

Invitation to the Oral Examination – Department CS

For the occasion of his examination for a Doctoral Degree,

Mr. Lukas Bernhard

will present his dissertation on

Fleet Management for Mobile Service Robots Within the Operating Room Wing

on **17th February, 2025** at **15:00 h**

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

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 in room 00.12.019 (FMI building, Boltzmannstr. 3, 85748 Garching).

Examination committee:

Chair: **Prof. Dr. rer. nat. Viktor Leis**

First Examiner: **Prof. Dr.-Ing. habil. Alois Christian Knoll**

Second Examiner: **Prof. Dr.-Ing. Johannes Fottner**

Third Examiner: **apl. Prof. Dr. med. Dirk Wilhelm**

Garching, the **13th of January 2025**

Mailing list:

Members of the examination committee

Doctoral candidate

Abstract:

Healthcare systems around the world are currently facing challenges due to increasing patient numbers, aging populations, and a shortage of qualified workers. To sustain and further improve patient care services, the application of assistive robotics is highly promising. For the first time, this doctoral thesis presents means for the dimensioning and composition of fleets of mobile service robots within the operating room wing and introduces domain-specific concepts for orchestrating and managing them.