

Invitation to the Oral Examination – Department CS/CE

For the occasion of her examination for a Doctoral Degree,

Qian Chen

will present her dissertation entitled

Beyond Quantification: Uncertainty in Predictive Process Monitoring

on Tuesday, 14th April 2026 at 9 am (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 online via Microsoft Teams:

<https://teams.microsoft.com/meet/33060365106521?p=nYWppA7FFW2VVlhVwW>

Examination committee:

Chair: Prof. Dr. rer. soc. oec. Martin Bichler

First Examiner: Prof. Dr. rer. nat. Stefanie Rinderle-Ma

Second Examiner: Assistant Prof. Ph.D. Xixi Lu, Utrecht University

Garching, the 25th March 2026

Mailing list:

Members of the examination committee

Doctoral candidate

Abstract:

This dissertation advances uncertainty-aware predictive process monitoring (PPM) by addressing two overlooked challenges: out-of-distribution (OOD) and semantic uncertainty. Novel artifacts are designed to predict unseen process behavior under both stationary and dynamic conditions, and to quantify the degree of compliance violations. The results enhance model generalization, interpretability, and actionable insights in data-driven process management.

Diese Dissertation erweitert das unsicherheitsbewusste Predictive Process Monitoring (PPM), indem sie zwei bisher vernachlässigte Herausforderungen adressiert: Out-of-Distribution (OOD) und semantische Unsicherheit. Neue Artefakte werden entwickelt, um unbekanntes Prozessverhalten in stationären und dynamischen Umgebungen vorherzusagen und das Ausmaß von Regelverletzungen zu quantifizieren. Die Ergebnisse verbessern Generalisierbarkeit, Interpretierbarkeit und Entscheidungsunterstützung im Prozessmanagement.