JI SEUNG YANG
ABBREVIATED
CURRICULUM VITAE

Department of Human Development and Quantitative Methodology
Measurement, Statistics and Evaluation Program
1225 Benjamin Building
University of Maryland
College Park, MD 20742-11155
(301) 405-6073
jsyang@umd.edu

PERSONAL INFORMATION

Educational Background

2007-2012   Ph.D. in Education (Advanced Quantitative Methods in Educational Research)
                   University of California, Los Angeles, CA, U.S.A.

2005-2007   M.A. in Education (Quantitative Research Methods)
                   Yonsei University, Seoul, Republic of Korea

1998-2005   B.A. in Education (with minor in English Language and Literature)
                   Yonsei University, Seoul, Republic of Korea

2000-2002   A.A. in General Studies (with Honors, Dean's listed)
                   Montgomery College, MD, U.S.A.

Academic Appointments at UMD

2019-   Associate Professor
                   Measurement, Statistics, and Evaluation
                   Department of Human Development and Quantitative Methodology
                   University of Maryland, College Park

2013-2019   Assistant Professor
                   Measurement, Statistics, and Evaluation
                   Department of Human Development and Quantitative Methodology
                   University of Maryland, College Park

Other Employment

2019 Fall   Visiting Professor, Yonsei University, South Korea

2012-2013   Postdoctoral Researcher and Lecturer

Advanced Quantitative Methodology
Graduate School of Education and Information Studies
University of California, Los Angeles, CA, U.S.A.

RESEARCH, SCHOLARLY AND CREATIVE ACTIVITIES

*Note: A # (hash tag) is used to identify co-authors mentored as undergraduate and graduate
students, postdoctoral researchers, faculty research assistants.*

Chapters

Books

1. **Yang, J. S**. & Seltzer, M. (2015). Handling measurement error in predictors with a multilevel latent variable plausible values approach, In J. R. Harring, L. M. Stapleton, & S. N. Beretvas (Eds.), *Advances in multilevel modeling for educational research: Addressing practical issues found in real-world applications* (pp. 295-333). Charlotte, NC: Information Age Publishing, Inc.

Encyclopedia

1. **Yang, J. S.,** #Morell, M., & Liu, Y. (2018). Constructed response items. In Frey, B., editor, *The SAGE Encyclopedia of Educational Research, Measurement& Evaluation*: New York: Sage Publication Inc.

Articles in Refereed Journal

Methodological Articles

1. #Morell, M., **Yang, J. S.**, & Liu, Y. (2019). Latent Variable Regression Discontinuity Design with Cluster Level Treatment Assignment. *Multivariate Behavioral Research, 55, 146.*

2. Liu, Y, **Yang, J. S.**, & Maydeu-Olivares, A. (2019). Restricted Recalibration of Item Response Theory Models. *Psychometrika, 84*, 529-553.

3. #Zheng, X., & **Yang, J. S.** (2018). Latent Growth Curve Analysis with Categorical Data: Model Specification, Estimation, and Panel Attrition. *Multivariate Behavioral Research, 53, 134.*

4. Liu, Y. & **Yang, J. S.** (2018). Bootstrap-calibrated interval estimates for latent variable scores in item response theory. *Psychometrika, 83*, 333-354.

5. Liu, Y. & **Yang, J. S.** (2018). Interval estimation of latent variable scores in item response theory. *Journal of Educational Behavioral Statistics, 43,* 259-285.

6. **Yang, J. S**.& #Zheng, X. (2017). Item response data analysis using Stata item response theory package. *Journal of Educational Behavioral Statistics, 43,* 116–129.

7. Stapleton, L.M., #McNeish, D., & **Yang, J. S.** (2016). Multi-level and single-level models for measured and latent variables when data are clustered. *Educational Psychologist, 51,* 317-300.

8. Stapleton, L.M., **Yang, J. S.**, & Hancock, G. (2016). Construct meaning in multilevel settings. *Journal of Educational Behavioral Statistics, 41,* 481-520.

