items)
- Curated and selected makerspace interventions to improve makerspace engagement across demographic groups
- Authored a peer-reviewed manuscript that was published in conference proceedings and accepted for presentation at the International Symposium on Academic Makerspaces

Journey Mapping the Virtual Design Thinking Experience **UC Berkeley**
Graduate Student and UX Researcher *June 2020 to July 2022*

- Curated a research study design to assess the individual and team-based experiences of novice design thinking participants
- Created interactive **survey instrument** to capture participant data – student ratings of self-efficacy during their design thinking experience.
- Constructed and analyzed student **participant journey maps** based on demographic context – such as gender, academic discipline, and project preference.
- Authored a peer-reviewed manuscript accepted for publication in proceedings of a premier Mechanical Engineering and Design Conference (ASME IDETC)

Towards Sustainable Life Cycles of Making in Small Scale Fabrication Spaces **UC Berkeley**
Graduate Student and UX Researcher *January 2022 to August 2022*

- Conducted **18 semi structured interviews** with experts other affiliated actors in the life cycles of fabrication spaces (from raw materials to disposal)
- **Trained and Managed** a team of graduate and undergraduate students in support of coding the transcribed interviews. (**Training and project completion was done within 6 weeks**).
- Conducted and guided the analysis of **+350 qualitative codes** into concise insights about the state of sustainable practices in fabrication spaces
- Conducted qualitative analysis in **MAXQDA** to iterate on study insights and leverage emerging AI tools for qualitative research

PUBLICATIONS

(*in prep*) **Moore, G.**, Wilson, S., Yang, M., 2025, "Towards Insights from Impact-Driven Design Projects: Researcher vs LLM Qualitative Research Outcomes" Journal of Mechanical Design
(*in review*) Koolman, E., **Moore, G.**, Young, L., Schauer, A., and Reynolds Brubaker, E., 2025, "Influence of AI Use on Creativity Metrics and Perceived Creativity" Journal of Computing and Information Science in Engineering (JCISE)

(*in review*) Ma, K., **Moore, G.**, Goucher-Lambert, K., and Reynolds Brubaker, E., 2025, "Human-AI Collaboration in the Design Process: Emergent Strategies of Generative AI Use by Professional Designers," Journal of Mechanical Design.

Koolman, E., **Moore, G.**, Young, L., Schauer, A., and Reynolds Brubaker, E., "Influence of AI on Creativity in a Speculative Design Process" Proceedings of the ASME 2025 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference, 2025

Ma, K., **Moore, G.**, Shyam, V., Villarubia, J., Goucher-Lambert, K., and Reynolds Brubaker, E., 2024, "Human-Ai Collaboration Among Engineering and Design Professionals: Three Strategies of Generative Ai Use" ASME 2024 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference, 2024

Madhurima Das, **George Moore**, Elisa Bravo, Amanda Baker, Martin Culpepper, Maria Yang, Jesse Austin-Breneman, 2023, "A Baseline Analysis of Makerspace Engagement – Comparing Institutional and Demographic Factors for First Year Undergraduate Students." 7th International Symposium on Academic Makerspaces, 2023

Moore, G., Rao, V., Goucher-Lambert, K., and Agogino, A., 2023, "JOURNEY MAPPING THE VIRTUAL DESIGN THINKING EXPERIENCE: ENGAGING STUDENTS ACROSS DISCIPLINES IN HUMAN-CENTERED DESIGN." Proceedings of the ASME 2023 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference, 2023

Moore, G. E., Agogino, A. M., and Goucher-Lambert, K., 2023, "TOWARDS SUSTAINABLE LIFE CYCLES OF MAKING IN SMALL SCALE FABRICATION SPACES," Proc. Des. Soc., 3, pp. 3611–3620.

Moore, G., Rao, V., Goucher-Lambert, K., and Agogino, A.M., 2021, "Journey Mapping the Virtual Prototyping Experience," Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition, 2021

Rao, V., **Moore, G.**, Jung, H.J., Kim, E., Agogino, A., and Goucher-Lambert, K., 2021, "Supporting Human-Centered Design in Psychologically Distant Problem Domains: The Design for Cybersecurity Cards." Proceedings of the Design Society, Vol. 1, pp. 2831-2840.

Moore, G., Goucher-Lambert, K., and Agogino, A.M., 2020, "A Life Cycle Analysis of Laser Cutter Embodied Impacts," Proceedings of the ASME 2020 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference, 2020

Rao, V., **Moore, G.**, Udekwu, O.A., and Hartmann, B., 2020, "Tracing Stories across the Design Process: A Study of Engineering Students' Engagement with Storytelling in an Undergraduate Human-Centered Design Course," International Journal of Engineering Education, Vol. 36, No. 2, pp. 1-11.

