Bachelor’s thesis position: ROS2 for agricultural applications

The Chair of Agrimechatronics at Technical University of Munich invites for applications for a Bachelor’s thesis position on the topic of “ROS2 for agricultural applications”.

About the topic
- Gaining basic understanding of some agricultural applications
- Learning ROS, if not already familiar
- Analysis and comparison between ROS1 and ROS2
- Analysis of applicability for agricultural applications
- A small experimental part on ROS2 communication between nodes, using ROS2 as a part of tractor-implement communication, including e.g. vehicle and implement data on ISO bus
- A documentation, e.g. “tutorial-style”, based on the experimental part and other findings

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
- Good programming skills in C/C++ (preferred) or Python
- Basic understanding of ROS is beneficial
- Basic understanding of communication protocols is beneficial
- Good writing skills and independent way of working are beneficial
- Written and spoken English: the thesis is to be written in English, communication with the advisor in English

Application process
Send your application in English by email to rikka.soitinaho@tum.de with title “Bachelor’s thesis position application” at latest 15.02.2021 including
- A cover letter (for example elaborating your background, interests and motivation)
- Your curriculum vitae (CV) in English
- A PDF copy of your transcripts of records

Data Protection Information: When you apply for a position with the Technical University of Munich (TUM), you are submitting personal information. Data protection information according to Art.13 of the data protection basic regulation (DSGVO) for the collection and processing of personal data in the context of your application. By submitting your application, you confirm that you have acknowledged the above data protection information of TUM.