Thomas J. Faulkenberry, Ph.D.

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Education

- Ph.D., Psychology, East Texas A&M University, 2010

- M.S., Mathematics, Oklahoma State University, 2002

- B.S. with highest honors, Mathematics, Southeastern Oklahoma State University, 2000

Experience

Administrative Positions

- 2024-present: Associate Dean, College of Graduate Studies, Tarleton State University

- 2021-2024: Head, Department of Psychological Sciences, Tarleton State University

- 2019-2021: Assistant Head, Department of Psychological Sciences, Tarleton State University

Faculty Positions

- 2024-present: Professor (tenured), Department of Psychological Sciences, Tarleton State University

- 2019-2024: Associate Professor (tenured), Department of Psychological Sciences, Tarleton State University

- 2013-2019: Assistant Professor, Department of Psychological Sciences, Tarleton State University

- 2012-2013: Assistant Professor, Department of Mathematics, Texas A&M University – Commerce

- 2010-2012: Visiting Assistant Professor, Department of Psychology and Special Education, Texas A&M University – Commerce

- 2005-2010: Lecturer, Department of Mathematics, Texas A&M University - Commerce

Honors and awards

- Faculty Excellence in Scholarship Award, Tarleton State University, 2024

- Faculty Excellence in Scholarship Award, TSU College of Education, 2024

- Virtual MathPsych People's Choice Award, Society for Mathematical Psychology, 2023

- Elizabeth A. Dahl Award for Excellence in Undergraduate Research, Journal of Psychological Inquiry, 2023

- O. A. Grant Excellence in Teaching Award, Tarleton State University College of Education, 2018

- Faculty Excellence in Scholarship Award, Tarleton State University College of Education, 2016

- President's All-Purple Award, Tarleton State University, 2016

- Fellow, The Psychonomic Society, 2014

- Texas A&M University System Teaching Excellence Award, 2010-2011

- Best Graduate Student Presentation, Annual Research Symposium, TAMU-C, 2010

- O.H. Hamilton Fellowship in Mathematics, Oklahoma State University, 2002

- S. J. Scroggs Distinguished Graduate Fellowship, Oklahoma State University, 2001

Administrative duties and accomplishments

2021-2024: Head of Psychological Sciences

- *Duties and responsibilities:*
  - serve as manager for 34 faculty members (12 full-time faculty, 21 part-time faculty, and 1 full-time research staff).
  - manage a departmental operating budget of $48,000 and an instructional budget of $1,136,000.
  - work with leadership in the College of Education leadership and the Division of Academic Affairs to advance the mission of the department.
  - promote the development of faculty members' skills and efforts in their teaching, research, and service activities.
  - conduct annual performance evaluations for all faculty and staff.
  - perform evaluations of tenure and promotion applications (7 faculty members to date).
  - create and manage scheduling and staffing of approximately 65-70 sections of courses each semester.
  - oversee program assessment for all undergraduate and graduate programs in the department, ensuring continued compliance with SACSCOC accreditation requirements.

- *Key accomplishments during my leadership:*
  - recruited and mentored new faculty members (to date, I have hired three and I am working to fill four additional tenure-track lines and two instructional lines for Fall 2024).
  - secured approximately $185,000 of internal funding to build research capacity in the department, including laboratory facilities and the department's first ever Postdoctoral Research Scholar.
  - developed a new Ph.D. program in Experimental Psychology, scheduled to begin in Fall 2025, pending approval from the Texas Higher Education Coordinating Board.
  - assisted with the development of a new Specialist in School Psychology degree, scheduled to begin in Spring 2024, pending approval from the Texas Higher Education Coordinating Board.
  - created two new concentrations for the M.S. in Applied Psychology and increased enrollment by 44%.
  - increased enrollment in the B.S. in Psychology by 8%.
  - increased number of graduates across all departmental degrees by 21%.
  - collaborated with other departments on campus to build innovative cross-disciplinary graduate programs, including an M.S. in Data Science and a Ph.D. in Integrative Biosciences.
  - increased undergraduate course offerings through dual-enrollment programs (e.g., the *Tarleton Today* high school partnership).
  - led departmental faculty in developing a strategic plan to accomplish its goals of institutional prominence in providing innovative and relevant instruction, expanding its international research profile, and increasing its community engagement.
  - encouraged and mentored faculty in grant writing and acquisition of external funding, resulting in a total of $540,000 of awards (to date).
  - consistently recognized the work of faculty and staff by nominating them for university-level awards, resulting in 8 college-level awards and 3 university-level awards.

Significant Leadership Positions

External Leadership

- Chair, Psychonomic Society Finance Commitee (appointed 2024-present)

- President, Southwestern Psychological Association (elected 2021-2024)

- Chair, ASA-MAA Joint Committee on Statistics and Data Science Education (appointed 2022)

- Secretary/Treasurer, MAA Special Interest Group (SIGMAA) on Statistics Education (elected 2020-2021)

- Treasurer, Southwestern Psychological Association (appointed, 2017-2021)

- Texas Representative, Southwestern Psychological Association (elected, 2015-2017)

Internal Leadership

- Chair, Institutional Review Board (IRB), Tarleton (2018-2023)

- Faculty Research Fellow, Tarleton (2018-2019)

- Faculty Fellow, Tarleton (2016-2018)

Books

1. Faulkenberry, T. J. (in press). *Bayesian Statistics: The Basics*. New York: Routledge. To appear in April 2025

2. Faulkenberry, T. J. (2022). *Psychological Statistics: The Basics*. New York: Routledge. `https://doi.org/10.4324/9781003181828`

Papers

1. Faulkenberry, T. J., & Brennan, K. B. (2023). Computing analytic Bayes factors from summary statistics in repeated-measures designs. *Biometrical Letters, 60* (1), 1-21. `https://doi.org/10.2478/bile-2023-0001`

2. Faulkenberrry, T. J., & Bowman, K. A. (2023). Bayesian modeling of the latent structure of individual differences in the numerical size-congruity effect. *Journal of Cognitive Psychology, 35* (2), 217-232. `https://doi.org/10.1080/20445911.2022.2136186`

3. Brennan, K., Rutledge, M., & Faulkenberry, T. J. (2023). Arithmetic operation signs elicit spatial associations: A confirmatory Bayesian analysis. *Journal of Psychological Inquiry, 27* (1), 5-13. `https://www.psychinquiry.org/wp-content/uploads/2023/05/vol27n1.pdf`

4. Zapata, B., & Faulkenberry, T. J. (2023). A diffusion model decomposition of the unit-decade compatibility effect in two-digit number comparison. *Proceedings of the 21st International Conference on Cognitive Modeling (ICCM 2023)*. `https://psyarxiv.com/f6qpy`

5. Colpitts, K., Dias, J., Faulkenberry, T. J., & Harris Bozer, A. (2023). Investigation of the relationship between perceived mental workload and chronic pain. *Psi Chi Journal of Psychological Research, 28* (4), 247-255. `https://doi.org/10.24839/2325-7342.JN28.4.247`

6. Faulkenberry, T. J. (2022). A note on the normality assumption for modeling constraint in cognitive individual differences. *Metodoloski Zvezki: Advances in Methodology and Statistics*, *19* (1), 45-59. `https://doi.org/10.51936/dtsh6123`

7. Vogel, S., Faulkenberry, T. J., & Grabner, R. (2021). Quantitative and qualitative differences in the canonical and the reverse distance effect and their selective association with arithmetic and mathematical competencies. *Frontiers in Education: Educational Psychology, 6*: 655747. `https://doi.org/10.3389/feduc.2021.655747`

8. Faulkenberry, T. J. (2021). The Pearson Bayes factor: An analytic formula for computing evidential value from minimal summary statistics. *Biometrical Letters, 58* (1), 1-26. `https://doi.org/10.2478/bile-2021-0001`

9. Nejman, J. A. & Faulkenberry, T. J. (2020). Implicit priming reveals decomposed processing in fraction comparison. *Journal of Psychological Inquiry, 24* (2), 17-23. `https://www.psychinquiry.org/wp-content/uploads/2021/01/vol24-2v3.pdf`

