

Benjamin Margolin Rottman

546 Murdoch, 3420 Forbes Ave
University of Pittsburgh
Pittsburgh, PA 15260

412-624-7493
rottman@pitt.edu
www.lrdc.pitt.edu/rottman

ACADEMIC APPOINTMENTS:

2018-Present Associate Professor, Dept. of Psychology, University of Pittsburgh
2013-2018 Assistant Professor, Dept. of Psychology, University of Pittsburgh
2013-Present Research Scientist, Learning Research and Development Center, U Pitt

DEGREES AND EDUCATION:

2011-2013 Postdoctoral Fellow, Hospital Medicine and Booth School of Business, U. Chicago. Mentors: Reid Hastie and David Meltzer
2006-2011 PhD (2011), MPhil (2009), and MS (2008) in Cognitive Psychology, Yale University. Mentors: Woo-Kyoung Ahn, Frank Keil, Laurie Santos
2002-2006 BA in Cognitive Science, Northwestern U. Mentor: Dedre Gentner

EXTERNAL GRANTS:

Co-Principal Investigator, (with Fraundorf & Nokes-Malach), "Foundational Science for Continuing Board Certification Proposal." American Board of Internal Medicine.
1/1/2020 – 9/1/2020. Total Costs: \$81,897.

Principal Investigator, "CAREER: Causal Reasoning in Daily Life and its Role in Science Literacy." National Science Foundation, BCS-1651330, 7/1/2017 - 6/30/2022. Total costs: \$628,352. Direct: \$427,978. Indirect: \$200,374. Also received two Research Experiences for Undergraduates Supplements in 2017 and 2018 for \$4,944 each.

Principal Investigator, "Developing a Theory of Causal Learning over Time." National Science Foundation, BCS-1430439, 9/1/2014 - 8/31/2016. Total costs: \$282,400. Direct: \$200,973, Indirect: \$81,427.

Co-Principal Investigator, 5% effort (PI: Nokes-Malach, Co-PIs: Binning, Grabowski, Kaufmann, Schunn, Singh, Votruba-Drzal), "Build, Understand, & Tune Interventions that Culminate to Real Impact." National Science Foundation, DUE-1524575, 9/1/2015-8/31/2020. Total costs: \$1,244,556. Direct: \$888,582. Indirect: \$355,974.

INTERNAL GRANTS:

Principal Investigator, (with Chris Schunn, Kristina Paris, and Kiran Nihlani).

“Transforming Stat 0200 to Increase Interest and Discipline-Based Examples for Psychology Students.” Discipline-Based Science Education Research Center, University of Pittsburgh, 6/1/2025 – 8/31/2025. Total costs: \$10,000.

Co-Principal Investigator (PI: Daniel Mosse; Co-PIs: Stephen Lee, Nadine von Frankenberg). “Sustainable (Campus) Buildings through Sensing and Human-Building Interaction. Mascaro Center for Sustainable Innovation: Research Seed Grants for Sustainability. University of Pittsburgh. Total costs: \$63,642.

Principal Investigator, “Providing Students in Research Methods a Choice between Learning Styles: “Flip It and Reverse It”. Discipline-Based Science Education Research Center, University of Pittsburgh, 6/1/2023 – 8/31/2024. Total costs: \$9,990.

Senior Personnel, (PI: Yu-Ru Lin; Co-PIs: Morgan R. Frank, Edouard Machery; Senior Personnel: Heath Cabot) “Cultural Representativeness in the Principles of AI.” Pitt Momentum Fund, 2022-2023.

Principal Investigator, “Flipping Research Methods for Psychology.” Discipline-Based Science Education Research Center, University of Pittsburgh, 6/1/2020 – 8/31/2020. Total costs: \$9,990.

Co-Principal Investigator (with Eric Kuo and Tim Nokes-Malach), “A Bayesian Approach to the Study of Conceptual Change.” LRDC Internal Awards Program., University of Pittsburgh, 3/14/2018-6/30/2022. Total Costs: \$149,993.

Co-Principal Investigator, (PI: Sybil Streeter), “Identifying and Supporting Career Tracks Through the Psychology Major.” Provost’s Personalized Education Grant, University of Pittsburgh, 2/1/2018-6/30/2019. Total costs: \$9,900.

Principal Investigator, “Active-Learning of Psychological Research Methods: Authentic Skill Development through Rich Real-World Research Examples and Representations.” Discipline-Based Science Education Research Center, University of Pittsburgh, 6/1/14 – 5/31/15. Total costs: \$15,000.

AWARDS AND FELLOWSHIPS:

Tina & David Bellet Teaching Excellence Award. The University of Pittsburgh Dietrich School of Arts and Sciences. 2024. Two awards are given out each year for the entire Dietrich School.

Association for Psychological Science Rising Star, 2016.

“The formation and revision of beliefs about complementary medicine.” The University of Sydney School of Psychology Visiting International Collaborator Support. 6-2016. Collaborators: Ben Colagiuri, Micah Goldwater, and Evan Livesey.

“Medical Decision Making: Roles of Evidence and Experience.” NRSA F32 Individual Postdoctoral Fellowship, National Heart, Lung, and Blood Institute, 1F32HL108711-01, 2011-2013. Mentors: Reid Hastie, PhD, & David Meltzer, MD, PhD.

