***About***

Yiqin Pan, Ph.D., is an Assistant Professor of Research and Evaluation Methodology in the School of Human Development and Organizational Studies in Education within the College of Education at the University of Florida. Dr. Pan has leveraged quantitative methodologies including artificial intelligence, statistical modeling, and psychometrics to address applied issues in educational measurement and optimize the learning process. Most of her recent research has centered on aspects of test security and personalized learning. Dr. Pan’s current projects include (i) developing anomaly detection algorithms for identifying potential fraud in tests, (ii) implementing item selection designs by recommendation systems for preventing potential fraud in adaptive testing, (iii) using anomaly detection methods to identify disengagement in learning, and (iv) building recommendation systems to select appropriate learning materials for students. Her research has been supported by Educational Testing Service (ETS) and Graduate Management Admission Council (GMAC).

***Research Interests***

* Educational Assessment and Measurement
* Artificial Intelligence
* Applied Statistics
* Test Security
* Personalized Learning

***Education***

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| --- | --- |
| University of Wisconsin-Madison, Madison, Wisconsin |  |
| - Ph.D. in Quantitative Methods (GPA: 4.0/4.0) | 08/2017-07/2022 |
| - M.S. in Computer Science | 08/2017-06/2019 |
| - Minor in Statistics | 08/2017-12/2018 |
| Beijing Normal University, Beijing, China |  |
| - M.S. in Psychometrics and Psychological Statistics | 09/2014-07/2017 |
| - B.S. in Psychology | 09/2010-07/2014 |

***AWARDS***

Harold Gulliksen Psychometric Research Fellowship: $28,000 09/2021-06/2022

*Educational Testing Service Princeton, New* Jersey

***Selected Publications***

Pan, Y., Sinharay, S., Livne, O., & Wollack, J. (in press). A Machine Learning Approach for Detecting Item Compromise and Preknowledge in Computerized Adaptive Testing.  *Journal of Psychological Test and Assessment Modeling.*

Pan, Y., Livne, O., Wollack, J., & Sinharay, S. (2022). Item Selection Algorithm Based on Collaborative Filtering for Item Exposure Control. Retrieved from https://psyarxiv.com/zakbf

Pan, Y., & Wollack, J. (2022). A Machine Learning Approach for the Simultaneous Detection of Preknowledge in Examinees and Items when Both are Unknown. Retrieved from psyarxiv.com/jtr78

Pan, Y., & Wollack, J. (2021). An Unsupervised-Learning-Based Approach to Compromised Items Detection. *Journal of Educational Measurement,58*(3), 413-433.

Bolt D., Kim, N., Wollack, J., Pan, Y., Eckerly, C. (2020). & Sowles J. A Psychometric Model for Discrete-Option Multiple-Choice (DOMC) Items. *Applied Psychological Measurement, 44* (1), 33-48.