

Simulation and Performance Analysis of Routing Protocols in VANET Networks

Filip Mitrevski

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Mentor: Prof. Dr. Sime Arsenovski

The thesis focuses on routing in VANET networks, where high vehicle mobility and frequent topology changes create specific challenges for stable and efficient communication. The research examines different approaches and routing protocols and analyses their performance through simulation scenarios under conditions characteristic of vehicular networks. Relevant parameters related to data transmission, link availability, and network behaviour under dynamic node movement are monitored. The analysis shows that the choice of protocol is closely related to the specific scenario and network conditions, while the results provide a basis for improved design of communication solutions for intelligent transportation systems.

Keywords: Vehicular ad hoc networks (VANET) · Routing protocols · Network simulations