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Associate Professor, Honors Faculty
Arizona State University

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EDUCATION

Ph.D. in Educational Measurement 08/2014

Department of Educational Psychology, University of Illinois at Urbana-Champaign

Advisor: Hua-Hua Chang, Ph.D.

Dissertation Title: *New Methods of Online Calibration in Computerized Adaptive Testing*

Master of Science in Statistics 12/2010

Department of Statistics, University of Illinois at Urbana-Champaign

Bachelor of Science in Psychology 06/2009

School of Psychology, Beijing Normal University, China

Minor in Psychology 12/2007

One-Semester Oversea Exchange Program (GPA: 4.00/4.00)

Tiffin University, OH, USA

ACADEMIC POSITIONS

Associate Professor 08/2020-present

Arizona State University

Mary Lou Fulton Teachers College & School of Mathematical and Statistical Sciences

Assistant Professor 08/2014-05/2020

Arizona State University

Mary Lou Fulton Teachers College & School of Mathematical and Statistical Sciences

Instructor of Record 08/2012-05/2013

University of Illinois at Urbana-Champaign

College of Education, Department of Educational Psychology

Teaching/Research Assistant 08/2009-12/2013

University of Illinois at Urbana-Champaign

College of Education, Department of Educational Psychology

Research Assistant 08/2013-05/2014

University of Illinois at Urbana-Champaign

College of Education, Confucius Institute

JOURNAL EDITORSHIP

Associate Editor 02/2019-present

Applied Psychological Measurement

Managing Editor 10/2011-02/2014

Applied Psychological Measurement

RESEARCH SPECIALIZATION

- Computerized adaptive testing and multistage testing
- Educational and psychological measurement theories (classical test theory and item response theory)
- Educational and psychological test development and validation
- Educational and psychological measurement data modeling
- Cognitive diagnostic modeling
- Automated test assembly

PUBLICATIONS

Notes:

- **Annotation for students and post-docs (at the time of publication):** Undergraduate student, graduate student (*), post-doc fellow (**).

PEER-REVIEWED JOURNAL ARTICLES

1. Mohammed, T., Nadile, E. M.*, Busch, C. A.*, Brownnell, S. E., Brister, D., Claiborne, C. T., Edwards, B. A., Wolf, J. G., Lunt, C., Tran, M., Vargas, C., Walker, K. M., Warkina, T. D., Witt, M. L., **Zheng, Y.**, & Cooper, K. M. (2021). Aspects of large-enrollment online college science courses that exacerbate and alleviate student anxiety. *CBE-Life Sciences Education, 20:ar69*, 1–23. doi: 10.1187/cbe.21-05-0132
2. Gong, B.*, & **Zheng, Y.** (2021). More is not always better: A study of country-level factors associated with adolescents' environmental attitudes using a multilevel analysis of PISA 2006. *Education Policy Analysis Archives, 29*(125), 1–12. https://doi.org/10.14507/epaa.29.4846
3. Gin, L. E.*, Clark, C. E., Elliott, D. B., Roderick, T. B., Scott, R. A., Arellano, D., Hunter, J. A., Ramirez, D., Vargas, C., Velarde, K., Aeschliman, A., Berkheimer, J., Campos, R., Cole, S. T., Gerbasi, M., Hughes, S., Roberts, J. A., White, Q. M., Wittekind, E., **Zheng, Y.**, Cooper, K. M., & Brownell, S. E. (2021). An exploration across institution types of undergraduate life sciences student decisions to stay in or leave an academic-year research experience. *CBE-Life Sciences Education, 20:ar47*, 1–14. doi:10.1187/cbe.21-04-0108
4. Barnes, M. E., Supriya, K.**, **Zheng, Y.**, Roberts, J., Brownell, S. E. (2021). A New Measure of Students' Perceived Conflict between Evolution and Religion (PCoRE) is a Stronger Predictor of Evolution Acceptance than Understanding or Religiosity. *CBE-Life Sciences Education, 20*:ar21, 1–16. doi: 10.1187/cbe.21-02-0024

