

# 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

**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

- DeLong, C. M., Fellner, W., **Wilcox, K. T.**, Odell, K., & Harley, H. E. (2019). Visual perception in bottlenose dolphins: Successful recognition of 2D objects rotated in the picture and depth planes. *Journal of Comparative Psychology*. <https://doi.org/10.1037/com0000207>
- Wilcox, K. T.**, Jacobucci, R., & Zhang, Z. (2019). Bayesian supervised topic modeling with covariates. *Multivariate Behavioral Research* (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(1), 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 for 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*.

Jacobucci, R., Ammerman, B. A., & **Wilcox, K. T.** (Under review). The use of text-based responses to improve our understanding and prediction of suicide risk. *Suicide and Life-Threatening Behavior*.

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.

**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. Integrative data analysis using multilevel modeling: Why, how, and when. Manuscript in preparation.

## **Software Development**

**Wilcox, K. T.** (2020). Psychtm: Text mining for psychological research (Version 2020.2) [Computer software]. Available at <https://github.com/ktw5691/psychtm/>

## **Presentations**

#### *Peer-Reviewed Conference Presentations*

Hong, M., **Wilcox, K. T.**, & Cheng, Y. (2020, July). A joint modeling framework for item response and topic models. Paper submitted for presentation at the 2020 International Meeting of the Psychometric Society, College Park, Maryland.

Che, C., **Wilcox, K. T.**, & Zhang, Z. (2020, May). Evaluation of the unsupervised latent Dirichlet allocation model through simulation. Paper accepted for presentation at the Annual Meeting of the International Society for Data Science and Analytics, Notre Dame, Indiana.

**Wilcox, K. T.**, Jacobucci, R., & Zhang, Z. (2020, May). Modeling relationships from themes in text and covariates with an outcome: A Bayesian supervised topic model with covariates. Paper accepted for presentation at the Annual Meeting of the International Society for Data Science and Analytics, Notre Dame, Indiana.

DeLong, C. M., Morrison, E., Wegman, J., Morelli, J., Rachfal, T., & **Wilcox, K. T.** (2020, April). Visual object categorization in goldfish (*Carassius auratus*). Poster accepted

for presentation at the 27th Annual International Conference on Comparative Cognition, Melbourne, Florida.

Ammerman, B. A., **Wilcox, K. T.**, & Jacobucci, R. (2019, November). A nuanced examination of the relationship between social connectedness and suicidal ideation. Paper presented at the 53rd Annual Convention for the Association for Behavioral and Cognitive Therapies, Atlanta, Georgia.

**Wilcox, K. T.**, Jacobucci, R., McCloskey, M. S., & Ammerman, B. A. (2019, November). Evaluating personal narratives of interpersonal relationships via text mining to predict nonsuicidal self-injury. Paper presented at the 53rd Annual Convention for the Association for Behavioral and Cognitive Therapies, Atlanta, Georgia.

**Wilcox, K. T.** (2019, October). Bayesian supervised topic modeling with covariates. Poster presented at the 17th Annual Society of Multivariate Experimental Psychology Graduate Student Conference, Baltimore, Maryland.

DeLong, C. M., Morrison, E., Wegman, J., Rachfal, T., & **Wilcox, K. T.** (2019, April). Visual perception of rotated 2D color representations of familiar 3D objects in goldfish (*Carassius auratus*). Paper presented at the 26th Annual International Conference on Comparative Cognition, Melbourne, Florida.

**Wilcox, K. T.** (2018, July). A Bayesian hidden topic Markov model for latent linguistic structure. Paper presented at the 2018 International Meeting of the Psychometric Society, New York City, New York.

DeLong, C. M., Gardner, K., Rachfal, H., Morrison, E., & **Wilcox, K. T.** (2018, April). Visual discrimination of rotated 3D objects in goldfish (*Carassius auratus*). Paper presented at the 25th Annual International Conference on Comparative Cognition, Melbourne Beach, Florida.

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). North American river otters (*Lontra canadensis*) use shape and color to discriminate between 2D objects. Poster presented at the 25th Annual International Conference on Comparative Cognition, Melbourne Beach, Florida.

Fobe, I., DeLong, C. M., & **Wilcox, K. T.** (2017, December). An exploration of rhythm perception in African penguins (*Spheniscus demersus*). Paper presented at the 174th Meeting of the Acoustical Society of America, New Orleans, Louisiana.

DeLong, C. M., Fellner, W., Harley, H. E., Fobe, I., **Wilcox, K. T.**, Gardner, K., & Odell, K. (2017, November). Visual discrimination of rotated 2D objects in a bottlenose dolphin (*Tursiops truncatus*) and goldfish (*Carassius auratus*). Paper presented at the Fall Meeting of the Comparative Cognition Society, Vancouver, British Columbia, Canada.

**Wilcox, K. T.** (2017, April). Text mining with a Bayesian hidden topic Markov model. Paper presented at the Sixth Annual Joint Conference of the Upstate Chapters of the American Statistical Association, Buffalo, NY.

- DeLong, C. M., Fobe, I., **Wilcox, K. T.**, & O'Leary, T. (2017, April). Visual discrimination of rotated 2D objects in goldfish (*Carassius auratus*). Paper presented at the 24th Annual International Conference on Comparative Cognition, Melbourne, Florida.
- Wilcox, K. T.** (2016, April). An introduction to ensemble methods for machine learning. Paper presented at the Fifth Annual Joint Conference of the Upstate Chapters of the American Statistical Association, Buffalo, New York.
- Wilcox, K. T.**, & DeLong, C. M. (2014, May). Mindfulness meditation and relaxation differentially improve mindfulness and affect, not emotional memory. Poster presented at the 26th Association for Psychological Science Annual Convention, San Francisco, California.
- 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 presented at the Second 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). Training North American river otters (*Lontra canadensis*) to discriminate among objects. Poster presented at the RIT Undergraduate Research and Innovation Symposium, Rochester, New York.

## **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**, Eisenhower 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

*Association for Psychological Science*

**Association for Psychological Science Student Caucus** 12/2016, 12/2017, 12/2018

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