Brandon M. Turner

Professor
Department of Psychology
The Ohio State University
turner.826@gmail.com
(417) 619-0957

Education

Ph.D. in Quantitative Psychology, The Ohio State University, 2008-11
Advisor: Trisha Van Zandt

Master of Applied Statistics, The Ohio State University, 2008-11

Master of Arts in Quantitative Psychology, The Ohio State University, 2008-09

Bachelor of Science in Psychology, Cum Laude, Missouri State University, 2004-08
Bachelor of Science in Mathematics, Cum Laude, Missouri State University, 2004-08
Minor in Computer Science.

Employment

Professor *May 2022 to present*
Associate Professor *August 2019 to May 2022*
Assistant Professor *August 2014 to 2019*
The Ohio State University
Professor in the cognitive and cognitive neuroscience areas of the psychology department. Responsible for mentoring students, teaching courses, servicing the university, and conducting scholarly research.
Courses Taught

PSYCH 3513	Introduction to Cognitive Neuroscience	2014, 15, 16, 19, 21
PSYCH 5608	Introduction to Mathematical Psychology	2017, 18
PSYCH 5612	Introduction to the Electroencephalogram	2019, 21, 23
PSYCH 6880	Techniques and Topics in Cognitive Neuroscience	2020
PSYCH 7695.04	Introduction to Model-based Cognitive Neuroscience	2016, 18

Fellow in the Center for Mind, Brain and Computation *September 2012 to September 2014*
Stanford University
Responsible for helping to organize the colloquium series offered by the Center for Mind, Brain and Computation. As part of the fellowship, I teach one course per year on using Bayesian statistics for computational cognitive models.

Postdoctoral Fellowship *September 2012 to September 2014*
Stanford University
Primary Advisor: James McClelland
The primary goal of the fellowship is to further extend likelihood-free methods of Bayesian inference to general, hierarchical, and nonparametric settings for complex, stochastic models of decision making in neuroscience.

Postdoctoral Researcher *September 2011 to September 2012*
University of California, Irvine
Primary Advisor: Mark Steyvers
Secondary Advisors: Michael Lee, Bill Batchelder
We investigated novel approaches for aggregating forecasting judgments across experts in the intelligence community. This was a collaborative effort with six other universities and a defense contractor.

Statistical Consultant *August 2009 to June 2011*
The Ohio State University
Statistical consultant for the psychology department, primary duties included applying item response theory to Psychology 100 examinations, interpreting the results, and helping to improve the measurement quality of the exams.

Graduate Teaching Associate *August 2008 to June 2011*
The Ohio State University
Preparation and presentation of lectures, preparing syllabi, preparing homework, supervision of group work, grading homework, tests and quizzes. Psychology 321 is an undergraduate course whereas Psychology 826-7-8 are graduate–level courses.

PSYCH 321	Statistical Methods in Psychology	Autumn 2008, Winter 2009, Spring 2009
PSYCH 826	Statistics in Psychology	Autumn 2009, Autumn 2010
PSYCH 827	Analysis of Variance	Winter 2010, Winter 2011
PSYCH 828	Correlational Analysis	Spring 2010, Spring 2011

Professional Memberships

- Member of the American Psychological Association
- Member of the Cognitive Science Society
- Member of the International Society for Bayesian Analysis
- Member of the Psychometric Society
- Member of the Psychonomic Society
- Member of the Society for Mathematical Psychology
- Member of the Society for Neuroscience

Professional Service

- Ad Hoc Journal Reviewer for *Cognition*, *Cognitive Psychology*, *eLife*, *Journal of Mathematical Psychology*, *Journal of Memory and Language*, *Journal of Personality Assessment*, *Nature Communications*, *Nature Human Behavior*, *NeuroImage*, *PLOS Computational Biology*, *PLOS ONE*, *Psychological Methods*, *Psychological Review*, *Psychonomic Bulletin and Review*, *Psychophysiology*, *SAGE Open*, and *Trends in Cognitive Science*.
- President of the *Society for Mathematical Psychology* since June 2025.
- Member of the Executive Board for the *Society for Mathematical Psychology* since 2023.
- Member of Editorial Advisory Board for *Cognitive Psychology* since 2021.

