YI FENG

4522 Pritzker Hall
University of California, Los Angeles
yi.feng@ucla.edu

EDUCATION

Ph.D., Quantitative Methodology: Measurement and Statistics,   12/2023
University of Maryland, College Park, MD
Advisor: Dr. Gregory R. Hancock

M.A., Measurement, **Statistics and Evaluation**, University of Maryland, College Park, MD   08/2018
Advisor: Dr. Gregory R. Hancock

M.A., Applied Psychology, New York University, New York, NY   05/2014
Advisor: Dr. Niobe Way

PROFESSIONAL APPOINTMENTS

Assistant Professor in Quantitative Psychology   11/2023—present
Department of Psychology
University of California, Los Angeles

PUBLICATIONS/ACTIVE SUBMISSIONS

Methodological Research

Feng, Y. (2024). Introduction to causal graphs for education researchers. *Asia Pacific Education Review*. https://doi.org/10.1007/s12564-024-09980-3 [*Journal Impact Factor: 2.6*]

Feng, Y., & Hancock, G. R. (2024). A structural equation modeling approach for modeling variability as a latent variable. *Psychological Methods, 29*(2), 262–286. https://doi.org/10.1037/met0000477 [*Journal Impact Factor: 14.738*]

Feng, Y., & Hancock, G. R. (2023). SEM as a framework for power analysis*.* In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (2ⁿᵈ ed.). The Guilford Press.

Feng, Y., & Hancock, G. R. (2022). Model-based incremental validity*. Psychological Methods*, *27*(6), 1039–1060. https://doi.org/10.1037/met0000342 [*Journal Impact Factor: 14.738*]

Feng, Y., & Hancock, G. R. (2021). Oh no! They cut my funding! Using "post hoc" planned missing data designs to salvage longitudinal research. *Child Development*, *92(*3*)*, 1199-1216. [*Journal Impact Factor: 5.899*]

Feng, Y., & Hancock, G. R. (2020). Abstract: An analytical framework for research questions with variability as the outcome or predictor. *Multivariate Behavioral Research*, *55(*1*)*, 144-145. [*Journal Impact Factor: 5.439*]

Feng, Y., & Harring, J. R. (2020). *Book review for Structural equation modeling: Applications using Mplus. Psychometrika*, *85*(*2*), 526-530. [*Journal Impact Factor: 3.649*]

Feng, Y., Hancock, G. R., & Harring, J. R. (2019). Latent growth models with floors, ceilings, and random knots. *Multivariate Behavioral Research*, *54*(5), 751-770. [*Journal Impact Factor: 5.439*]

Bonnéry, D., **Feng, Y.**, Henneberger, A. K., Johnson, T. L., Lachowicz, M., Rose, B. A., Shaw, T., Stapleton, L. M.,

Woolley, M. E., & Zheng, Y. (2019). The promise and limitations of synthetic data as a strategy to expand access to state-level multi-agency longitudinal data. *Journal of Research on Educational Effectiveness*, *12*(4), 616-647. [*Journal Impact Factor: 2.47*]

Applied Research

Feng, Y., Whiteman, S. D., Xu, S., Li, L., Jin, S., & French, D. C. (2019). Chinese adolescents' relationships with mothers, fathers, and siblings: Associations with youth's internalising and externalising problems. *Journal of Relationships Research*, *10*, 1-11. [*Journal Impact Factor: 0.76*]

Henneberger, A. K., Johnson, T., **Feng, Y.**, Rose, B. A., Stapleton, L. M., Sweet, T., & Woolley, M. E. *Modeling School Context in the Presence of Student Mobility: An Applied Comparison of Statistical Approaches*. Manuscript submitted for publication (under review).

Barnes, Z. T., Edwards, A. A., Strachota, S., **Feng, Y.**, & Logan, J. (2024). Understanding the relation between socioeconomic status and elementary science achievement: A quantile regression approach. In Infant and Child Development. Wiley. https://doi.org/10.1002/icd.2502

Henneberger, A. K., Rose, B. A., **Feng, Y.**, Johnson, T., Register, B., Stapleton, L. M., Sweet, T., & Woolley, M. E. (2023). Estimating Student attrition in school-based prevention studies: Guidance from state longitudinal data in Maryland. *Prevention Science*, *24*(5), 1035-1045. https://doi.org/10.1007/s11121-023-01533-1 [*Journal Impact Factor: 3.931*]

