

# QIZHOU DUAN

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University of Notre Dame ♦ Notre Dame, IN 46556

## EDUCATION

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<b>University of Notre Dame</b> Ph.D. in Quantitative Psychology	2026
<b>University of Notre Dame</b> M.S. in Applied and Computational Mathematics and Statistics	2023
<b>The College of William &amp; Mary</b> B.S. in Mathematics B.S. in Psychology	2020

## RESEARCH INTERESTS

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

## RESEARCH/WORK EXPERIENCE

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<b>Cambium Assessment, Inc.</b> <i>Psychometrician</i>	2024 - Present <i>Remote</i>
<ul style="list-style-type: none"><li>• Quality control for test configurations and scoring algorithms for Arkansas, New Jersey, and Utah state assessments.</li><li>• Research in sample size planning for the state of Arakansas K-2 assesssments.</li><li>• Conduct linking and equating for the state of Utah assessments.</li><li>• Conduct simulation for computerized adaptive tests for Arkansas, New Jersey, and Utah state assessments.</li></ul>	
<b>Notre Dame Institutional Research, Innovation, and Strategy</b> <i>Graduate Researcher</i>	2024-2025 <i>Notre Dame, IN</i>
<ul style="list-style-type: none"><li>• Provide data visualizations for institutional survey data for stake holders.</li><li>• Work with institutional ranking data, and compile literature review for bibliometric research.</li><li>• Create deliverable reports for Notre Dame Business School graduates' outcomes.</li></ul>	
<b>Notre Dame Department of Psychology</b> <i>Statistical Consultant</i>	2023 <i>Notre Dame, IN</i>
<ul style="list-style-type: none"><li>• Providing statistical service to students and faculty in the psychology department ranging from statistical models to data processing techniques.</li></ul>	
<b>Learning Analytics and Measurement in Behavioral Sciences Lab</b> <i>Graduate Researcher</i>	2020-2025 <i>Notre Dame, IN</i>
<ul style="list-style-type: none"><li>• Conduct original research in psychometrics, and produce conference presentations and publishable journal articles.</li><li>• Maintain lab website and update information about the lab periodically.</li></ul>	

- Mentor undergraduate researchers.

## TEACHING

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- University of Notre Dame:
  - Spring 2022, Teaching Assistant.
    - \* Statistics for Behavioral Sciences (PSY 30100)
    - \* Students rating (4.7/5.0)
  - Fall 2023, Teaching Assistant.
    - \* Methods for Behavioral Sciences (PSY 30160)
    - \* Students rating (4.9/5.0)

## DOCTORAL DISSERTATION

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1. Duan, Q. (2025). The application of response time in educational and psychological measurement. Doctoral dissertation, University of Notre Dame. ProQuest Dissertations & Theses Global.

## PUBLICATIONS

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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

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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.

## PRESENTATIONS

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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

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

## HONORS AND AWARDS

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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

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<b>Programming Languages</b>	R, Python, SQL, SPSS, SAS, Qualtrics, Tableau
<b>Markup Languages</b>	L <sup>A</sup> T <sub>E</sub> X, Rmarkdown, HTML, CSS
<b>System Administration</b>	Debian GNU/Linux
<b>Large Datasets</b>	PISA, GSS
<b>Languages</b>	English (Fluent), Chinese (Native)

## PROFESSIONAL MEMBERSHIPS

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National Council on Measurement in Education  
 American Educational Research Association  
 Midwestern Psychological Association  
 The Erdős Institute  
 United States Chess Federation