10. Faulkenberry, T. J. (2020). Estimating Bayes factors from minimal summary statistics in repeated-measures analysis of variance designs. *Metodoloski Zvezki: Advances in Methodology and Statistics, 17*, 1-17. `https://arxiv.org/abs/1905.05569`

11. Faulkenberry, T. J., Ly, A., & Wagenmakers, E. J. (2020). Bayesian statistics in numerical cognition: A tutorial using JASP. *Journal of Numerical Cognition, 6*, 231-259. `https://doi.org/10.5964/jnc.v6i2.288`

12. Faulkenberry, T. J., Cruise, A., & Shaki, S. (2020). Task instructions modulate unit-decade binding in two-digit number representation. *Psychological Research, 84*, 424-439. `https://doi.org/10.1007/s00426-018-1057-9`

13. Faulkenberry, T. J. (2019). Estimating evidential value from ANOVA summaries: A comment on Ly et al. (2018). *Advances in Methods and Practices in Psychological Science, 2*, 406-409. `https://doi.org/10.1177/2515245919872960`

14. Faulkenberry, T. J. (2019). A tutorial on generalizing the default Bayesian t-test via posterior sampling and encompassing priors. *Communications for Statistical Applications and Methods, 26*, 217-238. `https://doi.org/10.29220/CSAM.2019.26.2.217`

15. Frampton, A. R., & Faulkenberry, T. J. (2018). Mental arithmetic processes: Testing the independence of encoding and calculation. *Journal of Psychological Inquiry, 22*, 30-35. `https://www.psychinquiry.org/wp-content/uploads/2019/03/Vol22-1.pdf`

16. Faulkenberry, T. J., Vick, A. D., & Bowman, K. A. (2018). A shifted Wald decomposition of the numerical size-congruity effect: Support for a late interaction account. *Polish Psychological Bulletin, 49*, 391-397. `https://doi.org/10.24425/119507`

17. Faulkenberry, T. J., Witte, M., & Hartmann, M. (2018). Tracking the continuous dynamics of numerical processing: A brief review and editorial. *Journal of Numerical Cognition, 4* (2), 271-285. `https://doi.org/10.5964/jnc.v4i2.179`

18. Faulkenberry, T. J. (2018). Computing Bayes factors to measure evidence from experiments: An extension of the BIC approximation. *Biometrical Letters, 55* (1), 31-43. `https://doi.org/10.2478/bile-2018-0003`

19. Faulkenberry, T. J. (2018). A simple method for teaching Bayesian hypothesis testing in the brain and behavioral sciences. *Journal of Undergraduate Neuroscience Education, 16*, A126-A130. `http://www.funjournal.org/wp-content/uploads/2018/01/june-16-126.pdf?x91298`

20. Faulkenberry, T. J. (2017). A single-boundary accumulator model of response times in an arithmetic verification task. *Frontiers in Psychology, 8:1225*. `https://doi.org/10.3389/fpsyg.2017.01225/`

21. Faulkenberry, T. J., Cruise, A., & Shaki, S. (2017). Reversing the manual digit bias in two-digit number comparison. *Experimental Psychology, 64*, 191-204. `https://doi.org/10.1027/1618-3169/a000365`

22. Sobel, K. V., Puri, A. M., Faulkenberry, T. J., & Dague, T. D. (2017). Visual search for conjunctions of physical and numerical size shows that they are processed independently. *Journal of Experimental Psychology: Human Perception & Performance*, *43*, 444-453. `https://doi.org/10.1037/xhp0000323`

23. Faulkenberry, T. J., & Tummolini, L. (2016). Commentary: Is there any Influence of Variations in Context on Object-Affordance Effects in Schizophrenia? Perception of Property and Goals of Action). *Frontiers in Psychology*, *7:1915*. `https://doi.org/10.3389/fpsyg.2016.01915`

24. Faulkenberry, T. J. (2016). Testing a direct mapping versus competition account of response dynamics in number comparison. *Journal of Cognitive Psychology*, *28*, 825-842. `https://doi.org/10.1080/20445911.2016.119150`

25. Sobel, K. V., Puri, A. M., & Faulkenberry, T. J. (2016). Bottom-up and top-down attentional contributions to the size-congruity effect. *Attention, Perception, & Psychophysics*, *78*, 1324-1336. `https://doi.org/10.3758/s13414-016-1098-3`

26. Faulkenberry, T. J., Cruise, A., Lavro, D., & Shaki, S. (2016). Response trajectories capture the continuous dynamics of the size congruity effect. *Acta Psychologica*, *163*, 114-123. `https://doi.org/10.1016/j.actpsy.2015.11.010`

27. Faulkenberry, T. J., Montgomery, S. A., & Tennes, S. N. (2015). Response trajectories reveal the temporal dynamics of fraction representations. *Acta Psychologica*, *159*, 100-107. `https://doi.org/10.1016/j.actpsy.2015.05.013`

28. Faulkenberry, T. J., & Rey, A. R. (2014). Extending the reach of mousetracking in numerical cognition: A comment on Fischer and Hartmann (2014). *Frontiers in Psychology*, *5*:1436. `https://doi.org/10.3389/fpsyg.2014.01436`

29. Faulkenberry, T. J. (2014). Hand movements reflect competitive processing in numerical cognition. *Canadian Journal of Experimental Psychology*, *68*, 147-151. `https://doi.org/10.1037/cep0000021`

30. Faulkenberry, T. J., & Geye, T. L. (2014). The cognitive origins of mathematics learning disability: A review. *The Rehabilitation Professional*, *22* (1), 9-16.

31. Faulkenberry, T. J., & Faulkenberry, E. D. (2013). Teaching integer arithmetic without rules: An embodied approach. *Oklahoma Journal of School Mathematics*, *5* (2), 5-14.

32. Faulkenberry, T. J., (2013). The conceptual/procedural distinction belongs to strategies, not tasks: A comment on Gabriel et al. (2013). *Frontiers in Psychology*, *4*:820. `https://doi.org/10.3389/fpsyg.2013.00820`

33. Faulkenberry, T. J., & Montgomery, S. A. (2013). The primacy of fraction components in adults' numerical judgements. In Reeder, S. L. and Matney, G. T. (Eds.). *Proceedings of the 40th Annual Meeting of the Research Council on Mathematics Learning* (pp. 155-162). Tulsa, OK: RCML

34. Faulkenberry, T. J. (2013). How the hand mirrors the mind: The embodiment of numerical cognition. In Reeder, S. L. and Matney, G. T. (Eds.). *Proceedings of the 40th Annual Meeting of the Research Council on Mathematics Learning* (pp. 205-212). Tulsa, OK: RCML

35. Faulkenberry, E. D., & Faulkenberry, T. J. (2012). Do you see what I see? An exploration of self-perception in the classroom. In S. L. Reeder (Ed.), *Proceedings of the 39th Annual Meeting of the Research Council on Mathematics Learning* (pp. 121-126). Charlotte, NC: RCML.

36. Faulkenberry, T. J., & Pierce, B. H. (2011). Mental representations in fraction comparison: Holistic versus component-based strategies. *Experimental Psychology*, *58*, 480-489. `https://doi.org/10.1027/1618-3169/a000116`

37. Faulkenberry, T. J. (2011). Individual differences in mental representations of fraction magnitude. In S. Reeder (Ed.) *Proceedings of the 38th Annual Meeting of the Research Council on Mathematics Learning* (pp. 136-143). Cincinnati, OH: RCML.

38. Faulkenberry, E. D., & Faulkenberry, T. J. (2010). Transforming the way we teach function transformations. *Mathematics Teacher*, *104*, 29-33.

39. Faulkenberry, T. J. (2010). The working memory demands of simple fraction strate- gies. In S. Reeder (Ed.) *Proceedings of the 37th Annual Meeting of the Research Council on Mathematics Learning* (pp. 84-89). Conway, AR: RCML.

40. Faulkenberry, E. D. & Faulkenberry, T. J. (2006). Constructivism in mathematics education: A historical and personal perspective. *The Texas Science Teacher*, *35*, 17- 22.

