



IMPS 2025

University of Minnesota • Minneapolis, MN, USA
July 15-18, 2025 • Short Courses July 14

Welcome Reception and Poster Session

Tuesday, July 15 • 5:15 p.m. - 7:15 p.m.

(Presenters will be available at posters from 5:45 p.m. - 7:15 p.m.)

Location: Memorial Hall of McNamara Center

Address: 200 SE Oak St, Minneapolis, MN 55455

Poster 1 **Comparing traditional and AI-based IRT estimation: An empirical study**

Mr. Olukayode Apata

Poster 2 **Network psychometrics: Node redundancy**

Mr. Abraham Iniguez

Poster 3 **Comparing the rasch equating method and the d scoring equating method**

Dr. Ahmed Haddadi

Poster 4 **Assessing cross-group and cross-time measurement invariance**

Mr. Alexander Miles

Poster 5 **Impacts of Q-matrix design on Learning DCM linear attribute hierarchies**

Dr. Alfonso Martinez

Poster 6 **Evaluating sample size requirements for context questionnaire scales in international large-scale assessments**

Dr. Andrés Christiansen

Poster 7 **Early assurance admission program outcomes for matriculation years 2019 - 2022**

Dr. Anita Wilson

Poster 8 **Supporting student progression: The relationship between the LASSI, preclinical course exams, and USMLE Step 1**

Dr. Anita Wilson

- Poster 9** **Comparing Logit, Probit, and Glogit Link Functions: A multinomial logistic regression model with unbalanced data**
Dr. Anita Wilson
- Poster 10** **Avoiding conflated random slopes in multilevel analysis**
Mr. Bladimir Padilla
- Poster 11** **Testing measurement invariance and DIF under BIB design and complex sampling**
Dr. Bo Zhang
- Poster 12** **Time series and multilevel modeling for longitudinal item response theory data**
Dr. Caio Azevedo
- Poster 13** **Causal mediation in clustered data with machine learning**
Mr. Cameron McCann
- Poster 14** **Beta copula diagnostic classification models for attribute estimation using testlet-based visual analogue scaling**
Prof. Chen-Wei Liu
- Poster 15** **Investigating stopping rules for variable-length multistage adaptive testing**
Dr. Chia-Ling Hsu
- Poster 16** **Demarginalizing the intersection of DIF: traditional vs intersectional approach**
Mr. Christopher Green
- Poster 17** **Psychometric modeling of performance and response strategies in forecasting judgements**
Dr. Clifford Hauenstein
- Poster 18** **Application of explanatory Rasch model: Standardizing African certificate examination**
Mr. Daniel Oyeniran
- Poster 19** **Impact of item drift on student scores in pre-equated assessments**
Mr. Eric Asare
- Poster 20** **Modeling interaction terms among level 1 predictors in multilevel models**
Ms. Erica Dorman
- Poster 21** **Type 1 error and power considerations for many multiple group DIF analysis**
Ms. Erin Winters
- Poster 22** **Evaluating aberrant response patterns in reading using mixture models**
Dr. Fathima Jaffari
- Poster 23** **Mediation analysis with misclassification in binary variables**
Mr. Fei Gao
- Poster 24** **A two-stage path analysis approach to model interaction effects for categorical indicators**
Mr. Gengrui Zhang

