Sabanci Universitesi

Smart Mobility and Logistics Lab: **sml.sabanciuniv.edu**

CL5-2022-D6-02-01: Logistics networks integration and harmonisation through operational connectivity to optimise freight flows and drive logistics to climate neutrality.

Organization

Name of the Organisation: Sabanci University

Organisation Type: University

Country: Turkey

Brief description of the Organization:*

Sabanci University (SU) is internationally recognized as one of the most research-oriented and innovative universities in Turkey. In Horizon 2020, Sabanci University has received ~7,6 Million Euro EU contribution with its 39 funded projects. Smart Mobility and Logistics Lab (SML) in SU focuses on transport logistics and mobility planning including urban transport, first-mile, long-distance and last-mile pickup/delivery operations, electromobility, and sustainable logistics chains. SML team is equipped with extensive domain knowledge in logistics and transportation research, and experienced in addressing multifaceted problems through systematic modelling approaches and effective solution methods using optimization/operations research tools and techniques. The SML Lab conducts research projects particularly on urban mobility and sustainable transport planning with a special emphasis on logistics network design, route optimization, electrification of logistics vehicles, and battery performance analysis.

Describe which aspects of the call topic you would like to contribute to and how. Include the skills and competences making you suitable for that:*

We have ~10 years of experience in developing optimization-based approaches, models, and solution methodologies to reduce the carbon footprint of logistics activities on road transportation networks. Within the scope of this project, we can contribute in the following aspects:

- to provide a systematic approach to minimize the operational inefficiencies related to empty trips, vehicle utilization and route planning, peak demands, etc. by taking into account the external factors associated with environmental sustainability;

- to model the collaborative logistics network to optimize the freight flows and develop methods to provide effective and efficient solutions;

- to assess the proposed solutions in terms of financial costs as well as energy consumptions and greenhouse gas emissions;

- to validate the benefits of the collaboration scheme in comparison to conventional independent logistics operations.

Previous experience in EU/other Related Projects and references:*

Coordinator, "MeHUB: Integrating a Connected Micromobility Infrastructure to the Existing Public Transport", 2021. EIT Urban Mobility (Partners: DUCKT, Ankara Metropolitan Municipality)

Partner, HEV TCP Task 41 "Electric Freight Vehicles", 2019-21. Hybrid and Electric Vehicle Technology Collaboration Programme by International Energy Agency (Operating Agent: German Aerospace Center).

Primary Investigator, "New Models and Efficient Solution Methods for the Electric Vehicle Routing Problem", 2018-20. TÜBİTAK 1001 Program Grant #118M412.

Researcher, "Costs and Benefits of Vehicle Electrification in Turkey", 2017-18. Sabanci University Internal Research Grant.

Primary Investigator, "New Approaches and Methodologies to Reduce Energy Consumption and Greenhouse Gas Emissions on Transportation Networks", 2013-15. TÜBİTAK 2515 Program Grant #113M522 - related with the COST Action: TU 1204 "People Friendly Cities in a Data Rich World"

Partner, HEV TCP Task 27 "Electrification of Transport Logistic Vehicles (eLogV)", 2015-17. Hybrid and Electric Vehicle Technology Collaboration Programme by International Energy Agency (Operating Agent: German Aerospace Center).

CONTACT

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