Kunicki, Z. J., Ngo, L. H., Marcantonio, E. R., Tommet, D., **Feng, Y.**, Fong, T. G., Schmitt, E. M., Travison, T. G., Jones, R. N., & Inouye, S. K. (2023). Six-year cognitive trajectory in older adults following major surgery and delirium. *JAMA Internal Medicine*. *183*(5), 442-450. https://doi.org/10.1001/jamainternmed.2023.0144 [*Journal Impact Factor: 44.41*]

Rose, A. L., **Feng, Y.**, Rai, S., Shrestha, P., Magidson, J. F., & Kohrt, B. A. (2023). Pre-training skills as predictors of competence of nonspecialists in delivery of mental health services. *Psychiatric Services. 74*(6), 614-621. https://doi.org/10.1176/appi.ps.202100691 [*Journal Impact Factor: 4.157*]

Li, L., Lu, T., Niu, L., **Feng, Y.**, Jin, S., & French, D. C. (2017). Tobacco use by middle and high school Chinese adolescents and their friends. *Journal of Youth and Adolescence*, *46*, 1262-1274. [*Journal Impact Factor: 5.613*]

Kwak, Y., Taylor, Z. E., Anaya, L. Y., **Feng, Y.**, Evich, C. D., & Jones, B. L. (2017). Cumulative family stress and diurnal cortisol responses in Midwest Latino families. *Hispanic Journal of Behavioral Sciences*, *39*, 82-97. [*Journal Impact Factor: 1.60*]

PRESENTATIONS

Feng, Y. (2024, April). *A finite mixture multilevel structural equation model for unobserved heterogeneity in random variability*. Paper presented at the annual meeting of the American Educational Research Association, Division D: Measurement & Research Methodology, Philadelphia, PA.

Feng, Y., & Steiner, P. M. (2023, May). *Identification and estimation of interference effects with contextual multilevel models*. Poster presented at the American Causal Inference Conference (ACIC), Austin, TX.

Feng, Y., & Hancock, G. R. (2023, April). *Power analysis is too damn hard! Good-enough sample size determination for structural equation modeling and beyond*. Paper presented at the annual meeting of the American

Educational Research Association, SIG: Educational Statisticians, Chicago, IL.

Feng, Y., & Steiner, P. M. (2022, September). *When can contextual multilevel models be trusted? A discussion from a graphical models perspective*. Paper presented at the annual meeting of the Society for Research on Educational Effectiveness, Arlington, VA.

Feng, Y., & Steiner, P. M. (2022, April). *Contextual effects in multilevel models: A discussion of centering strategies from a graphical models perspective*. Paper presented at the annual meeting of the American Educational Research Association, SIG: Educational Statisticians, San Diego, CA.

Feng, Y., & Hancock, G. R. (2021, April). *A structural equation modeling framework for incremental validity*. Paper presented at the annual meeting of the American Educational Research Association, Division D: Measurement & Research Methodology, Virtual Online Conference.

Feng, Y., & Hancock, G. R. (2020, April). *An analytical framework for research questions with variability as random variable*. Paper accepted to be presented at the annual meeting of the American Educational Research Association, Division D: Measurement & Research Methodology, San Francisco, CA.

Feng, Y. (2020, February). *Adaptive learning: Optimizing individual learning trajectories with a bifactor DINA model*. Paper presented at the PSU-UMD longitudinal data analysis mini conference, College Park, MD.

Feng, Y., & Hancock, G. R. (2019, October). *An analytical framework for research questions with variability as the outcome or predictor*. Poster presented the annual meeting of Society of Multivariate Experimental Psychology, Baltimore, MD.

Feng, Y., Hancock, G. R., & Harring, J. R. (2019, April). *Latent growth models with floors, ceilings, and random knots*. Paper presented at the PSU-UMD longitudinal data analysis conference, State College, PA.

Feng, Y., & Hancock, G. R. (2019, April). *Oh %&$#!, they cut my funding: Using planned missing data methods to salvage longitudinal research*. Paper presented at the annual meeting of the American Educational Research Association (AERA), Division D: Measurement & Research Methodology, Toronto, ON, Canada.

Feng, Y., & Hancock, G. R. (2019, April). *Variability as an outcome variable: using multilevel SEM to model heterogeneous variance as higher-level latent variables*. Paper presented the 12th International Multilevel Conference, Utrecht, the Netherlands.

