

IMPS 2018

Columbia University · New York City, New York, USA · July 9-13, 2018

Addendum

Updated Abstract:

Parallel Session 4.7E (Yanhong Bian)

Classification Accuracy for Nonparametric Classification Approaches in Cognitive Diagnosis

Cognitive diagnosis models (CDMs) and several nonparametric classification methods have been developed to classify examinees to the proficiency classes they belong to, based on the attributes they master or nonmaster. There are several classification accuracy indices developed under CDMs. However, the classification accuracy for nonparametric classification approach in cognitive diagnosis has seldom been proposed. This study introduces the classification accuracy indices under the general nonparametric classification (GNPC) method which can be applied to data that conform to the saturated CDM. Three indices from previous literature (Wang, Song, Chen, & Ding, 2015) are employed under the GNPC, namely, the test-level, attribute-level and pattern-level accuracy indices. The performance of the three indices are investigated using simulation study and compared with indices computed based on the saturated CDM. Preliminary results showed three indices can reflect the true classification accuracy of the GNPC.

Poster Withdrawn:

Poster #12 - Lead Presenter: Shunta Nagano
Poster #35 - Lead Presenter: Gamze Kartal
Poster #71 - Lead Presenter: John Donoghue

Talk Withdrawn:

Parallel Session 2.4C- Lead Presenter: Xin Qiao
Parallel Session 6.3B - Lead Presenter: Sangbeak Ye
Parallel Session 7.1C- Lead Presenter: Nitin Bhushan
Parallel Session 7.5E - Lead Presenter: Tom Benton
Parallel Session 7.6A- Lead Presenter: Joseph Grochowalski
Parallel Session 10.5C- Lead Presenter: Yadira Peralta

Talk Rescheduled:

Parallel Session 1.5D (Lead Presenter: Yating Zheng)
to Parallel Session 6.6E

Update to Lead Presenter:

Parallel Session 5.4A - New Lead Presenter: Carolin Strobl

Update to Chair:

Parallel Session 7.6 - New Chair: Anton Beguin

Abstract Presented:

10.2 Item Response Theory
on Friday July 13 11:00 a.m.-12:30 p.m.

10.2B *Anchor Point Selection*
presenter: Carolin Strobl

Abstract:

For detecting differential item functioning (DIF) between two groups of test takers, their item parameters need to be aligned in some way. Typically this is done by means of choosing a small number of so called anchor items. Here we propose an alternative strategy: the selection of an anchor point along the item parameter continuum, where the two groups best overlap. We illustrate how the anchor point is selected by means of maximizing an inequality criterion. It performs equally well or better than established approaches when treated as an anchoring technique, but also provides additional information about the DIF structure through its search path.

Carolin Strobl, University of Zurich; Julia Kopf, University of Munich; Raphael Hartmann, University of Freiburg; Achim Zeileis, University of Innsbruck