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The Future of Work in Mobility and Transportation

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This workshop aims to bring together researchers and practitioners interested in the future of work and the domains of mobility and transportation. Transportation used to be a means to get to and from work. However, three trends give grounds to reconsider the intersection of work with mobility and transportation: (1) People are changing where they work, including when on the move (e.g., on the train, plane, or even in their car and while walking), (2) Those for whom transportation was part of their job are experiencing changes due to the availability of more technology (e.g., cab/truck/train drivers, first responders, delivery couriers), and (3) People who work to ensure that others keep moving (e.g., train planners, urban planners) face more diverse types of transportation and technical support that changes their work. In this workshop, we will exchange ideas with participants interested in the intersection of (the future of) work and mobility and transportation. The goal is to stimulate community-driven bottom-up initiatives about how (the future of) work reshapes the mobility and transportation domain.

1 Motivation

Transportation and work are intertwined: workers use transportation to get to work; for many using transportation is part of their work; and many others work to create and maintain transportation networks that support work, and mobility in general. Mobility and transportation also have their own communities inside and outside ACM SIGCHI (e.g., AutomotiveUI, MobileHCI). However, due to the connections between transportation, mobility, and work, many members of those communities also attend CHIWORK. In this workshop, we want to strengthen this community by providing a platform to share ideas and make connections.

Work in mobility and transportation is changing in three ways. First, people are changing where they work, including when on the move. Working while being driven on a bus, metro, train, ship, or plane is already common practice.

However, those who have ever worked on their laptop while seated in economy class on a plane while the passenger in front of them has their seat reclined know there is still much that can be improved in the design (and therefore, HCI) for work in public transportation. Other forms of mobility, such as cars, are also becoming spaces where people want to do some work (e.g., [8, 12]). As automation increases, the car might become a "mobile office" [1, 3, 9]. Even when people are not doing direct work while traveling, they might already use the travel time to (mentally) prepare for work, or unwind from work (e.g., [7, 12]). Similarly, there is an interest in working while walking, for example, taking part in online meetings [2]. Furthermore, people are reconsidering whether they want to travel at all to work, and if so: how. They might do this in consideration of sustainability [10] or because a remote or hybrid meeting might also suffice, and avoiding commuting saves a great deal of time [4]. If people commute less often, at the times where they do, they might use different forms such as car sharing or ride sharing. But how does one tailor such shared mobility forms to one's personal (work) needs? Moreover, shared forms might pose questions about privacy, and impose other constraints on what can and cannot be done (e.g., an online meeting versus quiet work).

Second, those for whom transportation was already part of their job are experiencing changes due to the availability of more technology. This group contains workers such as cab drivers, truck drivers, bus and train operators, first responders, and delivery couriers. Technology is changing what information they have available before, during, and after their drive. Part of the change is in increased connectivity. Another part is in ways that HCI can allow these workers to access data while traveling (see e.g. [5]).

Third, work is changing for those who work so others can move smoothly. These are the people that, for example, plan schedules for train and bus drivers or airline pilots, or those that design the public space to accommodate the needs of travelers. For example, municipalities have started to use urban digital twins (virtual simulations of city traffic) to (re-)design the public space to allow smoother flow of traffic and to anticipate unsafe crowded areas. The technology allows them to consider the impact of a wider variety of potential area designs. HCI opportunities lie in having better models of underlying human behavior [6] and better forms to consider design alternatives and their impact. Another example is the operation of large infrastructures, such as bridges and locks, which is being done more remotely. Here, HCI opportunities lie in gaining a better understanding of how operators conduct such complex tasks [11] and how to redesign interfaces or training to accommodate operator needs.

To summarize differently, three different groups of workers are experiencing changes in mobility and transportation: (1) The 'regular' commuter who works more and on different forms of transport (e.g., in cars, walking), (2) Workers for whom travel is an integral aspect of their work, and (3) Workers whose work ensures that other people can keep moving. Each group faces its own HCI challenges and opportunities.

1.1 Workshop goals

Our workshop has the following goals:

(1) To create and strengthen a forum for researchers interested in the future of work in mobility and transportation.
(2) To discuss state-of-the-art research in these fields, including theoretical, design, and methodological perspectives.
(3) To identify challenges and opportunities for this diverse community, including opportunities for collaboration.

1.2 Topics of interest

To facilitate the goals, we have identified a range of topics that we think speak to relevant members of the CHIWORK community interested in mobility and transportation. Position papers by attendees could, for example, focus on:

- What is appropriate work during (personal) travel? And how can this be made effective and satisfying?
- How does this differ between transport modes? (e.g., car, bus, train, tram, plane, walking)?
- What are the HCI challenges and opportunities for workers for whom transportation is an integral part of their work? For example, cab drivers, delivery services, truck drivers, operators of trains and buses, first responders?
- What are the HCI challenges and opportunities for those who work such that others can travel smoothly? For example, planners of (public) transportation and those that design the public environment?
- How does the intersection of (the future of) work with mobility and transportation impact science, society, and technology at large?
- What are other relevant topics to consider regarding the future of work in intersection with mobility and transport?