Preprints

1. Zapata, B., & Faulkenberry, T. J. (2024). Closed-form estimates of ex-Gaussian response time models in two-digit number comparison. *PsyArXiv*, `https://psyarxiv.com/82psu`

2. Faulkenberry, T. J. (2023). Closed-form approximations of the two-sample Pearson Bayes factor. *arXiv*, `https://arxiv.org/abs/2310.11313`

3. Bowman, K. A., & Faulkenberry, T. J. (2020). Modeling response times in the size-congruity effect: Early versus late interaction. *PsyArXiv*, `https://psyarxiv.com/dns4t/`

Contributions to Open Science

1. In 2022, I built *PsyStat*, a free online statistical calculator to accompany my book *Psychological Statistics: The Basics* (Routledge). One important feature is that the calculator gives users the ability to compute Bayes factors directly from summary statistics in common experimental designs, which directly applies much of my theoretical work in Bayesian statistics since 2018. The calculator can be accessed at `https://tomfaulkenberry.shinyapps.io/psystat`, and its source code is available at `https://github.com/tomfaulkenberry/statShinyApps`.

2. Since 2021, I have contributed 15 entries to the online *The Book of Statistical Proofs* (`https://statproofbook.github.io/`). Topics have included theorems about computing Bayes factors, as well as proofs of various statistical properties of common response time models, including the Wald and ex-Gaussian distributions.

3. In 2020, I co-authored the book *Learning Statistics with JASP: A Tutorial for Psychology and Other Beginners* with Danielle Navarro and David Foxcroft. This book and its source files are freely downloadable from `https://learnstatswithjasp.com` and is published under a Creative Commons BY-SA license (CC BY-SA) version 4.0.

Abstracts, columns, and book reviews

1. Faulkenberry, T. J. (2023). A hierarchical Bayesian extension of the censored shifted Wald model for response times. *Abstracts of the Psychonomic Society*, *28*, 74-75.

2. Zapata, B. E., & Faulkenberry, T. J. (2023). A diffusion model decomposition of the unit-decade compatibility effect in two-digit number comparison. *Abstracts of the Psychonomic Society*, *28*, 145.

3. Faulkenberry, T. J. (2023). A Mathematician's Apology: How a Life in Mathematics Has Shaped a Career in Psychology. *Southwestern Psychologist*, *16* (1). `https://rb.gy/7gpbb`

4. Faulkenberry, T. J., & Scheuler, B. (2022). Testing the independence of encoding and calculation in mental addition: A confirmatory Bayesian analysis. *Abstracts of the Psychonomic Society*, *27*, 93.

5. Scheuler, B., & Faulkenberry, T. J. (2022). Evaluating classical maximum likelihood estimation for estimating shifted-Wald models of response times. *Abstracts of the Psychonomic Society*, *27*, 181.

6. Faulkenberry, T. J. (2022). Message from the President. *Southwestern Psychologist*, *15* (2). `https://rb.gy/fn56p`

7. Faulkenberry, T. J. (2020). Getting started with Bayesian statistics. *Southwestern Psychologist*, *13* (3). `https://rb.gy/rikuim`

8. Bowman, K. A., & Faulkenberry, T. J. (2020). Response time modeling for the size-congruity effect: Early vs. late interaction. *Abstracts of the Psychonomic Society*, *25*, 193.

9. Faulkenberry, T. J. (2020). Book review of "Chi-squared data analysis and model testing for beginners. *MAA Reviews*, `https://www.maa.org/press/maa-reviews/chi-squared-data-analysis-and-model-testing-for-`

10. Faulkenberry, T. J. (2020). Statistics education awards presented at Joint Mathematics Meetings. *MAA Focus*, *40(2)*, 40. `https://www.maa.org/press/periodicals/maa-focus`

11. Faulkenberry, T. J. (2020). Closed form Bayes factor techniques for measuring evidential value from analysis of variance models. *Abstracts of Papers Presented to the American Mathematical Society.*, *41*, 256.

12. Faulkenberry, T. J. (2019). Book review of "Handbook of Approximate Bayesian Computation". *MAA Reviews*, `https://www.maa.org/press/maa-reviews/handbook-of-approximate-bayesian-computation`.

13. Bowman, K. A., & Faulkenberry, T. J. (2019). Response time modeling supports a late interaction account of the size-congruity effect. *Abstracts of the Psychonomic Society*, *24*, 227-228.

14. Faulkenberry, T. J. (2019). Treasurer's Column: Financial Challenges in Albuquerque. *Southwestern Psychologist*, *12(2)*, 3.

15. Faulkenberry, T. J. (2018). Modeling individual difference structures in the size-congruity effect. *Abstracts of the Psychonomic Society*, *23*, 42.

16. Bowman, K. A., & Faulkenberry, T. J. (2018). Nonwords induce reverse priming effects in a lexical decision task. *Abstracts of the Psychonomic Society*, *23*, 246.

17. Faulkenberry, T. J. (2018). Treasurer's Column: Where does the money go? A quick picture of SWPA finances. *Southwestern Psychologist*, *11(1)*, 3.

18. Faulkenberry, T. J. (2017). A single-boundary accumulator model of decisions in a mental arithmetic task. *Abstracts of the Psychonomic Society*, *22*, 27.

19. Geye, T. L., & Faulkenberry, T. J. (2017). Computer mousetracking reveals the facilitation and interference components of the size congruity effect. *Abstracts of the Psychonomic Society*, *22*, 106.

20. Bowman, K. A., & Faulkenberry, T. J. (2017). The dynamics of spatial-operational momentum in mental arithmetic. *Abstracts of the Psychonomic Society*, *22*, 188.

21. Faulkenberry, T. J. (2017). Treasurer's Column: Standing on the shoulders of giants. *Southwestern Psychologist*, *10(2)*, 5.

22. Faulkenberry, T. J. (2016). Motor dynamics support a competition model of number processing. *Abstracts of the Psychonomic Society*, *21*, 26.

23. Bowman, K. A., & Faulkenberry, T. J. (2016). Testing competing models of two-digit number representation: Decomposed versus holistic processing. *Abstracts of the Psychonomic Society*, *21*, 285.

24. Faulkenberry, T. J. (2016). Decoding the development of mathematical thinking: A book review of *Development of Mathematical Thinking: Neural Substrates and Genetic Influences*. *PsycCRITIQUES*, *61* (31). doi: 10.1037/a0040434

25. Faulkenberry, T. J. (2016). Undergraduate students: An endangered resource? *Southwestern Psychologist*, *9(1)*, 2.

26. Faulkenberry, T. J., Cruise, A., Lavro, D., & Shaki, S. (2015). Response trajectories support a late-interaction model of the size-congruity effect. *Canadian Journal of Experimental Psychology, 69*, 346.

27. Faulkenberry, T. J., Cruise, A., & Shaki, S. (2015). Reversing the manual decade bias in two-digit number comparison. *Abstracts of the Psychonomic Society, 20*, 39.

28. Geye, T. L, & Faulkenberry, T. J. (2015). Response trajectories capture individual differences in a size congruity task. *Abstracts of the Psychonomic Society, 20*, 249.

29. Faulkenberry, T. J., Cruise, A., Lavro, D., & Shaki, S. (2014). Response trajectories capture the continuous dynamics of the size-congruity effect. *Abstracts of the Psychonomic Society, 19*, 53.

30. Faulkenberry, T. J. (2013). Measuring the working memory requirements of mental arithmetic. *Canadian Journal of Experimental Psychology, 67*, 281.

31. Faulkenberry, T. J. (2013). Measuring the working memory requirements of mental arithmetic. *Abstracts of the Psychonomic Society, 18*, 203-204.

32. Faulkenberry, T. J. (2012). The temporal dynamics of fraction representations: Components are processed first. *Canadian Journal of Experimental Psychology, 66*, 310.

33. Faulkenberry, T. J. & Montgomery, S. A. (2012). The primacy of components in numerical fractions. *Abstracts of the Psychonomic Society, 17*, 206.

34. Faulkenberry, T. J. (2011). Brain-based mathematics: Promising practice or hopeful hype? *RCML Intersection Points, 35* (3), 9-10.

35. Faulkenberry, T. J. & Kelsey, A. R. (2011). Working memory and strategic performance in fraction comparison. *Canadian Journal of Experimental Psychology, 65*, 311-311.