- Guest Editor: Special Focus Issue entitled "Integrating Neural and Behavioral Measures of Cognition" at the Journal of Cognitive Neuroscience
- Member of Editorial Board for *Psychological Science* since 2020.
- Organizer: Workshop on Integrating Neural and Behavioral Measures of Cognition. The Ohio State University (2019).
- Organizer: The 2019 Midwest Cognitive Science Conference. The Ohio State University.
- Associate Editor of *Decision* since 2017.
- Organizer (joint with Andrew Heathcote, Scott Brown, Dora Matzke, Marc Howard, Guy Hawkins, and Maxim Bushmakin): Training Grant for a four day workshop on Bayesian Estimation of Evidence Accumulation Architectures in Neuroscience and Cognition, held at Psychonomics, 2016.
- Guest Editor (joint with Thomas Palmeri and Bradley Love): Special Issue entitled "Integrating Neural and Behavioral Measures of Cognition" at the Journal of Mathematical Psychology
- Organizer (joint with Andrew Heathcote and Scott Brown): Workshop on Estimating Parameters of Accumulator Models at the Annual Meeting for the Cognitive Science Society.
- Organizer: Symposium on Jointly Modeling Behavioral and Neural Measures of Cognition at the 2013 Meeting of the Society for Mathematical Psychology
- Organizing Committee: Symposium on Innovative Bayesian Methodology at the 2012 Meeting of the Society for Mathematical Psychology

Awards and Honors

- Fred Brown Research Award, Department of Psychology OSU (April, 2024)
- Mid-career Faculty Excellence Award (2021-2022), The Ohio State University
- CAREER Award, National Science Foundation (August, 2019)
- Early Career Award, Psychonomic Society (June, 2019)
- William K. Estes Early Career Award, Society for Mathematical Psychology (July, 2016)
- Fred Brown Research Award, Department of Psychology OSU (April, 2016)
- R. Duncan Luce best paper award 2011-13, Society for Mathematical Psychology (July, 2014)
- Ruth L. Kirschstein National Research Service Award (NRSA), NIH (June, 2012)
- Psychometrika Dissertation Award, Psychometric Society (June, 2012)
- Bennet B. Murdock Award, CEMS (August, 2011)
- Graduate Student Research Excellence Award, The Ohio State University (May, 2011)
- Institute for Perception Award (March, 2011)
- Student Travel Award, Society for Mathematical Psychology (2009, 2010, 2011)
- Arbuckle Leadership Award, Missouri State University (May, 2008)
- Maxwell Research Award, Missouri State University (May, 2008)

- Top Paper Award, Kappa Mu Epsilon Honor Society (March, 2008)
- Top Poster Award, Great Plains Psychology Conference (October, 2007)

Ongoing Research Support

NIH: R01HD078545 *9/1/2021 – 8/31/2026*
The Development of Categorization
Role: co-PI
Amount: $3,200,000
The goal of this research is to understand how selective attention develops over time by studying children in a longitudinal design from ages five to ten years old. We are developing computational models to explain the joint distribution of choice and fixation duration (from eye-tracking) during the trial, and infer the degree to which selective attention develops as children age.

Completed Research Support

NSF: CAREER *9/1/2019 – 8/31/2024*
On the Neural and Mechanistic Bases of Higher-order Cognition
Role: PI
Amount: $800,000
The goal of this research is to elaborate on existing computational framework to study aspects of higher-order cognition, such as self-control, learning, and impulsivity, that are more difficult to appreciate with either behavioral or neural data alone.

NIH: P01HD080679 *9/1/2016 – 8/31/2022*
Development and Neurobiology of Categorization
Role: co-PI
Amount: $5,772,969
The goal of this research is to use a cross disciplinary approach ranging from pigeon studies, fMRI data, and computational theories to better understand the neural basis of categorization.

NCS-FO: Collaborative Research, SMA-1533500 *8/1/2015 – 7/31/2019*
Understanding Individual Differences in Cognitive Performance: Joint Hierarchical Bayesian Modeling of Behavioral and Neuroimaging Data
Role: co-PI
Amount: $432,165
The goal is to develop and apply a joint hierarchical Bayesian framework to model behavioral and neuroimaging data to understand individual differences in cognitive performance.

FA8650-16-1-6770: Air Force Research Lab *09/30/2016 – 03/31/2019*
SUPREME: Sensing to understanding and prediction realized via an experiment and modeling ecosystem
Role: PI
Amount: $1,216,368
The goal of this research is to develop a battery for assessing cognitive performance, methods for detecting changes in cognitive function, and methods for optimizing information gain within the assessment.

William K. and Katherine W. Estes Fund *1/13/2016 – 11/20/2016*
Bayesian Estimation of Evidence Accumulation Architectures in Neuroscience and Cognition
Role: co-PI
This proposal is for an advanced training grant on Bayesian estimation of evidence accumulation models that are popular in cognitive science and neuroscience. The venue for this training series is a four day workshop at Psychonomics in November, 2016.

