Within the **Chair for Numerical Analysis and Scientific Computing** at the Centre for Mathematical Science of the Technical University of Munich (TUM) there is an opening for a

PhD Position (75%) in Mathematics

This research position is situated within the project *Topological and geometric analysis of dynamic data sets,* which is part of the DFG funded Collaborative Research Centre SFB/TRR109 "Discretization in Geometry and Dynamics". In this project, we study discrete flow maps/trajectory data sets from both the geometric and topological viewpoints, and develop rigorous theory and computational methods for a decomposition of flow domains into coherent and mixing regions. We are also interested in characterizing continuous, infinite-sample limits of the different approaches.

Profile:
As well as an outstanding Master's Degree in Mathematics or Physics we expect:

- the ability to work independently on a high scientific level
- enthusiasm, curiosity, flexibility and the ability to work in a team
- good command of the English language (German language skills are an advantage, but not necessary)
- previous experience and knowledge in nonlinear dynamics and of at least one of the following fields: harmonic analysis (diffusion maps), computational topology (persistent homology), numerical analysis
- substantial and practical expertise in numerical programming.

Should you require further information please contact the project leader, Dr. Daniel Karrasch via email at karrasch@ma.tum.de or visit the website of SFB/TRR-109: www.discretization.de.

We offer an interesting, varied and challenging position within a young, international and interdisciplinary team located at the Garching Campus of the TU München and the opportunity to work in an active, interregional research project funded by the German Research Foundation (DFG).

The 75%-position is paid according to the Civil Service rates of the German States "TV-L", E13. The contract will initially be limited to 2 years with the possibility for further extension.

As an equal opportunity and affirmative action employer, TUM explicitly encourages applications from women as well as from all others who would bring additional diversity dimensions to the university's research and teaching strategies. Preference will be given to disabled candidates with essentially the same qualifications.

Interested?
Candidates should send their applications including a letter of motivation, C.V., two letters of recommendation, and copies of all relevant examination certificates and academic testimonials in a single pdf file via email to Diane Clayton-Winter. Please indicate "PhD Position Dynamic Data Analysis" in the subject line.
Email address for applications: clayton@ma.tum.de
Application deadline: December 11th, 2017