5. Nadile, E. M.*, Williams, K. D., Wiesenthal, N. J., Stahlhut, K. N., Sinda, K. A., Sellas, C. F., Salcedo, F., Camacho, Y. I. R., Perez, S. G., King, M. L., Hutt, A. E., Heiden, A., Gooding, G., Gomez-Rosado, J. O., Ford, S. A., Ferreira, I., Chin, M. R., Bevan-Thomas, W. D., Barreiros, B. M., Alfonso, E., **Zheng, Y.,** Cooper, K. M. (2021). Gender differences in student comfort voluntarily asking and answering questions in large-enrollment college science courses. *Journal of Microbiology & Biology Education, 22*(2): e00100-21. doi: 10.1128/jmbe.00100-21
6. Gin, L. E.*, Scott, R. A., Pfeiffer, L. D., **Zheng, Y.**, Cooper, K. M., Brownell, S. E. (2021). It's in the syllabus… or is it? How syllabi can serve as tools for creating inclusive classrooms. *Advances in Physiology Education, 45*, 224–240. doi: 10.1152/advan.00119.2020
7. Nadile, E. M.*, Alfonso, E., Barreiros, B. M., Bevan-Thomas, W. D., Brownell, S. E., Chin, M. R., Ferreira, I., Ford, S. A., Gin, L. E.*, Gomez-Rosado, J. O., Gooding, G., Heiden, A., Hutt, A. E., King, M. L., Perez, S. G., Rivera Camacho, Y. I., Salcedo, F., Sellas, C. F., Sinda, K. A., Stahlhut, K. N., Stephens, M. D., Wiesenthal, N. J., Williams, K. D., **Zheng, Y.,** Cooper, K. M. (2021). Call on me! Undergraduates' perceptions of voluntarily asking and answering questions in front of large-enrollment science classes. *PLoS ONE, 16*(1): e0243731. doi: 10.1371/journal. pone.0243731
8. Mead, C., Supriya, K.**, **Zheng, Y.**, Anbar, A. D., Collins, J. P., LePore, P., & Brownell, S. E. (2020). Online biology degree program broadens access for women, first-generation to college, and low-income students, but grade disparities remain. *PLoS ONE 15*(12): e0243916. doi:*10.1371/journal. pone.0243916*
9. **Zheng, Y.**, Cheon, H.*, & Katz, C. (2020). Using machine learning methods to develop a short tree-based adaptive classification test: Case study with a high dimensional item pool and imbalanced data. *Applied Psychological Measurement, 44*(7-8), 499–514. doi: 10.1177/0146621620931198
10. Barnes, M. E.**, Dunlop, H. M.*, Sinatra, G. M., Hendrix, T. M., **Zheng, Y.**, Brownell, S. E. (2020). "Accepting evolution means you can't believe in God": Atheistic perceptions of evolution among college biology students. *CBE-Life Sciences Education, 19*:ar21, 1–13. doi: 10.1187/cbe.19-05-0106
11. Figueroa, C., **Zheng, Y.**, & Adams, J.* (2020). College students' belief about psychological services: a Guatemalan case study. *Journal of Multicultural Counseling and Development, 48*, 44–57. doi: 10.1002/jmcd.12163
12. Kang, H.-A., **Zheng, Y.**, & Chang, H-H. (2019). Online calibration of a joint model of item responses and response times in computerized adaptive testing. *Journal of Educational and Behavioral Statistics, 45*(2), 175–208. doi: 10.3102/1076998619879040
13. Cooper, K. M.**, Gin, L. E. *, Akeeh, B., Clark, C. E., Hunter, J. S., Roderick, T. B., Elliott, D. B., Gutierrez, L. A., Mello, R. M., Pfeiffer, L. D., Scott, R. A., Arellano, D., Ramirez, D., Valdez, E. M., Vargas, C., Velarde, K., **Zheng, Y.**, & Brownell, S. E. (2019). Factors that predict life sciences student persistence in undergraduate research experiences. *PLoS One, 14*(8): e0220186. doi: 10.1371/journal.pone.0220186
14. Wang, B*., **Zheng, Y.**, Irimata, K. M., & Wilson, J. R. (2019). Bootstrap ICC estimators in analysis of small clustered binary data. *Computational Statistics, 34*, 1765–1778. doi: 10.1007/s00180-019-00885-z
15. Wang, B.*, **Zheng, Y.**, Fang, D., Kamarianakis, Y., & Wilson, J. R. (2019). Split bootstrap hierarchical modeling of antibiotics abuse in China. *Statistics in Medicine, 38*, 2282–2291. doi: 10.1002/sim.8118

16. Couch, B. A., Wright, C. D.**, Freeman, S., Knight, J. K., Semsar, K.**, Smith, M. K., Summers, M.**, **Zheng, Y.**, Crowe, A. J., & Brownell, S. E. (2019). GenBio-MAPS: A programmatic assessment to measure student understanding of Vision and Change core concepts across general biology programs. *CBE-Life Sciences Education, 18*(1). doi: 10.1187/cbe.18-07-0117
17. Barnes, M. E.**, Dunlop, H. M.*, Holt, E. A., **Zheng, Y.**, Brownell, S. E. (2019). Different instruments used to measure evolution acceptance lead to different research findings. *Evolution: Education and Outreach, 12*(4). doi: 10.1186/s12052-019-0096-z
18. Cooper, K. M.*, Hendrix, T., Stephens, M. D., Cala, J. M.*, Mahrer, K., Krieg, A., Agloro, A., Badini, G. V., Barnes, M. E.*, Eledge, B., Jones, R., Lemon, E. C., Massimo, N. C.*, Martin, A., Ruberto, T.*, Simonson, K., Webb, E. A.*, Weaver, J., **Zheng, Y.**, Brownell, S. E. (2018). To be funny or not to be funny: Gender differences in student perceptions of instructor humor in college science courses. *PLoS One, 13*(8):e0201258. doi: 10.1371/journal.pone.0201258
19. Xia, Y.**, & **Zheng, Y.** (2018). Asymptotically normally distributed person fit indices for detecting spuriously high scores on difficult items. *Applied Psychological Measurement, 42*(5), 343–358. doi: 10.1177/0146621617730391
20. **Zheng, Y.**, & Chang, H-H. (2017). A comparison of five methods for pretest item selection in online calibration. *International Journal of Quantitative Research in Education, 4*(1/2), 133–158. doi: 10.1504/IJQRE.2017.086500
21. **Zheng, Y.**, Nozawa, Y., Zhu, R., & Gao, X. (2016). Automated top-down heuristic assembly of a classification multistage test. *International Journal of Quantitative Research in Education, 3*(4), 242–265. doi: 10.1504/IJQRE.2016.082387
22. Chiu, C.-Y., Koehn, H.-F., **Zheng, Y.**, & Henson, R. (2016). Joint maximum likelihood estimation for cognitive diagnostic models. *Psychometrika, 81*(4), 1069–1092. doi: 10.1007/s11336-016-9534-9
23. **Zheng, Y.** (2016). Online calibration of polytomously scored items under the generalized partial credit model. *Applied Psychological Measurement, 40*(6), 434–450. doi: 10.1177/0146621616650406
24. Wang, S.*, **Zheng, Y.**, Zheng, C., & Li, P. (2016). An automated test assembly program for a large-scale Chinese proficiency test. *Applied Psychological Measurement, 40*(3), 233–237. doi: 10.1177/0146621616628503
25. Guo, R., **Zheng, Y.**, & Chang, H-H. (2015). A stepwise test characteristic curve method to detect item parameter drift. *Journal of Educational Measurement, 52*(3), 280–300. doi: 10.1111/jedm.12077
26. **Zheng, Y.**, & Chang, H-H. (2015). On-the-fly assembled multistage adaptive testing. *Applied Psychological Measurement, 39*(2), 104–118. doi: 10.1177/0146621614544519
27. Wang, C., **Zheng, Y.***, & Chang, H-H. (2014). Does standard deviation matter? Using "standard deviation" to quantify security of multistage testing. *Psychometrika, 79*(1), 154–174. doi: 10.1007/s11336-013-9356-y
28. **Zheng, Y.***, Chang, C-H., & Chang, H-H. (2013). Content-balancing strategy in bifactor computerized adaptive patient-reported outcome measurement. *Quality of Life Research, 22*(3), 491–499. doi: 10.1007/s11136-012-0179-6

