

# Kenneth Tyler Wilcox

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## Education

*University of Notre Dame*, Notre Dame, IN

Ph.D. Quantitative Psychology 2022 (expected)

*Rochester Institute of Technology*, Rochester, NY

M.S. Applied Statistics 2017

Thesis: Bayesian hidden topic Markov models

B.S. Psychology 2013

## Grants and Awards

**University of Notre Dame** 2020

Graduate Student Union Outstanding Teaching Assistant Award (\$300)

**Society of Multivariate and Experimental Psychology** 2019

Travel Assistance Award (\$1,500)

**University of Notre Dame** 2017–present

University Presidential Fellowship

**Upstate Chapters of the American Statistical Association** 2016

Honorable Mention for Oral Presentation Based on Methodology and Theory

**Rochester Institute of Technology Center for Quality and Applied Statistics** 2015

John D. and Rachel E. Hromi Endowed Scholarship

**Association for Psychological Science Student Caucus** 2014

Travel Assistance Award (\$200)

**Rochester Institute of Technology College of Liberal Arts**

Outstanding Undergraduate Scholarship Award 2013

Student Research Fund (\$72) 2013

Kearse Award for Excellence in Writing (\$100) 2012

## Teaching Experience

*University of Notre Dame*

**Teaching Assistant & Lab Instructor**, Department of Psychology 08/2019–

Courses: Quantitative Methods I (graduate course), Quantitative Methods II (graduate course)

*Rochester Institute of Technology*

**Teaching Assistant**, School of Mathematical Sciences 09/2015–05/2017

Courses: Elements of Statistical Theory (graduate course), Principles of Statistical Data Mining (graduate course)

**Tutor**, Academic Support Center 09/2010–05/2013, 10/2014–05/2017

Courses: Calculus, Multivariate Calculus, Linear Algebra, Differential Equations, University Physics, Probability, Statistics, Regression Analysis, Design of Experiments, Stochastic Processes

**Teaching Assistant**, Center for Quality and Applied Statistics 01/2015–12/2015

Courses: Statistical Software (graduate course), Probability and Statistics II for Engineers

