

Michael W. Beach | Curriculum Vitae

Department of Human Centered Design & Engineering
University of Washington, Sieg Hall, Box 352315
Seattle, WA 98195-2315

michaelwbeach.com
themichaelbeach@gmail.com

Education

- 2018 - 2025 **Ph.D. Human Centered Design & Engineering**
University of Washington, Seattle, WA
- 2018 - 2022 **M.S. Human Centered Design & Engineering**
University of Washington, Seattle, WA
- 2014 - 2018 **B.S. Human Centered Design & Engineering**
B.A. Comparative History of Ideas
University of Washington, Seattle, WA
- 1999 - 2005 **A.A. Psychology**
State College of Florida-Manatee, Sarasota, FL

Research Experience

- Jan 2026 - Current **Postdoctoral Researcher | NSF RED (Revolutionizing Engineering Departments) Program**
Department of Electrical and Computer Engineering @ Bucknell University, Lewisburg, PA
Conduct research on engineering education transformation through curriculum redesign, navigational agency, and longitudinal assessment systems within an NSF RED initiative. Responsibilities include facilitating faculty workshops, developing reflective educational infrastructures, conducting qualitative Research through Design studies, supporting organizational change research, and contributing to the development of AI-supported reflection tools and assessment practices. *Publication forthcoming
- Jul 2025 - Jan 2026 **Researcher | “Women in Engineering and STEM: A Review of the 2025 Literature” for SWE**
CERSE (Center for Evaluation & Research for STEM Equity) @ University of Washington, Seattle, WA
Conducting a comprehensive synthesis of 2025 research on equity in STEM, highlighting how systemic barriers limit the development of a representative global STEM workforce. Contributing to designing the article structure, analyzing the literature, and authoring the final manuscript published in *SWE Magazine* (with 2 co-authors).
- Oct 2023 - Dec 2025 **Research Assistant (with Tyler Fox) | UX to Transition Design Design Competencies**
University of Washington, Seattle, WA
Developed a research program to understand design competencies used during UX design and Transition Design work over two quarters. Evaluating program outcomes and developing a course based on findings. Faculty support: Tyler Fox Ph.D. Grant: Microsoft. *Publication forthcoming
- Jun - Sep 2025 **Researcher | REDPAR Program Sustainability Evaluation**
CERSE (Center for Evaluation & Research for STEM Equity) @ University of Washington, Seattle, WA
Conduct research for the REDPAR project focused on sustainability in STEM higher education. Responsibilities include literature review and conceptual framework development, qualitative interview protocol design, data coding and memoing, and stakeholder engagement with organizational change experts. Contribute to annual reporting and journal manuscript preparation. *Publication forthcoming
- Apr - Jun 2025 **Researcher | ASPIRE INCLUDES Research & Evaluation**
CERSE (Center for Evaluation & Research for STEM Equity) @ University of Washington, Seattle, WA
Conduct research and evaluation for Aspire INCLUDES and other CERSE projects. Responsibilities include survey design and analysis, data management, facilitating program sustainability evaluation sessions, and annual report writing. Contribute to the evaluation of a sustainability rubric. *Publication forthcoming
- Nov 2024 - Mar 2025 **Researcher | UW Bothell Physics REU Program Evaluation**
CERSE (Center for Evaluation & Research for STEM Equity) @ University of Washington, Seattle, WA
Led qualitative and quantitative data collection for a program evaluation, including designing and fielding a “Where are they now?” survey with student mentees and facilitating focus groups with program mentors. Authored the final

evaluation report, including quantitative analysis and data visualization. Findings are used by the program to support future funding proposals and strategic planning.