MANUSCRIPTS UNDER REVIEW OR REVISION

1. **Zheng, Y.**, Jin, J. I. *, & van Vliet, F. * (under review). Examining the use of learner-centered assessment in the school of mathematics and statistics in a large research university in the United States: A case study based on course syllabi. *Assessment and Evaluation in Higher Education.*
2. Wang, S.†, **Zheng, Y.**†, Tong, R., & Kelly, H. (under review). Evaluation of Adaptive Instructional Systems. In J. Cockroft, & Tong, R. (Eds.) *AIED Learning Technology - Where we are Today.* († Wang & Zheng contributed equally.)
3. Krantsevich, C.*, Hahn, P. R., **Zheng, Y.**, & Katz, C. (under review). Bayesian decision theory for tree-based adaptive screening tests with an application to youth delinquency. *The Annals of Applied Statistics.*
4. Chen, D., Vazquez Arreola, E, Wilson, J., & **Zheng, Y.** (under review). Generalized estimating equations for modeling multiple correlated responses with time-dependent covariates. *Statistics in Medicine.*
5. Singarajah, E. M., Reifsnider, E., Shin, C.-N., **Zheng, Y.**, & Komnenich, P. (under review). Ethnic differences in health and cardiovascular risk factors of Asians in Arizona. *Public Health Nursing.*
6. Amrein-Beardsley, A., Azizova, Z., Gibbs, N. P. *, Ikegwuonu, C. A., Kim, J., La Torre, D. M. *, Lavery, M. R., Pivovarova, M., & **Zheng, Y.** (under revision). What do we know about the SATs and ACTs and why, given COVID, should K12 educational stakeholders care?
7. Amrein-Beardsley, A., Azizova, Z., Gibbs, N. P.*, Ikegwuonu, E., Kim, J., La Torre, D. M.*, Lavery, M. R., Pivovarova, M., & **Zheng, Y.** (under review). A validation review of the SAT and ACT for admissions decisions. *Educational Assessment.*
8. Close, K.*, & **Zheng, Y.** (under revision). Clarifying, Expanding, and Challenging the NCME Position Statement on Testing Multilingual Learners.
9. Fisher, K. W., Xia, Y., **Zheng, Y.**, & Park, H. (under revision). Social capital dimensions: identifying items and latent constructs using the National Longitudinal Transition Study-2 data.
10. **Zheng, Y.** (under revision). A note on real-subject experiments on computerized adaptive testing: The needs, the barriers, and lessons learned.

MANUSCRIPTS IN PROGRESS

1. Amrein-Beardsley, A., Azizova, Z., Gibbs, N. P.*, Ikegwuonu, E., Kim, J., La Torre, D. M.*, Lavery, M. R., Pivovarova, M., & **Zheng, Y.** (in progress). *Expert report. Smith et al. (Plaintiffs) v. Regents of the University of California, Janet Napolitano (Defendants). No. RG19046222.* Superior Court of the State of California. Alameda County.
2. Close, K.*, & **Zheng, Y.** (in progress). Developing a technology-enhanced solution to language bias found in English-based math tests.
3. Barnes, M. E., **Zheng, Y.**, & Brownell, S. E. (in progress). Developing and validating the Inventory of Culturally Competent Evolution Education Practices (ICCEEP).

BOOK CHAPTERS

1. **Zheng, Y.** (2017). Online calibration in computerized adaptive testing. In D. Tu (Ed.), *Computerized adaptive testing* (Chapter 9, pp. 157–175). Beijing, China: Beijing Normal University Press.
2. **Zheng, Y.***, & Chang, H-H. (2014). Multistage testing, on-the-fly multistage testing, and beyond. In Y. Cheng, & H-H. Chang (Eds.), *Advancing methodologies to support both summative and formative assessments* (Chapter 2, pp. 21–39). Charlotte, NC: Information Age Publishing.
3. **Zheng, Y.***, Wang, C., Culbertson, M. J.*, & Chang, H-H. (2014). Overview of test assembly methods in multistage testing. In D. Yan, A. A. von Davier, & C. Lewis (Eds.), *Computerized multistage testing: Theory and applications* (Chapter 6, pp. 87–99). New York, NY: CRC Press.

