

Statistics Seminar

Ick Hoon Jin
University of Notre Dame
Tues, January 31st
154 Hurley Hall
4:00 – 5:00 PM



A Doubly Latent Space Joint Model for the Analysis of Item Response Data

Item response theory (IRT) models explain an observed item response as a function of a respondent's latent trait and the item's property. Local independence, which is a critical assumption for IRT, is often violated during real testing situations, and this violation can severely bias item and person parameter estimates. We propose a new type of model, so-called a doubly latent space joint model, for item response data which does not require the local independence assumption. Our proposed model can estimate relative distances between pairs of items to represent the item dependence structure, which can also be used to identify item clusters in latent spaces. Our approach introduces a new type response analysis with opportunities for further applications and extensions.

The Department of Applied and Computational
Mathematics and Statistics

Please visit acms.nd.edu to view the full list of speakers.