National Research Service Award: 1F32GM103288-01 *9/24/12 – 9/23/14*
Analyzing Complex Stochastic Models using Approximate Bayesian Computation
Role: PI
The award is meant to support the investigation of complex, stochastic, neutrally-inspired architectures of human cognition using techniques developed for performing approximate Bayesian computation.

Supervision

- Eeshan Hasan, Ph.D., Postdoctoral Researcher, 8/2025 – current
- Robert Ralston, Ph.D., Postdoctoral Researcher, 8/2023 – current
- Emily Weichart, Ph.D., Postdoctoral Researcher, 8/2020 – 5/2023
- Joyce Zhao, Ph.D., Postdoctoral Researcher, 9/2020 – 6/2021
- Peter Kvam, Ph.D., Postdoctoral Researcher, 8/2018 – 8/2019
- Ting Wang, Ph.D., Postdoctoral Researcher, 8/2015 – 8/2016
- Nicole King, Ph.D. Graduate Student, 8/2021 – current
- Yiming Wang, Ph.D. Graduate Student, 8/2024 – current
- Benson Zhao, Ph.D. Graduate Student, 8/2024 – current
- Dan Evans, Ph.D. Graduate Student, 8/2020 – 8/2024
- Inhan Kang, Ph.D. Graduate Student (joint), 8/2019 – 12/2021
- Matthew Galdo, Ph.D. Graduate Student, 8/2018 – 5/2023
- Fiona Molloy, Masters Graduate Student, 8/2018 – 6/2020
- Woojong Yi, Masters Graduate Student, 8/2018 – 4/2021
- Nathaniel Haines, Ph.D. Graduate Student (joint), 8/2017 – 8/2021
- Giwon Bahg, Ph.D. Graduate Student, 8/2016 – 12/2021
- Qingfang Liu, Ph.D. Graduate Student, 8/2016 – 1/2021
- James Palestro, Masters Graduate Student, 8/2015 – 5/2019
- Yiming Wang, Graduate Student, 8/2024 – current
- Bingsong Zhao, Graduate Student, 8/2024 – current
- Dan Evans, Ph.D. Research Assistant, 5/2019 – 8/2020

Books

Turner, B. M. and Kvam, P. D. (in preparation). A tutorial on model-based cognitive neuroscience.

Forstmann, B. U. and Turner, B. M. (2024). Introduction to model-based cognitive neuroscience. Second Edition. Springer: New York.

Turner, B. M., Forstmann, B. U., and Steyvers, M. (2019). Joint models of neural and behavioral data. Springer: New York.

Palestro, J. J., Osth, A. F., Sederberg, P. B., Van Zandt, T., and Turner, B. M. (2018). Likelihood-free Bayesian inference in cognitive science. Springer: New York.

Book Chapters

Turner, B. M. (2024). Cognitive modeling: Joint models use cognitive theory to understand brain activations. In Kay, K. (Ed.), *Computational and Network Modeling of Neuroimaging Data, Edition 1.* Elsevier: Amsterdam.

Turner, B. M., Bahg, G., Galdo, M., and Liu, Q. (2024). Advancements in joint modeling of neural and behavioral data. In Forstmann, B. U. & Turner, B. M. (Eds.), *An introduction to model-based cognitive neuroscience: Second Edition.* (pp. 211-239). Springer: New York.

Thomas, N., Turner, B. M., and Van Zandt, T. (2023). Approximate Bayesian Computation. In Ashby, Colonius, and Dzhafarov (Eds.), *New Handbook of Mathematical Psychology.* Springer: New York.

Ly, A., Boehm, U., Heathcote, A., Turner, B. M., Forstmann, B., Marsman, M., Matzke, M. (2017) A flexible and efficient hierarchical Bayesian approach to the exploration of individual differences in cognitive-model-based neuroscience. In Moustafa, A. A. (Ed.). Computational models of brain and behavior. Wiley-Blackwell: New Jersey.

Turner, B. M. (2015). Constraining cognitive abstractions through Bayesian modeling. In Forstmann, B. U. & Wagenmakers, E.-J. (Eds.), *An introduction to model-based cognitive neuroscience.* Springer: New York.

Peer Reviewed Journal Publications

Bahg, G., Sloutsky, V. M., and Turner, B. M. (2025). Algorithmic personalization of information can cause inaccurate generalization and overconfidence. *Journal of Experimental Psychology: General*, *154*, 25032522.

