Call for Papers

2nd ACM SIGSPATIAL Workshop on Sustainable Urban Mobility (SUMob 2024)

The Workshop on Sustainable Mobility at the ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems is dedicated to lifting the conventional discussion on improving urban mobility services to their actual impact on the complex system of access in a city: towards a thorough discussion of impact statements, studies of adversarial consequences of improvements, and approaches to study life-cycle assessments of any intervention in mobility services.

Mobility and accessibility are central prerequisites for social integration and participation, exchange, employment and prosperity in our cities. And yet, motorized urban transport is known to be a major contributor to emissions (greenhouse gases, particles, noise), resource and space consumption, segregation of activities, decline of liveability, and for its propensity to encourage a more passive lifestyle.

Thus, there is a long-recognized need to shift urban mobility worldwide towards sustainable solutions, beyond only emission targets. Yet, this shift is often studied for mobility modes or mobility systems in isolation. But they are part of the social, environmental, and economic fabric of the city, and only systems thinking will lead to significant breakthroughs and progress towards sustainability.

Sustainability is often aimed at by *avoid*, *shift*, *reduce* principles. With regard to urban mobility, which is a derived demand, a number of factors impact these three principles: Those addressing the urban fabric and common infrastructure – e.g., urban planning, transport engineering, traffic management, – and those addressing individual behavior and culture, guided by, e.g., costs, incentives, and other regulations. Each of these factors raise questions relevant to our computational community:

- Which interventions to avoid, shift, and reduce can make basic functionalities of life accessible for all people with less or no motorized trips?
- And where basic functionalities are already accessible, such as in dense urban areas, which regulatory interventions can support a behavioral shift to more local lifestyles?
- And how can any of these interventions be assessed for its impact at system scale?

This is a domain of spatial and spatiotemporal simulation, data analytics, and prediction.

Topics of this workshop include, but are not limited to:

- Make real costs of mobility transparent, including its impacts across other sectors (e.g. energy, environment, logistics, public health)
- Explore and assess environments that support sustainable mobility (e. g., 15 min centers)
- Investigate and quantify transport fairness
- Explore the impact of new forms of information (e.g., mobility carbon budgets, transport options)
- Investigate how to substitute personal motorized trips in areas lacking supply with (some) basic functionalities

- Elicit decisive parameters for route or mode choice to nudge travelers to a more sustainable behavior
- Assess sharing principles (e. g., car sharing, ride sharing) and its integration with mass transportation for their system-wide impact
- Manage distribution of traffic in favor of active mobility or shared mobility at the expense of individual motorized traffic
- Explore alternative concepts for urban logistics
- Extend single-mode optimizations taking system-wide sustainability into account (changing demand, land use, environment, waste, energy, logistics)
- Devise decision support tools, methods and data analyses to support sustainable policy making

Dates

- Workshop: October 29, 2024 (first day of the ACM SIGSPATIAL 2024 Conference)
- Paper submission deadline: August 30, 2024
- Notification date: September 20, 2024
- Camera ready: September 27, 2024

Paper Format

We invite full research papers (limited to 10 pages plus references), short research papers (4 pages), data papers (4 pages), and vision papers (2 pages) on sustainable urban mobility. All these papers will undergo peer review, but vision papers are only considered for discussion and will not be published. A data paper should present a publicly accessible data set and the circumstances of the collection of the data, possibly with tools to read or use the dataset to make it more findable, accessible, interoperable and reusable. The alternative forms to a full research paper are actively encouraged since the workshop aims for active participation and broad discussion, e.g., in breakout groups.

Manuscripts should be submitted in PDF format and formatted using the ACM camera-ready templates available at http://www.acm.org/publications/proceedings-template, applying the Conference Proceedings Primary Article template with two-column format. Submissions are single-blind, i.e., the names and affiliations of the authors should be listed in the submitted version.

Submissions that do not follow the page limit or formatting requirements will be desk rejected without any technical reviews.

Submissions

All papers should be submitted through EasyChair using the following link:
https://easychair.org/conferences/?conf=sumob2024

Based on the evaluations from the reviewers, the Program Committee may recommend that certain papers are invited for presentation and discussion at the workshop but not be published in the workshop proceedings.

Program Committee

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Workshop Chairs

- Stephan Winter, The University of Melbourne, Australia (winter@unimelb.edu.au)
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