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HOME

<Short bio and headshot>

Katlyn M. Turner is a researcher, traveler, educator, and creator who focuses on technology, environmental and climate justice, marginalized communities, and self determination. She has led & conducted research on topics like critical minerals x AI, frontline communities and storytelling sovereignty, the theory & practice of inclusive innovation, epistemic & institutional exclusion in the nuclear sector, and climate justice praxis in sub-Saharan Africa. Her theoretical frameworks about technology and social hierarchy aim to make visible the externalities of technology systems and the ways in which intersectionally marginalized groups are uniquely impacted; they are frequently cited in Black feminist, HCI, STS, and systems engineering communities. Her work has been featured in large venues like climate week, The Conference, and COP, and intimate ones like Racism and the Origins of the Atomic Bomb and the Indigenous and Antiracist Innovators Summit. Katlyn earned her PhD from Stanford University advised by the late Prof. Rodney C. Ewing and Prof. Wendy Mao. Katlyn is a research affiliate at the MIT Media Lab and the CU Boulder Information Science Department, and is the founder and principal investigator of KTLN Consulting. When not doing research-y things, you can find her hiking with her dog Ru, at the City Park farmer's market, biking (outside or in dark rooms), or on a train in Europe somewhere.

<news>

Katlyn is convening the upcoming session: Frontline Community-Driven Approaches to Climate and Environmental Change: Theory, Narrative, and Practice on December 18, 2025 at the American Geophysical Union Conference (AGU25) in New Orleans, Louisiana.

Katlyn is the senior author on the publication: <u>A Mixed Methods Needs Assessment of Frontline Communities: Insights for Engagement and Partnerships Between Communities and Intermediary Organizations</u>, published September 8, 2025 in Community Science.

ABOUT

Really short bio

Short bio

Katlyn M. Turner is a researcher, traveler, educator, and creator who focuses on technology, environmental and climate justice, marginalized communities, and self determination. She has

led & conducted research on topics like critical minerals x AI, frontline communities and storytelling sovereignty, the theory & practice of inclusive innovation, epistemic & institutional exclusion in the nuclear sector, and climate justice praxis in sub-Saharan Africa. Her theoretical frameworks about technology and social hierarchy aim to make visible the externalities of technology systems and the ways in which intersectionally marginalized groups are uniquely impacted; they are frequently cited in Black feminist, HCI, STS, and systems engineering communities. Her work has been featured in large venues like climate week, The Conference, and COP, and intimate ones like Racism and the Indigenous and Antiracist Innovators Summit. Katlyn earned her PhD from Stanford University advised by the late Prof. Rodney C. Ewing and Prof. Wendy Mao. Katlyn is a research affiliate at the MIT Media Lab and the CU Boulder Information Science Department, and is the founder and principal investigator of KTLN Consulting. When not doing research-y things, you can find her hiking with her dog Ru, at the City Park farmer's market, biking (outside or in dark rooms), or on a train in Europe somewhere.

Long bio

WORK

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Categories: (Nina example) <u>ninalutz.github.io/projects.html</u>

- Research
 - (EXAMPLE TEMPLATE) Critical Minerals
 - ← upload Thumbnail and name it in the thumbnail folder
 - <Write description>
 - <Keywords>
 - Storytelling & Narrative Sovereignty in Frontline Communities
 - <thumbnail>
 - < Description > Frontline communities experience the first and worst impacts of climate change, environmental degradation, and global extractive economies. Community based organizations (CBOs) in frontline spaces are spaces for organizing, advocacy, grounded stewardship, and self-determination. Storytelling and narrative-making are important parts of frontline identity and advocacy—and yet, the process of storytelling, particularly in partnership with external collaborators (journalists, photographers, policymakers, etc) can be inequitable and unsafe for these communities and organizations. This project, in collaboration with Environmental Defense Fund and the Frontline Resource Institute, aims to understand how frontline CBOs and communities conceptualize and

- implement storytelling and narrative-making, and what their needs are with respect to sovereignty and safety in this realm. (2024-Present)
- <keywords> environmental justice, climate justice, frontline communities, self determination, storytelling, narrative, resistance,

Al Platforms x Frontline Communities

- Thumbnail
- <description> Frontline communities experience the first and worst impacts of climate change, environmental degradation, and global extractive economies. Community based organizations (CBOs) in frontline spaces are spaces for organizing, advocacy, grounded stewardship, and self-determination. This project, in collaboration with Environmental Defense Fund and the Frontline Resource Institute, asks: how are frontline CBOs using (or not using) AI platforms, why, and what are their needs engaging with these technologies? (2024-Present)
- <Keywords> AI, environmental justice, climate justice, frontline communities, self determination, technology design, HCI, critical HCI, algorithmic systems