Haines, N., Kvam, P. D., Irving, L., Smith, C. T., Beauchaine, T. P., Pitt, M. A., Ahn, W.-Y., and Turner, B. M. (in press). A tutorial on using generative models to advance psychological science: Lessons from the reliability paradox. In press at *Psychological Methods.*

Yoo, M., Bahg, G., Turner, B. M., and Krajbich, I. (2025). People display consistent recency and primacy effects in behavior and neural activity across perceptual and valuebased judgments. *Cognitive, Affective, & Behavioral Neuroscience. 25*, 923940.

Broschard, M. B., Turner, B. M., Tranel, D., and Freeman, J. H. (2024). Dissociable roles of the dorsolateral and ventromedial prefrontal cortex in human categorization. *Journal of Neuroscience*,

44, e2343232024.

Gao, M., Turner, B. M., and Sloutsky, V. M. (2024). The role of attention in category representation. *Cognitive Science*, 48, e13438.

Sloutsky, V. M., Ralston, R., Turner, B. M., and Ghetti, S. (2024). A Little Imprecision Goes a Long Way: Why Imprecise Memories are Good Enough to Launch Memory Development. *Child Development Perspectives*, 00, 1-7.

Turner, B. M. and Sloutsky, V. M. (2024). Cognitive Inertia: Cyclical interactions between attention and memory shape learning. *Current Directions in Psychological Science*, 33(2), 79 86.

Wasserman, E., Turner, B. M., and Güntürkün, O. (2024). The pigeon as a model of complex visual processing. *Neuroscience Insights*, 19, 15.

Weichart, E. R., Unger, L., King, N., Sloutsky, V. M., and Turner, B. M. (2024). The eyes are the window to the representation: Linking gaze to memory precision and decision weights in object discrimination tasks. *Psychological Review*, 131(4), 10451067.

Davis-Stober, C. P., Marley, A. A. J., McCausland, W. J., and Turner, B. M. (2023). An illustrated guide to context effects. *Journal of Mathematical Psychology. 115*, 102790.

De Boeck, P., Pek, J., Walton, K., Wegener, D. T., Turner, B. M., Andersen, A., Beauchaine, T. P., Myung, J. I., and Petty, R. E. (2023). Questioning Psychological Constructs: Current Issues and Proposed Changes. *Psychological Inquiry. 34*, 239-257.

De Boeck, P., Pek, J., Walton, K., Wegener, D.T., Turner, B., Andersen, B., Beauchaine, T.P., Lecavalier, L., Myung, J.I., and Petty, R.E. (2023). A call for keeping doors open and for parallel efforts. *Psychological Inquiry*, *34*, 292-297.

Haines, N., Kvam, P. D., and Turner, B. M. (2023). Bridging the description-experience gap in risky decision-making: Asymmetric learning of positive and negative prediction errors as a causal mechanism. *Cognitive, Affective, and Behavioral Neuroscience. 23*, 557-577.

Sloutsky, V. M., and Turner, B. M. (2023). Cognition: The power of simple associative learning. *Current Biology*, 33, 223-225.

Turner, B. M. and Wasserman, E. A. (2023). The Pigeon as a machine: Complex category structures can be acquired by a simple associative model. *iScience. 26*, 107998.

Blanco, N., Sloutsky, V. and Turner, B. M. (2022). The benefits of immature cognitive control: How distributed attention guards against learning traps. *Journal of Experimental Child Psychology*, *226*, 105548.

Galdo, M., Weichart, E. R., Sloutsky, V. M., and Turner, B. M. (2022). The Quest for Simplicity in Human Learning: Identifying the Constraints on Attention. *Cognitive Psychology*, *138*, 101508.

Kang, I., Galdo, M., and Turner, B. M. (2022). Constraining Functional Coactivation with a Cluster-based Structural Connectivity Network. *Network Neuroscience*, 1-34.

Kang, I., Yi, W., and Turner, B. M. (2022). A Regularization Method for Linking Brain and Behavior. *Psychological Methods*, *27*,400-425.

Weichart, E. R.*, Evans, D. G.*, Galdo, M., Bahg, G., and Turner, B. M. (2022). Distributed

Neural Systems Support Flexible Attention Updating during Category Learning. *Journal of Cognitive Neuroscience, 34*, 17611779. *Joint first authorship.