“Coherence of Complex Explanations.” Graduate Research Fellowship Program, National Science Foundation. 2007 – 2010. Mentors: Frank Keil, PhD, & Woo-kyoung Ahn, PhD.

RESOURCES DEVELOPED:

Research Methods for the Social Sciences 	Open source materials for teaching research methods. https://canvas.pitt.edu/courses/124970
Causality and Multiple Regression 	R Shiny app for learning about the relation between causality and multiple regression https://research-methods-dojo.shinyapps.io/causality_and_regression/
PsychCloud.org 	Tutorial and code for making psychology experiments (or interactive websites more generally) hosted on Google App Engine and the Google Cloud. www.psychcloud.org

MANUSCRIPTS UNDER REVIEW:

Rottman, B. M. Causal Learning with Two Confounded Causes over Weeks.

PEER REVIEWED PUBLICATIONS:

*Mentored Student

Rottman, B. M., & *Zhang, Y. (2025). Primacy and Recency over Long Timeframes in Causal Judgments and Memory. *Cognitive Research: Principles & Implications*. 10(1), 9. <https://doi.org/10.1186/s41235-025-00614-9>

Cowan, E., *Zhang, Y., **Rottman, B. M.**, & Murty, V. (2024). The effects of mnemonic variability and spacing on memory over multiple timescales. *Proceedings of the National Academy of Sciences*. 121(12), e2311077121. <https://doi.org/10.1073/pnas.2311077121>

- We also published a summary of this research in Scientific American: <https://www.scientificamerican.com/article/the-best-strategy-for-learning-may-depend-on-what-youre-trying-to-remember/>

*Zhang, Y., & **Rottman, B. M.** (2024). Causal learning with delays up to 21 hours. *Psychonomic Bulletin and Review*. 31(1), 312-324. <https://doi.org/10.3758/s13423-023-02342-x>

*Zhang, Y., & **Rottman, B. M.** (2023). Causal learning with interrupted time series data. *Judgment and Decision Making*, 18, e30. <https://doi.org/10.1017/jdm.2023.29>

Rottman, B. M., *Caddick, Z. A., Nokes-Malach, T. J., & Fraundorf, S. H. (2023). Cognitive perspectives on maintaining physicians’ medical expertise: I. Reimagining

- maintenance of certification to promote lifelong learning. *Cognitive Research: Principles and Implications*, 8(1), 1-15. <https://doi.org/10.1186/s41235-023-00496-9>
- *Caddick, Z. A., Fraundorf, S. H., **Rottman, B. M.**, & Nokes-Malach, T. J. (2023). Cognitive perspectives on maintaining physicians' medical expertise: II. Acquiring, maintaining, and updating cognitive skills. *Cognitive Research: Principles and Implications*, 8(1). <https://doi.org/10.1186/s41235-023-00497-8>
- Fraundorf, S. H., *Caddick, Z. A., Nokes-Malach, T. J., & **Rottman, B. M.** (2023). Cognitive perspectives on maintaining physicians' medical expertise: III. Strengths and weaknesses of self-assessment. *Cognitive Research: Principles and Implications*, 8(1). <https://doi.org/10.1186/s41235-023-00511-z>
- Fraundorf, S. H., *Caddick, Z. A., Nokes-Malach, T. J., & **Rottman, B. M.** (2023). Cognitive perspectives on maintaining physicians' medical expertise: IV. Best practices and open questions in using testing to enhance learning and retention. *Cognitive Research: Principles and Implications*, 8(1). <https://doi.org/10.1186/s41235-023-00508-8>
- Nokes-Malach, T. J., Fraundorf, S. H., *Caddick, Z. A., & **Rottman, B. M.** (2023). Cognitive perspectives on maintaining physicians' medical expertise: V. Using an expectancy-value framework to understand the benefits and costs of testing. *Cognitive Research: Principles & Implications*. 8(1).
- *Caddick, Z. A., & **Rottman, B. M.** (2021). Motivated Reasoning in an Explore-Exploit Task. *Cognitive Science*, 45(8), e13018. [doi:10.1111/cogs.13018](https://doi.org/10.1111/cogs.13018)
- *Willett, C. L. & **Rottman, B. M.** (2021). The accuracy of causal learning over long timeframes: An ecological momentary experiment approach. *Cognitive Science*, 45(7), e12985. [doi:10.1111/cogs.12985](https://doi.org/10.1111/cogs.12985)
- Barnes, K., **Rottman, B. M.**, & Colagiuri, B. (2021). The placebo effect: To explore or to exploit? *Cognition*, 214, 104753. [doi:10.1016/j.cognition.2021.104753](https://doi.org/10.1016/j.cognition.2021.104753)
- Chow, J. Y., Colagiuri, B., **Rottman, B. M.**, Goldwater, M., & Livesey, E. J. (2021). Pseudoscientific Health Beliefs and the Perceived Frequency of Causal Relationships. *International Journal of Environmental Research and Public Health*, 18(21), 11196.
- Blatt, L. B., Schunn, C., Votruba-Drzal, E., & **Rottman, B. M.** (2020). Variation in Which Key Motivational and Academic Resources Relate to Academic Performance Disparities Across Introductory College Courses. *International Journal of STEM Education*, 58(7), 1-25. <https://doi.org/10.1186/s40594-020-00253-0>
- *Soo, K. W. & **Rottman, B. M.** (2020). Distinguishing causation and correlation: Causal learning from time-series graphs with trends. *Cognition*, 195(2), 104079. <https://doi.org/10.1016/j.cognition.2019.104079>
- Rottman, B. M., Wyatt, G., Crane, T. E., & Sikorskii, A. (2020) Expectancy and Utilisation of Reflexology among Women with Advanced Breast Cancer. *Applied Psychology: Health and Well-Being*, 12(2), 493-512. <https://doi.org/10.1111/aphw.12194>