Feng, Y. (2019, April). *Adaptive learning: Optimizing individual learning trajectories with a bifactor DINA model*. Poster presented at the annual meeting of the American Educational Research Association, Division D Graduate Student in Progress Research Gala, Toronto, ON, Canada.

Feng, Y., Hancock, G. R., Harring, J. R., & Kher, H. (2018, April). *Latent growth models with floors, ceilings, and random knots*. Paper presented at the annual meeting of the American Educational Research Association, SIG: Structural Equation Modeling, New York, NY.

Feng, Y., Whiteman, S. D., Xu, S., Jin, S., Li, L., & French, D. C. (2016, April). *Chinese Adolescents' Relationships with Mothers, Fathers, and Siblings: Implications for Youths' Mental Health.* Poster session presented at Society for Research on Adolescence Biennial Meeting, Baltimore, MD.

Feng, Y., Way, N., Yoshikawa, H., Chen, X. & Okazaki, S. (2016, April). *The effects of emotion socialization on adolescents' social adjustment and mental health*. Poster session presented at Society for Research on Adolescence Biennial Meeting, Baltimore, MD.

Hancock, G. R. & **Feng, Y.** (2024, June). *nMAX: Restoring caution and integrity to the power analysis process*. Paper accepted to be presented at the annual Modern Modeling Methods conference, Storrs, CT.

Kunicki, Z. J., **Feng, Y.**, Tommet, D., Inouye, S. K., & Jones, R. N. (2023, June). *An application of random changepoint models to cognitive aging research*. Paper accepted to be presented at the annual Modern Modeling Methods conference, Storrs, CT.

Jayasekera, A., **Feng, Y.**, Wohn, C., Boberiene, L., & Stapleton, L. M. (2022, April). *Utilizing propensity score methods to provide measures of school quality for the Baltimore City Public Schools system*. Poster presented at the annual meeting of the American Educational Research Association, Division D Graduate Student in Progress Research Gala, San Diego, CA.

Henneberger, A. K., **Feng, Y.**, Johnson, T., Zheng, Y., Rose, B., Stapleton, L. M., Sweet, T., & Woolley, M. (2019, April). *Prevalence of multiple membership in a statewide longitudinal data system*. Paper presented at the annual meeting of the American Educational Research Association, SIG: Multilevel Modeling, Toronto, ON, Canada.

Johnson, T., **Feng, Y.**, Stapleton, L. M., & Zheng, Y. (2019, April). *The effect of correlated clusters on parameter estimates in multiple membership models.* Paper presented at the annual meeting of the American Educational Research Association, SIG: Multilevel Modeling, Toronto, ON, Canada.

Henneberger, A. K., **Feng, Y.**, Johnson, T., Zheng, Y., Rose, B., Stapleton, L. M, Sweet, T., & Woolley, M. (2019, March). *Estimating attrition in school-based evaluation studies: Guidance from state longitudinal data in Maryland*. Poster presented at the annual meeting of the Society for Research on Educational Effectiveness, Washington, D.C.

Johnson, T., **Feng, Y.**, & Stapleton, L. M. (2019, March). *Design and analytic implications in modeling student mobility across correlated schools*. Paper presented at the annual meeting of the Society for Research on Educational Effectiveness, Washington, D.C.

Logis, H., French, D. C., **Feng, Y.**, & Purwono, U. (2016, April). *Same- and Cross-Gender Bullying Among Indonesian Youths.* Poster session presented at Society for Research on Adolescence Biennial Meeting, Baltimore, MD.

French, D. C., Jin, S., Li, L., Niu, L., & **Feng, Y**. (2016, April). *Tobacco and Alcohol use of Chinese Adolescents as Longitudinally Predicted from Substance Use of Friends and Network Affiliates*. Symposium conducted at Society for Research on Adolescence Biennial Meeting, Baltimore, MD.

INVITED TALKS

Feng, Y. & Steiner, P. M. (2024, April). *Causal Identification and Estimation of Interference Effects Using Multilevel Models*. Invited talk at University of California Davis, CA.

Feng, Y. & Steiner, P. M. (2023, December). *Causal Identification and Estimation of Interference Effects Using Multilevel Models*. Invited talk at University of Notre Dame, Notre Dame, IN.

Feng, Y. (2022, February). *Data management skills for developmental researchers*. Invited talk at University of Maryland, College Park, MD.

Feng, Y. (2020, October). *Ask what you mean and mean what you ask: Strategic reparameterization of structural equation modeling*. Invited talk at University of Maryland, College Park, MD.

