

## **How to deal with missingness? - Analysis of incomplete data sets**

Trainer	Prof. Dr. Tenko Raykov
Language	English
Date	26 November 2012, 9.00 – 17.00 h
Location	MMZ (room will be announced later)
Target group	interdisciplinary
ECTS	0.5

Incomplete datasets are common in many empirical sciences. It is a little known fact that not the amount of missingness is the problem, but its pattern. Systematically missing data can lead to serious bias in the analysis – naïve methods of missing value treatment (deletion, mean substitution) are among the worst things you can do.

This workshop, presented by one of the leading experts in structural equation and hierarchical linear modeling, provides an introduction to the field of missing data analysis. Main mechanisms of missing data are initially focused on. Limitations of previous, ad hoc methods for dealing with incomplete data sets are subsequently highlighted.

A major principled approach to the analysis of missing data is next focused on – (full information) maximum likelihood – and some discussion of multiple imputation is provided. The inclusive analytic strategy based on auxiliary variables is in particular covered in more detail, incl. the case of missing values on covariates, which is applicable with the former approach when there are deviations from the assumptions of data missing at random and/or normality. Throughout the workshop, multiple empirical examples are used, and the software Mplus, Stata, and R are utilized.