Kim, S., Ninh, A., **Moore, G.**, and Qiu, K., 2019, *Berkeley Arts + Design*, Griffith Moon, Santa Monica, CA, Gender + Sexuality, pp. 74-75.

AWARDS

- **Postdoctoral Fellow (2022 - 2024)** – *Inaugural cohort of MIT's Engineering Excellence Fellows (2022 - Present)*
- **UC-Dissertation Year Fellowship (2021-2022)** – *an award that recognizes a student's contributions to diversifying the academy during their graduate careers and beyond*
- **Mentored Research Award (2020 – 2021)** – *an award that recognizes a student's contributions to diversifying the academy during their graduate careers and beyond*
- **Global Young Scientists Summit (2021)** - *Nominated by UC Berkeley to attend*
- **Chancellor's Award for Public Service (2019 – 2020)** – *an award that honors an undergraduate or graduate underrepresented student, or student ally, who has performed exemplary service pertaining to underrepresented communities.*
- **InFEWS Fellow (Fall 2018 – 2020)**
- **Chancellors Fellow (2016 – 2021)**
- **Tau Beta Pi Scholar (2015 – 2016)**
- **Georgia Pacific Scholar (2014 – 2015)**
- **Alabama Space Grant Consortium Scholar (2013 – 2015)**

CONFERENCE PRESENTATIONS

- ASME 2025 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference
- ISAM 2023 International Symposium on Academic Makerspaces

- ASME 2023 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference
- ICED 2023 International Conference on Engineering Design
- ASME 2021 International Mechanical Engineering Congress and Exposition
- ASME 2020 International Design Engineering Technical Conferences And Computers and Information in Engineering Conference

TEACHING AND MENTORING EXPERIENCE

- Fall 2024 - MIT Lead Instructor | *2.00: Introduction to Design*
- Summer and Fall 2023 - MIT Undergraduate Research Opportunities Program - Mentor
- Summer 2021 - Graduate Student Instructor | *DES INV 190: Design and Cybersecurity*
- Summer 2020 - Graduate Student Instructor | *DES INV 190: Design and Cybersecurity*
- Spring 2020 - Graduate Student Instructor | *MEC ENG 290: Technology Design Foundations*
- Summer 2019 - Graduate Student Instructor | *DES INV 190: Design, Cybersecurity, and Mobility*
- Spring 2019 - Graduate Student Instructor | *MEC ENG 290H: Green Product Development: Design for Sustainability*
- Summer 2018 - Graduate Student Instructor | *DES INV 190: Human-centered Design Methods: Reimagining Sensing and Mobility*
- Spring 2018 - Graduate Tutor | *Design Innovation Bootcamp*

RESEARCH PROJECTS

Life Cycle Assessment of Manufacturing Tools **UC Berkeley**
Graduate Student Researcher *Sept 2019 to August 2020*

- Manually Disassembled Laser Cutters – machines often used for professional manufacturing and personal fabrication processes – to quantify mass and raw materials
- Conducted a **Life Cycle Assessment**, using open source software, to measure the environmental impacts associated with the Laser Cutter manufacturing process
- Modeled the sources of raw materials and manufacturing processes required to produce the Laser Cutter
- Developed a strategy for identifying materials and components of the Laser Cutter that were not obvious or provided by the manufacturer

Co-Designing with the Pinoleville Pomo Nation via HCD framework **UC Berkeley**
Graduate Student and UX Researcher *July 2017 to Aug 2019*

- Led STEM workshops for PPN youth that involved teaching how to integrate sensors and actuators with an MCU
- Designed workshops with the PPN to extract the needs of the community at public events
- Managed and prepared undergraduate students for design projects around Food, Energy, and Water Systems within the PPN community
- Facilitated maker-themed workshops to collaboratively define community values in the PPN's new makerspace

Human Centered Design for Development (HCD+D) **UC Berkeley**
Graduate Student and UX Researcher *Aug 2016 to May 2017*

- Mapped the publication history of HCD+D globally
- Learned to create maps with user-friendly toggle features *(QGIS, R)*

Summer Research Opportunities Program **University of Michigan**
Undergraduate Student Researcher *June 2015 to Aug 2015*

- Studied sustainable manufacturing in lesser developed countries
- Applied customer preference models to improve MakaPad production

Louis Stokes Alliance for Minority Participation **Rensselaer Polytechnic Institute**
Undergraduate Student Researcher *June 2014 to July 2014*

- Trained to make polymer solution (PLLA/PCL) and electrospin nanofibers
- Performed degradation study comparing the fibers of polymers solutions
- Presented research at Rensselaer Polytechnic Institute poster session

Summer Research Opportunities Program **University of Illinois at Urbana-Champaign**
Undergraduate Student and UX Researcher *June 2013 to Aug 2013*

- Created user surveys to evaluate the effectiveness of the thermodynamic software
- Navigated thermodynamic software to provide user feedback and troubleshooting opportunities
- Presented research at SROP poster session