**Instructor**, Academic Support Center 10/2014–12/2015

Course: Critical Mathematical Skills

**Tutor**, Arthur O. Eve Higher Education Opportunity Program 07/2012–08/2012

Courses: Pre-Calculus, Algebra

## Research Experience

*Rochester Institute of Technology, Rochester, NY*

**Statistician**, Department of Service Systems 05/2017–07/2017

Research collaborators: Malarvizhi Hirudayaraj, Martin Anselm

**Research Assistant**, Department of Psychology 03/2012–05/2013

Research adviser: Caroline M. DeLong

**Research Assistant**, Department of Psychology 11/2011–05/2013

Research adviser: John Edlund

*SUNY Upstate Medical University, Syracuse, NY*

**Research Analyst**, Department of Psychiatry and Behavioral Sciences 06/2013–08/2013

Research adviser: John Manring

**Research Intern**, Department of Neurosurgery 07/2011–09/2011

Research advisers: John Manring, Satish Krishnamurthy

## Employment

Soleo Communications, Data Scientist

2016

## Publications

### JOURNAL ARTICLES

- Jacobucci, R., Ammerman, B. A., & **Wilcox, K. T.** (in press). The use of text-based responses to improve our understanding and prediction of suicide risk. *Suicide and Life-Threatening Behavior*.
- DeLong, C. M., Fellner, W., **Wilcox, K. T.**, Odell, K., & Harley, H. E. (2020). Visual perception in bottlenose dolphins (*Tursiops truncatus*): Successful recognition of 2-D objects rotated in the picture and depth planes. *Journal of Comparative Psychology*, 134(2), 180–196. <https://doi.org/10.1037/com0000207>
- Wilcox, K. T.**, Jacobucci, R., & Zhang, Z. (2020). Bayesian supervised topic modeling with covariates. *Multivariate Behavioral Research*, 55(1), 141 (Abstract). <https://doi.org/10.1080/00273171.2019.1695568>
- DeLong, C. M., Wright, C., Fobe, I., **Wilcox, K. T.**, & Morrison, E. (2019). North American river otters (*Lontra canadensis*) discriminate between 2D objects varying in shape and color. *Learning & Behavior*, 47, 91–104. <https://doi.org/10.3758/s13420-018-0346-x>
- DeLong, C. M., Fobe, I., O'Leary, T., & **Wilcox, K. T.** (2018). Visual perception of planar-rotated 2D objects in goldfish (*Carassius auratus*). *Behavioural Processes*, 157, 263–278. <https://doi.org/10.1016/j.beproc.2018.10.009>
- DeLong, C. M., Keller, A. M., **Wilcox, K. T.**, Fobe, I., & Keenan, S. A. (2018). Visual discrimination of geometric and complex 2D shapes in goldfish (*Carassius auratus*). *Animal Behavior and Cognition*, 5(3), 300–319. <https://doi.org/10.26451/abc.05.03.05.2018>
- DeLong, C. M., Barbato, S., O'Leary, T., & **Wilcox, K. T.** (2017). Small and large number discrimination in goldfish (*Carassius auratus*) with extensive training. *Behavioural Processes*, 141(P2), 172–183. <https://doi.org/10.1016/j.beproc.2016.11.011>
- Edlund, J.E., Nichols, A. L., Okdie, B. M., Guadagno, R. E., Eno, C. A., Heider, J. D., Hansen, E., Sagarin, B. J., Blackhart, G., Cottrell, C. A., & **Wilcox, K. T.** (2014). The prevalence and prevention of crosstalk: A multi-institutional study. *The Journal of Social Psychology*, 154(3), 181–185. <https://doi.org/10.1080/00224545.2013.872596>

### CONFERENCE PROCEEDINGS

- Fobe, I., DeLong, C. M., & **Wilcox, K. T.** (2017). An exploration of rhythm perception in African penguins (*Spheniscus demersus*). *Proceedings of Meetings on Acoustics*, 31(1). <https://doi.org/10.1121/2.0000773>

## MANUSCRIPTS UNDER REVIEW

- Ammerman, B. A., **Wilcox, K. T.**, O'Loughlin, C. M., & McCloskey, M. S. (Under review). Characterizing the choice to disclose nonsuicidal self-injury. *Journal of Clinical Psychology*.
- Morrison, E. K., DeLong, C. M., & **Wilcox, K. T.** (Under review). Humans discriminate among bottlenose dolphin signature whistles masked by noise: Investigating perceptual strategies for anthropogenic noise pollution. *Journal of the Acoustical Society of America*.

## MANUSCRIPTS IN PREPARATION

- Che, C., **Wilcox, K. T.**, & Zhang, Z. Evaluation of the unsupervised latent Dirichlet allocation model through simulation. Manuscript in preparation.
- Hong, M., & **Wilcox, K. T.**. A joint modeling framework for item response and topic models. Manuscript in preparation.
- Wilcox, K. T.**, Jacobucci, R., McCloskey, M. A., & Ammerman, B. A. A topic mining approach to characterizing interpersonal stress among nonsuicidal self-injury. Manuscript in preparation.
- Wilcox, K. T.**, Jacobucci, R., & Zhang, Z. Supervised latent Dirichlet allocation with covariates: A Bayesian joint regression model of text and covariates. Manuscript in preparation.
- Wilcox, K. T.** & Wang, L. Modeling approaches for integrative data analysis: Evaluations and recommendations. Manuscript in preparation.

