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| CONTACT INFORMATION | Department of Psychology University of Houston 3695 Cullen Boulevard Houston, TX 77204-5022 | Email: slee95@central.uh.edu Cell Phone: (781) 645-9203 |
| EDUCATION | University of Georgia, Athens, GA Ph.D. in Educational Psychology (Quantitative Methodology Program) University of Georgia, Athens, GA M.S. in Statistics University of Georgia, Athens, GA M.S. in Physics Sogang University, Seoul, South Korea (4 years full scholarship) B.S. in Physics (Cum Laude) | 2012 2008 2008 2002 |
| ACADEMIC POSITIONS | Department of Psychology, University of Houston Assistant Professor Department of Physics, Massachusetts Institute of Technology Postdoctoral Associate - Learning Analytics for Massive Open Online Courses (edX.org) Department of Public Policy, City University of Hong Kong Postdoctoral Fellow - Panel Data and Quasi-Experimental Analysis for Organizational Behavior Center for Family Research, University of Georgia Postdoctoral Associate - Longitudinal Data Analysis for Adolescents using SEM and HLM Center for Family Research, University of Georgia Graduate Research Assistant - Integrated Data Analysis (IDA) combining Multiple Data Sets using IRT - Longitudinal Data Analysis for Adolescents using SEM and HLM Bio Imaging Research Center, University of Georgia Graduate Research Assistant - Magnetic Resonance Imaging (MRI)/Dynamic Contrast Enhanced MRI/fMRI - Developing Image Processing Algorithms for Tumor Detection using MRI | 2017–Current 2015–2017 2014–2015 2012–2014 2008–2012 2006–2008 |
| CURRENT RESEARCH INTERESTS | Developing Psychometric Models for Intelligent Tutoring System (ITS) Application of Machine Learning in Psychology and Education Application of functional Near Infrared Spectroscopy (fNIRS) | |
| PROFESSIONAL ACTIVITIES | International Conference on Educational Data Mining (EDM) Program Committee of Main Track International Conference on Educational Data Mining (EDM) Program Committee of Doctoral Consortium Track Program Committee of Industry Track | 2018 2017 2017 |

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| PROFESSIONAL DEVELOPMENT | Advanced fNIRS Data Analysis, University of Pittsburgh | June 6-7, 2019 |
| | LearnLab Summer School, Carnegie Mellon University | Jul 10-14, 2017 |
| | Intelligent Tutoring System (ITS) track certificate | |
| | Kaufman Teaching Certificate Program (KTCP), MIT | May 30-June 13, 2017 |
| | Kaufman Teaching Certificate | |
| PUBLICATIONS | LearnLab Summer School, Carnegie Mellon University | Jul 11-15, 2016 |
| | Educational Data Mining (EDM) track certificate | |
| | Lee, S. (2nd revision). Multidimensional structure and measurement invariance of school engagement. <i>Journal of School Psychology</i> . | |
| | Lee, S. (2019). Logistic regression procedure using penalized maximum likelihood estimation for differential item functioning. <i>Journal of Educational Measurement</i> . | |
| | Lee, S. , Sriutaisuk, S., & Kim, H. J. (2019). Using the tidyverse package in R for simulation studies in SEM. <i>Structural Equation Modeling: A Multidisciplinary Journal</i> . | |
| PUBLICATIONS | Lee, S. , & Chung, J. Y. (2019). The machine learning-based dropout early warning system for improving the performance of dropout prediction. <i>Applied Sciences</i> . | |
| | Lee, S. , & Chung, J. Y. (2019). Lessons learned from two years of K-MOOC experience. <i>Educational Media International</i> , 56, 134-148. | |
| | Yoshida, H., Cirino, P., Mire, S. S., Burling, J. M., & Lee, S. (2019). Parents' gesture adaptations to children with autism spectrum disorder. <i>Journal of Child Language</i> | |
| | Alexandron, G., Yoo, L. Y., Ruiperez-Valiente, J. A., Lee, S. , & Pritchard, D. E. (2019). Are MOOC learning analytics results trustworthy? With fake learners, they might not be!. <i>International Journal of Artificial Intelligence in Education</i> , 1-23. | |
| | Chung, J. Y., & Lee, S. (2019). Dropout early warning systems for high school students using machine learning. <i>Children and Youth Services Review</i> , 96, 346-353. | |
| PUBLICATIONS | Lee, H. R., Lee, S. , & Sung, J. (2019). The impact of ignoring multilevel data structure on the estimation of dichotomous item response theory models. <i>International Journal of Assessment Tools in Education</i> , 6, 92-108. | |
| | Lee, S. , Choi, Y. J., & Cohen, A. S. (2018). Automating simulation research for item response theory using R. <i>International Journal of Assessment Tools in Education</i> , 5, 682-700. | |
| | Lee, S. (2016). Detecting differential item functioning using the Logistic regression procedure in small samples. <i>Applied Psychological Measurement</i> . | |
| | Lee, S. , Lei, M. K., & Brody, G. H. (2015). Confidence intervals for distinguishing ordinal and disordinal interactions. <i>Psychological Methods</i> , 20, 245-258. | |
| | Lee, S. , Lei, M. K., & Brody, G. H. (2015). Constructing confidence intervals for effect | |

