Invitation to the Oral Examination – Department [CS]

For the occasion of his examination for a Doctoral Degree,

Marvin Eisenberger

will present his dissertation entitled

Robust Deformable 3D Shape Correspondence and Interpolation

on **09th. October, 2024** at **11:00 am**

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 hybrid:

In person:

Room **00.10.011**

CIT Building, Boltzmannstraße 3, 85748 Garching

Online via BBB:

https://bbb.cit.tum.de/rue-u7s-4iv-n7y

Access code: 154297

Examination committee:

Chair: **Prof. Rüdiger Westermann – CIT, I15**

First Examiner: **Prof. Daniel Cremers – CIT, I9**

Second Examiner: **Prof. Emanuele Rodolá – Universitá La Sapienza, Rome**

Third Examiner: **Prof. Maks Ovsjanikov, Institut Polytechnique de Paris**

Garching, the **23rd.** of **September 2024**

Abstract:

Correspondence and interpolation of deformable 30 shapes are fundamental challenges in computer vision, with numerous potential applications. The main contributions of this dissertation comprise a number of specific practical algorithms, as well as general technical contributions in three major areas. We introduce shape deformation based on divergence-free vector fields, we perform multi-scale shape registration, and perform selfsupervised learning on geometric data.