9. **Yang**, **J. S.**, & Cai, L. (2014). Estimation of contextual effects through nonlinear multilevel latent variable modeling with a Metropolis-Hastings Robbins-Monro algorithm. *Journal of Educational Behavioral Statistics, 39,* 550-582.

10. Lee, G., Lee, W., Kolen, M., Park, I., Kim, D. & **Yang, J. S.** (2014). Bi-factor MIRT true-score equating for testlet-based tests. *Korean Journal of Educational Evaluation, 28,* 681-700.

11. **Yang**, **J. S.**, Hansen, M., & Cai, L. (2012). Characterizing sources of uncertainty in item response theory scale scores. *Educational & Psychological Measurement, 72,* 264-290.

12. Cai, L., **Yang**, **J. S**., & Hansen, M. (2011). Generalized full-information item bifactor analysis. *Psychological Methods, 16*, 221-248.

13. **Yang**, **J. S**., & Lee, G. (2007). Estimating reliability of test scores composed of testlets using generalizability theory approaches. *Korean Journal of Educational Evaluation, 20,* 119-139.

14. **Yang, J. S.**, Lee, G., & Kang, S. (2007). Estimating reliability of test scores composed of testlets using item response theory approaches. *Korean Journal of Educational Evaluation, 20,* 147-167.

Substantive Articles

15. #Morell, M., **Yang, J. S.**, Gladstone, J., Faust, L. T., Ponnock, A. R., Lim, H. J., & Wigfield, A. (accepted). Grit: The Long and Short of It. *Journal of Educational Psychology.*

16. Kim, J. & **Yang, J. S** (accepted). How to improve reliability of cut-off scores in dental competency exam: A Comparison of rating methods in standard setting.

European Journal of Dental Education.

17. Muenks, K., **Yang, J. S**., Wigfield, A. (2018). Associations between grit, motivation and achievement in high school students*. Motivation Science*, 4, 158-176.

18. Muenks, K., Wigfield, A. **Yang, J. S**., & O'Neal, C. (2017). How true is grit? Assessing its relations to high school & college students' personality characteristics, self-regulation, engagement and achievement. *Journal of Educational Psychology, 109,* 599-620.

19. Park, Y., Lim, Y., Koh, K., Kim, J. Kwon H., Shim, J., & **Yang, J. S.** (2017). Efficacy of rhythmic exercise and walking exercise in the older adults' exercise participation rates & physical function outcomes. *The Geriatrics & Gerontology International, 17,* 2311–2318. doi: 10.1111/ggi.13046

20. Park, Y., Lim, Y., Koh, K., Kim, J. Kwon H., **Yang, J. S.**& Shim, J., (2016). Association of spinal deformity and pelvic tilt with gait asymmetry in adolescent idiopathic scoliosis patients: Investigation of ground reaction force. *Clinical Biomechanics, 36*, 52-57.

Book Reviews

1. #Morell, M. & **Yang, J. S.** (2019). A review of *Multilevel Modeling Using* M*plus. Journal of Educational Behavioral Statistics*, *44,* 241-247.

Published Conference Proceedings

1. #Zheng, X., & **Yang, J. S.** (2016). Using sample weights in item response data analysis under complex sample designs. *New developments in psychometrics: Proceedings of the International Meeting of the Psychometric Society IMPS 2015*. NY: Springer.

2. **Yang, J. S.** & Cai, L. (2015). Dealing with measurement error in estimating a cross-level Interaction: Nonlinear multilevel latent variable modeling approach with a Metropolis Hastings Robbins-Monro Algorithm. *KAERA Research Forum, 1 (1),* 55-71.

Technical Reports

1. **Yang, J. S.**, & Cai, L. (2013). Estimation of contextual effects through nonlinear multilevel latent variable modeling with a Metropolis-Hastings Robbins-Monro algorithm, (CRESST Report No. 833), Los Angeles: UCLA.