36. Faulkenberry, T. J. (2011). The dynamics of the SNARC effect: Evidence from mouse tracking. *Canadian Journal of Experimental Psychology, 65*, 316-316.

37. Faulkenberry, T. J. (2011). Motor dynamics in numerical representations: Evidence from mouse tracking. *Abstracts of the Psychonomic Society, 16*, 76-76.

38. Faulkenberry, T. J. (2010). The roles of phonological and visuo-spatial working memory resources in simple fraction strategies. *Canadian Journal of Experimental Psychology, 64*, 302-302.

39. Lu, S. Wakefield, L. & Faulkenberry, T. J. (2006). The roles of beginnings, overlap, and ends in event temporal relations. *Abstracts of the Psychonomic Society, 11*, 9-9.

Conference Presentations

1. Faulkenberry, T. J. (March 2024). A (surprisingly efficient) closed-form method for fitting shifted Wald response time models. Southwestern Psychological Association. San Antonio, TX.

2. Faulkenberry, T. J. (October 2023) Using censoring to build process models that account for both RT and errors in high-accuracy cognitive tasks. Southwest Cognition Conference (ARMADILLO). Texas State University, San Marcos, TX.

3. Faulkenberry, T. J. (April 2023). Attenuation of evidence in Bayesian repeated-measures analysis of variance. Southwestern Psychological Association. Frisco, TX.

4. Brennan, K., & Faulkenberry, T. J. (April 2023). Operator priming effects in multiplication: Evidence of absence or absence of evidence? Southwestern Psychological Association. Frisco, TX.

5. Scheuler, B., Faulkenberry, T. J., & Houpt, J. (April 2023). Evaluating single-level and hierarchical maximum likelihood estimation in shifted-Wald models. Southwestern Psychological Association. Frisco, TX.

6. Zapata, B., & Faulkenberry, T. J. (April 2023). A diffusion model decomposition of the unit decade compatibility effect in two digit number comparison. Southwestern Psychological Association. Frisco, TX.

7. Faulkenberry, T. J. (March 2023). Gamma function approximations for computing closed-form Bayes factors. Mathematical Association of America Texas Section Meeting. Stephenville, TX.

8. Faulkenberry, T. J. (February 2023). Using computational mathematics as a research bridge between multiple disciplines. PERS Symposium, Tarleton State University, Stephenville, TX.

9. Faulkenberry, T. J. (October 2022). Bayesian hierarchical modeling of individual differences structures in numerical cognition. Southwest Cognition Conference (ARMADILLO), Tarleton State University, Stephenville, TX.

10. Scheuler, B., & Faulkenberry, T. J. (October 2022). Classical maximum likelihood estimation in shifted-Wald models. Southwest Cognition Conference (ARMADILLO), Tarleton State University, Stephenville, TX.

11. Brennan, K., & Faulkenberry, T. J. (October 2022). Operator preview effects in mental multiplication: Evidence for absence, or absence of evidence? Southwest Cognition Conference (ARMADILLO), Tarleton State University, Stephenville, TX.

12. Zapata, B., & Faulkenberry, T. J. (October 2022). A diffusion model decomposition of the latent cognitive processes in two-digit number comparison. Southwest Cognition Conference (ARMADILLO), Tarleton State University, Stephenville, TX.

13. Codreanu, M., & Faulkenberry, T. J. (April 2022). Using ex-Gaussian modeling to reveal mechanisms of the flanker effect, Southwestern Psychological Association, Baton Rouge, LA.

14. Zapata, B., Bowman, K., & Faulkenberry, T. J. (April 2022). Response time modeling reveals the latent cognitive processes in two-digit number comparison, Southwestern Psychological Association, Baton Rouge, LA.

15. Scheuler, B., & Faulkenberry, T. J. (April 2022). Cognitive processes in mental arithmetic: A confirmatory Bayesian analysis, Southwestern Psychological Association, Baton Rouge, LA.

16. Faulkenberry, T. J. (February 2022). Developing an interdisciplinary research experience for undergraduates in computational mathematics. PERS Symposium, Tarleton State University, Stephenville, TX.

17. Codreanu, M., & Faulkenberry, T. J. (February 2022). Using ex-Gaussian and diffusion modeling to reveal mechanisms of the flanker effect, PERS Symposium, Tarleton State University, Stephenville, TX.

18. Scheuler, B., & Faulkenberry, T. J. (February 2022). Cognitive processes in mental arithmetic: A confirmatory Bayesian analysis, PERS Symposium, Tarleton State University, Stephenville, TX.

19. Zapata, B., & Faulkenberry, T. J. (February 2022). Response time modeling reveals the latent cognitive processes in two-digit number comparison, PERS Symposium, Tarleton State University, Stephenville, TX.

20. Faulkenberry, T. J. (September 2021). Obtaining closed form Bayes factors from summary statistics in common experimental designs. Applied Statistics 2021, Virtual/online.

21. Faulkenberry, T. J. (September, 2021). A Bayesian framework for modeling individual differences in two-digit number representation. Southwest Cognition Conference (ARMADILLO), Virtual/online.

22. Zapata, B., Bowman, K., & Faulkenberry, T. J. (September 2021). An EZ Diffusion Model Parameter Decomposition of the Unit-decade Compatibility Effect. Southwest Cognition Conference (ARMADILLO), Virtual/online.

23. Jean Baptiste, C., Bowman, K., & Faulkenberry, T. J. (September 2021). An ex-Gaussian decomposition of the unit-decade compatibility effect. Southwest Cognition Conference (ARMADILLO), Virtual/online.

24. Faulkenberry, T. J. & Horry, R. (July, 2021). An interactive web applet for exploring the impact of unequal variances on the t-test. US Conference on the Teaching of Statistics (USCOTS 2021). Virtual/online.

25. Faulkenberry, T. J. (April, 2021). Some methods for approximating closed-form Bayes factors. Mathematical Association of America Texas Section Meeting. Virtual/online.

26. Faulkenberry, T. J. (April, 2021). Do asynchronous students perform worse? A Bayesian analysis of pandemic teaching. Southwestern Psychological Association. San Antonio, TX.

27. Faulkenberry, T. J., & Bowman, K. A. (October 2020). Modeling a latent structure of individual differences in numerical cognition. Southwest Cognition Conference (ARMADILLO), Virtual/online.

28. Faulkenberry, T. J. (June 2020). A systems factorial technology approach to classifying the architecture of fraction perception. Math Cognition and Learning Society, Dublin, Ireland (cancelled due to COVID-19)

29. Scheuler, B., & Faulkenberry, T. J. (April 2020). An illustration of Bayesian hypothesis testing: The case of the facial feedback effect. Southwestern Psychological Association, Frisco, TX (cancelled due to COVID-19)

30. Faulkenberry, T. J. (April 2020). Getting started with Bayesian inference in psychology: A workshop using JASP. Southwestern Psychological Association, Frisco, TX (cancelled due to COVID-19)

31. Bowman, K., Caldwell, K., Garcia, B., & Faulkenberry, T. J. (April 2020). Maximum likelihood estimation of the Ex-Gaussian model for response time distributions. Southwestern Psychological Association, Frisco, TX (cancelled due to COVID-19)

32. Faulkenberry, T. J., (November, 2019). Org-mode and FoilTeX - an unlikely (but useful) combination for teaching", EmacsConf2019, Free Software Foundation, Virtual / Online.

33. Faulkenberry, T. J. (June, 2019). A hierarchical Bayesian model of individual difference structures for the size-congruity effect. Math Cognition and Learning Society, Ottawa, ON.

34. Faulkenberry, T. J., Hetzel, S., & Bowman, K. (April, 2019). A systems factorial technology approach to classifying the architecture of fraction perception. Southwestern Psychological Association, Albuquerque, NM.

35. Faulkenberry, T. J. (April, 2019). An introduction to the theory and practice of Bayesian hypothesis testing: A workshop using JASP. Southwestern Psychological Association, Albuquerque, NM.

36. Bowman, K., & Faulkenberry, T. J. (April, 2019). Response time modeling supports a late interaction account of the size-congruity effect. Southwestern Psychological Association, Albuquerque, NM.

