

# Jeffrey C. Zemla

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## Education

|      |   |
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| 2015 | PhD in Psychology, Rice University, Houston, TX                     |
| 2011 | MA in Psychology, Rice University, Houston, TX                      |
| 2007 | BA in Psychology/Linguistics, Rutgers University, New Brunswick, NJ |

## Professional Experience

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| 2020-present | <b>Syracuse University, Psychology Department, Syracuse NY</b><br><i>Assistant Professor</i>   |
| 2017-2020    | <b>University of Wisconsin-Madison, Psychology Department, Madison, WI</b><br><i>Assistant Scientist</i>   |
| 2014-2016    | <b>Brown University</b><br><b>Department of Cognitive, Linguistic, and Psychological Sciences, Providence, RI</b><br><i>Post-doctoral Research Associate</i> |
| 2011-2012    | <b>Virginia Tech Carilion Research Institute, Roanoke, VA</b><br><i>Research Associate</i>   |
| 2008-2009    | <b>Princeton University, Psychology Department, Princeton, NJ</b><br><i>Research Assistant</i>   |

## Grants and Awards

- Computation and Information in Biology and Medicine Postdoctoral Fellowship (2019–2020)
- National Institutes of Health – NIA 1 R21 AG053467 (2016–2019)  
Computational modeling of semantic decline in Alzheimer’s disease (\$406,250 over two years)  
Role: PI (with Joseph Austerweil)
- UW-Madison Alzheimer’s Disease and Related Disorders Research Day Best Abstract (2018)
- MathPsych/ICCM Post-doc Travel Award (2017)
- Gertrude Maurin Travel Award (2014)
- Rice University Social Science Research Initiative Pre-Dissertation Research Grant (2012)
- Runner-up, Hillel Einhorn New Investigator Award, Society of Judgment and Decision Making (2010)
- Rice University Graduate Student Fellowship (2009–2014)

## Journal Publications

- 2020 Zemla, J. C., Cao, K., Mueller, K. D., & Austerweil, J. L. (2020). SNAFU: The semantic network and fluency utility. *Behavior Research Methods*.
- Lange, K. V., Hopman, E. W., Zemla, J. C., & Austerweil, J. L. (2020). Evidence against a relation between bilingualism and creativity. *PLoS One*, *15*(6), e0234928.
- 2019 Zemla, J. C., & Austerweil, J. L. (2019). Analyzing knowledge retrieval impairments associated with Alzheimer's disease using network analyses. *Complexity*, *2019*, 1–12.
- 2018 Zemla, J. C., & Austerweil, J. L. (2018b). Estimating semantic networks of groups and individuals from fluency data. *Computational Brain & Behavior*, *1*(1), 36–58.
- 2017 Zemla, J. C., Sloman, S., Bechlivanidis, C., & Lagnado, D. A. (2017). Evaluating everyday explanations. *Psychonomic Bulletin & Review*, *24*(5), 1488–1500.
- Bechlivanidis, C., Lagnado, D., Zemla, J. C., & Sloman, S. A. (2017). Concreteness and abstraction in everyday explanation. *Psychonomic Bulletin & Review*, *24*(5), 1451–1464.
- 2015 Zemla, J. C., Tossell, C. C., Kortum, P., & Byrne, M. D. (2015). A Bayesian approach to predicting website revisitation on mobile phones. *International Journal of Human-Computer Interaction*, *83*, 43–50.
- 2010 Alter, A. L., Oppenheimer, D. M., & Zemla, J. C. (2010). Missing the trees for the forest: A construal level account of the illusion of explanatory depth. *Journal of Personality and Social Psychology*, *99*(3), 436–451.

## Unpublished Manuscripts

*Manuscripts are available upon request*

- In prep Mueller, K. D., Allison, S. L., Kosciak, R. L., Jonaitis, E., Christian, B. T., Bethausser, T. J., . . . Johnson, S. C. (in prep). Verbal fluency measures are associated with Alzheimers disease biomarkers in late-middle-aged cognitively unimpaired adults.
- Gronchi, G., & Zemla, J. C. (in prep). Cognitive style predicts magical beliefs.
- Zemla, J. C., Sloman, S., Bechlivanidis, C., & Lagnado, D. A. (in prep). Not so simple! Mechanisms increase preference for complex explanations.

