



An Overview of the G-DINA Model Framework and the GDINA R Package

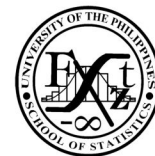
**STAT
SPEAKS**

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This is a two-part presentation on the G-DINA model as psychometric framework for diagnostic modeling and its implementation in R. The first hour of the presentation focuses on the G-DINA both as a general model and a framework for cognitive diagnostic modeling. As a model, the G-DINA is a general cognitive diagnosis model (CDM) that subsumes a number of existing specific (i.e., constrained) CDMs; as a framework, the G-DINA facilitates the conduct of various analyses such as parameter estimation, item- and test-level model comparison, model fit evaluation, and Q-matrix validation. The second hour focuses on the *GDINA*, a recently released R package that implements the G-DINA model framework. Its current features include: single- and multiple-group estimation of CDMs for dichotomous, ordinal, and nominal responses; saturated, higher-order, and hierarchical specification of the joint attribute distribution; monotonicity constraints on the success probabilities; Q-matrix validation; item and model fit evaluation; model comparison at the test and item levels; differential item functioning detection; and item response data simulation.

August 16, 2017 (Wednesday), 4:00 - 6:00 pm
Stat Colloquium Room (Rm 201)

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