QIZHOU DUAN

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Departmental of Psychology, University of Notre Dame ⋄ Notre Dame, IN 46556

EDUCATION

University of Notre Dame *Expected 2025*
Ph.D. in Quantitative Psychology

University of Notre Dame *May 2023*
M.S. in Applied and Computational Mathematics and Statistics

The College of William & Mary *May 2020*
B.S. in Mathematics
B.S. in Psychology

RESEARCH INTERESTS

Item Response Theory, Response Time Models, Differential Item Functioning, Non-parametric Statistics, Survival Analysis, Meta-Analysis

RESEARCH/WORK EXPERIENCE

Cambium Assessment, Inc. Winter 2024 - Present
Psychometrician/Measurement Scientist *Arlington, VA*

· Writing scripts for checking test configurations, scoring, and simulations for state assessments.
· Research in sample size planning.
· Conducting linking and equating for state assessments.

Notre Dame Institutional Research, Innovation, and Strategy Fall 2024 - Spring 2025
Graduate Researcher *Notre Dame, IN*

· Providing data visualizations for Institutional survey data for stake holders.
· Working with institutional ranking data, and compile literature review for bibliometric research.
· Creating deliverable reports for Notre Dame Business School graduates' outcomes.

Notre Dame Department of Psychology Fall 2023
Statistical Consultant *Notre Dame, IN*

· Providing statistical service to students and faculty in the psychology department ranging from statistical models to data processing techniques.

Learning Analytics and Measurement in Behavioral Sciences Lab Fall 2020 - Summer 2025
Graduate Researcher *Notre Dame, IN*

· Conducting original research in psychometrics, and producing conference presentations and publishable journal articles.
· Updating information about lab members and adding new pages to the lab website periodically.
· Mentoring undergraduate researchers.

The College of William and Mary, Department of Psychology Spring 2019 - Spring 2020
Undergraduate Researcher *Williamsburg, VA*

· Benefit Valuation and Gratitude Project: Data collection and cleaning, ran multilevel models in R.

· Lying and Memory Project: Data collection and cleaning, python programming, performed ANOVA.

TEACHING

– University of Notre Dame:

– Spring 2022, Teaching Assistant.

* <u>Statistics for Behavioral Sciences</u> (PSY 30100)

* Students rating (4.7/5.0)

– Fall 2023, Teaching Assistant.

* <u>Methods for Behavioral Sciences</u> (PSY 30160)

* Students rating (4.9/5.0)

PUBLICATIONS

1. Duan, Q. & Cheng, Y., (2025) Detecting Differential Item Functioning Using Response Time. Educational and Psychological Measurement.

2. Ober, T., Duan, Q., Kane, E., Blacklock, C., & Cheng, Y., (under review) Student Engagement during COVID-19: A Systematic Review and Meta-analysis. Educational Research Review.

3. Duan, Q., (2015) Listen to the Sound of Time: Poems and Prose Anthology of Qizhou Duan. CreateSpace Independent Publishing Platform.

WORKING PAPERS

1. Duan, Q. & Cheng, Y., Non-parametric Response Time Estimation.

2. Duan, Q. & Cheng, Y., A Censored Lognormal Distribution for Response Time at Item Level.

3. Duan, Q. & Cheng, Y., Assessing Differential Item Functioning in Response Time using Penalized Regression.

4. Duan, Q., Xu, C., & Kirkpatrick, L., Benefit Valuation and Gratitude as a measurement problem.

PRESENTATIONS

1. Duan, Q., Cheng, Y. (2025, July) Assessing Differential Item Functioning in Response Time using Penalized Regression. Poster Presentation at 2025 International Meeting of the Psychometric Society, Minneapolis, MN.

2. Duan, Q., Cheng, Y. (2025, April) A Censored Lognormal Distribution for Response Time at Item Level. Paper Presented at Gaining New Insights Through Analysis of Multimodal, Multi-Source Data Symposium in 2025 Annual National Council on Measurement and Education, Denver, CO.

3. Ai, A., Duan, Q. & Raney A., (2024, August) Character Strength Spirituality and Hope Mediate the Faith-based Coping and 3-Types of Wellbeing. Paper presented Spirituality and Mental Health in Natural Hazzard and Related Existential Crises Symposium at 2024 American Psychological Association Convention, Seattle, WA.

4. Ai, A., Duan, Q., Qiu, G., Sabuncu, C., & Stouffer, G., (2024, August) Cardiovascular Disease and Posttraumatic Growth: A Meta-analytic Review. Poster Presentation at 2024 American Psychological Association Convention, Seattle, WA.

5. Duan, Q., Chen, L., Ye, I., & Kirkpatrick, L., (2024, April) Gratitude and Benefit Valuation. Poster Presentation at 2024 Midwestern Psychological Association Annual Meeting, Chicago, IL.

6. Duan, Q., Le, A., & Cheng, Y., (2023, December) A Machine Learning Approach to Assess Differential Item Functioning in Educational Testing. Research Lightning Talk at 2023 Trustworthy AI Lab for Education Summit, Notre Dame, IN.

7. Duan, Q., Cheng, Y. (2023, November) Nonparametric Response Time Estimation for Evaluating Model Fit. Paper Presentation at 2023 Ideas In Testing Research Seminar, Chicago, IL.

8. Kane, E., Blacklock, C., Duan, Q., Ober, T., & Cheng, Y., (2023, May) Student Engagement During COVID-19: A Systematic Review and Meta-Analysis. Poster Presentation at 2023 Association for Psychological Science Annual Convention, Washington DC.

9. Duan, Q., Cheng, Y. (2023, April) Detecting DIF in Response Time Using Bootstrap Percentile Method. Paper Presentation at 2023 Annual National Council on Measurement and Education, Chicago, IL.

10. Duan, Q., Cheng, Y. (2022, April) Detecting Differential Item Functioning Using Response Time. Paper Presented at Response Time Symposium in 2022 Annual National Council on Measurement and Education, San Diego, CA.

LEADERSHIP AND SERVICE

Graduate Student Union Representative, Department of Psychology
Faculty Meeting Student Representative, Department of Psychology

HONORS AND AWARDS

Notre Dame Program for Interdisciplinary Educational Research Burns Fellow (2020-2025)
Notre Dame Summer Tuition Scholarship (2021-2025)
Modern Meta Analysis Research Institute Fellow (2022)
The College of William and Mary Institutional Honor: *magna cumme laude* **(2020)**
The College of William and Mary Dean's List (2016,2018,2019)

TECHNICAL STRENGTHS

Programming Languages	R, Python, SQL, SPSS, SAS, Qualtrics, Tableau
Markup Languages	LaTeX, Rmarkdown, HTML, CSS
System Administration	Debian GNU/Linux
Large Datasets	PISA, GSS
Languages	English (Fluent), Chinese (Native)

PROFESSIONAL MEMBERSHIPS

National Council on Measurement in Education
American Educational Research Association
Midwestern Psychological Association
Psi Chi International Honors Society in Psychology
Modern Meta Analysis Research Institute
The Erdős Institute
United States Chess Federation