Weichart, E. R., Galdo, M. Sloutsky, V. M., and Turner, B. M. (2022). As Within, so Without; As Above, so Below: Common Mechanisms Can Support Between- and Within-Trial Learning Dynamics. *Psychological Review*, 129, 11041143.

Kirkpatrick, R. P., Turner, B. M., and Sederberg, P. B. (2021). Equal Evidence Perceptual Tasks Suggest a Key Role for Interactive Competition in Decision-Making. *Psychological Review. 128*, 10511087.

Kvam, P. D., Romeu, R. J., Turner, B. M., Vassileva, J., and Busemeyer, J. R. (2021). Testing the factor structure underlying behavior using joint cognitive models: Impulsivity in delay discounting and Cambridge gambling tasks. *Psychological Methods. 26*, 1837.

Kvam, P. D., and Turner, B. M. (2021). Reconciling similarity across models of continuous selections. *Psychological Review. 128*, 766786.

Wang, T., Merkle, E. C., Anguera, J. A., and Turner, B. M. (2021). Score-based Tests for Detecting Heterogeneity in Linear Mixed Models. *Behavioral Research Methods. 53*, 216-231.

Weichart, E. R., Darby, K. P., Fenton, A. W., Jacques, B. G., Kirkpatrick, R. P., Turner, B. M., and Sederberg, P. B. (2021). Quantifying Mechanisms of Cognition with an Experiment and Modeling Ecosystem. In press at *Behavioral Research Methods. 53*, 18331856.

Bahg, G., Evans, D. G., Galdo, M., and Turner, B. M. (2020). Gaussian process linking functions for mind, brain, and behavior. *Proceedings of the National Academy of Sciences. 117*, 29398-29406

Bahg, G., Sederberg, P., Myung, J., Li, X., Pitt, M., Lu, Z.-L., and Turner, B. M. (2020). Real-time adaptive design optimization within functional MRI experiments. *Computational Brain and Behavior. 3*, 400-429.

Galdo, M., Bahg, G., and Turner, B. M. (2020). Variational Bayesian methods for cognitive science. *Psychological Methods. 25*, 535-559.

Haines, N., Beauchaine, T. P., Galdo, M., Rogers, A. H., Hahn, H., Pitt, M. A., Myung, J. I., Turner, B. M., and Ahn, W.-Y. (2020). Anxiety modulates preference for immediate rewards among trait-impulsive individuals: A hierarchical Bayesian analysis. *Clinical Psychological Science. 8*, 1017-1036.

Liu, Q., Petrov, A. A., Lu, Z.-L., and Turner, B. M. (2020). Extensions of Multivariate Dynamical Systems to simultaneously explain neural and behavioral data. *Computational Brain and Behavior*, *3*, 430-457.

Molloy, M. F., Romeu, R. J., Kvam, P. D., Finn, P. R., Busemeyer, J. R., and Turner, B. M. (2020). Hierarchies improve individual assessment of temporal discounting behavior. *Decision*, *7*, 212-224

Weichart, E. R., Turner, B. M., and Sederberg, P. B. (2020). A model of dynamic, within-trial conflict resolution for decision making. *Psychological Review*, *127*, 749-777.

Busemeyer, J., Gluth, S., Rieskamp, J., and Turner, B. M. (2019). Cognitive and neural bases of multi-attribute, multi-alternative, value-based decisions. *Trends in Cognitive Science. 23*, 251-263.

Gaut, G., Li, X., Turner, B. M., Cunningham, W. A., Lu, Z.-L., and Steyvers, M. (2019). Predicting task and subject differences with functional connectivity and BOLD variability. *Brain Connectivity. 9.*

Molloy, M.F., Bahg, G., Lu, Z.-L., and Turner, B. M. (2019) Individual differences in the neural dynamics of response inhibition.*Journal of Cognitive Neuroscience. 31*, 1976–1996.

Molloy, M. F., Galdo, B. M., Bahg, G., Liu, Q., and Turner, B. M. (2019). What's in a Response Time?: On the Importance of Response Time Measures in Constraining Models of Context Effects. *Decision. 6*, 171-200.

Poldrack, R. A., Feingold, F., Frank, M. J., Gleeson, P., de Hollander, G., Huys, Q. J. M., Love, B. C., Markiewicz, C. J., Moran, R., Ritter, P., Rogers, T. T., Turner, B. M., Yarkoni, T., Zhan, M., and Cohen, J. D. (2019). The importance of standards for sharing of computational models and data. *Computational Brain and Behavior. 2*, 229–232.

Turner, B. M. (2019). Toward a common representational framework for adaptation. *Psychological Review. 126*, 660–692.

