Workshop topic: *(for a one-day workshop)*

Use simulation to teach Measurement concepts

Workshop speaker:

Margaret Wu

This workshop will demonstrate how simulation can be used to help students understand some statistics and measurement concepts. The simulations are done using R. The topics include

- Generating item responses for dichotomous and partial credit models, and for 2PL IRT models
- Factors impacting on test reliability, and the relationship between reliability and dimensionality
- Understanding item threshold parameters for the partial credit model.
- Properties of fit statistics
- Differences between joint maximum likelihood (JML) and marginal maximum likelihood (MML)
- Using conditioning variables for MML
- Differences between unidimensional and multidimensional IRT models.