Conferences, Workshops and Talks

Invited Talks

1. **Yang, J. S.** (2020, July). *Recalibrating the PROMIS Pediatric Fatigue Scale Using Item Response Theory.* The FDA Statistical Association (FDASA), Remote, U.S.A.

2. **Yang, J. S.** (2019, October). *Handling measurement error in educational and psychological studies: Methods and practices.* LEAD Retreat. Keynote speaker. Heiligkreuztal, Tubingen University, Germany.

3. **Yang, J. S.** (2015, November). *Psychometric implications: Understanding task criticality through application of research data.* Disaster Recovery Construction Specialist Development & Research Planning Forum. Invited by Green Advantage Personal Certification, International Code Council & Antioch University. Washington D.C.

4. **Yang, J. S.** (2015, April). *Measurement error and its impact on statistical modeling.* Early experiences: Examinations of risk, contextual factors and their influences on development. Graduate Field Committee in Developmental Science Graduate Student organized Workshop. University of Maryland, College Park.

5. **Yang, J. S. &** Seltzer, M. (2014, November). *Nonlinear multilevel latent variable modeling approaches to handle measurement error in predictors: An illustrative example using teacher instructional practices.* Advances in Multilevel Molding for Educational Research: Addressing Practical Issues Found in Real-World Applications, University of Maryland, College Park, MD.

6. **Yang, J. S.** (2014, September). *Handling measurement error in predictors in multilevel settings.* Center for Children, Relationships and Culture and the Developmental Science Field Committee Sponsored Colloquium, University of Maryland, College Park.

7. **Yang, J. S.** (2012, February). *Estimation of contextual effects through multilevel latent variable modeling with a Metropolis-Hastings Robbins-Monro Algorithm.* Center for the Promotion of Research Involving Innovative Statistical Methodology (PRIISM), New York University.

8. **Yang, J. S**. (2012, February). *An introduction to item response theory.* Center for the Promotion of Research Involving Innovative Statistical Methodology (PRIISM), New York University.

Workshops

1. **Yang, J. S** (2019, July-August). Introduction to Item Response Theory. The Center for Drug Evaluation and Research at U.S. Food and Drug Administration.

2. **Yang, J. S** (2019, March). Introduction to Item Response Theory. The Center for Integrated Latent Variable Research (CILVR) at The University of Maryland.

3. **Yang, J. S**., & Hansen, M. (2012, October). *Reliability and validity*. Psychological Studies in Education division, University of California, Los Angeles (ref. Pf. Sandra Graham)

Symposiums as Organizer

1. **Yang. J. S** & Wigfield, A. (2019, April). Co-Evolution of Substantive and Methodological Research: The Case of Grit, Self-Regulation, and Motivation. Annual Meeting of the American Education Research Association, Toronto, Canada.

2. Liu, Y. & **Yang. J. S.** (2018, July). Multi-stage estimation and inference in measurement modeling. International Meeting of Psychometrics Society, New York.

3. **Yang. J. S. (**2016, April). Issues and practices in multilevel item response models. The National Council on Measurement in Education Annual Meeting, Washington., D. C.

Conference Presentations (Recent 3 Years)

1. #Morell, M., **Yang, J. S**., & Liu, Y. (2019, Oct). *Latent variable regression discontinuity design with cluster level treatment assignment*. Presentation at the Annual Meeting of the Society of Multivariate Experimental Psychology, Baltimore, Maryland.

2. Lim, H. J. & **Yang. J. S**. (2019, June). *Problems of Grit-S and Validity of its Factor Structure*. Presented at Korean Educational Psychology Association Conference, Seoul, South Korea.

3. #Gladstone, J. R., #Morell, M., **Yang, J. S.,** #Ponnock, A., #Turci (Faust), L., & Wigfield, A. (2019, April). *Grit-S, long-term grit and related constructs: Measurement invariance and mean differences across gender and ethnicity*. Poster presented to the Society for Research in Child Development Biennial Meeting, Baltimore, Maryland.

