Advanced course on using Mplus (S23)

12-16 July 2021

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Please note that the schedule is in Central European Summer Time.

Saturday and Sunday, (10 & 1 July 2021)		
Time	**Activity**	**Description**
12.00-18.00	*Key pick up*	*You will find the exact key pick up location in the pre-departure information, which becomes available after you have paid the course fee.*

Day	Time	Type	Description	Location
Monday	09:00 -12:45	*Lecture:* Prof. dr. Ellen Hamaker	On the formulas behind SEM; calculating the number of parameters and degrees of freedom by hand; how to interpret the TECH1 output; when to worry about the default settings in.	
	12:45 -13.15	*Lunch*		
	13:15 -16:30	*Computer lab*		
Tuesday	09:00 -12:45	*Lecture* Dr. Caspar van Lissa	A journey through the world of latent growth models: Mplus specification, model fit, interpretation of LGM parameters, the metric of time, LGM variations, and more.	
	12:45 -13.15	*Lunch*		
	13:15 -16:30	*Computer lab*		
Wednesday	09:00 -12:45	*Lecture* Dr. Caspar van Lissa	Longitudinal models with categorical variables, including latent class growth analysis, growth mixture modeling, and latent transition analysis (also known as hidden Markov models)	
	12:45 -13.15	*Lunch*		
	13:15 -16:30	*Computer lab*	*Before the start of this lab, see 'Setting up your computer for MplusAutomation' below.*	
Thursday	09:00 -12:45	*Lecture* Jeroen Mulder	Advanced longitudinal modeling, including the random-intercept cross-lagged panel model (RI-CLPM), the autoregressive latent trajectory (ALT) model, the latent curve model with structure residuals (LCM-SR), and the latent	
	12:45 -13.15	*Lunch*		
	13:15 -16:30	*Computer lab*		
Friday	09:00 -12:45	*Lecture* Dr. Noémi Schuurman	Dynamic structural equation modeling (DSEM) to model intensive longitudinal data (e.g., experience sampling or daily diary data); single level models (for N=1) and multilevel extensions (N>1).	
	12:45 -13.15	*Lunch*		
	13:15 -16:30	*Computer lab*		

For information about the Social Programme, please visit the Utrecht Summer School website!

Setting up your computer for MplusAutomation

One day of the course will use/showcase the R-packages “MplusAutomation” and “tidySEM”. The former package helps you run Mplus analyses in batch from R, and the latter helps you tabulate the results. This will save you a lot of time if you start doing more Mplus analyses.

This tutorial explains how to set up your personal computer for use with these R-packages. You only have to perform these steps once for every computer you intend to use R on, and the process should take approximately 15 minutes.

Follow these steps in order:

1. Install R from https://CRAN.R-project.org
2. Install ‘RStudio’ Desktop (Free) from rstudio.com
3. Install all packages required for the course by running the following code in the ‘RStudio’ console:

```
install.packages("tidySEM", dependencies = TRUE)
```

That’s it! Everything should be installed and connected now.

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