- Oct - Dec 2024 **Researcher** | “Women in Engineering and STEM: A Review of the 2024 Literature” for SWE
CERSE (Center for Evaluation & Research for STEM Equity) @ University of Washington, Seattle, WA
Conducted a comprehensive synthesis of 2024 research on equity in STEM, highlighting how systemic barriers limit the development of a representative global STEM workforce. Developed the article structure, led the literature analysis, and authored the final manuscript published in *SWE Magazine* (with 4 co-authors).
- Apr - Aug 2024 **Co-Lead Facilitator / Designer Researcher** | Community Co-Design & Engagement for Reuse Commons | Interim Board Leadership
University of Washington, Seattle, WA
Designed, implemented, and analyzed community co-design activities to engage with and across municipalities, community groups, small businesses, nonprofit organizations, and economists. Co-led facilitation of community engagement to develop reuse commons goals, objectives, mission, board members, and decision-making processes.
- Jan - Jun 2024 **Research Group Co-Lead Facilitator / Designer** | UX to Transition Design | Directed Research Group
University of Washington, Seattle, WA
Co-facilitated and co-designed research group to explore the role of design competencies as they apply to UX design work and transition design. Engaged with four different partners: Pacific Marine Energy Center, Forest Health Watch, NE Seattle Tool Library, and Seattle Furniture Repair Bank. Faculty support: Tyler Fox Ph.D.
- Oct 2023 - Mar 2024 **Research Group Lead Facilitator / Designer** | Workshops for Wicked Problems | Directed Research Group
University of Washington, Seattle, WA
Facilitated and designed research group to support my dissertation research. DRG student researchers provided assistance with qualitative data collection and analysis. Faculty support: Tyler Fox Ph.D.
- Jun - Aug 2023 **Research Group Co-Facilitator** | Politics of Imaginaries DIS Workshop Preparation and Analysis | Directed Research Group
University of Washington, Seattle, WA
Co-facilitated research group with Gabrielle Benabdallah to refine workshop activities, pilot the workshop and technology for hybrid event, and conduct analysis of workshop outcomes. Faculty support: Daniela Rosner Ph.D.
- Oct - Dec 2022 **Research Group Lead Facilitator / Designer** | Entanglement Methods | Directed Research Group
University of Washington, Seattle, WA
Facilitated and designed co-design research group to explore concepts of entanglement from different disciplines, conduct user research, and prototype design methods for tracing entanglement. Engaged with the assisted migration of Western redcedar project at Forest Health Watch as an example focal site. Faculty support: Kristin Dew Ph.D.
- Mar - Jun 2021 **Research Assistant (with Tyler Fox)** | Sympoietic Speculations
University of Washington, Seattle, WA
Developed F/Actors Workshop, co-designed Speculative Red Cedar Directed Research Group, translated fermentation data into an audio format for the Fermentum project, and participated in Simondon Reading Group.
- Jan - Jun 2021 **Research Group Co-Facilitator** | The UX of Climate Change: Western Red Cedar Dieback | Directed Research Group
University of Washington, Seattle, WA
Co-facilitated research group to conduct user research and rapidly prototype design solutions that will increase community participation in tracking Western redcedar. (WI21 & SP21) Faculty co-facilitator: Tyler Fox Ph.D.
- Oct - Dec 2020 **Research Group Lead Facilitator / Designer** | POST(-)HUMAN HAZMAT: Design fiction for multispecies care and collaborative survival in cataclysmic climates | Directed Research Group
University of Washington, Seattle, WA
Facilitated and designed co-design research group to explore and translate more-than-human theories and concepts into practice through more-than-human stories in the form of a zine. To learn more please visit: <https://michaelwbeach.com/posthumanhazmat/> Faculty support: Tyler Fox Ph.D.
- Jun 2019 - Feb 2020 **UX Researcher Designer Developer Internship (Extended)** | Science Capsule
Data Science & Technology Department, Lawrence Berkeley National Laboratory, Berkeley, CA
Designed and developed frontend UI of a web platform for multi-disciplinary scientific stakeholders based on ongoing analysis of user research data. Science Capsule is a tool that collects, annotates, and analyses live data from LBNL's Beamline experiments at the Advanced Light Source facility.