- Poster 25** **Do large language models replicate human psychometric bias? Investigating DIF in simulated CES-D responses**
Mr. Gengrui Zhang
- Poster 26** **Use of item response theory to validate emotional vacillation scale for undergraduates in Nigeria**
Mr. Godwin Sabbah
- Poster 27** **Integrating response time into stopping rules in computerized adaptive testing**
Ms. Hahyeong Kim
- Poster 28** **Comparison of RDSEM approaches in continuous-time and discrete-time**
Mr. Hosung Ryu
- Poster 29** **Evaluating detection and correction methods for dependent effect sizes in meta-analysis**
Prof. Hsiu-Ting Yu
- Poster 30** **Exploring attribute hierarchies in cognitive diagnosis from a graph-theoretic perspective**
Ms. Hyunjoo Kim
- Poster 31** **Equating coefficients and their standard errors under skew-normal ability distribution**
Dr. Ikko Kawahashi
- Poster 32** **Second-order structural equation modeling with both factors and components**
Mr. In-Hyun Baek
- Poster 33** **Comparison of Cronbach's Alpha and McDonald's Omega for nationally collected cross-sectional panel data**
Ms. Jae-A Lim
- Poster 34** **Structural bias in causal effects: Two-wave nonequivalent control group designs**
Mr. Jaehyun Shin
- Poster 35** **Reconciling reliability across measurement frameworks for adverse childhood experiences scales**
Dr. Jay Jeffries
- Poster 36** **The role of the mean structure in models of co-development**
Ms. Jennifer Traver
- Poster 37** **Comparing generalized linear mixed models and generalized estimating equations with longitudinal count data: A demonstration**
Mr. Jichuan Wu
- Poster 38** **An innovative approach to latent underlying structure by employing Bayesian network analysis**
Mr. Jingyang Li
- Poster 39** **Performances of collapsed Gibbs sampling, posterior mode estimation and joint maximum likelihood estimation on diagnostic classification models for boundary problems**
Mr. Jingyang Li
- Poster 40** **Measuring reflective higher-order consumption worldviews**
Dr. Julien Geissmar

- Poster 41** **Modeling engagement dynamics: Integrating deep learning with generalized additive models**
Dr. Jung Yeon Park
- Poster 42** **A new frontier in psychometrics: Leveraging large language model for psychological construct measurement**
Mr. Kentaro Suzuki
- Poster 43** **The use of AI tools to develop and validate Q-matrices**
Mr. Kevin Fan
- Poster 44** **Extending biclustering models to polytomous psychological scales**
Dr. Koji Kosugi
- Poster 45** **Differential test functioning procedures in small and disparate group samples**
Dr. Laura Jamison
- Poster 46** **Evaluating the performance of SEM fit indices in MASEM and MAGNA models**
Ms. Laura Maria Fetz
- Poster 47** **The impact of configural invariance violations on the performance of alignment optimization**
Ms. Lindsay Alley
- Poster 48** **Investigating multidimensionality in symptom presence/severity**
Mr. Lionel Meng
- Poster 49** **Uncovering dynamic cognitive signatures in spatial problem solving**
Ms. Lucy Okam
- Poster 50** **Latent profile analysis of health and well-being in COVID-19 patients**
Mr. Marco Viola
- Poster 51** **Sequence mining of cognitive strategies in a computerized neuropsychological task**
Mr. Matheus Rodrigues
- Poster 52** **Assessing metacognitive calibration in biological model evaluation using Rasch analysis**
Ms. Mei Grace Behrendt
- Poster 53** **Detecting differential item functioning using varying coefficient models**
Ms. Michaela Cichrová
- Poster 54** **Detection of aberrant response behavior in context of robust logistic regression methods**
Ms. Michaela Varejkova
- Poster 55** **Bridging psychometrics and reality: mitigating selection bias in factor analysis**
Mr. Miguel Bosch Francisco
- Poster 56** **Identifying core symptoms of depression for Hawaii farmers: a network analysis for PHQ-2 screening tool**
Dr. Min Liu

- Poster 57** **Testing Russell's affect circumplex in corpora: latent semantic scaling approach**
Ms. Mizuki Kobayashi
- Poster 58** **Developing OSCE examinee score reports using the latent space item response model**
Dr. Nai-En Tang
- Poster 59** **The creativity conundrum: Examining the gap between concept and measurement**
Ms. Navrose Bajwa
- Poster 60** **Comparing traditional and AI-based IRT estimation: An empirical study**
Mr. Olukayode Apata
- Poster 61** **Variable item replacement approaches for on-the-fly multistage testing**
Dr. Onur Demirkaya
- Poster 62** **Testing full factorial invariance assumptions with unbalanced data**
Mr. Po-Yi Chen
- Poster 63** **Classification-based DIF analysis of the National Benchmark Tests (NBT)**
Mrs. Precious Mudavanhu
- Poster 64** **NLP-based evaluation of LLMs' response alignment in couples counseling**
Mr. Qian Shen
- Poster 65** **Detecting differential item functioning in response time using regularized regression**
Mr. Qizhou Duan
- Poster 66** **Detection of cognitive diagnostic model misspecification using Lancaster-Chesher information matrix tests**
Ms. Reyhaneh Hosseinpourkhoshkbari
- Poster 67** **Evaluating Thomson bonds model as an alternative data generating model**
Mr. Robert Chapman
- Poster 68** **Linear measurement of parent and family Involvement in K-12 education**
Mr. Robert Anderson
- Poster 69** **What Do web-based memory assessments measure? A convergent validity analysis**
Mr. Romeo Penheiro
- Poster 70** **Evaluating factor retention methods in large exploratory factor analysis models**
Mr. Ruoqian Wu
- Poster 71** **Using dual scaling to understand rater cognition**
Prof. Ruth Childs
- Poster 72** **Linking across grades using calibrated projections with censored populations**
Mr. Ryan Lerch