CONFERENCE PROCEEDINGS

1. Chiu, C.-Y., Koehn, H.-F., **Zheng, Y.**, & Henson, R. (2015). Exploring joint maximum likelihood estimation for cognitive diagnosis models. In L. A. van der Ark, D. M. Bolt, W.-C. Wang, J. A. Douglas, & S.-M. Chow (Eds.), *Quantitative psychology research, The 79th annual meeting of the psychometric society.* (Chapter 19, pp. 263 – 278). Switzerland: Springer International Publishing.

COMPUTER PROGRAMS

1. **Zheng, Y.**, & Chiu, C.-Y. (2019). **NPCD**: Nonparametric Methods for Cognitive Diagnosis. *R package version 1.0-11*. http://CRAN.R-project.org/package=NPCD

TECHNICAL REPORTS

1. Katz, C. M., Cheon, H.*, & **Zheng, Y.** (2019). *User's manual for the Honduran behavior measurement instrument.* USAID Research Project Technical Report.
2. Katz, C. M., Cheon, H.*, & **Zheng, Y.** (2018). *The revised Honduran YSET: Scales, items and cut points.* USAID Research Project Technical Report.
3. **Zheng, Y.***, Chuah, D., & Proctor, T. (2013). *The preliminary pretest method for efficiently building item bank.* Newtown, PA: The College Board.
4. **Zheng, Y.***, Nozawa, Y., Gao, X., & Chang, H-H. (2012). Multistage adaptive testing for a large-scale classification test: The designs, automated heuristic assembly, and comparison with other testing modes. *ACT Research Reports 2012-6.* Retrievable from http://media.act.org/documents/ACT_RR2012-6.pdf
5. Ryan, K. E., Chang, H-H., Ahn, J. *, Choe, E.*, Kang, H.-A.*, Timmer, J. D.*, Wakita, S., Yeh, R.*, Zheng, C.*, & **Zheng, Y.*** (2012). *Final recommendations on Illinois State Assessments (Research Report No. 14).* Springfield, IL: Illinois State Board of Education.
6. Chang, H-H., Ryan, K. E., **Zheng, Y.***, Chen, Y.-L.*, Lin, H.*, Neo, T. Y. L.*, & Zheng, C.* (2011). *Vertical scaling of ISAT (I): Motivation, literature review, and design of simulation study (Research Report No. 12).* Springfield, IL: Illinois State Board of Education.
7. Chang, H-H., Ryan, K. E., **Zheng, Y.***, Ali, U.*, Wang, C.*, & Lin, H.* (2011). *Scale stability: An empirical study of ISAT linking (Research Report No. 10)*. Springfield, IL: Illinois State Board of Education.

8. Ryan, K. E., Gandha, T.*, Wakita, S., Gannon, N.*, Muhati, M. P.*, & **Zheng, Y.*** (2010). *Illinois assessment consequences evaluation: Year two report (Research Report No. 9)*. Springfield, IL: Illinois State Board of Education.

PRESENTATIONS

Notes:

- **Annotation for students and post-docs (at the time of publication):** Undergraduate student, graduate student (*), post-doc fellow (**).

INVITED TALKS - INTERNATIONAL

1. **Zheng, Y.** (2021, October). *Examining learner-centered assessment practices in higher education: A case study using review of course syllabi* (Invited symposium: Empirical research on measurement and evaluation in higher education). The 7th Forum on Empirical Education Research, Shanghai, China.
2. **Zheng, Y.** (2019, December). *Advanced techniques for item bank development, automated test assembly, and adaptive test designs.* Invited talk at the Collaborative Innovation Center of Assessment towards Basic Education Quality, Beijing Normal University, Beijing, China.
3. **Zheng, Y.** (2016, July). *Recent developments in psychometrics*. Invited talk at the Collaborative Innovation Center of Assessment towards Basic Education Quality, Beijing Normal University, Beijing, China.
4. **Zheng, Y.** (2016, June). *Recent developments in psychometrics.* Invited talk at the School of Psychology, Nanjing Normal University, Nanjing, China.
5. **Zheng, Y.** (2016, June). *Recent developments in psychometrics.* Invited talk at the School of Psychology, Jiangxi Normal University, Nanchang, China.
6. **Zheng, Y.** (2015, July). *Recent developments in psychometrics.* Invited talk at the Collaborative Innovation Center of Assessment towards Basic Education Quality, Beijing Normal University, Beijing, China.
7. **Zheng, Y.**, Wang, C., Culbertson, M. J.*, & Chang, H-H. (2015, July). *Overview of test assembly methods in multistage testing.* Invited symposium paper presented at the 80th Annual Meeting of the Psychometric Society, Beijing, China.
8. **Zheng, Y.*** (2011, December). *Multistage adaptive testing.* Faculty of Education, Beijing Normal University, Beijing, China.

INVITED TALKS - REGIONAL

1. **Zheng, Y.** (2021, November). *MxML (When measurement meets machine learning): Exploring paradigmatic relationship between M and ML in the history, current time, and future*. Invited talk at the quantitative psychology seminar series, Department of Psychology, Arizona State University.
2. **Zheng, Y.** (2020, April). *Applying data science to educational and psychological measurement*. Invited talk at the annual conference of Women in Data Science, Data Science Institute, University of Arizona.

3. **Zheng, Y.** (2018, October). *Using Concerto for real test-taker experimental research on Computerized Adaptive Testing*. Invited talk at the quantitative psychology seminar series, Department of Psychology, Arizona State University.
4. Fisher, K., Park, H., & **Zheng, Y.** (2016, April). *Exploring adolescent access to social capital.* Invited talk at the Mary Lou Fulton Teachers College Faculty Spotlight series, Arizona State University.

