Invitation to the Oral Examination – Department CE

For the occasion of his examination for a Doctoral Degree,

Seyed Ali Baradaranbirjandi

will present his dissertation entitled

Nonlinear Observer-Based Approaches for Accurate and

Reliable Kinematic State Estimation and

Disturbance Monitoring

on **Monday, 16th of September 2024** at **1:00 PM**

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 virtually via Zoom: https://tum-conf.zoom-x.de/j/62276847464?pwd=74CXKY1wPUaA1yJP2ZiBmiYwq9mY7t.1

Meeting ID: 622 7684 7464
Code: 16092024

Examination committee:
Chair: **Prof. Achim Lilienthal**
First Examiner: **Prof. Sami Haddadin**
Second Examiner: **Prof. Alessandro De Luca**
Third Examiner: **Prof. Abderrahmane Kheddar**

Munich, the **19th** of **August 2024**

Mailing list:
Members of the examination committee
Doctoral candidate
CIT staff

Abstract: A high degree of accuracy and reliability of their measurement states is a basic requirement for modern robot systems. However, higher-order kinematic states are currently unavailable due to the lack of measurement technology. This dissertation closes that gap by fusing different sensor types in a model-based state estimation framework, improving the overall state bandwidth, accuracy, and reliability.

Best regards,
Prof. Achim Lilienthal