## Software Development

- Wilcox, K. T.** (2020). *psychtm: Text mining for psychological research* (Version 2020.3) [Computer software]. <https://github.com/ktw5691/psychtm/>

## Presentations

### PEER-REVIEWED CONFERENCE PRESENTATIONS

- Hong, M., **Wilcox, K. T.**, & Cheng, Y. (2020, July 13–17). *A joint modeling framework for item response and topic models* [Paper presentation]. 85th Annual Meeting of the Psychometric Society, College Park, MD, United States.
- Wilcox, K. T.**, Jacobucci, R., & Zhang, Z. (2020, July 13–17). *Combining topic modeling and regression: Supervised topic modeling with covariates* ["Spotlight Talk" paper presentation]. 85th Annual Meeting of the Psychometric Society, College Park, MD, United States.
- Che, C., **Wilcox, K. T.**, & Zhang, Z. (2020, May 26–27). *Evaluation of the unsupervised latent Dirichlet allocation model through simulation* [Paper presentation]. 2nd Annual Meeting of the International Society for Data Science and Analytics, Notre Dame, IN, United States.

- Wilcox, K. T.**, Jacobucci, R., & Zhang, Z. (2020, May 26–27). *Modeling relationships from themes in text and covariates with an outcome: A Bayesian supervised topic model with covariates* [Paper presentation]. 2nd Annual Meeting of the International Society for Data Science and Analytics, Notre Dame, IN, United States.
- DeLong, C. M., Morrison, E., Wegman, J., Morelli, J., Rachfal, T., & **Wilcox, K. T.** (2020, April 1–4). *Visual object categorization in goldfish (Carassius auratus)* [Poster presentation]. 27th Annual International Conference on Comparative Cognition, Melbourne, FL, United States. (Conference canceled)
- Ammerman, B. A., **Wilcox, K. T.**, & Jacobucci, R. (2019, November 21–24). A nuanced examination of the relationship between social connectedness and suicidal ideation. In B. A. Ammerman & R. Jacobucci (Chairs), *Utilizing text mining in clinical research: Novel applications for improving the prediction of psychological distress* [Symposium]. 53rd Annual Convention of the Association for Behavioral and Cognitive Therapies, Atlanta, GA, United States.
- Wilcox, K. T.**, Jacobucci, R., McCloskey, M. S., & Ammerman, B. A. (2019, November 21–24). Evaluating personal narratives of interpersonal relationships via text mining to predict nonsuicidal self-injury. In B. A. Ammerman & R. Jacobucci (Chairs), *Utilizing text mining in clinical research: Novel applications for improving the prediction of psychological distress* [Symposium]. 53rd Annual Convention of the Association for Behavioral and Cognitive Therapies, Atlanta, GA, United States.
- Wilcox, K. T.** (2019, October 9–12). *Bayesian supervised topic modeling with covariates* [Poster presentation]. 17th Annual Society of Multivariate Experimental Psychology Graduate Student Conference, Baltimore, MD, United States.
- DeLong, C. M., Morrison, E., Wegman, J., Rachfal, T., & **Wilcox, K. T.** (2019, April 10–13). *Visual perception of rotated 2D color representations of familiar 3D objects in goldfish (Carassius auratus)* [Paper presentation]. 26th Annual International Conference on Comparative Cognition, Melbourne Beach, FL, United States.
- Wilcox, K. T.** (2018, July 9–13). *A Bayesian hidden topic Markov model for latent linguistic structure* [Paper presentation]. 83rd Annual Meeting of the Psychometric Society, New York City, NY, United States.
- DeLong, C. M., Gardner, K., Rachfal, H., Morrison, E., & **Wilcox, K. T.** (2018, April 4–7). *Visual discrimination of rotated 3D objects in goldfish (Carassius auratus)* [Paper presentation]. 25th Annual International Conference on Comparative Cognition, Melbourne Beach, FL, United States.
- Morrison, E., DeLong, C. M., Wright, C., Gardner, K., Rachfal, H., Gamble, M., **Wilcox, K. T.**, Frye, D., Thorner, H., Fobe, I., & Dami, J. (2018, April 4–7). *North American river otters (Lontra canadensis) use shape and color to discriminate between 2D objects* [Poster presentation]. 25th Annual International Conference on Comparative Cognition, Melbourne Beach, FL, United States.
- Fobe, I., DeLong, C. M., & **Wilcox, K. T.** (2017, December 4–8). *An exploration of rhythm*

