Relative Reachability Analysis on Multimodal Transportation Networks

Bachelor/Master

Summary
Design and develop algorithms to compute the relative reachability of a given mode of transport in a multimodal transportation network.

Project Phase
Implement a state-of-the-art label-constrained 1-N shortest path algorithm to compute relative reachability queries for a given course and integrate the algorithm into RRAMEN, a system for relative reachability analysis on multimodal networks.

Thesis Phase
Design and develop dynamic algorithms along with optimizations that support the efficient processing of 1-N and M-N relative reachability queries.

Requirements
- Experience in Python programming
- Course on Algorithms and Data Structures (or equivalent)

Preferable Courses (or equivalent)
- Graph Data Management and Analysis
- Efficient Route Planning Techniques

Contact
Theodoros Chondrogiannis, theodoros.chondrogiannis@uni.kn