Dynamic Latent Variable Models and Network Models

The **Methods Center** of the University of Tübingen invites applications for

2 PhD positions (m/f/d, E13 TV-L, 75%)

for the DFG funded research project "*Dynamic Latent Variable Models and Network Models*".

The positions are each limited to three years.

The Methods Center is an interdisciplinary and international research center for psychometric methods. The Quantitative Methods section is dedicated to developing new statistical methods that integrate traditional psychometric and econometric techniques with those from machine learning.

In this project, our goal is to develop and evaluate new frequentist estimation procedures for general classes of dynamic latent variable models. Additionally, we will create frequentist forecasting algorithms (such as Filters) for both network models and dynamic latent variable models. These methods will find application in important areas such as understanding phenomena like student dropouts from mathematics studies or clinical symptoms.

Successful applicants for the positions will have a Master degree in quantitative data science, mathematics, statistics, psychology/psychometrics, economics/econometrics, computer science or machine learning with emphasis on quantitative methods. Applicants should have experience with quantitative data analysis techniques. Programming skills (particularly in Python and/or R) are expected. They should show an interest in examining estimation techniques at the intersection of psychometrics, econometrics, and machine learning. Strong English language skills are necessary.

Applications with the usual documents (cover letter, curriculum vitae, copies of certificates, publications/conference talks) should be sent in electronic form as a single PDF to Prof. Augustin Kelava (augustin.kelava@uni-tuebingen.de) by **January 31, 2024**. Questions can be directed to Augustin Kelava.

The university seeks to raise the number of women in research and teaching and therefore urges qualified women academics to apply for this position. Qualified international researchers are expressly invited to apply. Equally qualified applicants with disabilities will be given preference. The university is committed to equal opportunities and diversity. It therefore takes individual's situation into account and asks for relevant information.

The employment will be carried out by the central administration of the University of Tübingen.