Proposed Title: Workshop on Equitable Accessibility and Sustainable Mobility (EASM ‘23)

Workshop Organisers

- Grant McKenzie, McGill University, Canada
- Alessia Calafiore, University of Edinburgh, United Kingdom
- Andrea Ballatore, King’s College London, United Kingdom
- Henrikki Tenkanen, Aalto University, Finland
- Rafael Pereira, Institute of Applied Economic Research, Brazil
- Christoph Fink, University of Helsinki, Finland
- Vanessa Bastos, University of Canterbury, New Zealand

Format of Workshop

- Half Day (See note in ‘Highlights’ about sister-workshop)

Previously Related Activities

While not directly related to the topic, we have organised a range of successful events, previously:

- Workshop on Mobility Data in Urban Science (Geographic Data Science Lab - Alan Turing Institute, 2021)
- Workshop on Ethics in Platial Research (Platial Symposium 2021)
- Spatial Data Science Symposium (2019, 2021, 2022)
- Location Privacy and Security Workshop (GIScience 2018)
- Workshop on Open tools for large-scale spatial accessibility analysis in Python and R (Center for Advanced Spatial Analysis - UCL, 2022)

Description

As the global population is increasingly experiencing the consequences of climate change, awareness of the pressing need for research in GIScience that promotes sustainability is growing. Decarbonising transport and promoting the integration of a wide range of sustainable mobility options is key for net-zero transitions in cities and a recommended intervention in the United Nations New Urban Agenda.

In the past decades, researchers have been using data-driven (and theory-informed) techniques to investigate many of the issues related to accessibility and mobility that hinder a more sustainable transport system, such as level of access to destinations, walkability, bikeability, availability of micro-mobility or shared-transport options among others. While the potential of geospatial data science to uncover accessibility and mobility patterns in cities has been demonstrated, advances in how the environmental, economic and social dimensions interact in the context of sustainable cities, remain. Ensuring equitable accessibility and mobility justice is critical to develop effective and widely acceptable net-zero policies and therefore fundamental to bring about long lasting changes and prevent conflict.

This workshop aims at bringing to the forefront discussions on how advances in geospatial data science can be leveraged to promote a development that balances social, economic and environmental sustainability in transport and mobility to build more equitable neighbourhoods and sustainable communities. This may include new methods and technologies as well as applying existing geospatial technique to uncover how inequalities affect accessibility and mobility based on i.e. gender, income, race etc. Given the interdisciplinary nature of this topic, the workshop welcomes contributions by researchers coming from a wide range of backgrounds in a format that involves both short presentations and guided discussions.

Highlights

This workshop is very well aligned with this year’s theme of disrupting society as it favours discussions on how data and urban data science can be used to provide robust and trustworthy evidence to plan for more a sustainable future in cities. This is one of two *sister* workshops, the other being the *Workshop on Open Tools for Equitable and Sustainable Accessibility and Mobility Analysis*. We see these two events complementing one another as this event takes a more academic, presentation, and discussion approach to the topic, where as the sister-workshop takes a more applied, hands-on, approach to the topic. The reason that we are not proposing a single full-day event, is that we acknowledge that some participants may only be interested in one piece of this larger topic. In reviewing this proposal, we request that the committee consider this workshop for a morning session to be held in the same room as the proposed workshop on *Open Tools for Equitable and Sustainable Accessibility and Mobility Analysis* in the afternoon.

APPENDIX

Program Structure

- First Half:
  - Welcome and Introductions
  - Presentations by authors of accepted papers (~10 mins each)
  - Lightning talks from participants (~2 mins each)
- Second Half:
  - Discussion (led by a series of directed questions and problem statements)
  - Closing, Report, and Next Steps

Timeline

All deadlines may be pushed by a week if necessary

- Submission deadline: July 7
- Reviews due: July 28
- Notifications: August 4
- Camera-ready deadline: August 18
- Workshop: September 12

Expected number of participants

- 20-30

Technical equipment required

- Projector and screen, Tables for small group discussions

Method of Participation

GIScience conference participants (and those external to the conference) are invited to participate in a number of ways. 1) Through submission of short papers and/or abstracts and 2) Through active participation and discussion.