4. #Gladstone, J. R., #Morell, M., **Yang, J. S**., #Ponnock, A., #Turci (Faust), L., & Wigfield, A. (2019, April). *Grit, self-regulation, and motivation: Examining measurement invariance and mean differences across gender and ethnicity*. Paper accepted as part of a symposium to be presented at the American Educational Research Association Annual Meeting, Toronto, Canada.

5. #Morell, M., **Yang, J. S**., Liu, Y., #Gladstone, J. R., #Ponnock, A., #Turci (Faust), L., Muenks, K., & Wigfield, A. (2019, April). *Validation of grit scales across multiple samples: Restricted recalibration and multiple group analysis*. Paper accepted as part of a symposium to be presented at the American Educational Research Association Annual Meeting, Toronto, Canada.

6. #Gladstone, J., Muenks, K., **Yang, J. S.**, Wigfield, A., Lim, H. J., & Hwang, M. H. (2018, July). *Clarifying grit's predictive role: Mediators help explain the relation between grit and achievement between U.S. & Korean students*. Poster presented at the International Society for the Study of Behavioral Development Biennial Meeting, Queensland, Australia.

7. #Gladstone, J. R., Muenks, K., **Yang, J. S.,** & Wigfield, A. (2018, August). *Clarifying grit's predictive role: Exploring mechanisms of the relation between grit and achievement*. Paper presented at the 16th International Conference on Motivation, Aarhus, Denmark.

8. Morell, Monica#., **Yang. J. S.,** & Liu, Yang (2018, July). *Cross-validation of the Grit scale using restricted recalibration.* International Meeting of Psychometrics Society, New York.

9. Strazzeri, Marian#, & **Yang. J. S** (2018, July). *IRT analysis in longitudinal randomized controlled trials.* International Meeting of Psychometrics Society, New York.

10. #Zheng, X., & **Yang, J. S**. (2018, April). *Latent growth curve analysis with item response data: Parameterization, estimation and attrition*. Annual Meeting of the American Education Research Association, New York.

11. #Morell, M. & **Yang, J. S.** (2018, April). *FIML estimation of LATE through latent RD analysis with an MH-RM algorithm.* Paper presented at 2017 Annual Meeting of the National Council on Measurement in Education, New York.

12. #Zheng, X., & **Yang, J. S**. (2017, July). *Parameter Estimation in Latent Growth Curve Item Response Models.* Paper presented at 2017 International Meeting of the Psychometric Society, Zurich, Switzerland.

13. **Yang, J. S.,** #Morell, M., Lim., H. J., Wigfield, A.& #Muenks, K. (2017, July). *Small-sample MIRT calibration and model selection using the grit data.* Paper presented at 2017 International Meeting of the Psychometric Society, Zurich, Switzerland.

14. #Morell, M. & **Yang, J. S.** (2017, July). *A Latent Variable Modeling Approach to the Regression Discontinuity Design.* Paper presented at 2017 International Meeting of the Psychometric Society, Zurich, Switzerland.

15. Liu, Y.& **Yang, J. S.** (2017, July). *Goodness of fit assessment for restrict re-calibration of IRT models.* Paper presented at 2017 International Meeting of the Psychometric Society, Zurich, Switzerland.

16. Liu, Y.& **Yang, J. S.** (2017, April). *Bootstrap-Calibrated Prediction Regions for Scale Scores in Multidimensional Item Response Theory*. Paper presented at 2017 Annual Meeting of the National Council on Measurement in Education, San Antonio, TX.

17. Seltzer, M., **Yang, J. S.,** Choi, K.C., Cai, L.& #Lee, D. (2017, April). *Multilevel/MCMC-based strategies for handling error in predictors: Pressure points & implementation recommendations.* Paper presented at 2017 Annual Meeting of the National Council on Measurement in Education, San Antonio, TX.

18. #Zheng, X., & **Yang, J. S.** (2017, April). *Interval estimation of interclass correlation coefficients in multilevel item response models.* Paper presented at 2017 Annual Meeting of the American Education Research Association, San Antonio, TX.

