

Student job, master thesis, bachelor thesis, project thesis, internship

Development of an optimisation model for multimodal transport systems

The "MulTraSys" research project (design and simulation of a multimodal transport system consisting of an AGV and drone for a quasi-continuous milk run in an SME production environment) is investigating the combination of AGVs and drones to increase logistical efficiency in order to compensate for the economic disadvantages of SMEs in the automation of in-house material transport.

The project concentrates on the design and simulation of such a multimodal transport system in SME production environments. The focus is currently on the development of a solution concept for the Vehicle Routing Problem (VRP), which describes order allocation and route planning.



Your tasks

Your work can focus on various topics:

- Literature research on existing mathematical approaches for intralogistic transport processes
- Development of basic target variables, requirements and influencing factors of a VRP for multimodal transport systems
- Determination of an evaluation scale for the monetary evaluation of the influencing and target variables
- Development of a VRP consisting of an objective function and restrictions for efficient order allocation and route control for a multimodal transport system
- Implementation of the model, e.g. with MATLAB or Python (preferably Python)
- Solving the set-up optimisation model using an exemplary transport process

Your profile

You are studying one of the following subjects:

- Production and Logistics
- Industrial engineering
- Business informatics
- Or comparable

Are you interested in logistics models, AGVs, intralogistics, operations research and simulation? And do you enjoy familiarising yourself with new topics independently? Then send us your application!

You should have (initial) knowledge of OR and logistics modelling and some programming experience.

Good written and spoken German and English skills are required!

We offer

- appropriate remuneration, if applicable
- independent work
- flexible working hours
- well-equipped workplaces
- home office by arrangement
- long-term cooperation if necessary



Bitte sende deine aussagekräftige Bewerbung in einer einzigen PDF-Datei an jobs@iph-hannover.de.

Die Bewerbung muss Anschreiben, Lebenslauf sowie Prüfungsleistungen des Studiums / Zeugnisse enthalten.

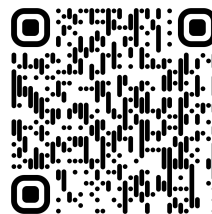
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