- *Betancur, L., **Rottman, B. M.**, Votruba-Drzal, E., & Schunn, C. (2019). Analytical Assessment of Course Sequencing: The Case of Methodological Courses in Psychology. *Journal of Educational Psychology*, 111(1), 91-103. doi:10.1037/edu0000269
- *Soo, K., & **Rottman, B. M.** (2018). Switch Rates Do Not Influence Weighting of Rare Events in Decisions from Experience, but Optional Stopping Does. *Behavioral Decision Making*, 31(5), 644-661. doi: 10.1002/bdm.2080
- *Soo, K., & **Rottman, B. M.** (2018). Causal strength induction from time series data. *Journal of Experimental Psychology: General*, 147(4), 485-513. doi:10.1037/xge0000423
- *Derringer, C., & **Rottman, B. M.** (2018). How People Learn about Causal Influence when there are Many Possible Causes: A Model Based on Informative Transitions. *Cognitive Psychology*, 102, 41-71. doi:10.1016/j.cogpsych.2018.01.002
- Rottman, B. M.** (2017). Physician Bayesian updating from personal beliefs about the base rate and likelihood ratio. *Memory & Cognition*, 45, 270-280. doi: 10.3758/s13421-016-0658-z
- Rottman, B. M.**, Marcum, Z. A., Thorpe, C. T., & Gellad, W. F. (2017). Medication adherence as a learning process: Insights from cognitive psychology. *Health Psychology Review*, 11(1), 17-32.
- Rottman, B. M.**, Prochaska, M. T., & Deaño, R. C. (2016). Bayesian reasoning in residents' preliminary diagnoses. *Cognitive Research: Principles and Implications*, 1(1), 1-7. **Blog Coverage:** <http://www.psychonomic.org/news/news.asp?id=311122>
- Rottman, B. M.** & Hastie, R. (2016). Do people reason rationally about causally related events? Markov violations, weak inferences, and failures of explaining away. *Cognitive Psychology*, 87, 88-134.
- Rottman, B. M.** (2016). Searching for the best cause: Roles of mechanism beliefs, autocorrelation, and exploitation. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 42(8), 1233-1256. doi:10.1037/xlm0000244
- Edwards, B. J., **Rottman, B. M.**, Shankar, M., Betzler, R., Chituc, V., Rodriguez, R., ... Santos, L. R. (2014). Do capuchin monkeys (*Cebus apella*) diagnose causal relations in the absence of a direct Reward? (E. Flynn, Ed.) *PLoS ONE*, 9(2), e88595. doi:10.1371/journal.pone.0088595
- Rottman, B. M.**, Kominsky, J. F., & Keil, F. C. (2014). Children use temporal cues to learn causal directionality. *Cognitive Science*, 38, 489-513. doi:10.1111/cogs.12070
- Rottman, B. M.**, & Hastie, R. (2014). Reasoning about causal relationships: Inferences on causal networks. *Psychological Bulletin*, 140(1), 109-139. doi:10.1037/a0031903
- Rottman, B. M.**, Gentner, D., & Goldwater, M. B. (2012). Causal systems categories: Differences in novice and expert categorization of causal phenomena. *Cognitive Science*, 36, 919-932. doi:10.1111/j.1551-6709.2012.01253.x

- Rottman, B. M., & Keil, F. C. (2012).** Causal structure learning over time: Observations and interventions. *Cognitive Psychology*, 64, 93-125. doi:10.1016/j.cogpsych.2011.10.003
- Rottman, B. M., & Keil, F. C. (2011).** What matters in scientific explanations: Effects of elaboration and content. *Cognition*, 121, 324-337. doi:10.1016/j.cognition.2011.08.009.
- Rottman, B. M., & Ahn, W. (2011).** Effect of grouping of evidence types on learning about interactions between observed and unobserved causes. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 37, 1432-1448. doi:10.1037/a0024829
- Rottman, B. M., Kim, N. S. Ahn, W., & Sanislow, C. A. (2011).** Can personality disorder experts recognize DSM-IV personality disorders from Five-Factor Model descriptions of patient cases? *The Journal of Clinical Psychiatry*, 72, 630-635. doi:10.4088/JCP.09mo5534gre
- Chang, A., Sandhofer, C. M., Adelchanow, L., & **Rottman, B. M.** (2010). Parental numeric language input to Mandarin Chinese and English speaking preschool children. *Journal of Child Language*, 38, 341-355. doi:10.1017/S0305000909990390
- Rottman, B. M., Ahn, W., Sanislow, C. A., & Kim, N. S. (2009).** Can clinicians recognize DSM-IV personality disorders from Five-Factor model descriptions of patient cases? *The American Journal of Psychiatry*, 166, 427-433. doi:10.1176/appi.ajp.2008.08070972
- Rottman, B. M., & Ahn, W. (2009).** Causal learning about tolerance and sensitization. *Psychonomic Bulletin and Review*, 16, 1043-1049. doi:10.3758/PBR.16.6.1043

