



# Sooyong Lee, Ph.D.

Psychometrician

WIDA

The University of Wisconsin-Madison

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## PROFESSIONAL SUMMARY

As a psychometrician, I specialize in applying contemporary statistical theories and techniques to my work. My research interests center around developing and utilizing statistical models, including structural equation modeling (SEM), multilevel modeling (MLM), item response theory (IRT), and mixture modeling. In my recent work, I have placed particular emphasis on Bayesian estimation as a means of modeling the relationships between variables.

## EDUCATION

- 2017-2023** Ph.D., Major in Quantitative Methods in Educational Psychology  
The University of Texas at Austin, Austin, Texas  
- Dissertation: Development of a Method for Addressing Various Censoring Effects in a Latent Growth Curve Modeling Framework. Advisor: Tiffany Whittaker
- 2014-2017** M.A., Major in Educational Statistics and Measurement  
Korea University, Seoul, Republic of Korea  
- Thesis: Exploration of LCA conditions in Latent Class with Low Proportion. Advisor: Sehee Hong

## PUBLICATIONS

2024

- **Sooyong Lee**, Suhwa Han, & Seung W. Choi (2024). Bayesian Moderated Non-linear Factor Analysis for DIF Detection under Violation of Equal Variance Assumption. *Journal of Educational Measurement*. In print.
- **Sooyong Lee**, Adam Sales, Hyeon-Ah Kang, & Tiffany A. Whittaker (2024). Fully Latent Principal Stratification With Measurement Models. *Journal of Educational and Behavioral Statistics*. Under review.
- Kahyun Lee, **Sooyong Lee**, & Allison Master (2024). From Fixed to Growth: An Intensive Longitudinal Study of the Interplay Between Growth Mindset, Emotions, Sense of Belonging, and Experiences in Daily Life Among College Students. In preparation.
- **Sooyong Lee**, Adam Sales, Hyeon-Ah Kang, & Tiffany A. Whittaker (2024). Bayesian and Maximum Likelihood Estimation in Fully Latent Principal Stratification. In preparation.
- **Sooyong Lee**, Adam Sales, Hyeon-Ah Kang, & Tiffany A. Whittaker (2024). Multidimensional Fully-latent Principal Stratification. In preparation.
- **Sooyong Lee**, Suyoung Kim, & Jiwon Kim (2024). Investigating Latent Interaction Effects in Multiple-Group Analysis in the Structural Equation Modeling Framework. *Structural Equation Modeling: A Multidisciplinary Journal*.

2023

- Jonghwan Lee, Christina Schneider, Garron Gianopulos, Luping Niu, **Sooyong Lee**, Sangdon Lim, & Seung W Choi (2023). The Impact of Item Bank Transition Rules on Student Ability Estimates and Achievement Level Classifications. *Journal of Computerized Adaptive Testing*. In print.
- **Sooyong Lee** & Tiffany A. Whittaker (2023). Parallel Process Latent Growth Modeling with Multivariate Confounders/Suppressors. *Structural Equation Modeling: A Multidisciplinary Journal*. 30(2), 284-295.
- **Sooyong Lee**, Kahyun Lee, & Tiffany A. Whittaker (2023). Application of Associative Discrete-Time Survival Analysis Using Latent Transition Specification. *Structural Equation Modeling: A Multidisciplinary Journal*. 1-12.
- **Sooyong Lee**, Adam Sales, Hyeon-Ah Kang, & Tiffany A. Whittaker (2023). Fully Latent Principal Stratification: Combining PS with Model-Based Measurement Models.. *The Annual Meeting of the Psychometric Society*. pp. 287-298.

## 2022

- Seung Choi, Sangdon Lim, Luping Niu, **Sooyong Lee**, Christina M. Schneider, Jay Lee, & Garron J. (2022). maat: An R Package for Multiple Administrations Adaptive Testing. *Applied Psychological Measurement*. 46-1, 73-74.
- **Sooyong Lee**, Suhwa Han, & Seung W. Choi (2022). DIF Detection With Zero-Inflation Under the Factor Mixture Modeling Framework. *Educational and Psychological Measurement*. 82-4, 678-704.
- **Sooyong Lee** & Tiffany A. Whittaker (2022). Comparison of Three Approaches to Class Enumeration in Growth Mixture Modeling when Time Structures are Variant Across Latent Classes. *Structural Equation Modeling: A Multidisciplinary Journal*. 29, 23-35.

## 2021

- Cory L. Cobb, Charles R. Martínez, Jr., **Sooyong Lee**, Tae Kyoung Lee, & Elma I. Lorenzo-Blanco (2021). Acculturation trajectories differ by youth age at arrival and time in residency among Latino immigrant families in a US emerging immigrant context. *International Journal of Intercultural Relations*. 81, 79-93.