- Jun 2018 - Feb 2020 **Graduate Research Assistant (with Charlotte P. Lee) | Sociotechnical Design: Creating a Data Repository for the Study of Marine Ecosystems**
University of Washington, Seattle, WA
Conducted ethnographic research and drawing on "action research" and participatory design methods to help a multi-disciplinary group of investigators and scientific stakeholders come together to design and develop shared understandings, priorities, practices, methods, software tools, and computer architectures that will lead to the development of a data repository.
- Jan 2015 - Feb 2020 **Research Assistant (with Charlotte P. Lee) | Model of Coordinated Action (MoCA)**
University of Washington, Seattle, WA
Developed a theoretical framework to define and describe coordinated-action. Conducting a retrospective content analysis of CSCW (Computer-Supported Cooperative Work).

Publications

- Beach, Michael W.**, Emily Knaphus-Soran, and Elizabeth Litzler. (2025). Women in Engineering and STEM: A Review of the 2025 Literature. Society of Women Engineers.
<https://swe.org/magazine/women-in-engineering-and-stem-a-review-of-the-2025-literature/>.
- Beach, Michael W.**, Emily Knaphus-Soran, Maryam Tanveer, Jana Foxe, and Pauline C. Dott. (2024). Women in Engineering and STEM: A Review of the 2024 Literature. Society of Women Engineers.
<https://swe.org/magazine/women-in-engineering-and-stem-a-review-of-the-2024-literature/>.
- Beach, Michael W.** (2024). "Nonlocality, Nonlinearity, & Complicit Bias in Climate Diasporas." Society for Literature, Science, and the Arts (SLSA), University of Texas at Dallas.
- Beach, Michael W.**, Christina Graves, and Tyler Fox. (2024). "Speculative F/Actors: Climate Futures – Crafting a Workshop for Collaborative Worldbuilding in Cataclysmic Climates." In *Halfway to the Future*. ACM.
- Gabrielle Benabdallah, **Michael W. Beach**, Lucy Suchman, Kavita Philip, Nathanael Elias Mengist, and Daniela Rosner. (2023). "The Politics of Imaginaries: Probing Humanistic Inquiry in HCI." Designing Interactive Systems (DIS), Carnegie Mellon University, Pittsburgh, Pennsylvania.
- Beach, Michael W.** and Fox, T. (2023). "Speculative F/Actors: Climate Futures – Crafting a Workshop for Collaborative Worldbuilding in Cataclysmic Climates." Workshop WS27: *HCI for Climate Change: Imagining Sustainable Futures*. April 28, 2023. CHI, Hamburg, Germany.
- Beach, Michael W.**, and Tyler Fox. (2022). "Value Sensitive Speculative Design: Exploring More-Than-Human Relations in the Age of Climate Catastrophe." *IxD&A* 51
- Ghoshal, Devarshi, Ludovico Bianchi, Abdelilah Essiari, Drew Paine, Sarah S. Poon, **Michael W. Beach**, Alpha T. N'Diaye, Patrick Huck, and Lavanya Ramakrishnan. "Science Capsule: Towards Sharing and Reproducibility of Scientific Workflows." In *2021 IEEE Workshop on Workflows in Support of Large-Scale Science (WORKS)*, pp. 66-73. IEEE, 2021.
- Ghoshal, Devarshi, Ludovico Bianchi, Abdelilah Essiari, **Michael W. Beach**, Drew Paine, and Lavanya Ramakrishnan. "Science Capsule-Capturing the Data Life Cycle." *Journal of Open Source Software* 6, no. 62 (2021): 2484. ([PDF](#))
- Jones, Ridley, **Michael W. Beach**, Melinda McClure Haughey, Will Sutherland, and Charlotte P. Lee. "Construction of Shared Situational Awareness in Traffic Management." *Proceedings of the ACM on Human-Computer Interaction* 5, no. CSCW1 (2021): 1-27. ([PDF](#))
- Neang, Andrew B., Will Sutherland, **Michael W. Beach**, and Charlotte P. Lee. "Data Integration as Coordination: The Articulation of Data Work in an Ocean Science Collaboration." *Proceedings of the ACM on Human-Computer Interaction* 4, no. CSCW3 (2021): 1-25. ([PDF](#))

