



PhD Position

Digital Twin in Agricultural Vehicle Mechatronics

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

invites for applications for the position of a Research Associate (Doctoral Student). 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 position

The position involves both teaching and engaging in innovative research projects on tractor autonomy, path-planning algorithms, soil compaction modeling, and sensor fusion in close collaboration with industrial and university partners. Additionally, it includes supporting project applications and contributing to the Chair's development initiatives. The position is available from 01.11.2025.

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 international team in northern Munich area, you will have an excellent opportunity to develop yourself as a team player as well as an independent researcher. Our work is interdisciplinary, international, and in-depth, but also practical. We offer a possibility to obtain broad and profound expertise, both theory and practice, in the field of agricultural applications, technology and research.

Compensation

The position will be paid in accordance with the Collective Agreement for the Civil Service of the German States (TV-L).

Your qualifications

- A Master's level university degree in engineering (e.g. Mechatronics & Robotics), completed with above-average results
- Good skills (both theory and practice) in one or several of the following topics:
 - Terramechanics
 - State Estimation, especially GNSS & IMU Sensor fusion
 - CANbus communication technology
 - MATLAB/Simulink
- Research interest in one or several of following topics:
 - Tractor Engineering
 - Vehicle Modelling
 - Mobile Robotics
- Prior experience with open field agricultural machinery is advantageous
- Excellent language skills in written and spoken English and fluent in written and spoken German



Application process

Send your application in English by email to amx@wzw.tum.de with title “Research Associate application” at **latest 01.07.2025** including

- A cover letter (for example elaborating your background, interests and motivation)
- Curriculum Vitae (CV) in English
- PDF copies of earned university degrees and transcripts of individual grades
- PDF copy of your Master’s thesis or a seminar paper

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.
