EAM Workshop on October 6th 2026

Introduction to Bayesian Multilevel Latent Time Series Models

with the R-package *mlts*

Presenter

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Abstract

In this workshop, we give an introduction into the newly developed R-package *mlts* for analyzing intensive longitudinal data (ILD). We first give an overview of multilevel latent time series models and dynamic structural equation models (DSEM). Together with the participants, we then prepare ILD for use in the package and specify, estimate, and interpret two-level DSEM involving two time-series constructs using a worked example. We further illustrate the general package workflow for specification of more complex model extensions, such as multiple-indicator measurement models, adding between-person covariates to the model, and fitting multiple-group models. For all exercises, we provide R code and example data sets and share additional resources. We discuss known issues and common pitfalls of DSEM modeling that can lead to low model convergence and excessive estimation times and provide practical solutions where possible. The workshop is suitable for all applied and methodological researchers. Participants are required to bring their own notebook with R and RStudio and the packages *rstan* and *mlts* installed, and basic knowledge in R is recommended. By the end of the workshop, participants will have gained experience in DSEM and be able to use the *mlts* package for their own research.

Date: 6.10.2026 from 9am to 18pm

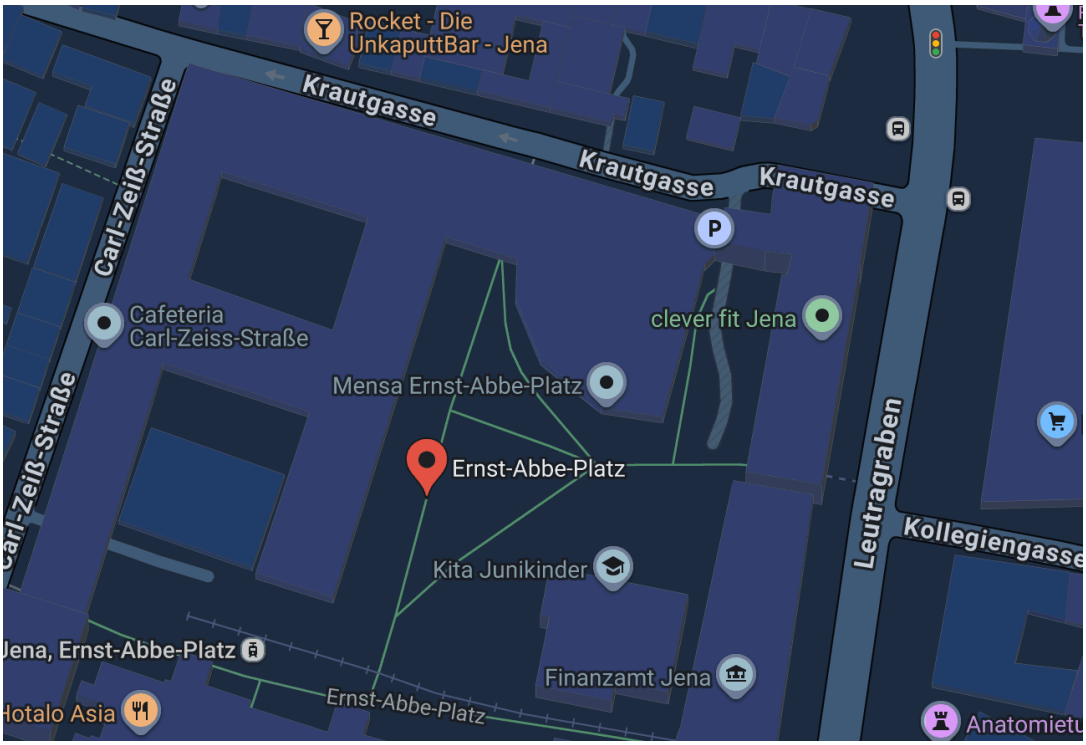
Format: Hybrid (Online or Onside)

Place: HS E028 (Room), Ernst-Abbe-Platz 8, Friedrich-Schiller-Universität Jena (Germany)

Maximum Number of Online-Participants: 30

Maximum Number of On-Side Participants: 30

Zoom Link will be shared with the participants after registration.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