DISSERTATIONS SUPERVISED (NOT YET OTHERWISE PUBLISHED):

- *Soo, K. W. X. (2019). *The Role of Granularity in Causal Learning* (Doctoral dissertation, University of Pittsburgh). <http://d-scholarship.pitt.edu/id/eprint/36402>
- *Derringer, C. (2019). *Illusory Correlation and Valenced Outcomes* (Doctoral dissertation, University of Pittsburgh). <http://d-scholarship.pitt.edu/id/eprint/37314>
- *Willett, C. L. (2023). *Why Correlation Doesn't Imply Causation: Improving Undergraduates Understanding of Research Design* (Doctoral dissertation, University of Pittsburgh). <http://d-scholarship.pitt.edu/id/eprint/44077>
- *Caddick, Z. A. (2023). *Learning, Choice Consistency, and Individual Differences in How People Think Elections Should be Decided* (Doctoral dissertation, University of Pittsburgh). <http://d-scholarship.pitt.edu/id/eprint/44049>
- *Zhang, Y. (2025). *The Roles of Delays and Intervening Events in Causal Learning*. (Doctoral dissertation, University of Pittsburgh).

BOOK CHAPTERS:

- Rottman, B. M. (2017).** The acquisition and use of causal structure knowledge. In M.R. Waldmann (Ed.), *Oxford Handbook of Causal Reasoning* (85-114). Oxford: Oxford U.P.

Rottman, B. M., Ahn, W., & Luhmann, C. C. (2011). When and how do people reason about unobserved causes? In P. Illari, F. Russo, & J. Williamson (Eds.), *Causality in the Sciences*. Oxford: Oxford U.P.

Edwards, B.J., **Rottman, B. M.**, & Santos, L. R. (2011). Causal reasoning in children and animals. In T. McCormack, C. Hoerl, and S. Butterfill (Eds.) *Tool Use and Causal Cognition*. Oxford: Oxford U.P.

PUBLISHED CONFERENCE PROCEEDINGS:

*Mentored Students

Zhang, Y., & **Rottman, B. M.** (2021). Causal Learning with Interrupted Time Series. In T. Fitch, C. Lamm, H. Leder, & K. Tessmar (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Zhang, Y., & **Rottman, B. M.** (2021). Causal Learning with Delays Up to 21 Hours. In T. Fitch, C. Lamm, H. Leder, & K. Tessmar (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Kuo, E., Weinlader, N., **Rottman, B. M.**, & Nokes-Malach, T. (2020). Using Causal Networks to Examine Resource Productivity and Coordination in Learning Science. In Gresalfi, M. and Horn, I. S. (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020*, Volume 2 (pp. 875-876). Nashville, Tennessee: International Society of the Learning Sciences.
<https://doi.org/10.22318/icls2020.875>

*Willett, C., & **Rottman, B. M.**, (2020). Causal learning with two causes over weeks. In S. Denison, M. Mack, & Y. Xu, & B. C. Armstrong (Eds.) *Proceedings of the 42nd Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Kuo, E., Weinlader, N. K., **Rottman, B. M.**, & Nokes-Malach, T. J. (2020). Using causal networks to examine resource productivity and coordination in learning science. In M. Gresalfi & I. Horn (Eds.) *Proceedings of the International Conference of the Learning Sciences*. The International Society of the Learning Sciences.

Weinlader, N. K., Kuo, E., **Rottman, B. M.**, & Nokes-Malach, T. J. (2019) A new approach for uncovering student resources with multiple-choice questions. *Physics Education Research Conference 2019*. Doi: <http://dx.doi.org/10.1119/perc.2019.pr.Weinlader>

*Willett, C., & **Rottman, B. M.**, (2019). The Accuracy of Causal Learning over 24 Days. In A. Goel, C. Seifert, & C. Freska (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

*Caddick, Z., & **Rottman, B. M.**, (2019). Politically Motivated Causal Evaluations of Economic Performance. In A. Goel, C. Seifert, & C. Freska (Eds.) *Proceedings of the 41st Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