19. #Morell, M. & **Yang, J. S.** (2017, April). *Using item response models to handle measurement error in regression discontinuity designs.* Presented at 2017 Annual Meeting of the National Council on Measurement in Education. San Antonio, TX.

20. #Muenks, K., Wigfield, A., & **Yang, J. S.** (2017, April). *Relations between grit, motivation and achievement in high school students.* Paper presented at the Midwestern Psychology Association Annual Meeting, Chicago, IL.

Sponsored Research

Grants

1. National Institutes of Health (R01)
   Title: Improving the clinical utility of preschool language sample analysis Duration: 08/15/2018-08/14/2023
   Role: Co-Investigator
   Total Award Amount: $2,163,639
   Location of Project: University of Maryland, College Park
   PI: Nan Ratner

2. National Science Foundation (Division on Research on Learning)
   Title: An Examination of Grit in Relation to Diverse High School Students' STEM Motivation, Self-Regulation& Outcomes: A Longitudinal Validation Study (1534846)
   Duration: 3/1/16 - 6/30/19
   Role: Co-Principal Investigator
   Total Award Amount: $1,237,743
   Location of Project: The University of Maryland, College Park
   Co-PI: Allan Wigfield

3. Institute of Educational Sciences (Statistical and Research Methodology in Education– Early Career, Goal: Methodological Innovation)
   Title: Multilevel Item Bifactor Models with Semi-Nonparametric Latent Densities

(R304D150052)
Duration: 7/01/15 – 1/31/17
Role: Principal Investigator
Total Award Amount: $199,924
Location of Project: The University of Maryland, College Park

4. University of Maryland, Support Program for Advancing Research & Collaboration (SPARC)
    Project Title: Nonlinear Multilevel Latent Variable Modeling Approaches to Handle Measurement Error in Predictors
    Duration: 10/28/13 – 10/28/14
    Role: Principal Investigator
    Total Award Amount: $15,000
    Location of Project: The University of Maryland, College Park

TEACHING, MENTORING AND ADVISING

Courses Taught

UMD- Graduate courses (Note that the numbers are approximated)

1. EDMS623: Applied Measurement: Issues & Practices. Fall 2016 (25 students), Fall 2017 (15 students)

2. EDMS651: Applied Multiple Regression Analysis/ General Linear Models I. Fall 2013 (30 students); Spring 2014 (30 students), Fall 2015 (25 students), Fall 2017 (15 students), Spring 2018 (25 students)

3. EDMS646: Quantitative Research Methods II/ General Linear Models II. Spring 2014 (35 students), Fall 2014 (35 students), Spring 2015(30 students), Fall 2015 (15 students), Spring 2017 (28 students).

4. EDMS738: Seminar in Special Problems in Measurement: Multidimensional/Multilevel Item Response Theory. Fall 2014 (9 students), Fall 2016 (7 students).

5. EDMS724: Modern Measurement Theory. Spring 2016 (8 students), Spring 2017 (10 students), Spring 2018 (12 students), Spring, 2019 (8 students).

University of California, Los Angeles – Graduate courses

6. ED230A: Introduction to Research Design & Statistics, Fall 2012 (30 students)

7. ED230B: Introduction to Multiple Regression Models, Winter 2013 (30 students)

Advising

This refers to students whose projects the faculty has supervised as adviser, committee chair, or committee member (indicate role). The name of student, academic year(s) involved and the name of institution if other than UMD should be indicated, as well as placement of the student(s), if the project is completed. List completed work first.

