

# Sunbeom Kwon

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Department of Psychology  
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## EDUCATION

University of Illinois Urbana-Champaign, Champaign, IL	2021 - Present
Ph.D. in Quantitative Psychology	
University of Illinois Urbana-Champaign, Champaign, IL	2024
M.S. in Statistics	
Sungkyunkwan University, Seoul	2020
M.A. in Psychology	
Sungkyunkwan University, Seoul	2015
B.A. in Psychology and Statistics	

## EMPLOYMENT

### ETS

Ida Lawrence Research Summer Intern	June 2024 - July 2024
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### BSCHR, Seoul

Psychometric Researcher	August 2020 - February 2021
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## TEACHING

### University of Illinois Urbana-Champaign

Lab Instructor and Teaching Assistant

#### Courses:

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|--|-------------------------|
| • PSYC 490: Measurement and Test Development Lab | Fall 2022, 2023         |
| • PSYC 301: Psychological Statistics             | Spring 2025, 2024, 2023 |
| • PSYC 235: Introduction to Statistics           | Fall 2024               |

### Sungkyunkwan University

Teaching Assistant

#### Courses:

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|---|-------------|
| • Psychological Testing and Measurement | Spring 2018 |
| • Statistical Analysis in Psychology    | Fall 2018   |
| • Introduction to Psychology            | Spring 2019 |

## PUBLICATIONS

1. **Kwon, S.**, McCaffrey, D., Jewsbury, P., & Casabianca, J. (Under Review). An Empirical Bayesian Approach for Testing the Fairness of Automated Scoring. *Journal of Educational and Behavioral Statistics*.
2. **Kwon, S.**, Zhang, S. (In Revision). Explaining Performance Gaps with Problem-Solving Process Data via Latent Class Mediation Analysis. *Psychometrika*.
3. **Kwon, S.**, Zhang, S., Koehn, H. F., & Zhang, B. (2024). MCMC Stopping Rules in Latent Variable Modeling. *British Journal of Mathematical and Statistical Society*.
4. Choi, J., **Kwon, S.**, & Zhang, B. (2024). A Structural After Measurement Approach to Bifactor Predictive Models. *Structural Equation Modeling: A Multidisciplinary Journal*.
5. **Kwon, S.** (2020). Effects of factor scaling constraints on model estimation in Bayesian confirmatory factor analysis. *Sungkyunkwan University*.

## PRESENTATIONS

### Leading Conference Presentations:

1. **Kwon, S.**, Zhang, S. (2025, April). Explaining Performance Gaps with Problem-Solving Process Data via Latent Class Mediation Analysis. *Poster presented at the National Council on Measurement in Education Annual Meeting, Denver, CO*.
2. **Kwon, S.**, McCaffrey, D., Jewsbury, P., & Casabianca, J. (2025, April). An Empirical Bayesian Approach for Testing the Fairness of Automated Scoring. *Paper presented at the National Council on Measurement in Education Annual Meeting, Denver, CO*.
3. **Kwon, S.**, Zhang, S. (2024, July). Explaining Performance Gaps with Problem-Solving Process Data via Latent Class Mediation Analysis. *Paper presented at the International Meeting of the Psychometric Society 2024, Prague, Czech*.
4. **Kwon, S.**, Zhang, S. (2023, November). Explaining Performance Gaps with Problem-Solving Process Data via Latent Class Mediation Analysis. *Paper presented at the Ideas in Testing Research Seminar, Chicago, IL*.
5. **Kwon, S.**, Zhang, S., & Köhn, F. (2023, March). MCMC Convergence Diagnostics in DINA Model and Bifactor IRT Model. *Poster presented at the National Council on Measurement in Education Annual Meeting, Chicago, IL*.
6. **Kwon, S.**, Jahng, S. (2020, October). Effects of Factor Scaling Constraints on Model Estimation in Bayesian Confirmatory Factor Analysis. *Paper presented at the Meeting of the Korean Society of Psychological Measurement and Assessment, Seoul, Korea*.
7. **Kwon, S.**, Jahng, S. (2019, March). Autoregressive Cross-lagged Model with Phantom Variables for Panel Data with a Missing Time Point. *Poster presented at the International Convention of Psychological Science, Paris, France*.
8. **Kwon, S.** (2017, November). Testing Autoregressive Cross-lagged Effects between Academic Achievement and Achievement Values Using Phantom Variables. *Poster presented at the Meeting of the Korean Society of Psychological Measurement and Assessment, Seoul, Korea*.

### Contributed Conference Presentations:

1. Choi, J., **Kwon, S.**, & Zhang, B. (2024, April). An Investigation of the Structural After Measurement Approach for Bifactor Models. *Poster presented at the Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL*.

## SOFTWARE

The **hmc dm** R package

Creator / Maintainer

- A package for fitting hidden Markov cognitive diagnosis models on longitudinal data for learning.
- <https://github.com/tmsalab/hmc dm>

## SERVICE

### Professional Committee:

- National Council on Measurement in Education  
*Dissertation Award Committee* 2023

### Ad-hoc Manuscript Reviewer:

- *Behavioral Research Methods*
- *Behaviormetrika*
- *Educational Measurement: Issues and Practice*
- *Statistics and Its Interface*

## AWARDS & HONORS

### University of Illinois Urbana-Champaign:

- Hobson Fellowship, Department of Psychology, 2021-2025.
- List of Teachers Ranked as Excellent by Students, Center for Innovation in Teaching & Learning, 2023.