

Active Micro-Mobility – Modeling Spatial Behaviour of Cyclists and Pedestrians

NECTAR Cluster 4 workshop

Lyon, France

16-17 March 2023

Call for papers

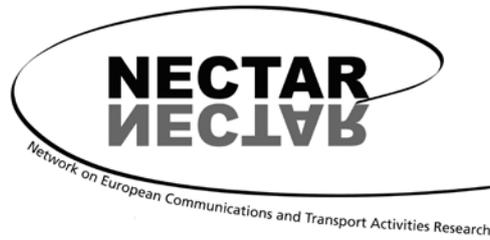
It is our pleasure to invite you to a workshop of NECTAR Cluster 4 (Travel, Migration, Housing and Labour Markets) and which will be held at the ENTPE – University of Lyon, France, the 16th and 17th March 2023.

Main topic

Scope:

Despite many recent disruptions in transportation systems caused inter alia by economic crises, pandemics and war situations, the current mobility development is still on a rising edge. This holds for transport movements at a metropolitan scale (e.g. big cities) and at a national scale (e.g. in emerging economies). This development jeopardises environmental and climate goals. Several transportation measures have been proposed to mitigate the environmental externalities of uncontrolled transport movements, e.g. by imposing road pricing, by introducing electric vehicles, by implementing advanced logistics, and by resorting to digital technology tools. Clearly, the latter technological support tools have been widely accepted in public transport, car mobility, logistics and aviation. There is however, a category of transport mode users which has remained under-investigated in the search for sustainable transport and mobility, viz. cyclists and pedestrians.

It is noteworthy that in the rich history of transportation science statistical analysis and modelling of spatial mobility behaviour in private transport and in transit systems has gained a great popularity, with a wealth of quantitative and modelling studies. However,



the modelling of spatial movements (e.g. route choice, trips frequency, destination choice) of cyclists and pedestrians has not kept the same pace. The same holds for digital support tools for both 'active micro-mobility' management and for supporting spatial choices of cyclists and pedestrians (apart from simple apps). These new tools represent a real opportunity to overcome some of the shortcomings of traditional data. There is a need to revisit active micro-mobility in the context of a digital society against the background of energy scarcity, environmental sustainability and healthy (active) life styles. Active micro-mobility is increasingly advocated as one of the promising responses to the challenges imposed by the current energy crisis, sustainable transport, and contributors to a healthy ('active') life style. This is also illustrated by the growing popularity of the concept of a '15 minute city'.

Aims

This workshop seeks to bring together experts on the theme of Active Micro-Mobility – Modeling Spatial Behaviour of Cyclists and Pedestrians'. It is devoted to advanced analytical studies on the merits of active transport modes, in particular biking and walking. It is evident that there is much potential for focussing the attention on advanced quantitative analysis of the behaviour of cyclists and pedestrians (e.g. crowd-sourced data), in terms of both motives or perceptions and actual choices (and implications thereof). In this setting the convenience, flexibility, financial costs, speed, environmental impact, safety and physical and mental health aspects of cyclists and pedestrians can be put in the broader context of a multi-modal mobile society. Modern digital tools (e.g. cell phone data, GPS data, sensors, cameras, social media information) may be instrumental in developing new research trajectories and generating novel insights.

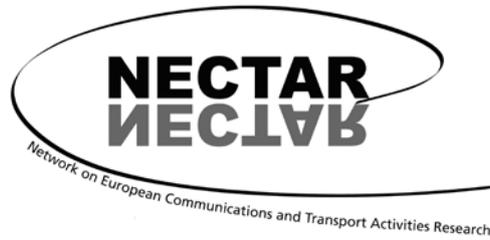
The workshop seeks to:

- Generate new analytical and empirical knowledge on the potential role of active micro-mobility in a mobile society (in particular, urban areas).
- Develop advanced modelling and quantitative studies on the complex behaviour and attitude of cyclists and pedestrians in a multi-faceted urban fabric.
- Study the contribution of active micro-mobility to climate-neutral cities, circular cities, sustainable cities or 15-minute cities.
- Present modern, often digitally-oriented studies on active micro-mobility that offer a clear scope for enhancing future quality of urban life.

Topics of interest

The workshop may focus on methodological developments, production of new knowledge on the mobility behaviour of people and goods, as well as evaluation of policies aimed at promoting active micro-mobility. Examples of topics are:

- Potential of new digital active mobility data
- Hybridisation of data for the analysis of active micro-mobility
- Spatiotemporal analysis methods: AI, ML, SOM, CNN



- Analysis of accessibility to active modes
- Analysis of the link between active micro-mobility and public transport modes (complementarity/substitutability)
- Analysis of freight transport and urban logistics movements (e.g., cargo bikes)
- Analysis of interactions between active micro-mobility and urban form
- Modelling of modal choice, itinerary, travel time and their spatio-temporal variability
- Evaluation of the impact of planning and mobility policies aimed at promoting active modes (self-service bicycle systems, bicycle parking, implementation of bicycle lanes, pedestrianisation, etc.)
- Health effects of active mobility behaviour and safety
- Impact of active modes on real estate value
- Simulation and foresight for decision support (Agent-based simulation, dashboards).

Publication

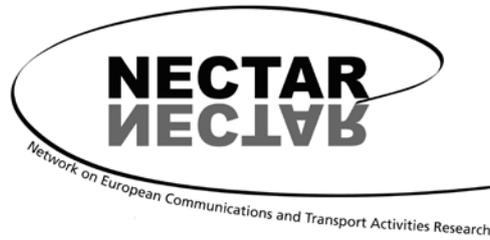
Papers presented at this workshop will be considered for publication in a high-quality journal (Frontiers in Future Transportation).

Venue

The workshop is organized by LAET-ENTPE (University of Lyon) and NECTAR and will take place at the ENTPE - Graduate school of Civil, Environmental and Urban Engineering (<http://www.entpe.fr/>): 3 Rue Maurice Audin, 69120 Vaulx-en-Velin, France.

Participation and fees

Up to 20 authors will be invited to present a paper in the workshop. The participation of one author per paper is free and includes one night's accommodation, dinner and coffee-breaks. NECTAR membership for the year 2023 (€70 or, for those under the age of 30, €40) is required in order to attend the meeting. Non-members can find details on how to join the association on the 'Membership' page of NECTAR's website: <http://www.nectar-eu.eu/membership/>



Abstract submission:

If you are interested to participate in this workshop, please send an **abstract** of your presentation (about 500 words) including author names and affiliations and keywords, to Louafi.bouzouina@entpe.fr, before 13 February 2023.

The notification of abstract acceptance will be distributed 20 February 2023.

Organizing committee

Louafi Bouzouina, LAET-ENTPE, University of Lyon, Workshop Organizer

Karst Geurs, University of Twente, NECTAR Chair

Karima Kourtit, Open University of the Netherlands, Workshop Organizer

Ouassim Manout, LAET-ENTPE, University of Lyon, Workshop Organizer

Peter Nijkamp, Open University of the Netherlands, Workshop Organizer

John Östh, Oslo Metropolitan University, NECTAR Cluster 4 Co-chair

Cecília Silva, University of Porto, NECTAR Cluster 4 Co-chair

NECTAR is a European-based scientific association. The primary objective is to foster research collaboration and exchange of information between experts in the field of transport, communication and mobility from all European countries and the rest of the world. It is a multidisciplinary social science network. It brings together a wide variety of perspectives on transport and communication problems and their impacts on society in an international perspective. For further information see: <http://www.nectar-eu.eu>