- perception in African penguins (Spheniscus demersus)* [Paper presentation]. 174th Meeting of the Acoustical Society of America, New Orleans, LA, United States.
- DeLong, C. M., Fellner, W., Harley, H. E., Fobe, I., **Wilcox, K. T.**, Gardner, K., & Odell, K. (2017, November 9). *Visual discrimination of rotated 2D objects in a bottlenose dolphin (Tursiops truncatus) and goldfish (Carassius auratus)* [Paper presentation]. Fall Meeting of the Comparative Cognition Society 2017, Vancouver, BC, Canada.
- Wilcox, K. T.** (2017, April). *Text mining with a Bayesian hidden topic Markov model* [Paper presentation]. 6th Annual Joint Conference of the Upstate Chapters of the American Statistical Association, Buffalo, NY, United States.
- DeLong, C. M., Fobe, I., **Wilcox, K. T.**, & O'Leary, T. (2017, April 19–22). *Visual discrimination of rotated 2D objects in goldfish (Carassius auratus)* [Paper presentation]. 24th Annual International Conference on Comparative Cognition, Melbourne Beach, FL, United States.
- Wilcox, K. T.** (2016, April). *An introduction to ensemble methods for machine learning* [Paper presentation]. 5th Annual Joint Conference of the Upstate Chapters of the American Statistical Association, Buffalo, NY, United States.
- Wilcox, K. T.**, & DeLong, C. M. (2014, May 22–25). *Mindfulness meditation and relaxation differentially improve mindfulness and affect, not emotional memory* [Poster presentation]. 26th Association for Psychological Science Annual Convention, San Francisco, CA, United States.
- Nichols, A. L., Edlund, J. E., Okdie, B. M., Guadagno, R. E., Eno, C. A., Heider, J. D., Hansen, E., Sagarin, B. J., Blackhart, G., Cottrell, C. A., & **Wilcox, K. T.** (2013, November). *Predicting and preventing participant crosstalk: A multi-institutional investigation* [Paper presentation]. 2nd International Conference on Emerging Research Paradigms in Business and Social Sciences, Dubai, United Arab Emirates.
- Wilcox, K. T.**, Wright, C., & DeLong, C. M. (2012, August 10). *Training North American river otters (Lontra canadensis) to discriminate among objects* [Poster presentation]. 21st Annual Rochester Institute of Technology Undergraduate Research Symposium, Rochester, NY, United States.

## Institute Service

*University of Notre Dame*

**Department of Psychology**

08/2018–07/2019

**Quantitative Area Representative**, Graduate Advisory Committee

*Rochester Institute of Technology*

**Department of Applied Statistics**

01/2015–05/2017

**Secretary**, Data Science Research Group

**Summer Mathematics Institute (Rochester, NY)**

06/2016

Discussant, "On the Five Pillars of Statistical Science: Methodology, Theory, Computation, Applications and Data"

**Psychology Department** 03/2012–05/2013

Secretary, Psychology Student Society

**College of Liberal Arts** 09/2012–05/2013

Student Representative, Eisenhart Nomination Committee

**First Year Enrichment Program** 09/2010–05/2013

Peer Mentor

## **Professional Associations**

American Psychological Association

American Psychological Association Division 5

American Statistical Association

Association for Psychological Science

Psychometric Society

## **Professional Activities**

*Ad Hoc Reviewer*

Multivariate Behavioral Research 2020

*Association for Psychological Science*

**Association for Psychological Science Student Caucus** 2016–2019

Reviewer, APSSC Student Grant Competition

*Upstate Chapters of the American Statistical Association*

**Sixth Annual Joint Conference (Buffalo, NY)** 04/2017

Session chair, "Applications of Statistics in Environmental Studies"

Judge, 2017 Pre-College Statistical Data Analysis Competition

**Fifth Annual Joint Conference (Buffalo, NY)** 04/2016

Judge, 2016 Pre-College Statistical Data Analysis Competition