37. Faulkenberry, T. J. (January, 2019). Demonstrating Bayesian model comparison with a class-sourced experiment in mental arithmetic. National Institute on the Teaching of Psychology (NITOP), St. Pete Beach, FL

38. Faulkenberry, T. J. (April, 2018). Introduction to Bayesian inference for the psychological sciences (workshop). Southwestern Psychological Association, Houston, TX

39. Bowman, K. A., & Faulkenberry, T. J. (April, 2018). The dynamics of spatial operational momentum in mental arithmetic. Southwestern Psychological Association, Houston, TX.

40. Faulkenberry, T. J. (November, 2017). A hierarchical Bayesian model for measuring response times in a mental arithmetic task. Society for Mathematical Psychology, Vancouver, BC.

41. Faulkenberry, T. J. (April, 2017). Accumulator models of decision processes in mental arithmetic. Southwestern Psychological Association, San Antonio, TX

42. Faulkenberry, T. J., & Wood, J. (April, 2017). A Bayesian perspective on the operator preview paradigm in mental arithmetic. Southwestern Psychological Association, San Antonio, TX

43. Nejman, J., & Faulkenberry, T. J. (April, 2017). Implicit priming reveals both holistic and decomposed processing in fraction comparison. Southwestern Psychological Association, San Antonio, TX

44. Wood, J., & Faulkenberry, T. J. (April, 2017). The dynamics of operator preview effects in mental arithmetic. Southwestern Psychological Association, San Antonio, TX

45. Bowman, K., & Faulkenberry, T. J. (April, 2017). Testing competing models of two-digit number representation: Decomposed versus holistic processing. Southwestern Psychological Association, San Antonio, TX

46. Faulkenberry, T. J. (April, 2016). Testing two accounts of response dynamics in a number comparison task. Southwestern Psychological Association, Dallas, TX

47. Faulkenberry, T. J. (April, 2016). Recent developments on the size congruity effect in numerical cognition. Southwestern Psychological Association, Dallas, TX

48. Rutledge, M., & Faulkenberry, T. J. (April, 2016). Spatial-numerical associations in mental arithmetic. Southwestern Psychological Association, Dallas, TX

49. Geye, T., & Faulkenberry, T. J. (April, 2016). Computer mousetracking reveals individual differences in a size congruity task. Southwestern Psychological Association, Dallas, TX

50. Bowman, K. A., & Faulkenberry, T. J. (April, 2016). The effects of mathematical fluency on multi-digit number representations. Southwestern Psychological Association, Dallas, TX

51. Faulkenberry, T. J. (October, 2015). Testing a direct-mapping versus competition account of response dynamics in a number comparison task. ARMADILLO 2015, Waco, TX.

52. Bowman, K. A., & Faulkenberry, T. J. (October, 2015). The effects of mathematical fluency on multi-digit number representations. ARMADILLO 2015, Waco, TX.

53. Bowman, K. A., & Faulkenberry, T. J. (October, 2015). The effects of mathematical fluency on multi-digit number representations. TAMUS Pathways Symposium, Corpus Christi, TX.

54. Bowman, K. A., & Faulkenberry, T. J. (October, 2015). The effects of mathematical fluency on multi-digit number representations. Tarleton Research Symposium, Stephenville, TX.

55. Faulkenberry, T. J. (April, 2015). Class-sourcing replications of reaction time studies: An example in mathematical cognition. Southwestern Teachers of Psychology Conference, Wichita, KS.

56. Geye, T., Fleming, B., & Faulkenberry, T. J. (April, 2015). Validation of the calculation fluency test for measuring arithmetic skills. Southwestern Psychological Association, Wichita, KS.

57. Frampton, A., & Faulkenberry, T. J. (April, 2015). Cognitive arithmetic processs: The effects of problem size and format on performance. Southwestern Psychological Association, Wichita, KS.

58. Faulkenberry, T. J. (April, 2015). Evidence for a late-interactions model of the numerical size congruity effect. Southwestern Psychological Association, Wichita, KS.

59. Harris Bozer, A., & Faulkenberry, T. J. (April, 2015). Applying the CREATE pedagogical tool to the online animal behavior course to enhance scientific literacy. 2015 CIRTL Forum: Preparing the Future STEM Faculty for the Rapidly Changing Landscape of Higher Education, College Station, TX.

60. Frampton, A., & Faulkenberry, T. J. (March, 2015). Cognitive arithmetic processes: The effects of numerical surface form on strategy choice. Texas Undergraduate Research Day at the Capitol, Austin, TX.

61. Faulkenberry, E. D., Smith, K., Riggs, E., & Faulkenberry, T. J. (February, 2015). The evolution of PST's beliefs: Examining the effect of teacher preparation. Research Council on Mathematics Learning, Las Vegas, NV.

62. Faulkenberry, T. J. (October, 2014). Hand movements reflect competitive processing in a numerical parity task. ARMADILLO 2014, Norman, OK.

63. Faulkenberry, T. J. (October, 2014). The dynamics of fraction representations: Components are processed first. ARMADILLO 2014, Norman, OK.

64. Faulkenberry, T. J. (April, 2014). Hand movements reflect competitive processing in numerical fraction representations. Southwestern Psychological Association, San Antonio, TX.

65. Faulkenberry, T. J. (April, 2014). A brief introduction to using R for teaching statistical methods. Southwestern Teachers of Psychology Conference, San Antonio, TX.

66. Faulkenberry, T. J. (March, 2014). A classroom activity for demonstrating confirmation bias. Tarleton Excellence in Teaching Conference, Stephenville, TX.

67. Smith, K. H., Riggs, B., Faulkenberry, E. D., & Faulkenberry, T. J. (February, 2014). A snapshot of preservice teacher beliefs: A factor analytic method. Research Council on Mathematics Learning, San Antonio, TX.

68. Faulkenberry, T. J. (April, 2013). Modeling the roles of working memory and strategy type in fraction comparison. TX Section MAA Meeting, Texas Tech University, Lubbock, TX.

69. Faulkenberry, T. J. (March, 2013). Estimating the working memory requirements of mental arithmetic. OK-AR Section MAA Meeting, Oklahoma State University, Stillwater, OK.

70. Faulkenberry, T. J. (April, 2012). Some limitations in measuring working memory capacity. TX Section MAA Meeting, El Centro College, Dallas, TX.

71. Faulkenberry, T. J. (February, 2012). Examining the role of testing in learning mathematics: Directions for future research. 39th Annual Meeting of the Research Council on Mathematics Learning, Charlotte, NC.

72. Faulkenberry, T. J. & Pierce, B. H. (October, 2011). The roles of working memory and strategy type in fraction comparison. ARMADILLO 2011, Commerce, TX.

73. Faulkenberry, T. J. (April, 2010). Working memory and strategy execution in simple fraction strategies. Annual Research Symposium, Texas A& M University - Commerce.

74. Faulkenberry, T. J. (April, 2009). Mathematics anxiety among elementary education majors: Does test format matter?. Annual Research Symposium, Texas A& M University - Commerce.

75. Faulkenberry, T. J. (February, 2009). Mathematics anxiety among elementary education majors. 36th Annual Meeting of the Research Council on Mathematics Learning, Rome, GA.

76. Faulkenberry, E. D. & Faulkenberry, T. J. (February, 2008). An assessment of the mathematical knowledge of elementary preservice teachers with regard to number and operation. 35th Annual Meeting of the Research Council on Mathematics Learning, Oklahoma City, OK.

77. Faulkenberry, T. J. (February, 2008). Working memory: Cognitive and instructional implications for mathematics. 35th Annual Meeting of the Research Council on Mathematics Learning, Oklahoma City, OK.

78. Faulkenberry, E. D. & Faulkenberry, T. J. (October, 2005). Using the geometry module in Teacher Quality grants. Charles A. Dana Center Higher Education Mathematics Conference, Austin, TX.

79. Faulkenberry, T. J. (April, 2005). Cognitive frameworks in advanced mathematical thinking. MAA Texas Section Meeting, University of Texas - Arlington.

80. Faulkenberry, T. J. (April, 2004). The shapes of 2-dimensional manifolds. MAA Texas Section Meeting, Texas A&M University - Corpus Christi.