size measures of indirect effects. *Multivariate Behavioral Research*, 50, 600-613.

Windle, M., Kogan, S. M., **Lee, S.**, Chen, Y. F., Lei, M. K., Brody, G. H., Steven, R. H., & Tianyi, Y. (2015). Neighborhood by 5-HTTLPR interactions for substance use from ages 10-24 years using a harmonized dataset of African-American children. *Development and Psychopathology*, 28, 415-431.

Lee, S. (2015). Generating univariate and multivariate non-normal data. *The Stata Journal*, 15, 95-109.

Lee, S. (2015). Implementing a simulation study using multiple software packages for structural equation modeling and hierarchical linear modeling. *SAGE Open*, 5, 1-16.

Kogan, S. M., Lei, M. K., Beach, S. R. H., Brody, G. H., Windle, M., **Lee, S.**, MacKillop, J., & Chen, Y. F. (2014). Dopamine receptor gene D4 polymorphisms and early sexual onset: gender and environmental moderation in a sample of African American youth. *Journal of Adolescent Health*, 55, 235-240.

Zhao, Q., Langley, J., **Lee, S.**, & Liu, W. (2011). Positive contrast technique for the detection and quantification of superparamagnetic iron oxide nanoparticles in MRI. *NMR in Biomedicine*, 24, 464-472.

Zhao, Q., **Lee, S.**, Kent, M., Schatzberg, S., & Platt, S. (2010). Dynamic contrast enhanced magnetic resonance imaging of canine brain tumors. *Veterinary Radiology and Ultrasound*, 51, 122-129.

DEVELOPED SOFTWARE

Lee, S. (2014). crossReg: Confidence intervals for crossover points of two simple regression lines. R package version 1.0. <http://CRAN.R-project.org/package=crossReg>

Two Stata commands `rnonnormal` and `rmvnonnormal` in **Lee, S.** (2015). Generating univariate and multivariate non-normal data. *The Stata Journal*, 15, 95-109.

CONFERENCE PROCEEDINGS PAPERS AND POSTERS

Patel, A., **Lee, S.**, & Yoshida, H. (2018) *Early attention perseveration in a context of the preferential paradigm*. Poster presented at 26th Annual ARMADILLO conference for Cognition and Cognitive Neuroscience in the Southwest Regional Area, Houston, TX.

Chen, Z., **Lee, S.**, & Garrido, G. (2018). *Re-designing the Structure of Online Courses to Empower Educational Data Mining*. Paper presented at Educational Data Mining, Buffalo, NY.

Alexandron, G., Valiente, J., **Lee, S.**, & Pritchard, D. (2018). *Evaluating the Robustness of Learning Analytics Results Against Fake Learners*. Paper presented at European Conference on Technology Enhanced Learning, Leeds, UK.

Lee, S. & Pritchard, D. (2017). *Fixed Item Parameter Calibration for Measuring Student Learning in MOOCs*. Poster presented at Learning with MOOC, Austin, TX.