Short papers (1500 - 4000 words) will be reviewed by at least two peers and abstracts (200-500 words) by at least one peer. Authors of accepted short papers will be invited to give a 10 minute presentation during the workshop with authors of abstracts invited for 2 minute lightning talks. All participants that register with the workshop will be highly encouraged to participate through submission of an abstract (at least).

After presentations, a set of discussion questions will be posted/distributed amongst the participants. Half of the workshop time will be dedicated to directed discussion on these questions/prompts. The goal of these questions is to spur discussion on issues, solutions, and next steps. At least one organising member will take notes.

A workshop report will be generating and we will aim to revise the notes and discussion into a vision paper of sorts. The accepted papers, abstracts, and report will be stored in, and shared through, an Open Science Foundation repository with a dedicated volume DOI.

Draft Call for Participation

Workshop Overview

Scope

As the global population is increasingly experiencing the consequences of climate change, awareness of the pressing need for research in GIScience that promotes sustainability is growing. Decarbonising transport and promoting the integration of a wide range of sustainable mobility options is key for net-zero transitions in cities and a recommended intervention in the United Nations New Urban Agenda.

In the past decades, researchers have been using data-driven (and theory-informed) techniques to investigate many of the issues related to accessibility and mobility that hinder a more sustainable transport system, such as level of access to destinations, walkability, bikeability, availability of micro-mobility or shared-transport options among others. Furthermore, interest in integrating the spatial dimension into data science methods to deal with the variety, velocity and volume of big urban data has experienced explosive growth.

While the potential of geospatial data science to uncover accessibility and mobility patterns in cities has been demonstrated, advances in how the environmental, economic and social dimensions interact in the context of sustainable cities, remain. Ensuring equitable accessibility and mobility justice is critical to develop effective and widely acceptable net-zero policies and therefore fundamental to bring about long-lasting changes and prevent conflict.

This workshop aims at bringing to the forefront discussions on how advances in geospatial data science can be leveraged to promote a development that balances social, economic and environmental sustainability in transport and mobility to build more equitable neighbourhoods and sustainable communities. This may include new methods and technologies as well as applying existing geospatial techniques to uncover how inequalities affect accessibility and mobility based on i.e. gender, income, ethnicity etc. Given the interdisciplinary nature of this topic, the workshop welcomes contributions by researchers coming from a wide range of backgrounds in a format that involves both short presentations and guided discussions.

Objectives

The objectives of the event are: 1) Provide a platform to discuss both the socio-economic and environmental aspects of sustainability in cities, with a specific focus on equity, accessibility and mobility; 2) Identify the main data-related, methodological and theoretical challenges researchers face when tackling sustainability from a holistic perspective. 3) Facilitating new collaborations within the GIScience community.

Workshop Themes

We invite submissions of **short research papers (1500-4000 words)** or **abstracts (200-500 words)** that describe new research ideas aligned with the general theme of the workshop of equitable and sustainable accessibility and mobility. All papers and abstracts will undergo peer-review with accepted papers being published online with a volume DOI (outlet to TBD). Submissions on a variety of topics are welcome including, but not limited to:

- Spatial and equity analysis of accessibility
- Mobility justice and sustainability
- Equity considerations on micromobility and shared mobility
- Sustainable mobility and gender
- Accessibility and sustainable mobility for an ageing society
- New forms of data for the analysis of inequalities and sustainable mobility
- Data bias and sustainable mobility analysis
- Exploring the relationship between accessibility and active travel
- Travel modes and new forms of mobility data
- Inequalities in walkability or bikeability
- Equitable urban design
- Sustainable urban vitality and urban vibrancy

Submission Guidelines

Submissions of **short research papers or abstract in a PDF format** should be directly uploaded to the workshop webpage and should follow the <TBD> format.

- Submission deadline: July 7
- Reviews due: July 28
- Notifications: August 4
- Camera-ready deadline: August 18
- Workshop: September 12

Workshop Format

This half-day workshop will consist of a first part with short presentation and lightning talks and a second part with groups discussion led by a series of directed questions and problem statements.

Participants are also encouraged to attend the *Workshop on Open Tools for Sustainable Accessibility and Mobility Analysis* which gives a more applied, hands-on, approach to the topic.