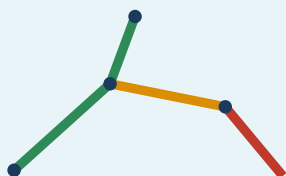


**CYCLIST SAFETY
INDICATOR****A multi-factor, empirically-weighted cyclist safety indicator for Amsterdam****Problem description**

Cyclist safety in Amsterdam is hard to measure directly: official crash records undercount cycling incidents, especially minor single-bicycle crashes, so an indicator built on crash data alone will systematically underrepresent risk on many links. A complete picture requires fusing crash data with denser, complementary sources: traffic conditions, infrastructure type, land use and activity levels, and how these factors explain the perception of cyclist about safety. This thesis will explore:

- A comprehensive fusion of these sources into one link-level indicator.
- Empirical weighting of each factor, estimating how much it actually shifts safety perception of cyclists.
- Rigorous validation of the resulting model, combining comparison against an established framework such as Level of Traffic Stress with out-of-sample prediction testing.

This thesis will explore these questions through empirical analysis based on data collected in Amsterdam during the thesis period, within the PROSPER research programme at ORBIT Lab, which will support data access and collection.

Assignment

The assignment will consist of:

- A literature review on cyclist safety indicators and multi-source data fusion.
- Construction of a link-level empirical model fusing crash, traffic, infrastructure, land-use/activity, and perceived-safety data.
- Design and execution of a video-based survey to elicit perceived safety at the link level.
- Validation of the resulting indicator against an established framework and through out-of-sample testing.

Background

The ideal student should have a strong interest in transport safety and urban cycling, with a willingness to work with multiple sources of data and quantitative methods. Knowledge of regression modelling, and survey design are required, and support will be provided for learning the required methods.

Chair: Dr. Yousef Maknnon,

Supervisors: Dr. Shadi Sharif Azadeh, Dr. Gonalo Correia.

Postdoc: Dr. Kuldeep Kavta.

The project can be conducted as a final thesis project for MSc [Transport, Infrastructure and Logistics / Traffic & Transport]. Preferred start date is as early as possible.