81. Faulkenberry, T. J. (March, 2003). Conway's ZIP proof. MAA Oklahoma/Arkansas Section Meeting, University of Tulsa.

82. Faulkenberry, T. J. (March, 2002). Knot algorithms and their computational complexity. MAA Oklahoma/Arkansas Section Meeting, Henderson State University.

83. Faulkenberry, T. J. (March, 2002). Topology in the high school? National Council of Teachers of Mathematics Regional Conference, Oklahoma City, OK.

84. Faulkenberry, T. J. (March, 1999). The construction of a Riemann surface structure on a once-punctured torus. MAA Oklahoma/Arkansas Section Meeting, Arkansas Tech University.

85. Faulkenberry, T. J. (March, 1998). The classification of Markoff numbers on a once-punctured torus. MAA Oklahoma/Arkansas Section Meeting, Southern Nazarene University.

Seminars and Invited Talks

1. Faulkenberry, T. J. (March 2024). Workshop – An introduction to Bayesian inference with JASP. New Mexico State University

2. Faulkenberry, T. J. (November 2023). Going beyond the mean: Using mathematical models as a window into cognitive processing. Psychological Sciences Brown Bag Seminar, Tarleton State University.

3. Faulkenberry, T. J. (September 2023). Going beyond the mean: Using mathematical models as a window into cognitive processing. Invited Talk, Texas A&M University - San Antonio.

4. Faulkenberry, T. J. (September 2023). Workshop - Getting Started in Bayesian Statistics with JASP. Texas A&M University - San Antonio.

5. Faulkenberry, T. J. (April 2023). A Mathematician's Apology: How a Life in Mathematics has Shaped a Career in Psychology. Keynote Address - Southwestern Psychological Association, Frisco, TX.

6. Faulkenberry, T. J. (April 2023). Getting started with Bayesian Statistics: A workshop using JASP. Southwestern Psychological Association, Frisco, TX.

7. Faulkenberry, T. J. (August 2022). "Bayes"-ic Statistical Inference. CEE Professional Development Workshop, Tarleton State University, Stephenville, TX.

8. Faulkenberry, T. J. (April 2022). Workshop: Getting started in Bayesian Statistics with JASP. Southwestern Psychological Association, Baton Rouge, LA.

9. Faulkenberry, T. J. (September 2021). A Bayesian framework for modeling individual differences in numerical cognition. Educational Psychology Colloquium Series, University of Alabama.

10. Faulkenberry, T. J. (April 2021). A Mathematician's Apology: What a Life in Mathematics has Taught Me about Teaching Psychology, Keynote Address - Southwestern Teachers of Psychology Conference (SWToP), San Antonio, TX.

11. Faulkenberry, T. J. (June 2020). Workshop: Bayesian statistics in numerical cognition. Invited workshop for the Math Cognition and Learning Society, Dublin, Ireland (cancelled due to COVID-19)

12. Faulkenberry, T. J. (June 2020), Workshop on Bayesian Statistics. Invited Lecture, University College - Dublin, Dublin, Ireland (cancelled due to COVID-19)

13. Faulkenberry, T. J. (April 2020). Developing an interactive web application for computing Bayes factors from summary statistics. Tarleton Psychological Sciences Day, Stephenville, TX.

14. Faulkenberry, T. J. (April 2020) A Mathematician's Apology: What a Life in Mathematics has Taught Me about Teaching Psychology, Keynote Address - Southwestern Teachers of Psychology Conference (SWToP), Frisco, TX (cancelled due to COVID-19)

15. Faulkenberry, T. J. (September 2019). Workshop: Bayesian statistics with JASP – Angelo State University, San Angelo, TX.

16. Faulkenberry, T. J. (June 2019). Workshop: Bayesian statistics in numerical cognition. Math Cognition and Learning Society, Ottawa, ON.

17. Faulkenberry, T. J. (August, 2018). Workshop on R and Bayesian Statistics – Texas Lutheran University, Seguin, TX.

18. Faulkenberry, T. J. (April, 2018). Introduction to applied Bayesian hypothesis testing – Faculty Research Coffee Hour, Stephenville, TX.

19. Faulkenberry, T. J. (December, 2017). Mental representations of two-digit numbers. Texas A&M University - San Antonio Speakers' Series, San Antonio, TX.

20. Faulkenberry, T. J. (September, 2017). Modeling response times in mental arithmetic. Baylor University Psychology and Neuroscience Speaker Series, Waco, TX.

21. Faulkenberry, T. J. (April, 2017). The Pope, Bayes' Theorem, and Harry Potter: A statistical drama in three acts. Tarleton Psychology Club, Stephenville, TX.

22. Faulkenberry, T. J. (March, 2017). Using mathematical modeling to understand mental arithmetic. Tarleton Math Club, Stephenville, TX.

23. Faulkenberry, T. J. (Nov. 2015). Associations between number and space in mental arithmetic. Psychological Sciences Open House, Stephenville, TX.

24. Faulkenberry, T. J. et al. (Oct. 2015). Publishing in the digital age. CII Panel Presentation, Stephenville, TX.

25. Faulkenberry, T. J. (June, 2015). Discussion of Marghetis et al. (2014). Carleton Math Cognition Lab, Ottawa, Ontario.

26. Smith, K. H., Riggs, B., Faulkenberry, E. D., & Faulkenberry, T. J. (May, 2014). A snapshot of preservice teacher beliefs: A factor analytic method. Tarleton State University Math Day 2014.

27. Faulkenberry, T. J. (Feb, 2014). Detecting cognitive processes via the motions of the hand: Studies in numerical cognition. Psychology & Counseling Department Seminar, Tarleton State University.Math

28. Faulkenberry, T. J. (April, 2013). Estimating the working memory requirements of mental arithmetic. Mathematics Education Seminar, University of Texas - Arlington, Arlington, TX.

29. Faulkenberry, T. J. (April, 2012). Reconsidering the magic number 7: Measuring and modeling working memory capacity. Mathematics Department Colloquium, Southeastern Oklahoma State University, Durant, OK.

30. Faulkenberry, T. J. (May, 2012). Arctangent approximations of π. Math Club Invited Speaker, Texas A&M University - Commerce

31. Faulkenberry, T. J. (Feb, 2012). Reconsidering the magic number 7: Measuring and modeling working memory capacity. Mathematics Department Colloquium, Texas A&M University - Commerce.

32. Faulkenberry, T. J. (2011). Introduction to LaTeX, Mathematics Department Colloquium, Texas A&M University - Commerce

33. Faulkenberry, T. J. (2009). Working memory in mathematical cognition: The case for fractions. Mathematics Department Colloquium, Texas A& M University - Commerce.

34. Faulkenberry, T. J. (2007). Uses, mis-uses, and non-uses of probability and statistics. Math club invited lecture, Texas A&M University - Commerce.

35. Faulkenberry, T. J. (2006). Continuous dynamics among phonological competitors. Cognitive Science Seminar, Texas A&M University - Commerce.

36. Faulkenberry, T. J. (2006). The evolution of color language. Cognitive Science Seminar, Texas A&M University - Commerce.

37. Faulkenberry, T. J. (2006). A computational model of event segmentation based on perceptual prediction. Cognitive Science Seminar, Texas A&M University - Commerce.

38. Faulkenberry, T. J. (2006). An introduction to latent semantic analysis. Cognitive Science Seminar, Texas A&M University - Commerce.

39. Faulkenberry, T. J. (2006). Dissections in mathematics. Math club invited lecture, Texas A&M University - Commerce.

40. Faulkenberry, T. J. (2006). Embodied cognition: The role of body and mind in abstract thought. Mathematics Education Seminar, Texas A&M University - Commerce.

41. Faulkenberry, T. J. (2005). A cognitive map for mathematical induction. Mathematics Education Seminar, Texas A&M University - Commerce.

42. Faulkenberry, T. J. (2005). Reflective abstraction in advanced mathematical thinking. Mathematics Education Seminar, Texas A&M University - Commerce.

43. Faulkenberry, T. J. (2005). Explorations in Flatland. Mathematics Colloquium, Texas A&M University - Commerce.

44. Faulkenberry, T. J. (2005). What is mathematics education research? Mathematics Education Seminar, Texas A&M University - Commerce.

