Title: Modeling Normally Distributed Data with Repeated Measures

Abstract: When data are collected on the same subjects repeatedly over time (for example, in clinical trials or cohort studies) or under different conditions (for example, in a designed experiment), the measurements within the same individual are modeled as having correlated values. At the workshop, we will consider several models that can be employed to model a normally distributed response variable. The models that we will consider are: random slope and intercept (mixed-effects) model and generalized estimating equations models with unstructured, autoregressive, compound symmetric (exchangeable), and independent working correlation matrices. All models will be run in R version 4.0.3.

The course will be structured as follows. For each part, we will first discuss the theory, then work through an example. After that the participants will work in small groups in break-out rooms to do hands-on exercises to help reinforce the material. All the files and Rstudio will be made available to the participants.