

Psychometrika, Applications and Case Studies (ARCS)

CALL FOR PAPERS

Special section on: Model Identification and Estimation for Longitudinal Data in Practice

We invite submissions for a special section on model identifiability and estimability in the context of analyzing realistic educational, psychological, and more generally, social and behavioral sciences longitudinal data. Submissions should focus on statistical models commonly used for analyzing longitudinal data—including but not limited to—linear or nonlinear mixed-effects models, generalized mixed-effects models, and latent growth curve models. Longitudinal data has a clustered structure where measures are repeatedly collected on the same individuals over time and are nested within individuals or other higher-order groups. Empirical research in social and behavioral sciences aims to identify and estimate the different group-level effects. These specific group-level effects can be hard to detect if data on groups is sparse, leading to the issue of model identifiability. Moreover, datasets in applied research are often accompanied by a significant amount of noise, small sample size, missing data, nonlinearity, systematic heterogeneity, and other issues that are often compounded.

Special methodological consideration is needed to analyze these “messy” datasets to ensure researchers and practitioners are, indeed, modeling the underlying phenomena. The overarching objective of this special topic is to involve quantitative researchers to exchange novel perspectives on statistical considerations for modeling longitudinal data in *challenging* applied settings. Examples of such contributions may include but are not limited to (a) tools that can help researchers and practitioners assess whether models under consideration are identifiable, (b) guidance on how to obtain reproducible, stable, and precise parameter estimation for a given model, and (c) guidance on how to assess or compare the appropriateness of different models for a given data application.

Manuscripts published in this special section will be methodologically rigorous and illustrate the application of innovative statistical methodology with one or more real data examples of general interest to educational, psychological, social, or behavioral scientists. Manuscripts may provide a novel extension and/or novel application of an existing method. Junior scholars are especially encouraged to submit their projects.

SUBMISSION GUIDELINES

Interested authors are asked to submit a short proposal (1000 words or less) by **August 1st, 2023** (see the link below). The proposal should briefly describe the methodological contribution of the work on model identifiability and estimability in the context of longitudinal data and the real data application.

After reviewing the proposals, the guest editors will invite a subset of authors to submit a full manuscript to the special section. This process is intended to ensure that submissions are aligned with the topic of the special section. The guest editors may also offer suggestions on the intended projects to ensure a good fit to the special section. The editors will get back to all authors with a decision by **September 15th, 2023**.

The deadline for submission of invited manuscripts is **January 31st, 2024**. All manuscripts submitted to the special section will go through the regular peer-review process (i.e., acceptance of the proposal does not guarantee publication). Submissions must represent original material that has neither been submitted to, nor published in, any other journal.

Proposals can be submitted via [Qualtrics](#).

Invited manuscripts must be submitted to the editorial manager submission system at <https://www.editorialmanager.com/pmet/> and the authors should select the special section “**Model Identification and Estimation for Longitudinal Data in Practice**” during the submission process.

Please direct all queries regarding this special issue to the guest editors.

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