45. Faulkenberry, T. J. (2004). Where do all the knots live: Templates and surface dynamics. Mathematics Colloquium, Texas A&M University - Commerce.

46. Faulkenberry, T. J. (2003). A beginner's guide to 3-manifolds. Graduate Student Colloquium, University of North Texas.

47. Faulkenberry, T. J. (2002). Determining the shape of space. Mathematics Colloquium, University of Central Oklahoma.

48. Faulkenberry, T. J. (2002). Determining the shape of space. Mathematics Colloquium, East Central University.

49. Faulkenberry, T. J. (2002). Algorithms in topology. Mathematics Colloquium, Southeastern Oklahoma State University.

Research Funding

PI unless otherwise noted. Total funding = $558,374

- 2023-2025, Tarleton State University, Postdoctoral Research Scholars Program, $168,000. *Bayesian modeling of individual differences in mathematical cognition*

- 2022-2023, National Science Foundation / Mathematical Association of America, National Research Experiences for Undergraduates Program (NREUP), $29,425. *CMAT: Computational Mathematics at Tarleton*

- 2022 (summer), Tarleton State University, President's Excellence in Research Scholars (PERS), $29,993. *Tarleton Researchers in Computational Mathematics.*

- 2021-2022, National Science Foundation / Mathematical Association of America, National Research Experiences for Undergraduates Program (NREUP), $30,125. *CMAT: Computational Mathematics at Tarleton*

- 2021 (summer), Tarleton State University, President's Excellence in Research Scholars (PERS), $31,500. *REU Site: Computational Mathematics at Tarleton.*

- 2020-2021, Tarleton State University, Faculty-Student Research Grant, $5000, *Developing an interactive web-based calculator for Bayesian statistics*

- 2019 (fall), Tarleton State University, Faculty Development Grant, $1000, *Travel: Math Cognition and Learning Society Conference in Dublin, Ireland.*

- 2019 (summer), National Science Foundation / Mathematical Association of America, National Research Experiences for Undergraduates Program (NREUP), $29,663. *CMAT: Computational Mathematics at Tarleton*

- 2018-2019, Tarleton State University, Faculty-Student Research Grant, $5000, *Modeling individual difference structures in numerical cognition*

- 2018 (spring), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *Using hierarchical Bayesian modeling to uncover the cognitive mechanisms underlying associations between number and space*

- 2017 (fall), Tarleton State University, Faculty Development Grant, $1000, *Travel: Psychonomic Society Meeting in Vancouver, BC*

- 2017 (summer), Tarleton State University, First Year Research Experience (FYRE), $4000, *Using the Wiener diffusion process to model response time distributions in a numerical decision task*

- 2015 (fall), Tarleton State University, Faculty Development Grant, $750, *Travel: Psychonomic Society Meeting in Boston, MA*

- 2016 (summer), Tarleton State University, First Year Research Experience (FYRE), $6500, *Investigating the dynamics of operator preview effects in mental arithmetic*

- 2016 (summer), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $4000, *Testing competing models of two-digit number representation: Decomposed, holistic, or hybrid?*

- 2016 (spring), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *Testing decomposed versus holistic fraction representations via an implicit priming task*

- 2016 (spring), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *Is memory "retrieval" in single digit arithmetic really just rapid shifts of attention along a mental number line?*

- 2015 (fall), Tarleton State University, Faculty Development Grant, $750, *Travel: Psychonomic Society Meeting in Chicago, Illinois*

- 2015 (fall), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *The effects of numerical fluency on mental representations of two-digit numbers.*

- 2015 (fall), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *Spatial-numerical associations in mental arithmetic.*

- 2015 (summer), Tarleton State University, First Year Research Experience (FYRE), $6500, *Mental representations of two-digit numbers*

- 2015 (summer), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $3500, *Spatial-numerical associations in mental arithmetic.*

- 2015 (spring), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *Are the stages of cognitive arithmetic additive or interactive? The effects of numerical surface form on an addition production task.*

- 2015 (spring), Society for the Teaching of Psychology, Early Career Travel Grant, $350, *Travel: Southwestern Teachers of Psychology Conference in Wichita, Kansas*

- 2014-2015, Tarleton State University, Organized Research Grant, $9560, *Investigating the cognitive factors behind mathematics learning disability*

- 2014 (fall), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $1000, *The effects of numerical surface form on strategies for mental arithmetic verification*

- 2014 (fall), Tarleton State University, Faculty Development Grant, $508, *Travel: Psychonomic Society Meeting in Long Beach, California*

- 2014 (summer), Tarleton State University, OSRCA Undergrad. Res. Assistantship, $3500, *Using hand tracking to analyze mental representations of fractions*

- 2014 (spring), Tarleton State University, QEP Startup Grant, $1500, *Applied Learning Experience: Undergraduate Research in Mathematical Cognition*

- 2013 (fall), Tarleton State University, Faculty Development Grant, $630, *Travel: Psychonomic Society Meeting in Toronto, Ontario*

- 2012-2013, National Science Foundation: Robert Noyce Scholarship Program, $174,020 (Co-PI with Ben Jang), *Building the Capacity for Math and Science Teacher Training*

- 2010, Texas A&M University – Commerce, OSP Research Grant, $5000, *Mouse Tracking in Mathematical Cognition*

- 2008, Texas A&M University – Commerce, OSP Mini Grant, $600, *IoLab Button Box for Psyscope X*

Editorial roles

- Associate Editor (2024-present): *Behavior Research Methods*

- Guest Editor (2023-2025): *Canadian Journal of Experimental Psychology*

- Editorial Board (2019-present): *Journal of Numerical Cognition*

- Associate Editor (2016-present): *Journal of Psychological Inquiry*

- Associate Editor (2017-2021): *Journal of European Psychology Students*

- Guest Editor (2016-2018): *Journal of Numerical Cognition*

- Associate Editor (2017-2019): *Frontiers in Psychology: Cognition Section*

- Review Editor (2016-2017): *Frontiers in Psychology: Cognition Section*

Reviewing

- Ad hoc reviewer for the following journals: *Acta Psychologica, Advances in Methods and Practices in the Psychological Sciences, Attention, Perception, & Psychophysics, Behavior Research Methods, British Journal of Developmental Psychology, Canadian Journal of Experimental Psychology, Cognitive Processing, Cognition, Cognitive Science, Computational Brain and Behavior, Frontiers in Psychology, Indian Journal of Science and Technology, Journal of Cognitive Psychology, Journal of Experimental Child Psychology, Journal of Experimental Psychology: General, Journal of Numerical Cognition, Journal of Open Source Software, Learning and Individual Differences, Mathematical Population Studies, Mathematics Teacher, Mathematics Teaching in the Middle School, Meta-Psychology, PLOS One,*

Proceedings of the Research Council on Mathematics Learning, Psychological Methods, Psychonomic Bulletin and Review, Quarterly Journal of Experimental Psychology

- External Examiner

  - 2023, Don van den Bergh, Ph.D., University of Amsterdam, NL
  - 2017, Corinna Jones, Ph.D., University of Huddersfield, UK

- Panelist/Reader

  - 2017-2019, Judge, American Statistical Association Statistics Project Competition
  - 2015-2020, Reader, AP Statistics Exam, Kansas City, MO
  - 2012-2015, Panelist, National Science Foundation, Washington, DC

- Grant proposal reviewer for National Science Foundation, Social Sciences and Humanities Research Council of Canada, National Science Centre (Poland)

- Textbook reviewer for Psychology Press, Routledge, Sage, Taylor & Francis, Cambridge University Press, Springer.

