

Invitation to the Oral Examination – Department CS

For the occasion of her examination for a Doctoral Degree,

Tamara Tina Müller

will present her dissertation entitled

Graph Deep Learning in Medicine - Prospects, Pitfalls, and Privacy
on the 19th of December 2024 at 12:30 (CET).

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 hybrid form.

In person in room:

TranslaTUM, Raum 00.22.01 Johannes B. Ortner Forum (Großes Auditorium)

Einsteinstraße 25 (Bau 522), 81675 München

Virtually via Zoom:

[https://tum-conf-zoom-join.com/j/64446402211?pwd=b6CQnA2tXVbpXrHiHOI7TAKA3FWYMd.1](https://tum-conf.zoom-join.com/j/64446402211?pwd=b6CQnA2tXVbpXrHiHOI7TAKA3FWYMd.1)

Meeting-ID: 644 4640 2211

Passcode: 894647

Examination committee:

Chair: **Prof. Stephan Günnemann**

First Examiner: **Prof. Daniel Rückert**

Second Examiner: **Prof. Nassir Navab**

Third Examiner: **Prof. Ben Glocker, Imperial College London**

Abstract:

This dissertation discusses different applications, advantages, and limitations of graph deep learning on medical data. We investigate the impact and assessment of the graph structure on the performance of graph neural networks (GNNs) and discuss privacy-preserving graph deep learning using differential privacy. With the works summarized in this dissertation, we hope to contribute towards a better understanding of the power of GNNs and their applicability to medical research and workflows.