Sooyong Lee

PhD

Educational Psychology, The University of Texas at Austin

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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

The University of Texas at Austin — *Austin, Texas*
Ph.D., Major in Quantitative Methods in Educational Psychology — *2017-2023*

Korea University — *Seoul, Republic of Korea*
M.A., Major in Educational Statistics and Measurement — *2014-2017*

Research experience

FLPS project — *Post-doc*
IES grant — *2023/9-present*
- Development of FLPS package for Fully-latent Principal Stratification

FLPS project — *Graduate Research Assistant*
IES grant — *2021/9-2023/8*
- Development of FLPS package for Fully-latent Principal Stratification

Embedded Standard Setting (ESS) — *Intern*
Creative Measurement Solutions LLC — *2021/6-2021/8*
- Internship for developing ESS package for Embeded Standard Setting

Embedded Standard Setting (ESS) — *Intern*
Creative Measurement Solutions LLC — *2020/6-2020/8*
- Internship for developing Shiny app for Embeded Standard Setting

maat package development project — *Graduate Research Assistant*
Northwest Evaluation Association (NWEA) — *2019/9-2020/5*
- Development of MAAT package for Computerized Adaptive Testing for Northwest Evaluation Association (NWEA)

COE Full-Time Tenured and Tenure-Track Faculty — *Graduate Research Assistant*
2019/9-2019/12
- Data analysis for surveys of graduate programs of education at the Univerisity of Texas at Austin

President's Award for Global Learning (PAGL) — *Graduate Research Assistant*
President's Award for Global Learning (PAGL) — *2019/1-2019/8*
- Designing a culturally appropriate mobile application to increase mental health literacy and self-care habits among South Korean young adults

CGS PhD Career Pathways project *Graduate Research Assistant*
2018/9-2019/5

- Data analysis for surveys to collect data on the career pathways of past and present STEM and humanities PhD students.

Selective Publications

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.

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, Suhwa Han, & Seung W. Choi (2023). Bayesian Moderated Non-linear Factor Analysis for DIF Detection under Violation of Equal Variance Assumption. *Educational and Psychological Measurement*. Under review.

Selective Presentation and Poster

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.

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.

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.

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.

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.

Program

Embeded Standard Setting *Shiny application*
- `https://sooyonglee.shinyapps.io/ESS_shiny/` *2021*

GRshiny: Graded response model *Shiny application*
- `https://sooyonglee.shinyapps.io/GRShiny/` *2022*

Embeded Standard Setting *R package*
- `https://sooyongl.github.io/EmStanS/` *2022*

maat package *R package*
- `https://choi-phd.github.io/maat/` *2022*

flps package *R package*
- `https://cran.r-project.org/web/packages/flps/index.html` *2022*

GRshiny package *R package*
- `https://sooyongl.github.io/GRShiny/` *2023*