Al Infrastructure x Frontline Communities

- Thumbnail
- <Description> Frontline communities experience the first and worst impacts of climate change, environmental degradation, and global extractive economies. Al infrastructure—such as data centers, power plants, and mines—are hosted within frontline communities in the US and globally. This project, in collaboration with Environmental Defense Fund and the Frontline Resource Institute, aims to understand how frontline communities are being impacted by Al infrastructure, and what their perspectives, needs, goals, and concerns are with respect to this suite of emerging technologies. (2024-Present)
- <Keywords> AI, environmental justice, climate justice, frontline communities, resistance, self determination, infrastructure, emerging technologies, HCI, critical HCI

Powering Data Centers

- Thumbnail
- <Description> Data centers to support computing infrastructure such as data storage and generative AI have immense electricity, water, and heating/cooling requirements. Their projected needs have prompted stakeholders in the electricity and tech sectors to consider how to power these centers. This project, in collaboration with Nina Lutz, examines community attitudes towards different scenarios of powering data centers. (2025-Present)
- <Keywords> AI, environmental justice, climate justice, frontline communities, self determination, infrastructure, emerging technologies, nuclear, HCI, critical HCI
- Atomic Terrain Tarot

- Thumbnail
- Description> Atomic infrastructure around the world tells many stories: of technosolutionism, the modern world order, chemistry, security, folly, triumph, environmental injustice, engineering, and the power of the universe. This art and research collaboration with Aditi Verma, the Atomic Terrain collective, and Bombshelltoe (Lovely Umayam), aims to tell the stories of atomic infrastructure, communities, and legacy through the structure and medium of tarot. The Atomic Terrain Tarot asks users to expand their epistemology of nuclear narratives, hold multiple truths at once, and seek connections between technocentric and esoteric realms. The accompanying book of fieldnotes and essays discusses the stories of places and communities engaged with for this project. (2024-Present)
- <Keywords> tarot, art, design, storytelling, narrative, environmental justice, nuclear, climate justice, technospirituality
- Water Management and Climate Justice in Angola
 - <thumbnail>
 - <Description> Angola experiences a drought-flood cycle in its southern regions in the Cunene, Huila, and Namibe provinces. The weather patterns, though somewhat predictable, are increasing in their intensity due to the impacts of climate change. As a country, Angola has been negatively impacted by colonialism, racism, and proxy wars-and the emergence of its peaceful, stable government from 2004 onward represents a period of growth and self-determination of the country. As part of its national strategy of growth in this post-conflict period, Angola seeks to leverage technodiplomacy and international multi-stakeholder collaboration to support ecosystem services, infrastructural development. educational initiatives, and climate justice. This project, hosted at the Media Lab in collaboration with NASA, the Angolan Space Agency (GGPEN). UMBC, and MIT seeks to leverage equity-centered systems engineering theory and praxis to build and deploy a decision support system for Angolan water management. In addition to addressing water management, the project's architecture supports Angola's strategic goals related to growth, self-determination, technodiplomacy, and climate justice. (2019-Present)
 - <keywords> environmental justice, climate justice, frontline communities, Angola, sub Saharan Africa, systems architecture, water management, decision support system, satellite earth observation, self determination, technodiplomacy, sustainability
- Technospirituality, Marginalization, and Self-Determination
 - <thumbnail>
 - <Description> Creators all over the world have reimagined the traditional Rider-Waite Tarot in ways that center their identities and communities.
 These decks are profound in how they confront users and practitioners with the "universal story" represented by the cards in the Rider-Waite

Tarot but reinterpreted through black, feminist, disabled, fat, femme, trans, and queer (etc) lenses. This project, in collaboration with Sid Cook, Nina Lutz, and Bryan Semaan aims to understand how tarot creators holding marginalized identities conceptualize and conduct their practices and goals with regards to these creations, and aims to understand tarot creation and practice within marginalized communities as a form of self-determination, critical infrastructuring, and technospirituality.

- <Keywords> art, design, tarot, self-determination, critical theory, technospirituality, infrastructure
- Climate Tech, Place Based Practices, and the PNW
 - <thumbnail>
 - Climate tech is a broad term encompassing innovations meant to mitigate greenhouse gas (GHG) emissions. It is often the focus of climate advocacy by policymakers, scholars, venture capitalists, and practitioners in STEM. However, many environmental and climate justice practitioners and frontline communities find themselves skeptical or opposed to climate tech innovations—e.g. nuclear reactors, carbon capture and sequestration, and anaerobic digesters. This project, in collaboration with Amelia Dogan and Lindah Kotut at the University of Washington, aims to understand the attitudes and needs of frontline communities and place-based practitioners in the Pacific Northwest of the US with respect to climate tech.
 - <keywords> environmental justice, climate justice, climate tech, frontline communities, self determination, infrastructure, emerging technologies
- Net Zero x ECJ Advocacy
 - <thumbnail>
 - Net Zero is a framework adopted by policymakers and climate advocates that posits the world can address climate change by creating various technological and policy-related innovations that decrease *net* carbon emissions to zero. These innovations are typically a combination of technologies that remove carbon from the atmosphere (e.g. carbon capture and sequestration), and economic structures that incentivize carbon reduction in business + government supply chains (e.g. cap and trade). While Net Zero-advancing innovations may defray carbon emissions, they oftentimes cause or exacerbate other non-carbon pollutants in air, water, and land, such as NOx, radiation, and particulate matter. Hence, environmental and climate justice (ECJ) advocates are not always aligned with Net Zero in their work. This project, in collaboration with Lauren Johnson, Erica Morehouse, Nina Lutz, and Environmental Defense Fund, aims to understand how ECJ advocates in the US view Net Zero, how Net Zero impacts their work, and how Net Zero proponents can better collaborate with and support ECJ in their work.
 - <keywords> environmental justice, climate justice, net zero, climate tech, policy, infrastructure, emerging technologies