Doctoral

Completed dissertations chaired (with current position of student)

1. Xiaying Zheng (UMCP 2017F) Researcher - American Institute for Research in Washington D.C.
2. Monical Morell (UMCP 2020S) Psychometrician – FDA

Current doctoral advisees (pre-candidacy)

1. Marian Strazzeri (3rd year)   UMCP

Completed doctoral dissertations advised as member

1. Yoonjeong Kang   UMCP 2014F
2. Ming Li   UMCP 2015S
3. Kylie King   UMCP 2017S
4. Kari Hansen   UMCP 2017S
5. Sara Hass   UMCP 2018S
6. Xiulin Mao   UMCP 2018S
7. Shauna Sweet   UMCP 2018F
8. Huili Liu   UMCP 2018F
9. Tiago Alexandre Calico   UMCP 2019S
10. Daniel Lee   UMCP 2019S
11. Jordan Prendez   UMCP 2020S
12. Gabriella Estevez   UMCP 2020S

Current service on dissertations committee as member

1. Ethan Sewell (TLPL)   UMCP
2. (CHSE)   UMCP
3. Jessica Gladstone (HDQM)   UMCP
4. Elizabeth Bell (Kinesiology)   UMCP

Master's

Graduates

1. Yishan Ding (Current doctoral student at EDMS)

Non-degree

Certificate program
   1. Sophie Jablansky (Certificate in Measurement, Statistics & Evaluation, 2017)
   2. Zexin Ma (Certificate in Measurement, Statistics & Evaluation, 2016)

SERVICE AND OUTREACH

Editorships, Editorial Boards & Reviewing Activities

Editorial Boards

1. Statistical Consulting Editor, Journal of Personality Assessment (2016-2018)
2. Journal of Educational Behavioral Statistics (2018 Fall – current)
3. Journal of Educational Measurement (2019 Jan-current)

Reviewing Activities for Agencies & Foundations

1. U.S. Department of Education, Institute for Education Sciences; Member of the Review Panel for Basic Processes (2016-2020)
2. National Science Foundation; Review Panel for Methodology, Measurement& Statistics (MMS) Program (2016, 2017)

Committees, Professional & Campus Service

Campus Service – Department
   1. Member, Department Review Committee (EDUC-HDQM), 2018-2019
   2. Member, Faculty Search Committee (EDUC-HDQM), 2018 Fall
   3. Member, Awards Committee (EDUC-HDQM), 2018-2019
   4. Member, Merit Committee (EDUC-HDQM), 2017- 2018
   5. Member, Undergraduate Committee (EDUC-HDQM), 2013-2017
   7. Chair, Examination Committee (EDUC-HDQM-EDMS), 2018-2019
   8. Member, Admission Committee (EDUC-HDQM-EDMS), 2016-2019
   9. Chair, Examination Committee (EDUC-HDQM-EDMS), 2015-2016
   10. Member, Examination Committee (EDUC-HDQM-EDMS), 2013-2015

Campus Service - College

Campus Service – University
   1. Member, University Senate (UMD), 2016 –2019
   2. Member, The Senate Educational Affairs Committee (UMD), 2015-2017

Professional Affiliations

1. Member, American Educational Research Association, 2007 - present
2. Member, National Council on Measurement in Education, 2007 – present
3. Member, Psychometric Society, 2010- present

Professional Service
1. Member, Quantitative Dissertation Award Committee, American Educational Research Association, 2015-2017
2. Chair, Division D Outstanding Dissertation Award Committee, American Educational Research Association, 2017-2018.

AWARDS, HONORS and RECOGNITION

Research Fellowships, Prizes and Awards

1. Exceptional Scholarship Award, College of Education, University of Maryland, 2017
2. 9th Annual University-Wide Celebration of Scholarship and Research Honoree, 2016
3. 18th Annual Research Leaders Luncheon Honoree, 2016
4. Society of Multivariate Experimental Psychology (SMEP) Dissertation Support Award, 2012
5. Graduate School of Education & Information Studies Fellowship, UCLA, 2007-2012
6. The Edwin & Edna C. Lee Fellowship, UCLA, 2007-2009
7. Scholarship for International Yonsei Graduate Students, Yonsei International Foundation, 2011
8. Academic Merit-Based Scholarship, Yonsei University, 1999-2005

Service Awards and Honors

1. AERA Outstanding Reviewer Award for *Journal of Educational and Behavioral Statistics,* 2018 and 2019