Turner, B. M., Palestro, J. J., Miletic, S., and Forstmann, B. U. (2019). Advances in techniques for imposing reciprocity in brain-behavior relations. *Neuroscience and Biobehavioral Reviews. 102*, 327–336.

Molloy, M. F., Bahg, G., Li, X., Steyvers, M., Lu, Z.-L., and Turner, B. M. (2018). Hierarchical Bayesian Analyses for Modeling BOLD Time Series Data. *Computational Brain and Behavior. 2*, 184-213.

Palestro, J. J., Bahg, G., Sederberg, P. B., Lu, Z.-L., Steyvers, M., and Turner, B. M. (2018). A Tutorial on Joint Models of Neural and Behavioral Measures of Cognition. *Journal of Mathematical Psychology. 84*, 20-48.

Palestro, J. J., Weichart, E., Sederberg, P. B., and Turner, B. M. (2018). Some Tasks Demands Induce Collapsing Bounds: Evidence from a Behavioral Analysis. *Psychological Bulletin and Review. 25*, 1225-1248.

Turner, B. M., McClelland, J. L., and Busemeyer, J. (2018). Bayesian Statistics to Assess Bayes Optimality. *Behavioral and Brain Sciences*, e246.

Turner, B. M., Miletic, S., and Forstmann, B. U. (2018). Deep Neural Networks and Computational Cognitive Modeling. *NeuroImage. 180*, 117-118.

Turner, B. M., Rodriguez, C. A., Liu, Q., Molloy, M. F., Hoogendijk, M., and McClure, S. M. (2018). On the Neural and Mechanistic Bases of Self-Control. *Cerebral Cortex.* 1-19.

Turner, B. M., Schley, D., Muller, C., and Tsetsos, K. (2018). Competing models of multi-attribute, multi-alternative preferential choice. *Psychological Review 125*, 329-362.

Turner, B. M. and Van Zandt (2018). Approximating Bayesian Inference through Model Simulation. *Trends in Cognitive Science. 22*, 826-840.

Turner, B. M., Gao, J., Koenig, S., Palfy, D., and McClelland, J. L. (2017). The averaging diffusion model: A model of the perceptual time course of multimodal integration. *Psychonomic Bulletin and Review. 24*, 1819-1843.

Miletic, S., Turner, B. M., Forstmann, B. U., and Van Maanen, L. (2017). Parameter recovery for the Leaky, Competing Accumulator Model. *Journal of Mathematical Psychology. 76*, 25-50.

Palmeri, T. J., Love, B. C., and Turner, B. M. (2017) Model-based cognitive neuroscience. *Journal of Mathematical Psychology. 76*, 59-64.

Turner, B. M., Forstmann, B. U., Love, B. C., Palmeri, T. J., and Van Maanen, L. (2017) Approaches to analysis in model-based cognitive neuroscience. *Journal of Mathematical Psychology. 76*, 65-79.

Turner, B. M., Wang, T., and Merkle, E. (2017). Factor analysis linking functions for simultaneously modeling neural and behavioral data. *NeuroImage. 153*, 28-48.

Turner, B. M., and Schley, D. (2016). The anchor integration model: A descriptive model of anchoring effects. *Cognitive Psychology. 90*, 1-47.

Turner, B. M., Rodriguez, C. A., Norcia, T., McClure, S. M., and Steyvers, M. (2016). Why more is better: Simultaneous modeling of EEG, fMRI and behavioral data. *NeuroImage. 128*, 96-115.

Turner, B. M., Sederberg, P. B., and McClelland, J. L. (2016). Bayesian analysis of simulation-based models. *Journal of Mathematical Psychology. 72*, 191-199.

Rodriguez, C. A., Turner, B. M., Van Zandt, T., and McClure, S. M. (2015). The neural basis of discounted-value accumulation. *European Journal of Neuroscience.* 1-11.

Turner, B. M., van Maanen, L., and Forstmann, B. U. (2015). Informing cognitive abstractions through neuroimaging: The Neural Drift Diffusion Model. *Psychological Review. 122*, 312-336.

Van Maanen, L., Turner, B. M., and Forstmann, B. U. (2015). From model-based perceptual decision-making to spatial interference control. *Current Opinion in Behavioral Sciences. 1*, 72-77.

Djulbegovic, B. H., Beckstead, J., Reljic, T., Hozo, I., Kumar, A., Cannon-Bowers, J., Taylor, S., Tsalatsanis, A., Turner, B. M., and Paidas, C. (2014). Evaluation of physicians' cognitive styles. *Medical Decision Making. 34*, 627-637.