Feng, Y. (2020, February). *Complex latent growth models.* Invited talk at Brown University, Providence, RI.

Hancock, G. R. & **Feng, Y.** (2024, April). *nMAX: Restoring caution and integrity to the power analysis process*. Invited talk at University of Missouri, MO.

Hancock, G. R. & **Feng, Y.** (2024, Mar). *nMAX: Restoring caution and integrity to the power analysis process*. Invited talk at Princeton University, NJ.

Hancock, G. R. & **Feng, Y.** (2024, Feb). *nMAX: Restoring caution and integrity to the power analysis process*. Invited talk at Rice University, TX.

Hancock, G. R., & **Feng, Y.** (2022, February). *Stop being so mean! An SEM-based framework for modeling variability as a latent variable*. Invited talk at Michigan State University, East Lansing, MI.

Hancock, G. R., & **Feng, Y.** (2021, March). *Stop being so mean! Complementary analytical methods for research questions focused on variability*. Invited talk at Georgia Institute of Technology, Atlanta, GA.

TEACHING

Instructor of Record, University of California, Los Angeles   2024-present
- Graduate-level: *PSYCH M257-Multivariate Analysis with Latent Variables*
  Average course rating: 8.8/9
- Undergraduate-level: *PSYCH 100A-Psychological Statistics*

Instructor of Record, University of Maryland   2022
EPIB 695-Introduction to R for Health Data Analysis
- Designed and created the course materials for a 3-credit graduate-level course
- Taught students to apply R for data management, data visualization, and data analysis
- Introduced base R, tidyverse, and R markdown, while covering basic statistical methods including descriptive statistics, t-test, ANOVA, simple linear regression, Chi-square test, and generalized linear models
- Assessed students' performance through in-class activities, homework assignments, and final project.

Instructor of Record, University of Maryland   2017—2022
EDMS 451-Introduction to Educational Statistics
- Planned and taught lectures on introductory statistical concepts and methods, including descriptive statistics, t-test, Pearson correlation, simple linear regression, and Chi-square test
- Assessed students' performance through homework, on-line quizzes, in-class exams and SPSS/R projects

Instructional Colleague, University of Maryland
EDMS 657- Exploratory Latent and Composite Variable Methods   2019—2023
- Developed parallel R materials and tutorial videos for conducting MANOVA, canonical correlation analysis, principal component analysis, exploratory factor analysis, mixture modeling, and tree-based methods

EDMS 722- Structural Equation Modeling   2019—2023
- Developed parallel R materials and tutorial videos for conducting measured path models, CFA, latent variable path models, latent growth models, and multigroup

analysis in SEM

Invited Lectures

Introduction to R (UNF) — 2021
Data Management and Intro to Statistical Software (UMD) — 2020—2022
Introduction to Measurement (UMD) — 2020

Guest lecturer, University of Maryland — 2018—2022
EDMS 657- Exploratory Latent and Composite Variable Methods
Introduction to statistical learning: regression and classification trees, support vector machines, and neural networks

Software Packages and Online Tutorials

Feng, Y., & Hancock, G. R. (2019). *simPM: SIMulation-based power analysis for Planned Missing designs*. R package version 0.0.0.9000. https://yifengedms.github.io/simPM/

Feng, Y., & Hancock, G. R. (2019-2022). *R tutorials: Exploratory latent and composite variable methods*. https://yifengedms.github.io/EDMS657-R-Tutorials/

Feng, Y., & Hancock, G. R. (2019-2022). *R tutorials for SEM*. https://yifengedms.github.io/SEM/

Feng, Y., & Hancock, G. R. (2022). *Tutorials: Longitudinal SEM and LGM using R*. https://yifengedms.github.io/LSEM/

Feng, Y. (2022). *EDMS451 R tutorials*. https://yifengedms.github.io/EDMS451/

Attempted and Pending Grants

Utilizing Propensity Score Methods to Provide Measures of School Quality for the Baltimore City Public Schools System — 2021-2022
$ 5,000, Education Research Service Project (ERSP) Grant Award, AERA.
Role: Co-Principal Investigator
Status: Completed

Causal Identification and Estimation of Interference Effects Using Multilevel Models — 2024-2025
$ 5,000, UCLA Academic Senate Faculty Grants
Role: Principal Investigator
Status: Funded

Equitable School Quality Measures: Integrating Student Diversity into School Performance Assessment from a Causal Perspective — 2024-2025
$ 72,549.34, Spencer Foundation
Role: Principal Investigator
Status: Under Review