Teaching Experience

- Winter 2024 **Instructor**
HCDE 313 A: Introduction to User Research
Instructor on Record (IoR), Department of Human-Centered Design and Engineering, University of Washington
Taught a foundational course in user research for undergraduate students, equipping them with practical skills in planning, conducting, and analyzing qualitative research. Emphasized hands-on learning through iterative assignments and in-class exercises, team-based fieldwork, and peer critique. Guided students in developing research questions, conducting interviews and observations, and synthesizing findings into actionable insights. Adapted instructional strategies to support diverse learning needs, student growth, and confidence as emerging researchers.
- Spring 2023 **Teaching Assistant**
HCDE 519 A: Qualitative Research Methods
Arpita Bhattacharya, Ph.D; Assistant Teaching Professor; Department of HCDE; University of Washington
Assisted a masters-level course on qualitative research methods in HCDE. Graded assignments and gave feedback to student teams on their qualitative research projects.
- Winter 2023 **Teaching Assistant**
HCDE 592 A: Masters Capstone
Daniella Kim, Ph.D; Affiliate Assistant Professor; Department of HCDE; University of Washington
Assisted a masters-level course on HCDE capstone. Graded assignments and gave feedback to students on their capstone assignments. Consulted with capstone teams about shaping their projects and research.
- Autumn 2022 **Teaching Assistant**
HCDE 598 A: Service Design
Tyler Fox, Ph.D; Associate Teaching Professor; Department of HCDE; University of Washington
Assisted a studio-based masters-level course on core concepts, methods, and practices within service design. Graded assignments and gave feedback to student teams on service design artifacts such as journey maps, blueprints, and design systems that describe cohesive experiences across digital and physical touchpoints.
- Summer 2022 **Teaching Assistant**
HCDE 501 A: Theoretical Foundations Of Human Centered Design And Engineering
Kristin Dew, Ph.D; Assistant Teaching Professor; Department of HCDE; University of Washington
Assisted a masters-level course on theoretical foundations of HCDE. Graded assignments and gave feedback to students on their usability research projects.
- Spring 2022 **Instructor**
HCDE 318 A: Introduction to User-Centered Design
Instructor on Record (IoR), Department of Human-Centered Design and Engineering, University of Washington
Taught an undergraduate-level course on the user-centered design paradigm, with an emphasis on the importance of developing and applying design processes and strategies. Iterated upon the previous course offering, incorporated ethical & theoretical consideration to provide more situated and embodied contexts for evaluation. Designed and facilitated hybrid (remote and in-person) design activities and critique. Graded assignments and gave feedback to students on their prototyping projects.
- Winter 2022 **Instructor**
HCDE 451 A: UX Prototyping Techniques
Instructor on Record (IoR), Department of Human-Centered Design and Engineering, University of Washington
Taught an undergraduate-level course on prototyping techniques. Iterated upon the previous course offering, incorporated ethical & theoretical consideration to provide more situated and embodied contexts for evaluation. Designed and facilitated hybrid (remote and in-person) design activities and critique. Graded assignments and gave feedback to students on their prototyping projects: developing success metrics for evaluation goals, user tests, analysis, and iteration. Student prerequisite: HCDE 318
- Autumn 2021 **Teaching Assistant**
HCDE 501 B: Theoretical Foundations Of Human Centered Design And Engineering
Sucheta Ghoshal, Ph.D; Assistant Professor; Department of HCDE; University of Washington
Assisted a masters-level course on theoretical foundations of HCDE. Graded assignments and gave feedback to students on their usability research projects.
- Summer 2021 **Teaching Assistant**
HCDE 501 A: Theoretical Foundations Of Human Centered Design And Engineering
Kristin Dew, Ph.D; Assistant Teaching Professor; Department of HCDE; University of Washington

Assisted a masters-level course on theoretical foundations of HCDE. Graded assignments and gave feedback to students on their usability research projects.