- *Soo, K., & **Rottman, B. M.** (2018). Causal Learning from Trending Time-Series. In C. Kalish, M. Rau, J. Zhu, and T. T. Rogers (Eds.), *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
- *Derringer, C., & **Rottman, B. M.** (2018). Comparing Mediation Inferences and Explaining Away Inferences on Three Variable Causal Structures. In C. Kalish, M. Rau, J. Zhu, and T. T. Rogers (Eds.), *Proceedings of the 40th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
- *Soo, K., & **Rottman, B. M.** (2016). Causal learning with continuous variables over time. In A. Papafragou, D. Grodner, D. Mirman, & J. Trueswell (Eds.), *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (pp. 153-158). Austin, TX: Cognitive Science Society.
- *Derringer, C., & **Rottman, B. M.** (2016). Temporal causal strength learning with multiple causes. In A. Papafragou, D. Grodner, D. Mirman, & J. Trueswell (Eds.), *Proceedings of the 38th Annual Conference of the Cognitive Science Society* (pp. 758-763). Austin, TX: Cognitive Science Society.
- *Soo, K., & **Rottman, B. M.** (2015). Elemental causal learning from transitions. In R. Dale, C. Jennings, P. Maglio, T. Matlock, D. Noelle, A. Warlaumont, & J. Yoshimi (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp. 2254-2259). Austin, TX: Cognitive Science Society.
- Rottman, B. M.** (2015). How causal mechanism and autocorrelation beliefs inform information search. In R. Dale, C. Jennings, P. Maglio, T. Matlock, D. Noelle, A. Warlaumont, & J. Yoshimi (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp. 2033-2038). Austin, TX: Cognitive Science Society.
- Rottman, B. M.** (2015). Do Markov violations and failures of explaining away persist with experience? In R. Dale, C. Jennings, P. Maglio, T. Matlock, D. Noelle, A. Warlaumont, & J. Yoshimi (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp. 2027-2032). Austin, TX: Cognitive Science Society.
- Rottman, B. M.** (2014). Information search in an autocorrelated causal learning environment. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 1323-1328). Austin, TX: Cognitive Science Society.
- *Soo, K., & **Rottman, B. M.** (2014). Learning causal direction from transitions with continuous and noisy variables. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 1485-1490). Austin, TX: Cognitive Science Society.
- Rottman, B. M.**, & Keil, F. C. (2011 a). Learning causal direction from repeated observations over time. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33th Annual Conference of the Cognitive Science Society* (pp. 1847-1852). Austin, TX: Cognitive Science Society.

- Rottman, B. M.**, & Keil, F. C. (2011 b). Which parts of scientific explanations are most important? In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 378-383). Austin, TX: Cognitive Science Society.
- Rottman, B. M.**, & Keil, F. C. (2010). Connecting causal events: Learning causal structures through repeated interventions over time. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 907-912). Austin, TX: Cognitive Science Society.
- Rottman, B. M.**, Kim, N. S., Ahn, W., & Sanislow, C. A. (2009). The cognitive consequences of using categorical versus dimensional classification systems: The case of personality disorder experts. *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 2825-2830). Austin, TX: Cognitive Science Society.
- Rottman, B. M.**, & Ahn, W. (2009). Causal Inference when Observed and Unobserved Causes Interact. *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 1477-1482). Austin, TX: Cognitive Science Society.

PUBLISHED ABSTRACTS AND CONFERENCE PRESENTATIONS:

- Rottman, B. M.** (December, 2023). Open Source Research Methods for the Social Sciences. PsychTERMS 2023. Virtual.
- Zhang*, Y. & **Rottman, B. M.** (November, 2023). Causal learning with interrupted time series data. The 64th Annual Meeting of the Psychonomic Society. San Francisco, CA.
- Caddick*, Z., & **Rottman, B. M.** (2021, November). Views about the fairness of voting systems: Plurality, ranked-choice, and cardinal voting. The 62nd Annual Meeting of the Psychonomic Society.
- Barnes, K., **Rottman, B. M.**, Colagiuri, B. (2018, April) Exploring versus exploiting variable treatment outcomes: Ramifications for the placebo effect. 2018 Australian Pain Society 38th and New Zealand Pain Society Conjoint Annual Scientific Meeting. Sydney, Australia.
- Barnes, K., **Rottman B. M.**, Colagiuri, B. (2018, April). Placebo analgesia: the role of symptom variability and choice on treatment selection. 45th Annual Conference of the Australian Society for Experimental Psychology, Hobart Function and Conference Centre, Tasmania.
- Rottman B. M.** (2017, April) *Learning causal relations in non-stationary time series environments*. Symposium on Time and Causality conducted at the Experimental Psychology Society. Belfast, Ireland.
- Rottman, B. M.** (March, 2016). *Searching for the best cause and inferring causal strength over time*. Symposium conducted at the Annual Meeting of the Eastern Psychological Association. New York, NY.

Rottman, B. M. (November, 2015). *Searching for the best cause: Roles of mechanism beliefs, autocorrelation, and exploitation*. The 56th Annual Meeting of the Psychonomic Society. Chicago, IL.

Rottman, B. M. (March, 2015). *Causal reasoning: The role of temporal heuristics for sophisticated inferences*. Symposium conducted at the 23rd Annual Meeting of the Cognitive Neuroscience Society 2015, San Francisco, CA.

Hastie, R. & **Rottman, B. M.** (November, 2012). *How normative are inferences on causal Networks*. The 53rd Annual Meeting of the Psychonomics Society. Minneapolis, MN.

Rottman, B. M., Ahn, W., Kim, N. S., & Sanislow, C. A. (November, 2009). *Categorical Versus Trait-Based Dimensional Classification Systems for Personality Disorders*. The 50th Annual Meeting of the Psychonomics Society. Boston, MA.

POSTER PRESENTATIONS:

*Mentored Students

Jaramillo*, S. & **Rottman, B. M.** (July, 2024). Can people accurately draw statistical conclusions from dot plots? *Annual Conference of the Cognitive Science Society*.

