

Invitation to the Oral Examination – Department CE

For the occasion of his examination for a Doctoral Degree,

Chi Zhang

will present his dissertation entitled

**Efficient and Anticipatory Behavior Planning under Uncertainty for
Autonomous Driving in Urban Environments**

on 13 November 2024 at 13:00h

Attendance to the presentation is open to the public. The presentation will be in English.

The candidate, all members of the Examination Committee, and authorized examiners of the TUM School of CIT are invited to the presentation and subsequent oral examination.

The presentation and subsequent examination will take place online via Zoom:

<https://tum-conf.zoom-x.de/j/61133668027?pwd=B9b14X4KgeXqBuf0oEdVFKu0FxFxd1.1>

Examination committee:

Chair: **Prof. Sebastian Steinhorst**

First Examiner: **Prof. Alois Knoll**

Second Examiner: **Prof. Guang Chen**

Munich, the 22 October 2024

Mailing list:

Members of the examination committee

Doctoral candidate

CIT staff

Abstract:

This thesis proposes a new probabilistic behavior planning algorithm for challenging urban environments. The algorithm can handle various occlusion scenarios by utilizing onboard sensor information as well as information from vehicle-to-everything communication. Moreover, the algorithm, which incorporates multi-step occupancy grid maps, operates effectively in crowded areas and ensures safety and rule compliance through a responsibility-sensitive safety model and a traffic rule monitor.