2nd International Workshop on Ubiquitous Computing for Vulnerable Road Users (UbiComp4VRU 2026)

In conjunction with

2026 ACM International Joint Conference on Pervasive and Ubiquitous Computing, October 11-12, 2026, Shanghai, China.

Active mobility, such as cycling and walking, is an important part of a sustainable transportation system in the city of tomorrow. However, traffic accidents, especially those involving vehicles, are the number one cause of death worldwide for children and young adults. Road safety is an essential key to successfully promoting active mobility.

Thus, the proposed workshop will explore the road safety challenges for cyclists, pedestrians, and e-scooter drivers (i.e., vulnerable road users (VRU)) by sensing human activity, developing new technical applications, ubiquitous sensors, and AI algorithms to motivate to cycle and walk and to create a sustainable transportation system in the city of tomorrow. We invite to this workshop unique contributions addressing these challenges. UbiComp4VRU 2026 aims to facilitate collaboration among research groups working on these topics.

Topics of interest include, but are not limited to the following areas:

- HCI designs that effectively support decision-making for VRUs, particularly in interactions with autonomous vehicles, smart bicycles, scooters, and intelligent infrastructure
- Requirements for AI-driven safety systems for VRUs
- Simulation tools capable of accurately modeling complex human behavior, environmental variability, and edge cases of real-world traffic scenarios, enabling reliable evaluation of safety-critical systems prior to real-world deployment Human Activity Recognition of VRUs
- Machine learning and context modeling for pedestrians and bicyclists
- Ubiquitous, pervasive, and wearable computing
- Technical infrastructure measures
- Targeted training programs for cyclists and pedestrians
- Sensing and modeling of VRU behavior
- Sensor requirements and performance analysis for VRU safety
- Intention, trajectory, and behavior prediction of VRUs
- Novel applications, sensors, and wearable devices motivating to cycle or walk
- Mobile data measurement and collection platforms for active mobility
- Theory, experimental design, computational models, algorithms, and evolutionary investigation in VRU safety
- Active activity representations and signal characteristics
- Legal, ethical, psychological, and normative aspects of active mobility, VRU safety, and sustainable transportation systems
- Privacy issues
- Development and embedding of new sensors and devices for VRUs
- Active mobility (e.g., walking and cycling)
- Resilient sustainable environment
- Communication and sensing
- Car2VRU architectures, applications, and use cases
- Car2X, Car2VRU (Car2P, Car2B) communications
- Analysis of latency, overhead and message frequencies for Car2VRU communication
- Localization, trajectory prediction, and GNSS improvements
- Ultra-reliable and low-latency communications (URLLC)
- Mobile edge computing (MEC)

Important Dates

Extended submission deadline: July 2nd, 2026
~~Paper submission deadline: June 26th, 2026~~
Paper notification: July 17th, 2026
Camera Ready Deadline: July 31st, 2026

Workshop Policies

- The workshop will be affiliated to UbiComp / ISWC 2026, to be held in Shanghai, China.
- Each accepted workshop paper requires at least one author attending the workshop and UbiComp/ISWC 2026 in-person.
- Workshop papers will be included in the UbiComp/ISWC Adjunct Proceedings, which will be included in the ACM Digital Library as part of the UbiComp conference supplemental proceedings.
- The correct template for submission is a double-column Word Submission Template or a double-column LaTeX Template. **The maximum paper length is 6 pages, including references**. Please see https://www.ubicomp.org/ubicomp-iswc-2026/iswc_author_guide/ for more details on submission format and templates.
- Submit your papers via PCS https://new.precisionconference.com/submissions

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For more information, please visit: https://www.comtec.eecs.uni-kassel.de/ubicomp4vru-workshop/