Jaramillo*, S. & **Rottman, B. M.** (November, 2023). Can people accurately draw statistical conclusions from dot plots? The 64th Annual Meeting of the Psychonomic Society. San Francisco, CA.

Zhang*, Y., **Rottman, B. M.**, & Collins, A. (November, 2023). The role of working memory in feedback-based learning over long timeframes. The 64th Annual Meeting of the Psychonomic Society. San Francisco, CA.

Cowan, E., Zhang*, Y., **Rottman, B. M.**, & Murty, V. P. (May, 2021). The effects of spaced learning and encoding variability on associative memory. *Cognitive Neuroscience Society*. San Francisco, CA.

Jaramillo*, S., Kuo, E., Nokes-Malach, T., & Rottman, B. M. (July, 2021). Using Causality to map difficulties in a qualitative physics problem. *Annual Conference of the Cognitive Science Society*.

Caddick, Z., & **Rottman, B. M.**, (July, 2019). Motivated Reasoning in Causally Ambiguous Explore-Exploit Situations. The 41st Annual Conference of the Cognitive Science Society. Montreal, CA.

Chow, J. Y. L., Colagiuri, B., **Rottman, B. M.**, Goldwater, M. B., & Livesey, E. J. (April, 2019). Do contingency estimates inform our causal judgments? A survey of controversial health-related beliefs. *The Australasian Experimental Psychology Conference*. Wellington, New Zealand. (Winner of best student poster.)

- Chow, J. Y. L., Colagiuri, B., Goldwater, M. B., **Rottman, B. M.**, & Livesey, E. J. (April, 2019). Do contingency estimates inform our causal judgments? A survey of controversial health-related beliefs. *The 59th Annual Meeting of the Psychonomic Society*. New Orleans, Louisiana.
- Chow, J.Y.L., Colagiuri, B., Goldwater, M., **Rottman, B.M.**, Livesey, E.J. (July, 2018). *Do contingency estimates inform our causal judgements? A survey of dubious health-related beliefs*. Paper presented at The Australian Learning Group Mid-Year Conference, Katoomba, Australia.
- Barnes, K., **Rottman, B. M.**, Colagiuri, B. (2018, April). Exploring versus exploiting variable treatment outcomes: Ramifications for the placebo effect. *Australian Pain Society 38th and New Zealand Pain Society Conjoint Annual Scientific Meeting*. Sydney, Australia.
- Wyatt, G., Sikorskii, A., **Rottman, B. M.**, & Crane, T. (February, 2018). *The Role of Expectancy in Supportive Care Therapy Use and Symptom Outcomes Among Women with Advanced Breast Cancer*. The 15th Annual American Psychosocial Oncology Society Annual Conference. Tucson, Az.
- *Soo, K., & **Rottman, B. M.** (November, 2015). *Causal learning from transitions and states*. The 56th Annual Meeting of the Psychonomics Society. Chicago, IL.
- *Derringer, C., & **Rottman, B. M.** (July, 2015). *Informative transitions: A heuristic for conditionalized causal strength learning*. The 37th Annual Conference of the Cognitive Science Society. Pasadena, CA, USA.
- Rottman, B. M.** (June, 2015). *Human information search: Choosing the best cause*. The Multi-disciplinary Conference on Reinforcement Learning and Decision Making. Edmonton, Alberta, Canada.
- Rottman, B. M.** (June, 2015). *How people test whether a medicine works: Implications for adherence*. Pittsburgh Conference on the Science of Medication Adherence. Pittsburgh, PA, USA.
- Rottman, B. M.**, Prochaska, M., Deaño, R., & Meltzer, D. (March, 2013). *The influence of residents' experiences on disease prevalence judgments, preliminary diagnoses, and post-test judgments*. The 2013 Department of Medicine Research Day, University of Chicago.
- Rottman, B. M.**, Prochaska, M., Deaño, R., & Meltzer, D. (November, 2012). *The influence of prior experiences with patients on medical diagnosis*. The 53rd Annual Meeting of the Psychonomics Society. Minneapolis, MN.
- Rottman, B. M.**, & Ahn, W. (November, 2009). *Causal inference when observed and unobserved causes interact*. The 50th Annual Meeting of the Psychonomics Society. Boston, MA.

Rottman, B. M., & Ahn, W. (July, 2008). *People distinguish causes that occur to one or multiple entities*. The 30th Annual Meeting of the Cognitive Science Society. Washington, DC.

Rottman, B. M., & Gentner, D. (July, 2006). *Expertise effects on sorting strategies of causal phenomena*. The 28th Annual Meeting of the Cognitive Science Society. Stresa, Italy.

INVITED EXTERNAL PRESENTATIONS:

Rottman, B. M. (2024, April). *The Accuracy of Causal Learning and Judgment from Experiences Gathered over Weeks*. Center for Experimental Studies Conference on Models and Learning from Observations. New York University.

Rottman, B. M. (2023, October). *Correlation and Causation of Life Sciences Systems*. National Academies: Board on Life Sciences Open Webinar.
https://www.nationalacademies.org/event/40803_10-2023_board-on-life-sciences-open-webinar-correlation-and-causation-of-life-sciences-systems

Rottman, B. M. (2023, June). *The Accuracy of Causal Learning and Judgment from Experiences Gathered over Weeks*. Society for Philosophy and Psychology. Pittsburgh, PA.

