The transport sector is responsible for 20% of greenhouse gas emissions in Germany and therefore plays a key role in achieving Germany’s climate targets. At the Institute Energy and Climate Research - Techno-economic Systems Analysis (IEK-3), we use model-based analysis methods to research both future transport demand in passenger and freight transport and the potential applications of drivetrain concepts. Building on existing models that depict the influence of traffic volume on required travel times, the behavior of automated and connected vehicles is now to be modeled. In this context, we are looking for your cooperation in addressing the research question: "How do traffic flow and travel times of vehicles change due to the gradual introduction of automated and connected driving?"

We offer you an exciting

Master Thesis - Model-based analysis of traffic flow and travel times for the deployment of automated and connected vehicles

Your Job:
• Literature review on the state of traffic flow modeling for conventional and automated vehicles (approaches, available models)
• Development of a suitable modeling approach and determination of data requirements
• Implementation of the traffic flow model and validation of travel times for conventional traffic
• Implementation of automated and connected driving in the model

Your Profile:
• Current master studies in computer science, mathematics, engineering, or a comparable field of study

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our Online-Recruitment-System!

Questions about the vacancy?
Get in touch with us by using our contact form.
Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de
• Good programming skills in Python
• Experience with microscopic and macroscopic traffic simulations
• Fluent oral and written proficiency in English

Our Offer:
We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:
• Highly motivated and international working group in one of the largest research institutions in Europe
• Intensive thesis supervision at a flexible workplace
• Outstanding scientific and technical infrastructure
• Flexible working hours as well as a reasonable remuneration

The position is initially for a fixed term of 6 months.

Forschungszentrum Jülich promotes equal opportunities and diversity in its employment relations.
We also welcome applications from disabled persons.