ORGANIZED CONFERENCE SESSIONS

5. Boykin, A. A., Manley A. C., Rios, J., & **Zheng, Y.**[†] (expected 2022, April). *Recruiting and retaining new educational measurement faculty*. Organized session at the Annual Meeting of the National Council on Measurement in Education, San Diego, CA. ([†] All authors ordered alphabetically.)

REFEREEED CONFERENCE PRESENTATIONS - INTERNATIONAL

1. **Zheng, Y.** (2015, July). *Exploring online calibration of polytomous items in computerized adaptive testing.* Paper presented at the 80th Annual Meeting of the Psychometric Society, Beijing, China.
2. Kang, H.-A.*, **Zheng, Y.**, & Chang, H-H. (2015, July). *Online calibration for a joint model of responses and response times in CAT.* Paper presented at the Annual Meeting of the Psychometric Society, Beijing, China.
3. **Zheng, Y.***, Nozawa, Y., Gao, X., & Chang, H-H. (2012, April). *Multistage adaptive testing for a large-scale classification test: The designs, automated heuristic assembly, and comparison with other testing modes.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Vancouver, British Columbia, Canada.

REFEREEED CONFERENCE PRESENTATIONS - NATIONAL

1. **Zheng, Y.**, Jin, J. I.*, & van Vliet, F.* (expected February 2022). *A case study of learner-centered assessment in a mathematics school.* Paper to be presented at the 2022 AAC&U Conference on General Education, Pedagogy, and Assessment, San Diego, CA.
2. **Zheng, Y.** (expected 2022, April). *Examining the validity evidence for SAT/ACT in admissions: Reliability/precision and internal structure* (In organized symposium: Do SATs/ACTs Inform Equitable Admissions and Scholarship Decisions for the 21st Century? A Validation Review). Paper to be presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.
3. Tang, X. *, Wu, T. *, **Zheng, Y.**, Hau, K. T., & Chang, H-H. (expected 2022, April). *Comparison of on-the-fly MST with preassembled MST on PISA data*. Paper to be presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.
4. Close, K.*, & **Zheng, Y.** (2021, June) *Predicting problematic items using a linguistic complexity framework: Findings from cognitive interviews.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Baltimore, MD.
5. **Zheng, Y.**, Cheon, H.*, & Katz, C. (2019, April). *Building a short tree-based adaptive screening test for juvenile delinquency risk.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Toronto, Canada.

6. Singarajah, E.*, Reifsnider, E., Shin, C., **Zheng, Y.**, Komnenich, P. (2020, April). *Ethnic differences in health and cardiovascular risk factors of Asians in Arizona.* Poster presentation presented at the Western Institute of Nursing's Annual Communicating Nursing Research Conference, Portland, OR.
7. Fisher, K. W., Xia, Y., **Zheng, Y.**, & Park, H. (2020, April). *Identifying items and latent constructs for social network support and structure using National Longitudinal Transition Study-2 data* [Roundtable Session]. The Annual Meeting of American Educational Research Association, San Francisco, CA. http://tinyurl.com/qu4gxy9 (Conference Canceled)
8. **Zheng, Y.** (2018, April). *Using Concerto for experimental research on CAT: Lessons learned.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, New York, NY.
9. Xia, Y.**, & **Zheng, Y.** (2018, April). *Analysis of incomplete ordinal data in structural equation modeling using the Bayes Estimator.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, New York, NY.
10. Fisher, K. W., **Zheng, Y.**, & Park, H. (2017, April). *Access to social capital in and out of high school: Why building student social connections is critical.* Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
11. **Zheng, Y.** (2016, April). *Online calibration of polytomous items in computerized adaptive testing.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Washington, D.C.
12. Kang, H.-A.*, **Zheng, Y.**, & Chang, H-H. (2015, April). *Online calibration for a joint model of responses and response times in CAT.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Chicago, IL.
13. **Zheng, Y.***, & Chang, H-H. (2014, April). *The ordered informative range priority index (OIRPI) method for item selection in online calibration.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Philadelphia, PA.
14. Guo, R.*, **Zheng, Y.***, & Chang, H-H. (2014, April). *A stepwise test characteristic curve method to detect item parameter drift.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, Philadelphia, PA.
15. Guo, R.*, **Zheng, Y.***, & Chang, H-H. (2013, April). *A stepwise test characteristic curve method to detect item parameter drift*. Roundtable presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
16. **Zheng, Y.***, Wang, C.*, & Chang, H-H. (2012, July). *Making multistage testing more secure: An analysis under the item theft scenario.* Paper presented at the 77th Annual Meeting of the Psychometric Society, Lincoln, NE.
17. Wang, C.*, **Zheng, Y.***, & Chang, H-H. (2012, July). *A new index to measure test security for online testing.* Paper presented at the 77th Annual Meeting of the Psychometric Society, Lincoln, NE.
18. **Zheng, Y.***, & Chang, H-H. (2011, October). *Automatic on-the-fly assembly for computerized adaptive multistage testing*. Paper presented at the International Association for Computerized Adaptive Testing Conference, Pacific Grove, CA.

19. **Zheng, Y.***, & Chang, H-H. (2011, April). *Automatic on-the-fly assembly for computer adaptive multistage testing*. Paper presented at the Annual Meeting of the National Council on Measurement in Education, New Orleans, LA.
20. **Zheng, Y.***, Chang, C-H., & Chang, H-H. (2010, July). *Content-balancing strategies in computerized adaptive Patient Reported Outcome assessment.* Paper presented at the 75th Annual Meeting of the Psychometric Society, Athens, GA.

