



# HCI, Mobility Justice, and Migration in the Face of Climate Crisis

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## ABSTRACT

This one-day in-person workshop invites together scholars from the CSCW community with expertise in immigration and displacement, climate change and sustainability, and/or mobility justice to consider the challenge of climate migration and how we, as a community, might respond. We draw from previous workshops on migration and displacement in CSCW and HCI, as well as draw in researchers from other related areas, e.g., ICTD, development scholarship, and sustainability sciences. In this workshop, participants aim to engage in an array of activities such as concept mapping, archival creation, research proposal ideation and presentations. Outcomes will include the development of a community of scholars working at the nexus of these crises, common understanding of relevant concepts and themes, and a shared research agenda to guide future work.

## CCS CONCEPTS

• **CSS Concepts Human-centered computing** → **Collaborative and social computing systems and tools.**

## KEYWORDS

Climate change; Migration; Climate justice; Refugees; Sustainable HCI; Datafication; Mobility justice

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## 1 BACKGROUND

Concerns about climate change continue to grow, impacting many areas of our research and practice. Scholars in the fields of CSCW and HCI have produced important research on topics related to migration and displacement [2, 6, 8, 12, 14, 17–20, 25–27, 29, 33, 34]. Workshops in the past have also sought to understand datafication and the digitization of migrant information and its effects on the everyday lives of refugees and asylum seekers [24]. Similarly, sustainable HCI has considered the issue of climate change for over a decade [7], but there has been increasing attention from other parts of the field, including science communication, ICT4D, speculative design, and participatory futuring, facilitating more interest and a broader suite of theoretical and methodological approaches [9, 16]. Research between climate and the bureaucratic and technical apparatus that surrounds immigration is limited, necessitating not only more attention to the needs and experiences of vulnerable communities [1, 28], which includes many climate migrants, but also advocacy for computing work on climate justice.

The Institute for Economics & Peace estimates that over 1.2 billion people may be displaced as a result of climate change by 2050 [10]. If these estimates are correct, it will be the largest migration event in human history, unsettling much of the world's population as well as their cultures, relationships to land, and political

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and economic systems. Climate-induced migration—where people leave their local environments due to climate risks and impacts—is affecting communities around the world [11, 30].

While climate-related disasters continuously drive people to move as climate migrants and have subsequently displaced people as climate refugees, a recurring challenge is that the term “climate refugee” does not have an agreed-upon legal definition [3, 21]. Thus, climate refugees are not an official status protected under international laws or the 1951 Refugee Convention which covers people fleeing on the grounds of their protected class, identity or political opinion [5]. This often puts climate migrants in uncertain legal positions, unauthorized to claim the protections afforded to those with refugee status [13].

At present, international bodies have set strategic goals to reduce climate change emissions, and affluent countries are financing low- and middle income nations affected by climate-driven disasters [22, 31]. However, there is unclear consensus on affluent countries’ interests, rights, and responsibilities to the resettlement of people in increasingly inhabitable regions.

Complexities related to defining climate migration may also arise from the diverse ways in which climate change can recourse people’s mobility. While individuals displaced by climate disasters like fires or floods may readily be seen as climate migrants, more people are likely to be impacted by food, livelihood insecurity, political instability to which climate change is an indirect contributor [32]. These pervasive narratives will continue to be challenged as the impacts of climate change accelerate, forcing international law, human rights, immigration and border-control systems to reevaluate current assumptions about the governance of human mobility [4, 15]. Such a reckoning will be particularly necessary given that the people who are predicted to be most impacted are generally those that have contributed the least to climate emissions [23]. These nuances demand careful and critical attention of the sort which CSCW scholars have undertaken with other marginalized populations. The specific challenges raised by climate migration are of broad interest to numerous contemporary CSCW concerns. As a result, workshop themes may include:

- Infrastructuring collaborative technologies for climate migrant communities: resource sharing, mutual aid, diaspora connections
- Data justice: participatory data governance, data colonialism and sovereignty
- Legal informatics: refugee rights, immigration policies, border technologies
- Environmental racism and climate (im)mobility: intersections of race, caste, and class displacement with the datafication of migration
- Online communities and crisis informatics: information flows, crisis response, and resilience
- Intersections with labor, disability justice, digital inclusion and other social justice domains

Audiences for the workshop include:

- HCI and migration scholars concerned with how climate change may impact their field

- Sustainable HCI or social justice researchers seeking to better understand the intersections between climate change and migration
- Mobility justice or public policy researchers interested in connections between climate change or migration and their work
- Measurement researchers who study the flow of people, flow or weather-related events

## 2 WORKSHOP OUTCOMES

The desired outcomes for this proposed workshop are:

- (1) Develop a network of scholars who are critically analyzing the ways climate change and migration apply to CSCW and HCI
- (2) Create a climate migration literacy toolkit that considers existing definitions and frameworks from migration and climate change research
- (3) Digitized workshop artifacts (e.g. interactions article, archive creations) to make available on the workshop website for greater comprehension

## 3 PRE-WORKSHOP LOGISTICS

The workshop will be held in person only. This decision is based on the workshop’s goal of establishing a necessary community infrastructure that allows participants to fully participate in the brainstorming process. The organizing team will purchase necessary supplies (markers, pens, paper) and be in charge of the day’s logistics (tech support, hosting, etc). Given participants’ approval, portions of the workshop materials will be made available on the workshop website, in addition to any resources required, which will be shared via Discord.

### 3.1 Workshop Website

All workshop-related information will be available on our website. This includes workshop description, application details, and call for submissions. For more information, visit the workshop website at: <https://sites.google.com/view/climatemigrationcsw/>.

### 3.2 Recruitment

We hope to bring together 30 people (excluding the organizers) for the in-person workshop who are eager to use knowledge on climate change and migration in their work. The workshop will be promoted through mailing lists (e.g., CHI Announcements, Sustainable-SIGCHI), social media channels (e.g., SIGCHI Discord, CHI Meta), and the organizers’ international and multidisciplinary networks.

### 3.3 Call for Participation

We welcome participants’ work that engages with the workshop’s themes critically and creatively. Submissions can take various forms, including but not limited to:

- (1) **Video or audio narratives (up to 5 minutes)**
- (2) **Position papers (max 2 pages):** proposing a particular idea, argument, framework or approach related to the workshop themes

- (3) **Multimedia submissions:** Photo essays/visuals, zines, illustrated pieces, interactive web-based experiences etc. that creatively engage the workshop themes
- (4) **Possible Interventions:** speculative design, technologies you are working on

Interested participants are asked to submit a brief statement of interest, 500 words max, along with their multimedia work, creative pieces, or position papers in single-column ACM template format by Aug 16, 2024 AoE. All submissions should include a brief contextual description, 300 words max, reflecting on participants' research and collaborative work experiences. A seeking participant should ask themselves - how does my work connect to the themes of this workshop?

Potential topics may include:

- (1) Climate change as a widely discussed but poorly understood contributor to migration decisions, with impacts on migrants journey and arrival in their destinations
- (2) The lack of official recognition of climate refugees and its impacts on immigration technologies and pathways
- (3) The role of data and algorithms in the resettlement processes of climate migrants. How the artificial intelligence (AI) systems are or could be used to track, surveil, or predict migration account for climate change
- (4) Ethics related to the use of synthetic data in migration forecasting and migration relief planning
- (5) How migrant diasporas use ICTs spread to information and awareness about climate change impacts and migration experiences around the world
- (6) Socio-technical approaches and systems to support resettlement organizations cope with the unique challenges posed by climate migration
- (7) Tools for mutual aid, remittances, and other forms of collective support to climate migrants
- (8) Impacts of climate change on working conditions and safety of migrant workers

The organizers will assess the submissions based on its relevance and potential for critical discussion. We especially welcome submissions from underrepresented voices in HCI, such as those from varied ethnic and gender backgrounds, as well as those linked with institutions and geographical regions outside of the traditional HCI hubs. Accepted submission will be notified by Aug 23, 2024. They will be published on the website and featured during the workshop sessions. We are committed to fostering a diverse and inclusive discussion, which will include asking participants how we can best assist their participation prior to the workshop via email questionnaire to enable their desired engagement.