Rottman, B. M. (2019, September). *Causal Learning over 24 Days*. Psychology and Economics of Causal Reasoning, University College London. London, UK.

Rottman, B. M. (2018, January). *How People Learn Causal Relations in Complex Time Series Settings*. University of Southern California, Department of Psychology. Los Angeles, CA.

Rottman, B. M. (2017, June). *Causal Learning Over Time*. University of New South Wales, Department of Psychology. Sydney, Australia.

Rottman, B. M. (2017, June). *Causal Learning Over Time*. The University of Sydney, School of Psychology. Sydney, Australia.

Rottman, B. M. (2015, November). *Adherence as a causal learning challenge: Insights from cognitive psychology*. The University of Michigan. Ann Arbor, MI.

Rottman, B. M. (2015, February). *Temporal causal reasoning*. Reasoning Work Group, NIH/NICHD. Online presentation.

Rottman, B. M. (2012, February). *Temporal causal learning*. Department of Cognitive Sciences, UC Irvine. Irvine, CA.

Rottman, B. M. (2012, January). *Temporal causal learning*. Department of Psychology, University of Pittsburgh. Pittsburgh, PA.

Rottman, B. M. (2012, January). *Temporal causal learning*. Department of Psychology, Harvard University. Cambridge, MA.

Rottman, B. M. (2009, March). *Tolerance/sensitization and interacting unobserved causes*. The Computational Cognitive Science Group, Department of Brain and Computational Sciences, MIT. Cambridge, MA.

EDITORIAL BOARDS:

Consulting Editor, Journal of Experimental Psychology: General, 2017-2021

Consulting Editor, Cognitive Research: Principles and Implications, 2017-Present

REVIEWING:

Journal Reviews: Acta Psychologica, Animal Cognition, Behavior Research Methods, Cognition, Cognitive Development, Cognitive Processing, Cognitive Psychology, Cognitive Research: Principles and Implications, Cognitive Science, Developmental Science, Entropy, Frontiers in Psychology: Cognition, Judgment and Decision Making, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of Medical Internet Research, Journal of Personality Disorders, Judgment & Decision Making, Medical Decision Making: Policy & Practice, Memory & Cognition, Metacognition and Learning, PLOS-ONE, Psychological Review, Psychonomic Bulletin and Review, Psychotherapy and Psychosomatics, Social Science & Medicine, The Quarterly Journal of Experimental Psychology, Thinking & Reasoning

The Cognitive Science Conference: ~9 reviews per year 2011-2019, ~7 meta reviews per year 2020-present

Ad Hoc Grant Reviewing: NSF, L'Agence Nationale de la Recherche (France)

National Science Foundation Panels: 1 in 2018, 2 in 2019, 1 in 2020, 1 in 2022

PROFESSIONAL MEMBERSHIPS:

Fellow of the Psychonomic Society, Member of the Cognitive Science Society

OTHER EXTERNAL PROFESSIONAL SERVICE:

Alliance for Decision Education Research Collaborative 2023-2024

Reasoning Work Group, NIH/NICHHD, 2014-2015

Organizer (with Reid Hastie and Dan Bartels) of the Causal Cognition Conference, July 23rd, 2018, Chicago, IL.

Reviewer for the Marr Prize, The Cognitive Science Society. 2023 and 2024.

MAJOR INTERNAL PROFESSIONAL SERVICE:

Start	End	Unit	Description
2014	Present	Psych	Organizer of Cognitive Program Research Seminar (except 2016-17)
2020	2024	Psych	Faculty Advisor for the Professional Development Committee
2023	Present	Psych	Initiate and coordinate efforts to improve departmental communication (e.g., calendars, website, newsletters, intranet)
2023	Present	Psych	Director of Undergraduate Studies
2023	2024	Psych	Chair of search committee for 3 Teaching Assistant Professor positions
2023	Present	Psych	Communication Committee
2024	2025	Psych	Chair of cognitive Assistant Professor search committee

OTHER INTERNAL PROFESSIONAL SERVICE:

Start	End	Unit	Description
2013	2014	Psych	Search Committee for Social - Health Position
2013	2014	Psych	Search Committee for Social - LRDC Position
2014	2019	Psych	Undergraduate Education Committee
2015	2015	Psych	Tim Post Award Committee
2016	2016	Psych	Mellon Fellowship Committee
2018	2018	Pitt	Reviewer for the Provost's Seed Awards
2018	2019	Psych	Search Committee for Teaching Faculty
2018	2020	LRDC	Space Committee for the LRDC
2020	2020	Psych	Tim Post Award Committee Cognitive Representative

2020	2021	Psych	Executive Committee
2020	2021	LRDC	Mission and Vision Working Group Co-Lead
2020	2021	Psych	PEIC – Undergraduate Committee
2020	2022	Psych	Led effort to revamp post-graduation planning part of psychology department website.
2021	2023	Psych	Climate Inclusiveness Committee
2021	2022	Pitt	Center for the Scholarship of Teaching and Learning in Nursing Education Advisory Board
2020	2021	LRDC	Executive Committee
2025	Present	Psych	Workload Committee