- Academic Program Reviewer

  - 2023: B.A. in Psychology, Colorado Mesa University

Professional Memberships

- American Mathematical Society

- American Statistical Association

- Mathematical Association of America

- Mathematical Cognition and Learning Society

- Psychonomic Society

- Society for Mathematical Psychology

- Southwestern Psychological Association (SWPA)

Professional Service

External Leadership Positions and Committee Membership

- Chair, Psychonomic Society Finance Commitee (appointed 2024-present)

- Member, Psychonomic Society Finance Committee (appointed 2023)

- President, Southwestern Psychological Association (elected 2021-2024)

- Chair, ASA-MAA Joint Committee on Statistics and Data Science Education (appointed 2022)

- Member, MAA Council on Teaching and Learning (appointed 2022)

- Secretary/Treasurer, MAA Special Interest Group (SIGMAA) on Statistics Education (elected 2020-2021)

- Member, ASA-MAA Joint Committee on Statistics Education (appointed 2020-2022)

- Treasurer, Southwestern Psychological Association (appointed, 2017-2021)

- Program Review Committee member, Psychonomic Society (appointed 2018-2021)

- Texas Representative, Southwestern Psychological Association (elected, 2015-2017)

- Steering Committee Member, Southwestern Teachers of Psychology (appointed, 2015-2016)

- Nominating Committee Chair, Southwestern Psychological Association (appointed, 2015)

- Advisory Board Member, Collaborative Replications and Education Project (CREP) (appointed, 2014-2016)

- Session Chair, Psychonomics Annual Meeting (2014, 2015)

- Session Chair, Southwestern Psychological Association Meeting (2015)

- Conference Committee Member, Research Council on Mathematics Learning (elected, 2012-2015)

Internal Leadership Positions and Committee Membership

- Member, University Academic Council, Tarleton (2021-present)

- Chair, Institutional Review Board (IRB), Tarleton (2018-2023)

- Member, General Education and Academic Assessment Committee, Tarleton (2019-2023)

- Faculty Research Fellow, Tarleton (2018-2019)

- Official Advisor for Alpha Chi Honor Society, Tarleton (2015-2020)

- State Non-Funded Course Review Group, Member, Tarleton (2015-2019)

- University Research Committee, Member, Tarleton (2015-2021)

- Student Research and Creative Activity Advisory Committee, Member, Tarleton (2013-2021)

- Member, Institutional Review Board (IRB), Tarleton (2017-2018)

- Faculty Fellow, Tarleton (2016-2018)

- Honors Advisory Committee for College of Education, Member, Tarleton (2015-2017)

- Session Chair and Judge, TAMUS Pathways Symposium (2017)

- University ALE Task Force, Member, Tarleton (2016-2017)

- Curriculum Committee, College of Education, Member, Tarleton (2014-2017)

- Greater Expectations Task Force, Member, Tarleton (2014-2015)

- Student/Faculty Marshall for Commencement, Tarleton (many times)

- Session Chair and Judge, Tarleton Research Symposium (2014, 2015)

- External Search Committee member, Department of Engineering, TAMU-C (2012-2013)

- University Honors Council, Member, TAMU-C (2012-2013)

- Liberal Studies Committee, Member, TAMU-C (2012-2013)

- Developmental Appeals Committee, Member, TAMU-C (2010-2012)

Courses Taught

Tarleton State University

- PSYC 2301: General Psychology (Honors), Fall 13,14,15
- PSYC 2317: Statistical Methods for Psychology, Fall 19,20,21,23; Sp 20
- PSYC 2301: General Psychology, Summer 14,15
- PSYC 3301: Psychology of Learning, Fall 13,14,15,16
- PSYC 3303: Educational Psychology, Fall 13; Spring 14; Summer 14,15,16
- PSYC 3309: Writing in Psychology, Spring 16
- PSYC 3320: Psycholinguistics, Summer 17,18,19,20,21
- PSYC 3330: Elem Statistics for Behav Science, Fall 14,15,16,17,18; Sp 15,16,17,18; Su 16,17,18
- HONS 3385: Honors Seminar (Numerical Cognition), Spring 15
- PSYC 3435: Prin Research for Behav Science, Fall 14,15,16,17,18,19,20; Sp 15,16,17,18,19,21; Su 15,16,17
- PSYC 4301: Psychological Tests and Measurements, Sp 20,21
- PSYC 4386: Advanced Statistical Methods, Spring 14
- PSYC 4386: Methods in Experimental Psychology, Spring 15; Fall 15
- PSYC 4386: Problems in Numerical Cognition, Fall 15
- PSYC 5303: Theories of Learning, Fall 16,22
- PSYC 5301: Research Methods, Spring 14,15,17,18,19,21
- PSYC 5304: Human Development, Spring 14
- PSYC 5316: Advanced Quantitative Methods, Fall 17,18,19,20,21,22,23
- PSYC 5322: Psychometrics, Sp 20
- PSYC 5379: Advanced Psycholinguistics, Summer 17,18,19,20,21
- EDAD 6313: Statistical Methods for Educational Leadership, Spring 16

Student Mentoring

Masters Thesis Chair

- Landry Smith (Applied Psychology, Tarleton, in progress)
- Steven McMullin (Applied Psychology, Tarleton, in progress)
- Keelyn Brennan (Applied Psychology, Tarleton, graduated 2023)
- Bryanna Scheuler (Applied Psychology, Tarleton, graduated 2022)
- Mihaela Codreanu (Applied Psychology, Tarleton, graduated 2022)
- Annie Lenoir (Applied Psychology, Tarleton, graduated 2021)
- Kristen Bowman (Applied Psychology, Tarleton, graduated 2020)
- Chelsea Bradley (Applied Psychology, Tarleton, graduated 2018)

Doctoral Committees

- Kristen Bowman (Psychology, TAMU-C, in progress)

- Angelika Stefan (Psychological Methods, University of Amsterdam, graduated 2023)

- Jessica Cervantes (Educational Leadership, Tarleton, graduated 2021)

- Jeni McNeely (Educational Leadership, Tarleton, graduated 2016)

- Trina Geye (Psychology, TAMU-C, graduated 2016)

- Beth Nikopoulous (Psychology, TAMU-C, graduated 2015)

- Donna Peters (Psychology, TAMU-C, graduated 2013)

Masters Committees

- Shanna Coury (Psychology, TAMU-C, in progress)

- Sam Arthur (Psychology, Tarleton, graduated 2023)

- Simon Rook (Applied Psychology, Tarleton, graduated 2022)

- Rene Wallace (Applied Psychology, Tarleton, graduated 2021)

- Kayli Colpitts (Applied Psychology, Tarleton, graduated 2020)

- Kody Lamb (Applied Psychology, Tarleton, graduated 2018)

- Trina Geye (Psychology, TAMU-C, graduated 2015)

- Beth Nikopoulous (Psychology, TAMU-C, graduated 2013)

- Heather Oetker (Special Education, TAMU-C, graduated 2012)

- Joshua Patterson (Mathematics, TAMU-C, graduated 2011)

Honors Thesis Chair

- Bella Zapata (Psychology, Tarleton, graduated 2023), *Closed form methods for estimating parameters of response time distributions*

- Kristen Bowman (Psychology, Tarleton, graduated 2018), *Nonwords induce reverse priming effects in a lexical decision task*

- Anissa Eid (Psychology, Tarleton, graduated 2018), *Cognitive mechanisms underlying spatial-numerical associations*

- Paige Woodard (Psychology, Tarleton, graduated 2017), *Mental arithmetic: Relationship between encoding and calculation processes*

- Sarah Montgomery (High Honors in Psychology, TAMU-C, graduated 2013), *Measuring the Working Memory Requirements of Mental Arithmetic*

- Emily Dalton (Honors in Psychology, TAMU-C, graduated 2013), *The Effects of Generation on False Memory for Numbers*

- Kaytlin Reid (Honors in Interdisciplinary Studies, TAMU-C, graduated 2013), *The Role of Working Memory in Mental Fraction Computation*

- Douglas Boney (Honors in Mathematics, TAMU-C, graduated 2013), *Knot Polynomials*

- Samantha Reece (Honors in Sociology, TAMU-C, graduated 2012), *The Effects of Stereotype Threat on Cheating Behavior in Mathematics*

Honors Thesis Committees

- Carmen Phelps (English, TAMU-C, 2013)

- Morgan Lutz (Psychology, TAMU-C, 2013)

- Nick Bredberg (Physics, TAMU-C, 2012)

- Kallie Hinton (Mathematics Education, TAMU-C, 2011)

- Lindsey Preston (Mathematics Education, TAMU-C, 2011)