

Detecting parameter heterogeneity in psychometric models by means of model-based recursive partitioning with psychotree, stablelearner & co.

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Model-based recursive partitioning is a flexible framework for detecting heterogeneity in model parameters between different groups of persons. This talk will give an overview over the idea and statistical background of model-based recursive partitioning in general, as well as specifically for psychometric models based on paired comparisons and item response theory. In this context, the data-driven approach of model-based recursive partitioning proves to be particularly suited for detecting violations of homogeneity, such as differential item functioning, where we usually have no a priori hypotheses about the underlying group structure. The presentation will also cover recent developments for assessing the stability of model-based trees and incorporating DIF effect size in tree-building and interpretation.