



Dr. Alberto Maydeu-Olivares

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11:00am - 12:00pm

270 Mabel Lee Hall

Goodness of Fit Assessment of Item Response Theory Models

This presentation will provide an overview of goodness of fit assessment methods for item response theory (IRT) models. It is now possible to obtain accurate p-values of the overall fit of the model if bivariate information statistics are used. Several alternative approaches are described. As the validity of inferences drawn on the fitted model depends on the magnitude of the misfit, if the model is rejected it is necessary to assess the goodness of approximation. With this aim in mind, a class of Root Mean Squared Error of Approximation (RMSEA) is described, which makes it possible to test whether the model misfit is below a specific cut-off value. Also, regardless of the outcome of the overall goodness of fit assessment, a piecewise assessment of fit should be performed to detect parts of the model whose fit can be improved. A number of bivariate statistics for this purpose are described, including a mean and variance correction to Pearson's X^2 statistic applied to each bivariate subtable separately, and the use of z-statistics for residual cross-products.



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