Mittner, M., Boekel, W., Tucker, A. M., Turner, B. M., Heathcote, A., Forstmann, B. U. (2014). When the brain takes a break: A model-based analysis of mind wandering. *Journal of Neuroscience. 34*, 16286-16295.

Rodriguez, C. A., Turner, B. M., and McClure, S. M. (2014). Intertemporal choice as discounted value accumulation. *PLoS ONE. 9*, e90138.

Steyvers, M., Merkle, E. C., Wallsten, T. S., and Turner, B. M. (2014). Evaluating probabilistic forecasts with Bayesian signal detection models. *Risk Analysis. 34*, 435 – 452.

Turner, B. M., and Sederberg, P. B. (2014). A generalized, likelihood-free method for posterior estimation. *Psychonomic Bulletin and Review. 21*, 227-250.

Turner, B. M., Steyvers, M., Merkle, E. C., Budescu, D. V., and Wallsten, T. S. (2014). Forecast aggregation via re-calibration. *Machine Learning. 95*, 261-289.

Turner, B. M., and Van Zandt, T. (2014). Hierarchical approximate Bayesian computation. *Psy-*

chometrika. 79, 185-209.

Turner, B. M., Dennis, S. and Van Zandt, T. (2013). Likelihood-free Bayesian analysis of memory models. *Psychological Review. 120*, 667-678.

Turner, B. M., Forstmann, B. U., Wagenmakers, E.-J., Brown, S. D., Sederberg, P. B., and Steyvers, M. (2013). A Bayesian framework for simultaneously modeling neural and behavioral data. *NeuroImage. 72*, 193-206.

Turner, B. M., Sederberg, P. B., Brown, S. D., and Steyvers, M. (2013). A method for efficiently sampling from distributions with correlated dimensions. *Psychological Methods. 18*, 368-384.

Turner, B. M., Rim, H., Betz, N. and Nygren, T. (2012). The maximization inventory. *Judgment and Decision Making. 7*, 48-60.

Turner, B. M., and Sederberg, P. B. (2012). Approximate Bayesian computation with differential evolution. *Journal of Mathematical Psychology. 56*, 375-385.

Turner, B. M., and Van Zandt, T. (2012). A tutorial on approximate Bayesian computation. *Journal of Mathematical Psychology. 56*, 69-85.

Betz, N. E., and Turner, B. M. (2011). Using item response theory and adaptive testing in online career assessment. *Journal of Career Assessment. 19*, 274-286.

Rim, H. B., Turner, B. M., Betz, N. and Nygren, T. (2011). Studies of the dimensionality, correlates, and meaning of measures of the maximizing tendency. *Judgment and Decision Making. 6*, 565-579.

Turner, B. M., Van Zandt, T., and Brown, S. (2011). A dynamic, stimulus-driven model of signal detection. *Psychological Review. 118*, 583-613.

Turner, B. M., Betz, N. E., Edwards, M. C., and Borgen, F. H. (2010). Psychometric examination of an inventory of self-efficacy for the Holland vocational themes using item response theory. *Measurement and Evaluation in Counseling and Development. 43*, 188-198.

Turner, B. M. (2009). The mathematical process of classification. *The Pentagon. 68*, 5-16.

Manuscripts in Progress

Bahg, G., Sloutsky, V. M., and Turner, B. M. (under review). Adverse effects of information personalization on human learning. Revise and resubmit decision reached at *Journal of Experimental Psychology: General*.

King, N., Sloutsky, V. M., and Turner, B. M. (in preparation). Learning in the Context of Partially Encoded Experiences.

Sloutsky, V. and Turner, B. M. (under review). Understanding cognitive development: An adaptive nature of immaturity

Turner, B. M., Weichart, E. R., Blanco, N., Unger, L., Kvam, P., Ralston, R., and Sloutsky, V. M. (in preparation). Cognitive Inertia: When learning distorts reality.
Yoo, M., Bahg, G., Turner, B. M., and Krajbich, I. (under review). People display consistent recency and primacy effects in behavior and neural activity across perceptual and value-based judgments.

Revise and resubmit decision reached at *Cognitive, Affective, and Behavioral Neuroscience.*

Peer Reviewed Conference Papers

NOTE: Presenter in boldface type.

Turner, B. M. and Steyvers, M. A wisdom of the crowd approach to forecasting. Workshop presentation at the 25th Annual Conference of Neural Information Processing Systems, Grenada, Spain, December, 2011

Invited Talks

How loops among attention, representation, and decision making distort reality. Presented as part of a weekly data club meeting at the University of Arkansas Medical Sciences. 2022.