CONFERENCE PRESENTATIONS - LOCAL

1. Close, K.*, & **Zheng, Y.** (2019, December) *Linguistic issues with standardized test items: Findings from cognitive interviews with native Spanish and mandarin Chinese speakers.* Paper presented at the Arizona Education Research Organization Annual Conference, Tempe, AZ.
2. **Zheng, Y.** (2018, February). *Using Concerto for experimental research on CAT: Lessons learned.* Poster presented at the ASU Learning Innovation Showcase, Arizona State University, AZ.
3. **Zheng, Y.** (2017, April). *Advancing computerized adaptive testing through participant-based research and open-source platform tools.* Poster presented at the ASU Mary Lou Fulton Teachers College Internal Research Grants Symposium, Arizona State University, AZ.
4. **Zheng, Y.***, & Chang, H-H. (2013, April). *On-the-fly Assembled Multistage Adaptive Testing (OMST)*. Paper presented at the 4th Annual College of Education Graduate Student Conference, University of Illinois at Urbana-Champaign, Champaign, IL.
5. Gandha, T.*, **Zheng, Y.***, Ryan, K. E., & Chang, H-H. (2012, March). *Collaborative research and evaluation to improve the uses and impact of test-based accountability*. Paper presented at the 3rd Annual College of Education Graduate Student Conference, University of Illinois at Urbana-Champaign, Champaign, IL.

GRANTS

Advancing personalized learning across physical and digital spaces: A data-driven learning analytics approach 05/2019-12/2019

Institution for Social Science Research, Arizona State University; Seed Grant Program

Amount: $7,998

Role: co-PI (50%) (PI: Ihan Hsiao, Arizona State University)

Applying translanguaging theory to testing: Designing a new technology-enhanced accommodation for English language learners 05/2019-12/2020

Mary Lou Fulton Teachers College, Arizona State University

Amount: $14,970

Role: PI (50%)

Developing an extension of the TELL curriculum for three-year-old children with developmental speech and/or language impairment 07/2018-06/2022

Institute of Education Sciences (IES), U.S. Department of Education

Amount: $1,400,000

Role: co-PI (20% REC/RID/IIA)

PI: Shelley Gray (College of Health Solutions, ASU)

Secondary violence prevention activity (SVPA) adaption and evaluation 01/2017-06/2020

Creative Associates International, USAID

Amount: $655,637

Role: co-PI (10% REC/RID/IIA)

PI: Charles Katz (School of Criminology & Criminal Justice, ASU)

Advancing computerized adaptive testing through participant-based research and open source platform tools 12/2016-11/2017

Mary Lou Fulton Teachers College, Arizona State University

Amount: $12,900

Role: PI (100%)

Psychometric advisory for Maricopa community colleges 03/2016-06/2016

Maricopa Community Colleges, Arizona

Amount: $1,194

Role: PI (100% REC/RID/IIA)

Exploring online calibration of polytomous items in computerized adaptive testing 05/2015-08/2015

Mary Lou Fulton Teachers College, Arizona State University

Amount: $8,000

Role: PI (100%)

COURSE TEACHING

Course Instructor 08/2014-present

Arizona State University

Analysis-of-Variance Methods (EDP 554)

Semester: 2020 Spring

Applied Regression Analysis (STP 530)

Semester: 2019 Fall, 2020 Fall

Experimental Statistics (STP 429)

Semesters: 2014 Fall, 2015 Spring, 2015 Fall, 2016 Fall, 2017 Spring, 2018 Spring, 2019 Spring

Introduction to Data Analysis (COE 502)

Semesters: 2015 Spring, 2017 Spring

Introduction to Measurement Theory and Practice in Education (DCI 691)

Semesters: 2015 Fall, 2017 Fall, 2019 Fall, 2020 Fall

Multiple Regression and Correlation Methods (EDP 552)

Semesters: 2016 Spring, 2018 Spring

Lab Session Instructor 08/2013-12/2013

University of Illinois at Urbana-Champaign

Measurement and Test Development Lab (PSYC 490)

Semester: 2013 Fall

Course Instructor of Record 08/2012-05/2013

University of Illinois at Urbana-Champaign

Elements of Statistics (EPSY 280)

Semesters: 2012 Fall, 2013 Spring

Teaching Assistant 08/2009-12/2011

University of Illinois at Urbana-Champaign

Educational Statistics (EPSY 480)

Semester: 2010 Spring

Statistical Methods in Psychology (EPSY 580)

Semesters: 2009 Fall, 2010 Fall, 2011 Fall

Intern Teacher 03/2009-04/2009

Zhongguangcun No.4 Primary School, Beijing, China

Experience: Class management; taught a course on social studies.

