

Invitation to the Oral Examination – Department CE

On the occasion of his examination for a Doctoral Degree,

Selina Kesler, M.Sc.

will present her dissertation entitled

From Computer-Aided Design to Computer-Aided Manufacturing: Enabling Intelligent Manufacturing Using a Scalable Artificial Intelligence Framework for Data-Driven Automation in Computer-Aided Process Planning Systems

on **28.04.2026** at **13:30 h**

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 in [N0116](#), Theresienstr. 90, building N1.

Examination committee:

Chair: **Univ.-Professor Dr.-Ing./ Tokio habil. Martin Buss, TUM**

First Examiner: **Prof. Dr.-Ing. Klaus Diepold, TUM**

Second Examiner: **Hon. Prof. Sonja Zillner, TUM**

Munich, March 12th, 2026

Mailing list:

Members of the examination committee

Doctoral candidate

Abstract:

In modern manufacturing, customisation and shorter cycles demand automation in product development. An AI-driven graph-based framework for CAM automation is introduced, starting with the generation of an industry standard dataset. Hierarchical graph learning are used to detect machining features, followed by the machining strategy classification. The tool and operation prediction is achieved based on a graph-based similarity search method in the customer database.