Lee, S., Chen, Z., Kimn, A., Pritchard, D., & Paul, A., (2017). *Factor Analysis Reveals Student Thinking using the Mechanics Reasoning Inventory*. Paper presented at ACM Conference on Learning@ Scale, Cambridge, MA.

Alexandron, G., **Lee, S.**, Chen, Z., & Pritchard, D. (2016). *Detecting cheaters in MOOCs using item response theory and learning analytics*. Paper presented at the User Modeling, Adaptation and Personalization, Halifax, Canada.

Lee, S., Kimn, A., Chen, Z., Paul, A., & Pritchard, D. (2016). *Factor structure of mechanical reasoning inventory*. Poster presented at Physics Education Research Conference, Sacramento, CA.

Ong, M. L., Lu, Z., **Lee, S.**, & Cohen, A. S. (2015). *A comparison of multilevel modeling, structural equation modeling, and the likelihood ratio test for detecting differential item functioning (DIF)*. In van der Ark, A., Bolt, D., Wang, W.-C., & Millsap, R.E. (Eds.). Quantitative psychology research from the 78th the Psychometric Society, Springer

Kogan, S. M., Lei, M. K., Beach, S. R. H., Brody, G. H., Windle, M., MacKillop, J., & **Lee, S.** (2014). *DRD4 polymorphisms and early sexual onset: Gender and environmental moderation in a sample of African American youth*. Paper presented at the Biennial Meeting of the Society for Research on Adolescence, Austin, TX.

Cho, J., Kogan, S. M., Allen, K. A., & **Lee, S.** (2013). *The influence of adverse rural environment on African American adolescents' HIV-related behavior*. Poster presented at Society for Research in Child Development, Seattle, WA.

Cho, J., Kogan, S. M., & **Lee, S.** (2013). *Condom use, number of partners, and substance use before sex: Multidimensional characterization of sexual risk behavior among African American adolescents*. Paper presented at the 37th Annual Quint State Symposium, Auburn, AL.

Cho, J., Kogan, S.M., & **Lee, S.** (2013). *A latent profile analysis of African American youths' sexual risk behavior*. Paper presented at the National Conference on Family Relations, San Antonio, TX.

Lee, S., & Ra, J. (2012). *Jeffreys' principle for non-informative prior specification in Bayesian IRT*. Poster presented at the National Council on Measurement in Education, Vancouver, BC, Canada.

Lee, S., Ra, J., & Choi, Y.-J. (2009). *Entropic prior specification for Bayesian methods in IRT*. Poster presented at the National Council on Measurement in Education, San Diego, CA.

Ra, J., & **Lee, S.** (2009). *Hierarchical Bayesian approach for rater effects on speaking performance in TOEFL test*. Paper presented at the National Council on Measurement in Education, San Diego, CA.

Lee, S., & Zhao, Q. (2009). *Phase gradient mapping (PGM) for positive contrast gen-*

eration. Poster presented at the 18th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Stockholm, Sweden.

Lee, S., & Zhao, Q. (2008). *Estimation of field maps with susceptibility gradient mapping*. Poster presented at the 17th Annual Meeting of the International Society for Magnetic Resonance in Medicine, Honolulu, Hawaii.

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| TEACHING EXPERIENCE | University of Houston, PSYC6300, Introductory Statistics, Graduate | Fall 2019 |
| | University of Houston, PSYC7396, Multiple Regression, Graduate | Fall 2019 |
| | University of Houston, PSYC7396, Data Mining & Machine Learning, Graduate | Spring 2019 |
| | University of Houston, PSYC7396, Multiple Regression, Graduate | Fall 2018 |
| | University of Houston, PSYC7396, Multiple Regression, Graduate | Spring 2018 |
| EXTERNAL JOURNAL REVIEWER | Psychological Methods | 2017 |
| | Journal of Applied Statistics | 2017 |
| | Journal of Educational Measurement | 2017 |
| | Psychological Methods | 2016 |
| | Multivariate Behavioral Research | 2016 |