

# LAUREN ALEXA TRICHTINGER

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## EDUCATION

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- Ph.D., Quantitative Psychology** 2022  
*University of Notre Dame*  
 Dissertation: Missing data methods for dynamic factor analysis  
 Advisor: *Dr. Guangjian Zhang*
- M.A., Quantitative Psychology** 2020  
*University of Notre Dame*  
 Thesis: Bootstrap methods for testing P-technique factor analysis  
 Advisor: *Dr. Guangjian Zhang*
- B.A., Mathematics and Psychology** 2016  
*Chatham University*  
 Thesis: Smiles, rapport, and learning gains during tutoring sessions  
 Advisors: *Dr. Aaron Trout and Dr. Monica Riordan*

## ACADEMIC APPOINTMENTS

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- Assistant Professor, Simmons University 2021-present  
*Division of Mathematics, Computing, and Statistics*
- Doctoral Student, University of Notre Dame 2016-2021  
*Quantitative Psychology*

## PUBLICATIONS

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- Liu, Q., Joiner, R. J., **Trichtinger, L. A.**, Tran, T., & Cole, D. A. (2023) Dissecting the depressed mood criterion in adult depression: The heterogeneity of mood disturbances in major depressive episodes. *Journal of Affective Disorders*. 323, 392–399. doi: 10.1016/j.jad.2022.11.047
- Zhang, G., Hattori, M., **Trichtinger, L. A.** (2022). Rotating factors to simplify their structural paths. *Psychometrika*. doi: 10.1007/s11336-022-09877-3
- Zhang, G., **Trichtinger, L. A.**, Lee, D. & Jiang, G. (2022) PolychoricRM: An efficient R function for estimating polychoric correlations and their asymptotic covariance matrix. *Structural Equation Modeling Structural Equation Modeling: A Multidisciplinary Journal*, 29:2, 310-320, DOI: 10.1080/10705511.2021.1929996
- Trichtinger, L. A.** & Zhang, G. (2021). Testing P-technique factor analysis with non-normal time series. *Multivariate Behavioral Research*, DOI: 10.1080/00273171.2021.1919047.
- Trichtinger, L.** & Zhang, G. (2021). A Bootstrap Procedure for Testing P-technique Factor Analysis. *Multivariate Behavioral Research*, 56:1, 152, DOI: 10.1080/00273171.2020.1852908 (Abstract).
- Trichtinger, L. A.** & Zhang, G. (2021). Quantifying the model error in P-technique factor analysis. *Multivariate Behavioral Research*, doi: 10.1080/00273171.2020.1717414
- Zhang, G., Hattori, M., **Trichtinger, L. A.**, & Wang, X. (2019). Target Rotation with both factor loadings and factor correlations. *Psychological Methods*, 24(3), 390-402. doi: 10.1037/met0000198
- Zhang, G., Preacher, K., Jiang, G., Hattori, M., & **Trichtinger, L. A.** (2018). A sandwich standard error estimator for exploratory factor analysis with nonnormal data and imperfect models. *Applied Psychological Measurement*, 43(5), 360-373. doi: 10.1177/0146621618798669
- Riordan, M. A. & **Trichtinger, L. A.** (2017). Overconfidence at the Keyboard: Confidence and Accuracy in Interpreting Affect in E-Mail Exchanges. *Human Communication Research*, 43(1), 1–24. doi: 10.1111/hcre.12093

## TEACHING EXPERIENCE

**Simmons University**

STAT 118: Introductory Statistics — <i>Instructor</i>	Fall2021[23,23], Spring2022[24], Fall2022[24], Spring2023[25, 30]
CS 347: Applied Data Science — <i>Instructor</i>	Spring2022[7]
STAT227: Intermediate Statistics: Design & Analysis — <i>Instructor</i>	Spring2023[14,7]
STAT391-01: Special Topics Stats/Biostats — <i>Instructor</i>	Spring2023[9]

**University of Notre Dame**

Quantitative Methods in Psychology II — <i>Lab Instructor</i>	Spring 2019
Quantitative Methods in Psychology I — <i>Lab Instructor</i>	Fall 2018
Experimental Psychology II: Research Methods — <i>Lab Instructor</i>	Fall 2019
Experimental Psychology I: Statistics — <i>Lab Instructor</i>	Fall 2017

