

Post-Doctoral Researcher vacancies at Delft University of Technology on:

Dynamic fleet management of autonomous vehicles

The Department of Maritime & Transport Technology at Delft University of Technology invites expressions of interest for two currently open post-doctoral research positions on initiating new research lines on control & coordination for (autonomous) road and water vehicles, while networking with internationals to get alignment on common research interests. One post-doctoral positions on fleet management of autonomous vehicles is currently open for application.

“Dynamic fleet management of autonomous vehicles”

Cooperative driving solutions for areas such as business parks, leisure sites, port areas, or event sites demand efficient management of fleets of cooperative vehicles. This project considers the challenges at the logistics and system level for organisations owning fleets of cooperative vehicles. This encompasses the entire spectrum of logistics systems: fleet size selection, vehicle rostering and assignment, dispatching, repositioning, and maintenance. The aim is to develop efficient methods that will enable the efficient deployment and operation of such fleets of cooperative (automated) vehicles.

This Post-doc position will take a methodological, distributed control perspective. Automatic coordination strategies and planning algorithms that will maximise the performance of fleets of vehicles themselves or as a system will be proposed and investigated. Autonomous learning algorithms, e.g. using (multi-agent) reinforcement learning, and how to integrate expert knowledge will be formally analysed. State-of-the-art logistic service simulators will be used to investigate the technical and logistic performance that could be realised with the new fleet management strategies. The value of integrating real-time maps with up-to-date transport system conditions (e.g. related to travel times) will then also be explored.

In case of interest in either of the above post-doc vacancies, mail resume, list of publications, motivation and questions to Dr. Frederik Schulte (f.schulte@tudelft.nl), or prof.dr. Rudy Negenborn (r.r.negenborn@tudelft.nl), Dept. of Maritime & Transport Technology, TU Delft, The Netherlands.