## Refereed Conference Proceedings

- 2019 Payton, M., Zemla, J. C., & Austerweil, J. L. (2019). Subjective randomness in a non-cooperative game. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society* (pp. 2544–2549). Austin, TX: Cognitive Science Society.
- 2017 Gronchi, G., Zemla, J. C., & Brondi, M. (2017). Cognitive style predicts magical beliefs. In *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 2138–2143). Austin, TX: Cognitive Science Society.
- Zemla, J. C., & Austerweil, J. L. (2017c). Modeling semantic fluency data as search on a semantic network. In *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp. 3646–3651). Austin, TX: Cognitive Science Society.

- 2016 Zemla, J. C., Kenett, Y. N., Jun, K.-S., & Austerweil, J. L. (2016). U-INVITE: Estimating individual semantic networks from fluency data. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (pp. 1907–1912). Austin, TX: Cognitive Science Society.
- Zemla, J. C., Steiner, S. M., & Sloman, S. (2016). Analytical thinking predicts less teleological reasoning and religious belief. In *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (pp. 1217–1222). Austin, TX: Cognitive Science Society.
- 2011 Zemla, J. C., Ustun, V., Byrne, M. D., Kirlik, A., Riddle, K., & Alexander, A. L. (2011). An ACT-R model of commercial jetliner taxiing. In *Proceedings of the 55th Annual Human Factors and Ergonomics Society* (pp. 831–835). Santa Monica, CA: Human Factors and Ergonomics Society.

## Book Chapters

- 2019 Sloman, S., Zemla, J. C., Lagnado, D., Bechlivanidis, C., & Hemmatian, B. (2019). Are humans intuitive philosophers? In S. R. Grimm (Ed.), *Varieties of understanding: New perspectives from philosophy, psychology, and theology* (pp. 231–250). New York, NY: Oxford University Press.

## Invited talks

- 2020 Zemla, J. C. (2020, February). *Understanding semantic decline in healthy and abnormal aging*. Invited talk presented to the Department of Psychology at Syracuse University, Syracuse, NY.
- 2018 Zemla, J. C. (2018, November). *Comparison of semantic networks in Alzheimer’s patients and controls*. Invited talk presented at the Society for Mathematical Psychology satellite meeting at Psychonomics, New Orleans, LA.
- Zemla, J. C., & Austerweil, J. L. (2018c, March). *Modeling semantic fluency data in Alzheimer’s patients*. Invited talk presented at the 2018 Alzheimer’s Disease and Related Disorders Research Day, Madison, WI.

## Talk and Poster Presentations

- 2019 Zemla, J. C. (2019, June). *Alzheimer’s disease biomarkers associated with semantic fluency performance*. Talk presented at the National Library of Medicine Informatics Training Conference, Indianapolis, IN.
- Castro, N., & Zemla, J. C. (2019, March). *The stability (and instability) of semantic category networks across adulthood*. Poster presented at the International Convention of Psychological Science (ICPS), Paris, France.
- 2018 Zemla, J. C., & Austerweil, J. L. (2018a, November). *Comparison of semantic networks in Alzheimer’s patients and controls*. Poster presented at the Annual 59th Psychonomics Society, New Orleans, LA.
- Zemla, J. C., & Austerweil, J. L. (2018e, October). *Modeling semantic fluency data in Alzheimer’s patients*. Poster presented at the 17th CIBM Training Program Annual Retreat, Madison, WI.
- Zemla, J. C., & Austerweil, J. L. (2018d, March). *Modeling semantic fluency data in Alzheimer’s patients*. Poster presented at the 2018 Alzheimer’s Disease and Related Disorders Research Day, Madison, WI.