**Chatham University**

Statistics and Research Design — <i>Supplemental Instructor</i>	Fall 2015/Spring 2016
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## TUTORING EXPERIENCE

General Psychology — <i>Tutor</i> <i>Chatham University</i>	Fall 2013-Spring 2016
Foundations of Behavioral Research — <i>Tutor</i> <i>Chatham University</i>	Fall 2014-Spring 2016
Abnormal Psychology — <i>Tutor</i> <i>Chatham University</i>	Fall 2015
Health Psychology — <i>Tutor</i> <i>Chatham University</i>	Fall 2015
Psychology of Learning — <i>Tutor</i> <i>Chatham University</i>	Fall 2015

## SOFTWARE DEVELOPMENT

Zhang, G., **Trichtinger, L.**, & Lee, D. (2020). Turbofuncs. [[R package on GitHub](#)]  
 Zhang, G., Jiang, G., Hattori, M. & **Trichtinger, L.** (2019). EFAutilities: Utility functions for  
 exploratory factor analysis. [[R package on CRAN](#)]  
*Over 22,000 downloads*

## AWARDS &amp; CERTIFICATES

Advanced Teaching Scholar Certificate	2020
Midwestern Association of Graduate Schools Excellence in Teaching Award Honorable Mention	2020
Graduate Student Union Outstanding Graduate Teaching Assistant Award	2019
Psychology Department Excellence in Graduate Teaching Assistant Award	2019
Striving for Excellence in College and University Teaching Certificate	2018
National Science Foundation Graduate Research Fellowship Program Honorable Mention	2018
Outstanding Graduate Student Teaching Award	2018
STEMentorship Certificate	2017- 2019
Montgomery Psychology Award	2016
World Ready Women Scholarship	2012-2016

Girl Scout Merit Scholarship	2012-2016
Trustees Merit Scholarship	2012-2016
Girl Scout Gold Award	2010

## PRESENTATIONS

- Trichtinger, L.** (2021, November). *Factor Analysis for Intensive Longitudinal Data*. Invited Talk, University of California, Los Angeles.
- Zhang, G., **Trichtinger, L.**, Lee, D., & Jiang, G (2020, October). *PolychoricRM: A Computationally Efficient R Function for Estimating Polychoric Correlations and Their Asymptotic Covariance Matrix*. Paper presentation, the 60th annual meeting of the Society of Multivariate Experimental Psychology, Virtual Meeting.
- Trichtinger, L.** & Zhang, G.(2020, October) *A Bootstrap Procedure for Testing P-technique Factor Analysis*. Poster presentation, 18th Annual Society of Multivariate Experimental Psychology (SMEP) Graduate Student Conference. Virtual.
- Trichtinger, L.** & Zhang, G.(2020, July). *Testing P-technique factor analysis with non-normal time series*. Paper presentation, the 84th Annual Meeting of the Psychometric Society (IMPS). College Park, MD.
- Zhang, G., Hattori, M., **Trichtinger, L.**, & Wang, X. (2018, October). *Extending Target Rotation to Include Factor Correlations*. Paper presentation, the 58th annual meeting of the Society of Multivariate Experimental Psychology. Albuquerque, NM.
- Trichtinger, L.** & Zhang, G.(2018, August). *Factor Retention Methods in P-Technique Factor Analysis*. Poster presentation, the 126th annual convention of the American Psychological Association. San Francisco, CA.
- Zhang, G., Hattori, M., **Trichtinger, L.**, & Wang, X. (2018, October). *Extending Target Rotation to Include Factor Correlations*. Paper presentation, the 58th annual meeting of the Society of Multivariate Experimental Psychology. Albuquerque, NM.
- Zhang, G., Jiang, G., Hattori, M. & **Trichtinger, L.** (2016, October). *An R package EFAutilities: A collection of utility functions for exploratory factor analysis*. Paper presentation, the 56<sup>th</sup> annual meeting of the Society of Multivariate Experimental Psychology. Richmond, VA.
- Riordan, M. A. & **Trichtinger, L.** (November, 2015). *Relational and contextual effects on the confidence and accuracy of interpreting affect in email exchanges*. Presented at the 101st annual meeting of the National Communication Association in Las Vegas, Nevada.
- Kovaz, D. M., Riordan, M. A., **Trichtinger, L.**, & Kreuz, R. J. (November, 2014). *The effects of cooperation and relationship status on alignment in conversation*. Presented at the 55th annual meeting of the Psychonomic Society in Long Beach, California.