# NATIONAL AND INTERNATIONAL PRESENTATIONS

## Presentations

1. **Sooyong Lee**, Adam Sales, Hyeon-Ah Kang, & Tiffany A. Whittaker (2024-04). Multidimensional Fully Latent Principal Stratification. American Educational Research Association (AERA), Philadelphia, USA.
2. Tiffany Whittaker, Hyeon-Ah Kang, **Sooyong Lee**, Adam Sales (2023-04). Bayesian and Maximum Likelihood Estimation in Fully Latent Principal Stratification. National Council on Measurement in Education (NCME), Chicago, USA.
3. **Sooyong Lee**, Adam Sales, Hyeon-Ah Kang, & Tiffany A. Whittaker (2022-07). Fully-Latent Principal Stratification. International Meeting of the Psychometric Society (IMPS), Bologna, Italy.
4. Garron Gianopulos, Jay Lee, Sangdon Lim, Luping Niu, **Sooyong Lee**, & Seung W. Choi (2022-04). The Impact of Item Pool Size and Item Pool Distribution on Student Ability Estimates for a Hybrid Interim-Summative CAT. National Council on Measurement in Education (NCME), San Diego, USA.
5. Jay Lee, M. Christina Schneider, Garron Gia, Luping Niu, **Sooyong Lee**, Sangdon Lim, & Seung W. Choi (2022-04). The Impact of item bank transition rules on student ability estimates and achievement level classifications. National Council on Measurement in Education (NCME), San Diego, USA.
6. Daniel Lewis & **Sooyong Lee** (2021-04). A Comparison of Two ESS Cut Score Estimation Algorithms. National Council on Measurement in Education (NCME), Baltimore, MD, USA.

## Posters

1. **Sooyong Lee**, Kahyun Lee, & Allison Master (2024-04). Exploring the dynamics of daily experiences, emotions, and depression among Asian American students: The moderating role of growth mindsets.. American Educational Research Association (AERA), Philadelphia, USA.
2. **Sooyong Lee**, Suhwa Han, & Seung W. Choi (2021-04). DIF Detection with Zero-Inflation under the Mixture Modeling Framework. American Educational Research Association (AERA), Virtual.
3. **Sooyong Lee** & Suhwa Han (2020-07). Item selection and trait estimation methods in CAT with item leakage. International Meeting of the Psychometric Society (IMPS), Maryland, USA.
4. **Sooyong Lee** & Tiffany A. Whittaker (2020-04). Comparison of Three Approaches to Class Enumeration in Growth Mixture Modeling when Time Structures are Variant Across Latent Classes. American Educational Research Association (AERA), Virtual.
5. **Sooyong Lee** & Sehee Hong (2018-07). Exploration of LCA conditions in Latent Class with Low Proportion. International Meeting of the Psychometric Society (IMPS), New York, USA.
6. Kejin Lee, **Sooyong Lee**, & Youngri Lee (2018-05). An Alternative Approach to Discrete-Time Survival Analysis for Meaningful Interpretation. Modern Modeling Methods conference (MMM), Connecticut, USA.

## RESEARCH

Psychometrician	WIDA - Data analysis for measurements and statistics	2024/4-present
Post-doc Fellow	FLPS project - Development of 'flps' package for Fully-latent Principal Stratification	2023/9-2024/3
Research Assistant	FLPS project - Development of 'flps' package for Fully-latent Principal Stratification	2021/9-2023/8
Intern	Embedded Standard Setting (ESS) - Internship for developing ESS package for Embedded Standard Setting	2021/6-2021/8
Intern	Embedded Standard Setting (ESS) - Internship for developing Shiny app for Embedded Standard Setting	2020/6-2020/8
Research Assistant	'maat' package development project - Development of MAAT package for Computerized Adaptive Testing for North-west Evaluation Association (NWEA)	2019/9-2020/5
Research Assistant	Survey of COE Full-Time Tenured and Tenure-Track Faculty - Data analysis for surveys of graduate programs of education at the University of Texas at Austin	2019/9-2019/12
Research Assistant	President's Award for Global Learning (PAGL) - Designing a culturally appropriate mobile application to increase mental health literacy and self-care habits among South Korean young adults	2019/1-2019/8
Research Assistant	CGS PhD Career Pathways project - Data analysis for surveys to collect data on the career pathways of past and present STEM and humanities PhD students.	2018/9-2019/5

## TEACHING

## Teaching Assistant

University of Texas at Austin

EDP 380C: Structural Equation Modeling 2021/1-2021/5  
Professor Tiffany Whittaker

EDP 380C: Structural Equation Modeling 2020/1-2020/5  
Professor Tiffany Whittaker

## PROGRAMS

R package	GRshiny package <a href="https://sooyongl.github.io/GRShiny/">https://sooyongl.github.io/GRShiny/</a>	2023
R package	clavaan package <a href="https://github.com/sooyongl/clavaan">https://github.com/sooyongl/clavaan</a>	2023
Shiny application	GRshiny: Graded response model <a href="https://sooyonglee.shinyapps.io/GRShiny/">https://sooyonglee.shinyapps.io/GRShiny/</a>	2022
R package	Embeded Standard Setting <a href="https://sooyongl.github.io/EmStanS/">https://sooyongl.github.io/EmStanS/</a>	2022
R package	maat package <a href="https://choi-phd.github.io/maat/">https://choi-phd.github.io/maat/</a>	2022
R package	flps package <a href="https://cran.r-project.org/web/packages/flps/index.html">https://cran.r-project.org/web/packages/flps/index.html</a>	2022
Shiny application	Embeded Standard Setting	2021

## SERVICE

Reviewer	International Journal of Intercultural Relations	2023/7 - present
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