- Zemla, J. C., & Austerweil, J. L. (2018f, July). *A model of Alzheimer's patients perseverating perseverating in semantic fluency data*. Talk presented at the 51st Annual Meeting of the Society for Mathematical Psychology.
- 2017 Zemla, J. C., & Austerweil, J. L. (2017e, April). *SNAFU: A tool for analyzing semantic networks and fluency data*. Poster presented at the 1st Annual Science of Successful Aging Summit, Madison, WI.
- Zemla, J. C., & Austerweil, J. L. (2017a, June). *Estimating networks from censored random walk data*. Poster presented at the 2017 International Conference on Network Science.
- Zemla, J. C., & Austerweil, J. L. (2017b, July). *Estimating semantic networks from fluency data*. Talk presented at the 50th Annual Meeting of the Society for Mathematical Psychology.
- Zemla, J. C., & Austerweil, J. L. (2017d, November). *Modeling semantic fluency data in Alzheimer's patients*. Poster presented at the Annual 58th Psychonomics Society, Vancouver, BC, Canada.
- 2016 Zemla, J. C., & Sloman, S. (2016b, August). *The role of mechanistic information in explanatory preference*. Talk presented at the 16th International Conference on Thinking, Providence, RI.
- Zemla, J. C., & Sloman, S. (2016a, November). *Mechanisms affect preference for simple explanations*. Poster presented at the Annual 57th Psychonomics Society, Boston, MA.
- 2015 Zemla, J. C., Sloman, S. A., Lagnado, D., & Bechlivanidis, C. (2015a, June). *Evaluating explanations*. Talk presented at the Varieties of Understanding Midpoint Conference, New York, NY.
- Zemla, J. C., Sloman, S. A., Lagnado, D., & Bechlivanidis, C. (2015b, November). *Evaluating explanations: What makes a good explanation?* Talk presented at the Annual 56th Psychonomics Society, Chicago, IL.
- 2014 Zemla, J. C., & Wang, S. (2014, June). *Assessing CAPTCHA usability with signal detection theory*. Talk presented at the Southwest Regional Human Factors and Ergonomics Society, College Station, TX.
- Zemla, J. C., & Byrne, M. D. (2014, November). *Feedback and block length facilitate adoption of a more optimal speed-accuracy tradeoff policy*. Poster presented at the 33rd Society for Judgement and Decision Making, Long Beach, CA.
- 2012 Zemla, J. C., Lisinski, J., & LaConte, S. (2012, June). *Performance feedback engages attention, boosts task SNR, and enhances pattern classification*. Poster presented at the Organization for Human Brain Mapping, Beijing, China.
- 2011 Byrne, M. D., Zemla, J. C., Kirlik, A., Riddle, K., & Alexander, A. L. (2011). A human performance model of commercial jetliner taxiing. In *Proceedings of the 16th International Symposium on Aviation Psychology* (pp. 209–214). Dayton, OH.

## Teaching Assistantships & Lecturing

Duties include: grading<sup>G</sup>, guest lectures<sup>L</sup>, office hours<sup>O</sup>, exam/homework construction<sup>E</sup>, and hosting recitation<sup>R</sup>

- Advanced Psychological Statistics I (graduate-level course; Fall 2013)<sup>GO</sup>
- Introduction to Psychology (Spring 2013)<sup>GOE</sup>
- Statistical Methods in Psychology (Fall 2012)<sup>GOR</sup>
- Introduction to Social Psychology (Spring 2011)<sup>GO</sup>
- Introduction to Cognitive Psychology (Spring 2010, Spring 2011, Spring 2014)<sup>GLOE</sup>
- Human and Machine Learning (Fall 2015)<sup>L</sup>

## Service

- Ad-hoc reviewer (journals): Acta Psychologica, Behavior Research Methods, Cognition, Complexity, Current Directions in Psychological Science, Journal of Gerontology: Psychological Sciences, Journal of Learning and Instruction, Journal of Personality and Social Psychology, PeerJ, Psychonomic Bulletin & Review
- Ad-hoc reviewer (conferences): CogSci, CHI, SJDM
- Mentor research assistants: Evelyn Bai, Kethural Manokaran, Daniela Lopez, Samantha Steiner, Kenneth Peluso, Kesong Cao, Sophie Sandweiss, Blake Chambers
- National Science Foundation, Reviewer (2019)
- External reviewer for the Swiss National Science Foundation
- Postdoctoral Representative - University of Wisconsin-Madison Committee on Disability, Access, and Inclusion (2019–2020)

## Open Science

Software

### **SNAFU (Semantic Network and Fluency Utility)**

SNAFU is a Python library and stand-alone tool designed to help researchers analyze their verbal fluency data using traditional measures (e.g., cluster switches), and to estimate networks from their data (Zemla & Austerweil, 2018).

<http://alab.psych.wisc.edu/snafu>

<https://github.com/AusterweilLab/snafu-py>

### **Jarjar**

Jarjar is a Python library and command-line tool that allows you to programmatically send your team Slack notifications when your scripts are done running. For example if you have a model that takes hours to run, you can use Jarjar to send yourself updates and catch any errors as they occur.

<https://github.com/AusterweilLab/jarjar>

Data

### **OSF.io**

I use OSF.io to host both raw data (when permitted) and analysis code for all first-author publications.

Profile: <https://osf.io/s2r5w/>

## Technical Skills

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| Web            | JavaScript, HTML, CSS, PHP, SQL             |
| Programming    | Python, R, MATLAB, Bash, Lisp, C++          |
| Software tools | git, $\LaTeX$ , NW.js, SPSS, AFNI, HTCondor |