

Special Issue on Joint Models and Their Applications

Call for Papers

A common objective in longitudinal studies is to characterize the relationship between a longitudinal response process and a time to event. Considerable interest has been focused on so-called joint models, where models for the event time distribution and longitudinal data are often specified through a common set of latent random effects. Joint models of longitudinal data and/or survival data have received great attention in the literature over the past two decades. The importance of these models is well recognized, partly due to the fact that longitudinal data and survival data arise frequently in practice. Despite the extensive literature on this topic, these models continue to be a main research stream since they offer many advantages over separate analysis of longitudinal data and/or survival data. Many important issues may stand out for joint models. For example, the common assumption of distributions for model errors and random effects in joint models is normal in most of the previous studies, but this assumption may lack the robustness against departures from normality. Other important issues also remain to be addressed, such as computational issues, model diagnostics and selections, and various choices of longitudinal models and survival models.

To stimulate the continuing efforts to understand various joint model development and associated statistical inference methods with their applications in biomedical, biological, engineering, and other studies, we invite authors to contribute original research articles as well as review articles. We are particularly interested in articles describing development of joint models with nonnormal or nonparametric distributions, the nature of common assumptions, computational aspects, model diagnostics, model selections, and other issues. Potential topics include, but are not limited to:

- Joint modeling of mixed effects models and Cox PH models joint models
- Joint models with skewed distributions such as skew-normal and skew-t distributions
- Simultaneous inference on mixed effects models and accelerated failure time models
- Joint models of longitudinal data and interval censored survival data

- Joint models of longitudinal data and recurrent event data
- Analysis of longitudinal data with informative observation times and/or drop out
- Various joint modeling methods with their applications
- Joint model diagnostics and selections

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