

***Mean and Covariance Structures (MACS) Models
for the Study of Ecological Factors***

Abstract of talk
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Mean and Covariance Structures (MACS) modeling is a particularly powerful tool for examining ecological/contextual influences. Not only can ecological factors be included as direct covariates, but also, by way of multiple-group comparisons, ecological factors such as race, gender, culture (or any ecologically relevant grouping factor) can be examined. I will discuss a number of the practical and theoretical issues for testing (a) the comparability, or measurement equivalence, of psychological constructs across groups and (b) detecting possible differences on the constructs in ecologically multiple-group driven research designs. Specifically, I will discuss how strong factorial invariance (W. Meredith, 1993) of each variable's loading and intercept (mean-level) parameters implies that constructs are fundamentally the same in each group, and therefore are comparable. Under this condition, hypotheses about the nature of group differences and similarities can be confidently and meaningfully tested among the constructs' means, variances, and covariances in each sample. The concept of moderation in the context of multiple-group comparisons is discussed.