Winter 2021 **Teaching Assistant**

HCDE 210 AB & AC: Explorations In Human Centered Design (HCD)

Kathryn E Shroyer, IoR; Department of Human-Centered Design and Engineering; University of Washington

Led two undergraduate-level design studios. Led collaborative sprint-style design activities. Helped students overcome obstacles in learning HCD concepts and methods. Gave feedback and graded assignments.

Autumn 2020 **Teaching Assistant**

HCDE 518 AD: User-Centered Design

Sarah Coppolla, Ph.D; Lecturer; Department of Human-Centered Design and Engineering; University of Washington

Assisted a masters-level course on user-centered design. Graded assignments and gave feedback to students on their user-centered design projects.

Summer 2020 **Teaching Assistant**

HCDE 501 A: Theoretical Foundations Of Human Centered Design And Engineering

Kristin Dew, Ph.D; Lecturer; Department of Human-Centered Design and Engineering; University of Washington

Assisted a masters-level course on theoretical foundations of HCDE. Graded assignments and provided feedback to students on their usability research projects.

Spring 2020 **Teaching Assistant**

HCDE 210 A: Explorations In Human Centered Design (HCD)

Mitchell Fajardo, Instructor on Record, Department of Human-Centered Design and Engineering, University of Washington

Led an undergraduate-level design studio. Led collaborative sprint-style design activities. Helped students overcome obstacles in learning HCD concepts and methods. Gave feedback and graded assignments.

Winter 2020 **Teaching Assistant**

HCDE 517 B: Usability Studies

Kristin Dew, Ph.D; Lecturer; Department of Human-Centered Design and Engineering; University of Washington

Assisted an masters-level course on usability research. Graded assignments and provided feedback to students on their usability research projects.

Autumn 2019 **Teaching Assistant**

HCDE 451 A: UX Prototyping Techniques

Andy Davidson, Senior Lecturer, Department of Human-Centered Design and Engineering, University of Washington

Assisted an undergraduate-level course on prototyping techniques. Graded assignments and provided feedback to students on their prototyping projects.

Panels

Nov 8, 2019 Fox, T., **Michael W. Beach**, Heidi Biggs, and Audrey Desjardins (2019). Speculative Design in Climactic Times. Session 13G: Roundtable. Society for Literature, Science, and the Arts (SLSA), University of California, Irvine.

Nov 9, 2019 **Beach, Michael W.**, Muindi, M., Young, J., Johnson, G., Sha, X. et al. (2019). Legacies of Cybernetics. Session 19I: Roundtable. Society for Literature, Science, and the Arts (SLSA), University of California, Irvine.

Presentations

Mar 30, 2021 **Beach, Michael W.** (2021). "Speculative Value Scenarios: Crafting More-Than-Human Stories in Human-Computer Interaction." Geek/Art CONfluence Panel: "Meta!" Syracuse University, NY. "Crippling" the Comic Con, aka CripCon.

Feb 15, 2019 **Beach, Michael W.** (2019). Emergent Techno-Botanical Networks: Paracosmic Dreams and Speculative Methods. 3rd Annual Post-Human Network Graduate Student Conference "Legacies of Cybernetics", Arizona State University, Tempe AZ. February 14-16 2019.

