Proposal for workshops – AGILE 2024

Glasgow, Tuesday 4 June 2024

https://agile-online.org/conference-2024

1. Workshop name/title (and acronym is applicable)

Open data and methods for assessing active mobility options: Routing in the context of bikeability and walkability

2. Description of the workshop by listing topic(s), objective(s) and planned outcome(s)

2.1 Topic(s)

routing applications; bikeability and walkability of the road infrastructure; calculating bikeable and walkable routes; data-driven methods for sustainable planning support; open source software and open data

2.2 Objective(s)

- Foster knowledge exchange on open and reproducible methods and software in the context of active mobility
- Illustrate the potential and promote the joint use of openly available services (openrouteservice) and assessment models (NetAScore).
- Learn about currently anticipated issues and limitations with existing routing software and models for assessment of infrastructure suitability (e.g. bikeability indices) as perceived by users and developers, and develop ideas for future solutions.
- Discuss data-driven approaches in planning for sustainable mobility.

2.3 Planned outcome(s)

An outcome can be e.g., the publication of a report, a special issue of an International Journal, a white paper, a book, etc. If you already know the publisher, please provide this information as well. The workshop can also be a hands-on tutorial in which the participants are taught a new method or software relevant to one of the conference topics.
The intended outcomes of the workshop are twofold. First, participants will get a hands-on tutorial on current methods and software for assessing suitability of road infrastructure and routing services based on open data. Second, it is intended to use the outcomes of the subsequent discussion as a basis for a joint publication on the current challenges, opportunities and future directions regarding the assessment of active mobility using open data and software in the context of sustainable cities.

3. Abstract

This is how you want your workshop to be presented on the conference webpages (maximum 1000 characters)

Fostering active mobility, such as walking and cycling, is an integral part of sustainable cities. This workshop aims at bringing together researchers in this diverse field to learn about current methods and open software solutions as well as discuss current challenges and future research directions. To this end, the workshop will cover both technical and conceptual aspects. First, a practical hands-on tutorial will provide participants with an overview of how routing and network assessment technologies such as openrouteservice and NetAScore can be used to analyse the suitability of the road network for pedestrians and cyclists based on open data. In the second part, participants are invited to share experiences from their research, discuss current challenges and limitations and exchange perspectives on how methods and software need to develop so it can support the assessment and improvement of mobility spaces to facilitate a more sustainable future.

4. Short description of the intended length (half or full day) and the format of the workshop

Full day - in the morning we will do a more technical session with an introduction to routing services (in particular openrouteservice) and assessment of infrastructure for active mobility (with a focus on NetAScore). Both aspects will be combined in one joint routing exercise for deriving bikeable and walkable routes.

After lunch, the format will shift to moderated discussions where participants are invited to share their experiences with GIS-based approaches for investigating active mobility and discuss their perspectives on future directions of the field as well as requirements for methods, software and data to better support sustainable city planning.

5. Brief statement of the relevance of the workshop for AGILE

Many methods that provide data and information to support planning for sustainable mobility rely on bikeability- and walkability-based routing. Therefore, conceptual considerations as well as practical implementation of these core methods are highly relevant to support the transition to a sustainable future. We want to especially encourage
the use of open and transparent methods and software for best reproducibility and inclusivity.

6. What is the approximate number of expected participants?

15

7. Names and e-mail addresses of the organizing member(s)

**Leading AGILE member (or sponsor) and contact person:**

*University Heidelberg, Geographisches Institut, Chair of GIScience* - Alexander Zipf, Christina Ludwig (christina.ludwig@uni-heidelberg.de)

**Contributing AGILE members (including the persons involved)** – at least one seconding AGILE member is needed:

*University of Salzburg, Department of Geoinformatics - Z_GIS* - Christian Werner (christian.werner@plus.ac.at), Lucas van der Meer and Martin Loidl

**Contributing non-AGILE members (including the persons involved)** – if applicable:

*HeiGIT gGmbH* - Adam Rousell (adam.rousell@heigit.org)

**Organizing Committee (if applicable):**

**Programme Committee (if applicable):**

8. Additional information about previous workshops, if held.

Workshop “Centrality indicators for road network analysis: from concept to implementation” held by Christina Ludwig (UHEI) and Adam Rousell (HeiGIT) at the GIScience 2023 conference (Leeds, 12th September, 2023)

Workshop “NetAScore: Open Source Tool for Assessing Bikeability and Walkability based on OSM or GIP data” held by Christian Werner (University of Salzburg) at the GiSalzburg 2023 conference (Salzburg, 5th July, 2023)

9. Expected resources needed

Explain here if you have any special needs (e.g. internet connection, break-out room(s), etc.), what are the expected resources needed. Please take into account that the fixed fee for the workshop (1 day) only covers the basic expenses made (coffee breaks, ...). If you need additional support, this request should be directed towards the AGILE Council, but this support cannot be guaranteed.
- reliable internet connection (e.g. via eduroam WiFi)
- seating with tables for approx. 15 people (participants will be requested to bring their own laptops)
- if possible: pinboards and workshop material (paper stickers, markers and pins)

10. Other information

More information on the main software packages used can be found here:

- openrouteservice: https://github.com/GIScience/openrouteservice
- NetAScore: https://github.com/plus-mobilitylab/netascore

Submission by e-mail to:

Dr Qunshan Zhao: Qunshan.Zhao@glasgow.ac.uk
Or Dr John Xiaogang Shi: John.Shi@glasgow.ac.uk