STUDENT MENTORING

Doctoral Advisor 12/2017-present

Arizona State University

Students: Kevin Close (LLT, current)

Doctoral Dissertation Committee Member 08/2014-present

Arizona State University

Students:

Junfei Zhu (Statistics, 2017 Spring)

Bei Wang (Statistics, 2017 Fall)

Zhongshen Wang (Statistics, 2018 Spring)

Katelyn Cooper (Biology Education, 2018 Spring)

Oscar Gonzales (Psychology, 2018 Spring)

Hyunkyoung Yoon (Math Ed, 2019 Summer)

Hazar Khogeer (Statistics, 2019 Fall)

Erlinda Singarajah (Nursing, 2019 Fall)

Elsa Vazquez (Statistics, 2020 Spring)

Kyran Cupido (Statistics, 2020 Spring)

Byoung-Gyu Gong (EPE, 2021 Spring)

Logan Gin (Biology Education, 2021 Fall)

Joshua Adams (LLT, current)
Ferdinand Delgado (Exercise & Nutritional Sciences, current)
Jennifer DiLallo (Speech & Hearing, current)
Man Su (LLT, current)
Jinhui Xu (Statistics, current)
Erika Nadile (Biology Education, current)

Doctoral Secondary Research Advisor 08/2015-present

Arizona State University

Students:

James Cunningham (LLT, 2015 Spring)
Joshua Adams (LLT, 2015 Fall, 2016 Spring, 2016 Fall, 2017 Spring)
Byoung-gyu Gong (EPE, 2017 Fall, 2018 Spring, 2019 Fall)
Jeong Im Jin (EPE, 2021 Spring)

Master Thesis/Applied Project Advisor 05/2015-present

Arizona State University

Students:

Liangfeng Yang (Statistics, 2016 Spring)

Master Thesis/Applied Project Committee Member 04/2015-present

Arizona State University

Students:

Hua Wang (Statistics, 2015 Spring)
Shichao Liu (Statistics, 2015 Spring)
Oscar Gonzales (Psychology, 2016 Spring)
Jie Pu (Statistics, 2016 Spring)
Renyuan Sun (Statistics, 2016 Spring)
Shengjie Zhou (Statistics, 2017 Spring)
Xin Lei (Statistics, 2017 Spring)
Fei Wang (Statistics, 2017 Spring)
Xitao Xie (Statistics, 2017 Fall)
Yi-Ping Lee (Statistics, 2019 Summer)
Jiaxuan Yang (Statistics, 2019 Fall)
Shu Yang (Statistics, 2019 Fall)
Chengyu Hong (Statistics, 2020 Spring)
Ziwei Chen (Statistics, 2020 Spring)
Haoran Shi (Statistics, 2020 Spring)
Catherine Hart (Statistics, 2020 Summer)
Ashley Foster (Biology, current)

Honors Thesis Chair 05/2015-present

Arizona State University

Students:

Justin Kasten (Statistics, 2016 Spring)

Henry Vasquez (Statistics, 2018 Spring)

Honors Thesis Committee Member 10/2015-present

Arizona State University

Students:

Kirsten Voorhies (Statistics, 2017 Spring)

Honor Contract Advisor 08/2014-present

Arizona State University

Students:

Sharon Wu (Statistics, 2014 Fall)

Nghia Millard (Statistics, 2015 Spring)

Koranis Tanwisuth (Statistics, 2015 Fall)

Alyssa Niren (Statistics, 2017 Spring)

Joel Krukar (Statistics, 2017 Spring)

Henry Vasquez (Statistics, 2017 Spring)

PROFESSIONAL SERVICE

INTERNATIONAL/NATIONAL SERVICE

Associate Editor 02/2019-present

Applied Psychological Measurement

Managing Editor 10/2011-02/2014

Applied Psychological Measurement

NCME Educators of Measurement SIGIMIE Committee member 06/2021-present

National Council on Measurement in Education

IEEE Working Group Committee Member 09/2020-present

IEEE Adaptive Instructional Systems Working Group --

Recommended Practices for AIS Evaluation Subgroup

Manuscript Reviewer 03/2011-present

Applied Psychological Measurement

Assessment

Behavior Research Methods

British Journal of Mathematical Statistical Psychology

Educational and Psychological Measurement

Educational Measurement: Issues and Practice

Frontiers: Quantitative Psychology and Measurement

International Journal of Testing

Journal of Educational Measurement

Journal of Engineering Education
Journal of Statistical Software
Psychometrika
Quality of Life Research

Proposal Reviewer

The Annual Meetings of National Council on Measurement in Education (2013)
The International Meeting of Psychometric Society (2013)
Mary Lou Fulton Teachers College Internal Research Grants (2017, 2020)

Member of Professional Associations

American Educational Research Association, Division D (Measurement & Research Methodology)
American Psychological Association, Division 5 (Evaluation, Measurement, and Statistics)
National Council on Measurement in Education
Psychometric Society

LOCAL AND COMMUNITY SERVICE

Organizing Committee co-Chair

American Statistical Association DataFest 08/2019-present

Statistics Consultant

Investigating increased horse fatalities at Turf Paradise racing track 02/2019-08/2019
Phoenix, AZ

Psychometrics Consultant

Developing mathematics diagnostic assessments for college-ready placement 11/2015-10/2016
Maricopa County Community Colleges

Judge (Statistics) 05/2016

Intel International Science and Engineering Fair (International high school students competition)
Phoenix, AZ

INSTITUTIONAL SERVICE

Math Adaptive Curriculum Development Committee Member 08/2020-present
Arizona State University, School of Mathematical and Statistical Sciences

Doctoral Admission Committee Member 08/2018-04/2019
Arizona State University
2019 Ph.D. in Learning, Literacies, and Technologies, *Mary Lou Fulton Teachers College*

Master Program Development Committee Member 03/2017-present
Arizona State University
M.S. in Education Sciences, *Mary Lou Fulton Teachers College*

Advisory Board Member 09/2016-05/2017
Arizona State University
Office of Scholarship Advisory Board, *Mary Lou Fulton Teachers College*

Search Committee Member 10/2015-12/2019

Arizona State University

2019-20 Educational Statistics and Methods, *Mary Lou Fulton Teachers College*

2015-16 Early Childhood Mathematics Education, *Mary Lou Fulton Teachers College*

2015-16 Elementary Mathematics Education, *Mary Lou Fulton Teachers College*

Quantitative Research Method Consultant 01/2010-05/2014

University of Illinois at Urbana-Champaign

Department of Educational Psychology

PREVIOUS RESEARCH POSITIONS

Research Intern 07/2013-08/2013

The College Board (*45 Columbus Avenue New York, NY 10023)*

Project: Enhancing IRT Item Parameter Estimation

Experience: Reviewed the literature on methods for enhancing IRT parameter estimation; based on the literature, proposed a design in an operational testing context to enhance IRT item parameter estimation in its pretesting; conducted a large-scale simulation study to evaluate the effectiveness of the proposed design.

