



DEPARTMENT of PSYCHOLOGY

2016-2017 COLLOQUIUM SERIES

Presents



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“Considering Parameter Uncertainty with Confidence Sets and Exchangeable Parameter Estimates”

Statistical results carry uncertainties which require a thorough evaluation before they can be definitively interpreted. The value and importance of considering two kinds of parameter uncertainty are highlighted in this talk. The first type of uncertainty, which is quantified by confidence sets (CSs), communicates sampling variability and estimate precision. The second and lesser known type of uncertainty, which is quantified by exchangeable parameter estimates (EPEs), communicates uncertainty in the stability and uniqueness of the substantive interpretation of parameter estimates or effect sizes in relation to model fit. A general framework is developed to unify these two types of parameter uncertainties; and the usefulness of considering CSs and EPEs are illustrated with two empirical examples. The first example uses a multiple linear regression model to relate GRE component scores to graduate GPA, and the second example uses a latent variable mediation model to examine direct and indirect effects of adolescent spirituality on thriving through religiosity. Additionally, a targeted illustration is presented to further illustrate distinctions between CSs and EPEs. Finally, the importance of considering both CSs and EPEs is discussed along with future research directions.

Friday, January 20, 2017

3:30 p.m.

Gilmer 190

Coffee/cookies at 3:15pm.

Reception will be held after the talk.