Causal Identification and Estimation of Interference Effects Using Multilevel Models — 2024-2027
$ 886,713, Institute of Education Sciences (IES)

Role: Principal Investigator
Status: Not funded

The Associations Between Mathematics Coursework Pathways, Mathematical Identities, and Career Choices
                                                                                      2025-2026

$ 216,990.78, Spencer Foundation
Role: Co-Principal Investigator
Status: Under Review

The relations of mathematics course pathways with performance, identity, and STEM career plans
                                                                                      2025-2028

$ 181,870, National Science Foundation (NSF)
Role: Co-Principal Investigator
Status: Not funded

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SCI Travel Scholarship, Society for Causal Inference	2023
SMEP Dissertation Research Grants, SMEP	2023
Ann G. Wylie Dissertation Fellowship, UMD	2022—2023
Jacob K. Goldhaber Travel Award, Graduate School, University of Maryland	2019 & 2023
International Conference Student Support Award, Graduate School, University of Maryland	04/2019
SMEP Student Travel Award, Society for Multivariate Experimental Psychology (SMEP)	02/2019
HDQM Graduate Student Travel Grant, College of Education, University of Maryland	2019—2023
Dean's Fellowship, College of Education, University of Maryland	2016—2019
Compton Graduate Research Travel Award, College of Health and Human Sciences, Purdue University	10/2015
Ross Fellowship, Purdue University	2014—2015
China University of Political Science & Law (CUPL) First-class Scholarship, CUPL	2009—2011
National Scholarship, the Ministry of Education, China	10/2009

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Outstanding Doctoral Student, College of Education, University of Maryland	05/2023
Educational Statisticians SIG Graduate Student Best Paper Award, AERA	04/2023
Tanaka Award for Best Article in *Multivariate Behavioral Research*, SMEP	10/2020
UMD Three Minute Thesis (3MT) Competition Finalist	04/2020
First Place Winner for **AERA Division H's Outstanding Publications**	
Competition: Advances in Methodology, AERA	03/2020
Grand Prize Winner, AERA Division D Graduate Student in Progress Research Gala	04/2019
Herb and Libby Ware Graduate Award, Measurement, Statistics and Evaluation	12/2018
Outstanding Master's Student, College of Education, University of Maryland	05/2018
Baosteel Excellent Student Award, Baosteel Education Foundation	10/2011

Aᴅᴠɪsɪɴɢ

DISSERTATION COMMITTEE MEMBER:

Praise Onaopemipo Owoyemi, UCLA

QUANTITATIVE PSYCHOLOGY 251A PROJECT ADVISING:

Remus Mitchell, UCLA

Professional Service

AD HOC REVIEWER: 2020—present

Psychological Methods
Multivariate Behavioral Research
Psychometrika
Behavioral Research Methods
Journal of the Royal Statistical Society: Series A
AERA Open
Journal of Research on Educational Effectiveness

OFFICES:

AERA Educational Statistician SIG Secretary & Treasurer   2024-2026

Quantitative Methods Short Courses Coordinator, Center for Integrated Latent Variable Research (CILVR)

                                                                                  2017-2022

Senior Campus Outreach Coordinator, American Educational Research Association (AERA)   2020-2021

President, U.PASS (UMD Student Organization)   08/2019—05/2020

Social Chair, U.PASS (UMD Student Organization)   08/2018—05/2019

Professional Affiliations

- American Educational Research Association
- Society for Research on Educational Effectiveness
- Society for Causal Inference

Workshops Attended

Passion-Driven Statistics: Project Based Teaching Tools
Using ICPSR Tools and Data in Education Research Methods Courses
CEILS Scientific Teaching Institute: Foundations of Equitable Course Design & Inclusive Teaching
CourseKata Summer Institute for Teaching of Introductory Statistics (2024 Fellow)
CourseKata Statistics and Data Science online workshop
Synthetic Data: Balancing Data Confidentiality & Quality in Public Use Files
On the Joys of Missing Data: Planned Missing Data Designs in Longitudinal Studies

SKILLS

- R, SPSS, STATA, M*plus*, Python, Stan, BUGS, SPSS Amos, HLM, GPower, Optimal Design
- SAS® certified base programmer for SAS 9
- Microsoft Excel and Access
- Qualitative data coding
- Qualtrics online survey system
- Proficiency in Mandarin and English
- Calligraphy, photography, traditional Chinese painting, and level-9 Koto (Gu Zheng)