



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO
DI PSICOLOGIA
"RENZO CANESTRARI"

PhD Program in Psychology

Seminar "Advanced Longitudinal Data Modelling with Mplus and R"

Prof. Stefanos Mastrotheodoros

Department of Psychology, University of Crete, Greece

Department of Youth and Family, Utrecht University, the Netherlands

11/06/2026, 9:00 – 13:00

Aula Anfiteatro, Piazza Aldo Moro, Cesena (FC)

Abstract

Longitudinal data is often of utmost importance to developmental scientists. Analyzing longitudinal data not only allows us to better understand how young people develop, but also to better comprehend within-person processes controlling for between-person differences. In this way, longitudinal data can help distinguish developmental processes from individual differences. Furthermore, longitudinal data can inform us about individual differences in developmental processes. Therefore, applying techniques to analyze longitudinal data is a necessary skill for researchers studying development and developmental processes.

In this seminar, you will acquire hands-on knowledge on conducting advanced SEM analyses to examine developmental order controlling for individual differences (Random-Intercept Cross Lagged Panel Models), longitudinal growth (Latent Growth Curve Models, Latent Change Score Models), as well as a special case where two informants report on the same construct (Latent Congruence Modeling). We will use both Mplus and R. In light of recent critical discourses, we will discuss between-person and within-person models, and how to choose the right analyses for your research questions.



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This seminar is aimed at researchers who want to extend their knowledge about SEM modelling techniques, and learn how to use these models in their own analyses. Participants should be familiar with basic SEM models (e.g., path analysis, growth models) and should have experience with running analyses in Mplus and/or R. To follow the course and practical exercises, at least one of these programs should be installed on your computer.

Reading:

Little, T.D. (2024). *Longitudinal Structural Equation Modeling (2nd ed.)*. The Guilford Press.

Kelloway, E. K. (2015). *Using Mplus for structural equation modeling: A researcher's guide (2nd Ed.)*. SAGE Publication.