- Poster 73** **Strengthening cross-grade comparisons on a vertical scale using moderated nonlinear factor analysis**
Dr. Sanford Student
- Poster 74** **A method for imputing ordinal responses at the intersection of misfitting items and persons in a Guttman scale**
Dr. Sherwin Balbuena
- Poster 75** **A network approach to procrastination: Modeling dynamic interactions with the irrational procrastination scale**
Dr. Shirin Rezvanifar
- Poster 76** **Simulation-based sensitivity analysis for power of Rasch family models**
Mr. Shuhei Hanadate
- Poster 77** **Distinguishing bifactor models from alternative models: Insights from loading patterns**
Ms. Sijia Li
- Poster 78** **Beyond cross-sectional calibration: Evaluating within-person variability in multilevel item response theory**
Ms. Siqi Sun
- Poster 79** **Evaluating the performance of repeated items in longitudinal exams**
Dr. Siyu Wan
- Poster 80** **Exploring suicidal ideation risk in first-year students with zero-inflated model**
Dr. Sohee Kim
- Poster 81** **Cross-classified mediation with a between-person predictor**
Prof. Soyoung Kim
- Poster 82** **Bullying Victimization patterns and school climate among middle school students in East Asian cultural circles: Based on latent profile analysis**
Dr. Sun Rui
- Poster 83** **Sample size imbalance and its impact on measurement invariance**
Ms. Teddy Chen
- Poster 84** **A comparison on three variants of parallel analysis in bifactor models**
Mr. Tugay Kaçak
- Poster 85** **Dealing with missing data in cognitive diagnosis modeling: A comparison on single and multiple imputation methods**
Mr. Tugay Kaçak
- Poster 86** **Mediation analysis using saturated and restricted structures**
Ms. Valerie Polad
- Poster 87** **School management and outcomes in Brazil: insights into leadership practices**
Ms. Victoria Jaeger
- Poster 88** **Assessing the utility of metacognitive wrapper data in in early grade prediction for student assessment**
Mr. Walton Ferguson

- Poster 89** **Youth's perspective of facility climate in restrictive education settings: A latent class analysis**
Prof. Wenchao Ma
- Poster 90** **CDMs in language assessments: A systematic review**
Ms. Mirai Nagasawa
- Poster 91** **Identification of diabetes predictive factors with machine learning methods**
Dr. Ya Zhang
- Poster 92** **Integrating anchor selection strategies with dual-scale purification for DIF detection**
Dr. Ya-Hui Su
- Poster 93** **Evaluating model fit in confirmatory factor analysis for cross-classified data**
Dr. Yen Lee
- Poster 94** **Detecting multidimensionality that causes differential item functioning: A simulation study**
Ms. Yijun Cheng
- Poster 95** **The effects of within- and between-person reliability on the performance of single-indicator multilevel MEAR(1)**
Ms. You Kyoung Hwang
- Poster 96** **Penalized Gaussian maximum likelihood of latent structural vector autoregressive models for high-dimensional discrete-valued time series**
Dr. Younghoon Kim
- Poster 97** **A new IRT model for correcting social desirability bias in VAS**
Mr. Youxiang Jiang
- Poster 98** **A new method for detecting DTF using sum scores**
Dr. Yutaro Sakamoto
- Poster 99** **The effect of item difficulty on credit scores integrating speed and accuracy in a cognitive performance measure**
Ms. Zarah Chaudhary
- Poster 100** **Understanding Spatial cognitive processes on a digital numeracy item: An N-Gram based machine learning approach**
Ms. Yiming Chen
- Poster 101** **Applying CoxNet onto the educational sequential process data**
Ms. Binhui Chen
- Poster 102** **The impact of latent confounder distribution statistics on direction dependence analysis**
Ms. Guyin Zhang