## 4 WORKSHOP STRUCTURE

The workshop's main components include introductions, a local keynote speaker, an icebreaker, concept mapping, archival creation, research proposal ideation and presentations. More detailed information will be found on the workshop website.

## 5 POST-WORKSHOP PLANS

This workshop will establish and nurture collaborations among CSCW and HCI researchers interested in climate justice and migration research. After obtaining participant consent will we develop some additional artifacts (a list of fellow participants' names and written discussion notes) that can be used to support further communication between participants and development of the research community. To share the results of the workshop, we will also co-author an Interactions article summarizing the workshop findings.

## 6 ORGANIZERS

**Louisa Kayah Williams** is currently pursuing a doctoral degree at the University of Michigan School of Information. Her research explores digital infrastructures as it relates to the geopolitical movement of migrants. Her interests in climate change centers around the role system classifications play in shaping immigrants' experiences.

**Rayan Awad Alim** is a Computer Science and Bioinformatics student at the University of Toronto, specializing in Human-Computer Interaction. Her research interests lie in climate change, migration, and the datafication and use of AI systems in socio-economic contexts.

**Vishal Sharma** is a PhD Candidate in the School of Interactive Computing and Graduate Fellow at the Brook Byers Institute for Sustainable Systems at Georgia Institute of Technology. His research draws from HCI, sustainability, and development scholarship to study the design and use of sociotechnical systems to support sustainable development beyond capitalist logic.

**Reem Talhouk** is an Assistant professor in Design and Global Development. Her research encompasses topics at the intersection of technologies, migration, activism and decolonial design. She has more recently begun exploring the design of technologies for climate action and migration.

**Marisol Wong-Villacrés** is an Associate Professor in Computer Science at the Escuela Superior Politécnica del Litoral. Her research lies at the intersection of assets-based technology design approaches, migration families, and infrastructures—including non-profits, sustainable cities, and data.

**Lynn Kirabo** is the Maria M Klawe Assistant Professor of Climate and Computer Science at Harvey Mudd College. She teaches courses at the intersection of Human-centered design and climate change literacy. In her research, she leverages qualitative and design research methods to investigate transportation and climate action equity across geographical communities, focusing on the lived experiences of disabled people.

**Tajanae Harris** is an Information Science Ph.D. candidate at the University of Colorado Boulder. Her research centers community-led data practices on issues of Environmental Justice and Climate Justice in communities of African, Latinx, Asian, and Native American descent as they push towards futures that are healthy and equitable for all living beings.

**Dipto Das** is a Ph.D. candidate in the Department of Information Science at the University of Colorado Boulder. He is interested in human-computer interaction and social computing. In his doctoral research, he studies how colonially marginalized and indigenous

communities decolonize their identities amid the coloniality of computing systems.

**Carleen Maitland** is Professor and Associate Dean for Research and Graduate Affairs at Penn State University. She researches data and information systems in UN-led migration crisis response.

**Bryan Semaan** is an Associate Professor and the chair of the Department of Information Science at CU Boulder. His research explores how people draw on sociotechnical systems to build resilience or where sociotechnical systems might create vulnerability. He has explored migration in the context of displacement as caused by war.

**Syed Ishtiaque Ahmed** is an Assistant Professor of Computer Science at the University of Toronto. He has been working with refugees and immigrants in Bangladesh, Canada, USA, Iraq, Iran, Turkey, and Ecuador for more than 10 years with a focus on making computing technology fairer, accessible, and meaningful for them.

**Robert Soden** is an Assistant Professor in Computer Science and the School of the Environment at the University of Toronto. He draws on critical perspectives from design, the humanities, and the social sciences in order to evaluate and improve the information systems used to respond to environmental challenges, including disasters and climate change. Robert leads the Toronto Climate Observatory.

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