- Participatory Justice x the International Maritime Organization (IMO)
 - <thumbnail>
 - <description>
 - <keywords> environmental justice, climate justice, shipping, international maritime organization, participatory justice, frontline communities, emerging technologies, climate tech, infrastructure
- Decentering
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 - <description>
 - <keywords> theory, self determination, intersectionality, systems architecture, critical theory
- Mediating the Marginal
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 - <description>
 - <keywords> algorithmic systems, social media, LGBTQ, intersectionality, critical HCI, HCI, self determination, infrastructure
- Frontline Communities Needs Assessment
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 - <description>
 - <keywords> environmental justice, climate justice, frontline communities, resistance, self determination, philanthropy, intermediaries, intersectionality
- Climate Vulnerability Index
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 - <keywords> environmental justice, climate justice, frontline communities, resistance, HCI, policy, decision support system, education
- Innovation Practices
 - <thumbnail>
 - <description>
 - <keywords> theory, innovation studies, inclusive innovation, systems architecture, critical theory, Boston, Detroit, HCI, critical HCI, sustainability, STS
- Critical Minerals, Decarbonization, and ECJ
 - <thumbnail>
 - <description>
 - <keywords> environmental justice, climate justice, sustainability, net zero, critical minerals, frontline communities, policy, climate tech, Al
- ECJ in the Beef Sector
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 - <description>
 - <keywords> environmental justice, climate justice, net zero, climate tech, frontline communities, agriculture, intersectionality
- Justice & Equity in US Climate Innovation

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- <description>
- <keywords> environmental justice, climate justice, intersectionality, innovation studies, climate tech, sustainability, systems architecture
- Epistemology of Nuclear Waste Management
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 - <description>
 - <keywords> theory, nuclear, innovation studies, STS, environmental justice, climate justice, frontline communities, policy

• Art + Design

- Atomic Terrain Tarot (blurb in research)
- Technospirituality, Marginalization, and Self-Determination (blurb in research)

Teaching

- Antiracism & Technology Design Seminar Series
 - <thumbnail>
 - <description>
 - <keywords> critical theory, antiracism, innovation studies, HCI, critical
 HCI, teaching, community
- Environmental Justice & Information Science Course
 - <thumbnail>
 - <description>
 - <keywords> environmental justice, climate justice, critical theory, intersectionality, innovation studies, STS, systems architecture, HCI, critical HCI, teaching
- Race & Technology Course
 - <thumbnail>
 - <description>
 - <keywords> critical theory, antiracism, technology design, algorithmic systems, environmental justice, climate justice, intersectionality, innovation studies, STS, HCI, critical HCI, teaching
- Decentering Course
 - <thumbnail>
 - <description>
 - <keywords> critical theory, antiracism, systems architecture, intersectionality, teaching
- ECJ Community of Practice (Fireflies)
 - <thumbnail>
 - <description>
 - <keywords> critical theory, systems architecture, environmental justice, climate justice, intersectionality, climate tech, net zero, policy, teaching, community
- Policy
- Environmental + Climate Justice
- Self determination

- Communities + Collectives
 - Atomic Terrain
 - <thumbnail>
 - <description>
 - <keywords> critical theory, environmental justice, climate justice, nuclear, policy, intersectionality, art, tarot, design, storytelling, narrative, community
 - MIT Solve: Indigenous & Antiracist Innovators
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 - <description>
 - <keywords> community, environmental justice, climate justice, antiracism, innovation studies, self determination, design, frontline communities, indigenous
 - Racism and the Origins of the Atomic Bomb
 - <thumbnail>
 - <description>
 - <keywords>
 - Antiracism & Technology Design Seminar Series
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 - Research to Policy Engagement
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 - <keywords>
- Nuclear
- Innovation
- Energy/Infrastructure

PRESS <u>ninalutz.github.io/words.html</u>

Podcast

Panels

PUBLICATIONS