TEACHING:

Start	End	Level	Class
2016	2016	Grad	Topics in Psychology: Academic Writing Workshop
2014	Present	Grad	Cognitive Program Research Seminar (except 16-17)
2013	Present	Undergrad	Research Methods (2 sections per year most years, between 60-140 students per section)

GRADUATE STUDENT MENTORSHIP:

Start	End	Name	Major Awards
2013	2019	Kevin Soo	
2014	2019	Cory Derringer	
2014	2014	A.J. Koury	
2017	2022	Ciara Willett	
2017	2022	Zachary Caddick	U. of Pittsburgh Mellon Dissertation Award
2019	2025	Yiwen Zhang	
2020	2024	Sara Jaramillo	NSF Graduate Research Fellowship Program

GRADUATE STUDENT MILESTONE COMMITTEES:

M = Master's, SE = Specialty/Comprehensive Exam, D=Dissertation

Brendan Barstow (16, M), Joshua Tremel (17, SE), Heather Bruett (19, M), Beverly Conrique (20, M), Griffin Koch (20, SE), Kole Norberg (22, D), Danielle Fox (22, M),

Quentin King-Shephard (22, M; ongoing, SE), Jessica Macaluso (23, M), Alex Silver (24, D)

GRADUATE STUDENT MENTORING COMMITTEES:

Regina Leckie (15), Brendan Barstow (14-16), Bart Larson (15-17), Alexandria Weaver (17-18, chair), Emily Braham (13-19), Kelly Boden (19), Heather Bruett (16-21), Griffin Koch (17-23, chair), Quentin King Shepard (18-Present), Alex Silver (19-24, chair), Yuetong Bai (23-Present), Yesenia Arevalo Jaimes (24-Present)

UNDERGRADUATE STUDENT HONORS THESIS COMMITTEES:

Sara Winter (15), Leighanne Ohlinger (18), Richaela Cowan (19), Joanna Ye (19, my lab), Danielle Nebril (22, my lab), Erin Zuo (25)

UNDERGRADUATE STUDENT AND VOLUNTEER MENTORSHIP:

2013 Kenneth Holstein
2016 Regis Kearney
2018 Gabriela Cuadro, Julia Gillow, Minbae Lee, Priya Chandrasekeran, Caitlin Haggerty, Beatrice Langer, Aleks Brown, Chris Shon, Melinda Rosen, Elise Faut, Joanna Ye, Michael Datz, Rachel Hopkins, Matthew Dodson
2019 Brooke O'Hare, Elise Faut, Beatrice Langer, Joanna Ye, Julia Gillow, Isabella Demo, Elizabeth Lawley, Michael Datz, Watole Hamda, Barbara Como, Marissa Lasalle
2020 Watole Hamda, Lundy Rosen, Marissa LaSalle, Alayna Brothers, Alli Sitkowski, Liz Lawley, Katie Lindsay, Daniel Lehr, Shannon Cormier, Barbara Como
2021 Katherine Lindsay, Daniel Lehr, Michael Datz, Kayla Grutowski, Johani Thomas, Eric Cohn, Anna Gogiberidze, Caroline Johnson, Deandra Robinson, Danielle Nebril, Julia Walker, Ashley Harbaugh, Rabia Kahn, Shannon Cormier
2022 Danielle Nebril, Thomas Saba, Jackson Weiler, London Claridy, Brianna Hale, Sophie Kempler, Shalyn Faison
2023 Shalyn Faison
2024 Nicholas Cassano, Rohini Das, Justin Luo, Qihui Sun

**UNDERGRAD AND GRADUATE STUDENT TEACHING ASSISTANT SUPERVISION
FOR RESEARCH METHODS BY TERM:**

- 14F Eli Talbert, Andrew Esper, Estizer Smith, Ellen Borza, Ryan Young
- 15F Amy Malakoff, Darik O'Neil, Matthew Clista, Leanne Scharr, Maranda Trapolsi, Travis Slopek
- 17Sp Leighanne Ohlinger, Erin Jarvis, Emily Braham, Kevin Soo, Cory Derringer
- 17F Jamie Amemiya, Ariel Epouhe, Amanda Bressler, Noelle Buchanan, Maria Evankovich, Michelle Holcomb, Geneva Litz, Susie Chen, Jiayuan Ye
- 18F Hanna Smyles, Beatrice Langer, Leslie Rajendran, Xinyu Lu, Nimisha Rajesh, Carlson Sunleaf, Ciara Willett, Zac Caddick
- 20F Kole Norberg, Liz Lawley, Shannon Cormier, Katie Lindsay, Dan Lehr, Kayla Grutowski, Johani Thomas, Eric Cohn, Anna Gogiberidze, Danielle Nebril, Julia Walker
- 21F Ciara Willett, Margaret Cavanaugh, Sofina Shekar, Ariella Levy, Caroline Johnson, Deandra Robinson, Ashley Harbaugh
- 22F London Claridy, Audrey Lorence, Ram Mehta, Isabel Novacich, Ryley Scheer, Yiwen Zhang
- 23F Stacy Cremer, Joelle Farah, Danielle Fox