Workshops

- Oct - Dec 2023 (Series) **Michael W. Beach.** (2023). "Entangled Justice Workshop." University of Washington (UW), Seattle, Washington.
- Oct - Dec 2023 (Series) **Michael W. Beach.** (2023). "Speculative F/Actors: Climate Futures." University of Washington (UW), Seattle, Washington.
- Jul 10, 2023 Gabrielle Benabdallah, **Michael W. Beach**, Lucy Suchman, and Daniela Rosner. (2023). "The Politics of Imaginaries: Probing Humanistic Inquiry in HCI." Designing Interactive Systems (DIS), July 10, 2023, Carnegie Mellon University, Pittsburgh, Pennsylvania.
- Dec 2, 2022 **Beach, Michael W.** and Tyler Fox. (2022). "Speculative F/Actors: Climate Futures." December 2, 2022. Pensacola Museum of Art (PMA) and University of West Florida (UWF), Pensacola, Florida.
- Oct 1, 2021 **Beach, Michael W. (chair)**, Uppugonduri, A., Sakrison, A., Muindi, M., Johnson, G. (2021). "Becoming Possibilities: An Exploration of Boundaries, Barriers, and Potentials of Energy through Gilbert Simondon's Notion of Anxiety." Society for Literature, Science, and the Arts (SLSA), University of Michigan, Ann Arbor. ([Link to program on Easychair website](#))
- Nov 8, 2019 **Beach, Michael W.** and Tyler Fox. (2019). "Speculative Transduction: A Speculative Workshop for Iterating Our Way Through Climate Catastrophe." Society for Literature, Science, and the Arts (SLSA), University of California, Irvine.
- Oct 26, 2018 Thurtle, Phillip., Mengist, N., and **Michael W. Beach.** (2018). "Envisioning Other Worlds: The Place of World Building in a Liberal Arts Education." Comparative History of Ideas (CHID), University of Washington & Center for Philosophical Technologies, Arizona State University. Oct. 26, 2018, Seattle, WA.

Professional Experience

- 2012 - 2017 **Front-End Developer / Designer**
Team Bubbly
Digital production agency based in New York City, NY
Designed, developed mobile & web experiences. Worked closely with marketing specialists, photographers, copywriters, editors, and print houses remotely. Team Bubbly clients include: Esquire, BMW, Nike, Gucci
TeamBubbly.com/
- 2007 - 2012 **Front-End Developer / Designer**
Seagrape Studios
Self-owned and operated mobile & web design company based in San Francisco, CA and Boston, MA
Designed, developed mobile & web experiences. Worked closely with marketing specialists, photographers, copywriters, editors, and print houses remotely. Clients include: Liancarlo, Rock Paper Photo, Reality Pictures, Whole Child Action.

Extra Curricular

- 2018 **Lead & Facilitator of Focus Group**
Focus Group: Ethical Design Thinking & Practice
Comparative History of Ideas - University of Washington, Seattle, WA
Lead and Facilitator of Focus Group to ideate, discover, plan, design, prototype, evaluate, and iterate on our creations using reflective practices and value sensitive design methodologies.
- 2015 - 2017 **Curriculum Committee Member**
Comparative History of Ideas Curriculum Committee
Comparative History of Ideas - University of Washington, Seattle, WA

Awards

- 2023 **Travel Award, DIS Conference**
Designing Interactive Systems, (in-person conference)
\$1547 funding to attend research conference and facilitate workshop
- 2023 **Travel Award, CHI Conference**
Conference on Human Factors in Computing Systems (CHI), (hybrid conference)
\$452.20 funding to attend research conference and participate in workshop
- 2022 **Travel and Accommodation Award, Speculative F/Actors Workshop**
Pensacola Museum of Art, (in-person workshop)
\$700 funding to facilitate workshop event
- 2020 **Travel Award, CSCW Conference**
Computer Supported Cooperative Work (CSCW), (virtual conference)
\$106 funding to attend research conference
- 2019 **Travel Award, SLSA Conference**
Society for Literature, Science, and the Arts, University of California (Irvine)
\$706 travel funding to attend research conference
- 2018 **Travel Award, PHuN Conference**
Post-Human Network, Arizona State University (Tempe)
\$445 travel funding to attend research conference
- 2018 **Travel Award, CSCW Conference**
New York City's Hudson River (Jersey City)
\$316 travel funding to attend research conference
- 2018 **CHID Research Award, Focus Group**
University of Washington, Seattle, WA
\$250 funding to design and facilitate Ethical Design Thinking & Practice focus group