## QUANTITATIVE SEMINAR PRESENTATIONS

- Trichtinger, L.** & Zhang, G.(2020, September). *Statistical analysis of intensive longitudinal data*. Presented at Grad Seminar: Quantitative Study. Notre Dame. IN.
- Trichtinger, L.** & Zhang, G.(2019, November). *Bootstrap methods for testing P-technique factor analysis*. Presented at Grad Seminar: Quantitative Study. Notre Dame. IN.
- Trichtinger, L.** & Zhang, G.(2018, September). *Quantifying the model error in P-technique factor analysis*. Presented at Grad Seminar: Quantitative Study. Notre Dame. IN.
- Trichtinger, L.** & Zhang, G.(2018, March). *Exploratory factor analysis and cross-validation*. Presented at Grad Seminar: Quantitative Study. Notre Dame. IN.
- Trichtinger, L.** & Zhang, G.(2017, April). *Computing Test Statistics for P-Technique Factor Analysis*. Presented at Grad Seminar: Quantitative Study. Notre Dame. IN.

## TEACHING WORKSHOPS ATTENDED

Facilitating Discussion in Social Sciences and Humanities	January 2020
Flipped Classroom	October 2019
Using Rubrics to Assess Student Work	September 2019
Transparent Assignment Design	September 2019
Building Better Bookends: Making the Most of the First & Last Days of Class	November 2018
Alternative/Flipped Finals Beyond Blue Books & Bubble Sheet	November 2018
Teaching in Flexible Spaces	September 2018
Gathering Early Semester Student Feedback	February 2018
Writing Effective Multiple Choice Questions	January 2018
Helping Students in Distress	January 2018

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#### STATISTICAL CONSULTING

Statistical Consultant	June 2018
<i>Worked with applied researchers to solve their statistical and coding questions</i>	

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#### TECHNICAL SKILLS

**Computing/Programming** — R, SPSS Syntax, CEFA, DyFA, Git, Unix/CLI, LaTeX, Lucidchart

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#### SERVICE AND LEADERSHIP

Graduate Peer Mentor, Diversity, Equity and Inclusion Committee	Fall 2020
STEM Mentor, Association for Women in Science	Fall 2016 – Present
Probability Workshop Leader, Expanding Your Horizon Conference	Spring 2017, 2018, 2019
Northern Indiana Regional Science and Engineering Fair Judge	Spring 2017, 2018, 2019, 2020

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#### NATIONAL PROFESSIONAL MEMBERSHIPS

Psychometric Society, American Psychological Association, Caucus for Women in Statistics, Psi Chi

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#### TEACHING PORTFOLIO AND COURSE INSTRUCTOR FEEDBACK

<https://bit.ly/3305ogE>

Teaching materials [https://rpubs.com/qliu6/qmr?fbclid=IwAR1y2H1Jtj2qFG0meQh5hKckHJLRQunuD7Peq\\_AnI-ifX8gTcGz562R\\_bTw](https://rpubs.com/qliu6/qmr?fbclid=IwAR1y2H1Jtj2qFG0meQh5hKckHJLRQunuD7Peq_AnI-ifX8gTcGz562R_bTw)  
 SERVICE ACTIVITIES

#### University Service

PLAN advisor	Fall 2022-Present
Administrative Board Board Member	Spring 2023-Present
SURPASS Judge	Spring 2023
Mock Class Instructor, Simmons Accepted Student Day	Spring 2022, Spring 2023

#### Professional Service

Reviewer, Structural Equation Modeling	Spring 2022
Reviewer, Behavior Research Methods	Fall 2021
Reviewer, Society of Multivariate Experimental Psychology Conference	Fall 2021
USPROC Judge	Spring 2023
Statistics and Data Science Job Search Committee	2023
Mathematics Job Search Committee	2023