2 Workshop mode & activities

The workshop will have two meetings: (1) An in-person half-day meeting at CHIWORK, to make the most of physically being together, (2) a follow-up virtual meeting open to the wider community (incl those that could not make it to CHIWORK) to delve deeper into topics that were identified at the workshop. A rough schedule for the in-person workshop is in Table 1. The workshop has an (ice-breaker) introduction aimed at getting all participants involved, followed by a brief introduction to the theme by the organizers. There are then three main sections, each with roughly 45-60 minutes dedicated to the activity and subsequent plenary discussion:

(1) Short (5-minute) Pitches of position papers. The pitch session has three goals: (1) to provide a platform for (junior) participants to present themselves and their work and to make easier connections with others, (2) to gain feedback on ongoing research, and (3) to gather input on emerging themes for later discussion.
(2) World café style discussion of emerging research challenges and opportunities. Themes will be decided upfront by the organizers based on the challenges (see section 1) and the submitted position papers. For each theme, the central brainstorming question is "what are (research or practical) challenges and opportunities in this area?".
(3) A speculative design session, where participants need to envision (in small groups) for a future scenario of work in mobility and transportation what can go wrong ("black mirror") or what can go right ("light mirror").

These formats were chosen as they facilitate interaction between participants in rotating groups, aiding our goal of community forming. Moreover, they speak to different subgroups of the community: those who want to present, those who want to brainstorm about design or theory, and those who want to speculate about future scenarios and their implications. The workshop organizers have extensive experience with these formats from previous workshops they organized. The wrap-up will focus on the main insights of the day and on how to move forward: what will be discussed during a follow-up online meeting(s) and other potential next activities (e.g., workshops at other venues, special issues).

3 Call for Participation

This workshop brings together researchers and practitioners who are interested in the future of work and the domains of mobility and transportation. Transportation used to be a means to get to and from work. However, its intersection with work has changed in three ways: (1) Work is done more 'on the move' (in trains, planes, cars, walking), (2) Those for whom transportation was part of their job are experiencing changes due to the availability of more technology (e.g., cab/truck/train drivers, first responders, delivery couriers), and (3) People who work to ensure that others keep moving (e.g., train planners, urban planners) face more diverse types of transportation and technical support that

Table 1. Proposed schedule of in-person workshop (assuming 4 hours)

From	To	Content
0:00	0:30	Welcome, introduction participants (ice-breaker), and introduction theme
0:30	1:15	Presentation of pitches by those who submitted position papers
1:15	1:30	Break
1:30	2:15	World Café style discussion of emerging research themes
2:15	2:30	Plenary discussion of emerging themes
2:30	2:45	Break
2:45	3:30	Speculative design of future scenarios (black/white mirror)
3:30	3:45	Reporting back speculative design
3:45	4:00	Wrap-up and planning of follow-up (online) event

changes their work. In this workshop, we will exchange ideas with participants interested in these and other topics using three interactive formats: pitches of position papers, brainstorming of (research) challenges and opportunities, and speculation of future (black/white mirror) scenarios. The goal is to create a strong community, and to stimulate community-driven bottom-up initiatives about how (the future of) work reshapes the mobility and transportation domain. Participants are encouraged (but not required) to submit a position paper via our website by June 1st, 2025. Position papers will be published publicly via ArXiv. At least one author per position paper is required to attend the workshop and 1 day of the conference. After the conference, we will hold an online follow-up with attendees and others interested in the domain to broaden the community. The topic will be determined during the workshop. For more details, visit: www.cpjanssen.nl/CHIWORK2025Mobility.

4 Plans to Publish Workshop Proceedings

All submitted papers will be shared with participants and bundled in online proceedings via ArXiv.

5 Organizers

Christian P. Janssen is an associate professor of Human-AI Interaction at the division of Experimental Psychology of Utrecht University, the Netherlands. He is also co-coordinator of Utrecht's Future of Work platform and of the Dutch National (ICAI) lab on AI & Mobility. He is a.o. steering committee member of ACM Automotive-UI, past subcommittee chair of CHI (understanding people), senior editor for IJHCS, and associate editor for HCI journal.

Susanne Boll is a professor of Media Informatics and Multimedia Systems at the University of Oldenburg, Germany, and a member of the executive board of the OFFIS Institute for Information Technology. She has been Program and General Chair for several international conferences and is a member of the editorial board for IEEE Multimedia Magazine and ACM Multimedia Tools and Applications. She is steering committee member of CHIWORK.

Andrew L. Kun is a professor of electrical and computer engineering at the University of New Hampshire. He is co-chair of the CHIWORK Steering Committee, senior editor for IJHCS, and associate editor for IEEE Pervasive and for the HCI Journal.

Orit Shaer is a professor and co-chair of Computer Science at Wellesley College. She has served on the program committees of a.o. ACM CHI, CSCW, UIST, and TEI conferences, and the editorial board of ACM Transaction on Computer-Human Interaction (ToCHI) and Foundations and Trends in Human Computer Interaction. She is a member of the CHIWORK Steering Committee.

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