Research Intern 06/2011-07/2011

ACT, Inc. (500 ACT Drive, Iowa City, IA 52243)

Project: Automatic Assembly of Multistage Tests Using a Heuristic Method

Experience: Constructed a multistage testing (MST) framework for a large-scale operational test; wrote a computer program for automatically assembling MST tests using a heuristic method, and conducted a simulation study to compare different designs of MST and compare MST with computerized adaptive testing and paper-and-pencil testing.

Research Assistant 08/2013-05/2014

Confucius Institute, University of Illinois at Urbana-Champaign

Project: Automated Assembly of the New Chinese Language Proficiency Test (HSK)

PI: Dr. Hua-Hua Chang

Funded by: Chinese Testing International Co., Ltd

Experience: Collaborating with one fellow research assistant, designed and developed an automated test assembly system for the new HSK, the official and most authoritative international standardized Chinese language exam for non-native Chinese speakers.

Research Assistant 05/2010-05/2012

University of Illinois at Urbana-Champaign

Project: External Review of the Illinois Large Scale Assessment and Accountability System

Co-PI: Dr. Hua-Hua Chang (PI: Dr. Katherine Ryan)

Funded by: Illinois State Board of Education

Experience: Reviewed and replicated Illinois state assessment equating procedures;
conducted innovative research on equating and vertical scaling; conducted survey data analysis.

Research Intern 09/2008-10/2008

China Select, Beijing, China (www.chinaselect.cn)

Experience: Assisted test development and item analysis.

SELECT AWARDS

NOMINATED FOR AWARDS

Outstanding Faculty Mentor Award 2020

Graduate College, Arizona State University

This award recognizes outstanding faculty members for their outstanding service to the graduate student and postdoctoral scholar communities through mentoring excellence, commitment to professional development and career advancement and the fostering of inclusive, collaborative academic environments.

Outstanding Faculty Mentor Award 2019

Faculty Women's Association, Arizona State University

This award recognizes faculty members who have demonstrated outstanding mentorship to students and/or to other faculty members, particularly women and underrepresented groups.

Charles Wexler Teaching Award (with stipend) 2016

School of Mathematical and Statistical Sciences, Arizona State University

This award recognizes an outstanding teacher of undergraduate mathematics annually. The winner is selected from nominations made by undergraduate students within the School.

Centennial Professorship Award (with stipend) 2015

Arizona State University Graduate & Professional Student Association

This award recognizes engaged scholarship, emerging leadership, dedication to community service, and demonstration of student-centered practices among ASU's assistant professors and non-tenure-track faculty members.

RECIPIENT OF AWARDS

Outstanding Faculty Mentor Award 2021

Faculty Women's Association, Arizona State University

This award recognizes faculty members who have demonstrated outstanding mentorship to students and/or to other faculty members, particularly women and underrepresented groups.

List of Teachers Ranked as Excellent by Their Students 2013

University of Illinois at Urbana-Champaign

Results are based on campus-wide end-of-course Instructor and Course Evaluation (ICES) questionnaire forms maintained by Measurement and Evaluation, Center for Innovation in Teaching and Learning.

Hardie Dissertation Award (with stipend) 2013

College of Education, University of Illinois at Urbana-Champaign

The award is granted on a competitive basis to support the completion of doctoral dissertation.

Tatsuoka Award (with stipend) 2013

College of Education, University of Illinois at Urbana-Champaign

The award recognizes one graduate student per year with outstanding scholastic and personal accomplishments among those with study interests in statistics and educational measurement.

Jeffrey Tanaka Memorial Award (with stipend) 2011, 2013

Department of Educational Psychology, University of Illinois at Urbana-Champaign

The award alternates yearly between the Department of Psychology and Educational Psychology to recognize outstanding original research or scholarship in quantitative and personality psychology.

Best Paper Honorable Mention Awards (with stipend) 2013

College of Education, University of Illinois at Urbana-Champaign

The award recognizes two excellent papers submitted to the College of Education Graduate Student Conference.

William Chandler Bagley Doctoral Scholarship (with stipend) 2012

College of Education, University of Illinois at Urbana-Champaign

The award recognizes outstanding graduate doctoral students annually.

Beijing Normal University Outstanding Graduate 2009

Beijing Normal University, China

Beijing Regional Outstanding University Graduate 2009

Beijing Department of Education, China

Special Honor Prize, National College Student English Competition 2008

Ministry of Education, China

National Specialty Scholarship (with stipend) 2008

Ministry of Education, China

Beijing Normal University Honor of Students 2006, 2007

Beijing Normal University, China

Beijing Normal University Rank 1 Specialty Scholarship (with stipend) 2006, 2007

Beijing Normal University, China

Jiangsu Province Honor of Students 2005

Jiangsu Department of Education, China

First Prize, China National Biology Olympics for High School Students 2005

Competition Committee, Jiangsu, China

First Prize, China National Physics Olympics for Junior High Students 2002

Competition Committee, China