Bachelor's thesis position

Representation of Agricultural In-Field Operations on a Graph Structure

The Chair of Agrimechatronics at Technical University of Munich (TUM)

invites for applications for a Bachelor's thesis position on the topic of **Representation of Agricultural In-Field Operations on a Graph Structure**. M/F/D. Applications from disabled persons with essentially the same qualifications will be given preference. TUM strives to raise the proportion of women in its workforce and explicitly encourages application from qualified women.

About the topic

Controlled Traffic Farming (CTF) systems provide agronomic benefits by restricting the in-field traffic of tractors to certain lanes. To automate processes in a CTF system, the lanes, their interconnections and possible points of interests have to be represented in a machine-readable fashion. The goal of the thesis is to define a graph-based data structure that is able to represent a broad range of in-field operations.

About us

The Chair of Agrimechatronics (Prof. Oksanen) studies especially Intelligent Machines for Agriculture. The research themes include topics like tractors and other agricultural vehicles and robots, tractor-implement automation, communication technologies for vehicles, navigation, guidance and planning, positioning systems, model-based control of mechatronic systems, drives and power systems, and robotic implements.

We offer

As a part of our team you will have an excellent opportunity to develop your skills in a supportive and inspiring environment. Our work is interdisciplinary, international, and in-depth, but also practical. We offer a possibility to obtain broad and profound expertise, both theory and practise, in the field of agricultural applications, technology and research.

Your qualifications

- Programming skills in one of the following languages: C++/Python/MATLAB
- Interest in agricultural operations

Application process

Send your application by email to henri.hornburg@tum.de with title "Bachelor's thesis CTF Graph" **at latest 31.01.2025** including

- A cover letter (for example elaborating your background, interests and motivation)
- Curriculum vitae (CV) in English
- Current transcript of records

More information   **https://www.lse.ls.tum.de/en/amx/home/**