Linking functions for mind, brain, and behavior. Presented as part of the Amsterdam Summer School for model-based cognitive neuroscience, University of Amsterdam. 2022.

How loops among attention, representation, and decision making distort reality. Presented as part of a symposium on misinformation at Facebook. 2022.

How loops among attention, representation, and decision making distort reality. Presented as part of a monthly seminar at Google. 2021.

Integrating theories of cognition and neuroimaging. Presented as recipient of the 2019 Early Investigator Award at the 60th Annual Meeting of the Psychonomic Society. 2020.

Linking functions for mind, brain, and behavior. Presented as part of the model-based cognitive neuroscience symposium at the 53rd Annual Meeting of the Society for Mathematical Psychology. 2020

Integrating theories of cognition and neuroimaging. Presented as a part of the weekly seminar in the Mathematical and Computational Psychology Colloquium in the Department of Psychological Sciences at Purdue University. February, 2020.

Integrating theories of cognition and neuroimaging. Presented as part of a monthly seminar series at Wright State University. Dayton, Ohio. September, 2019.

Constraining cognitive abstractions with neuroimaging. Presented as part of a workshop on Integrating Neural and Behavioral Measures of Cognition. Columbus, Ohio. May, 2019.

Constraining cognitive abstractions with neuroimaging. Presented as part of the Sackler Colloquium by the National Academy of Sciences. Irvine, California. May, 2019.

Integrating theories of cognition and neuroimaging. Presented as part of a monthly seminar series at Indiana University. Bloomington, Indiana. September, 2018.

On the Neural and Mechanistic Bases of Self-control. Presented as part of the model-based cognitive neuroscience symposium at the 50th Annual Meeting of the Society for Mathematical Psychology. Warwick, England. August, 2017.

Joint Models of Neural and Behavioral Data. Presented as part of the Introduction to Model-based Cognitive Neuroscience symposium at the 57th Annual Meeting of the Psychonomic Society. Boston, Massachusetts. November, 2016.

Sometimes Behavioral Data are Not Enough: Neural Asymmetries in Intertemporal Choice. Presented as part of the Model-based Cognitive Neuroscience symposium at the 2nd Annual Satellite Meeting of the Society for Mathematical Psychology. Boston, Massachusetts. November, 2016.

Integrating Neural and Behavioral Measures of Cognition. Presented as the plenary lecture at the 49th Annual Meeting of the Society for Mathematical Psychology. New Brunswick, New Jersey. August, 2016.

Likelihood-free Bayesian Modeling: Applications in Cognitive Science. Presented at Neural Information Processing Systems Conference. Montreal, Quebec. December, 2015.

Integrating Neural and Behavioral Measures of Cognition. Presented at the Princeton Neuroscience Institute. Princeton University. August, 2015.

Integrating Neural and Behavioral Measures of Cognition. Presented at the University of Amsterdam's Summer School on Model-based Cognitive Neuroscience. Amsterdam, The Netherlands. June, 2015.

Extensions of a dynamic, stimulus-driven model of signal detection: Response times, confidence judgments, and multi-alternative choice. Presented at the Bay Area Cognitive Science Conference. University of California, Berkeley. December, 2013.

Constraining cognitive abstractions through Bayesian modeling and neuroscience. Presented as part of a workshop on Interfacing Models with Brain Signals to Investigate Cognition at the University of California, Irvine. November, 2013.

Integrating neuroscience and cognitive modeling. Presented at a team meeting for the Deep Brain Stimulation Neurosurgery Group at The Ohio State University, Columbus, Ohio. October, 2013.

Constraining cognitive abstractions through Bayesian modeling and neuroscience. Presented as part of a seminar for the University of Amsterdam, Netherlands. July 2013.

ABCDE: A practical, likelihood-free Bayesian analysis technique with applications to computational models of memory and decision-making. Presented as a CARMA colloquium in the School of Mathematical and Physical Science, Newcastle, Australia. October, 2012.

Likelihood-free Bayesian modeling and the case of the cue overload principle. Presented as part of a weekly seminar in the Psychology Department, Newcastle, Australia. October, 2012.

Likelihood-free Bayesian modeling. Presented as the recipient of the Psychometrika Dissertation Award at the 77th Annual International Meeting of the Psychometric Society, Lincoln, Nebraska. July, 2012.

ABCDE: A practical, likelihood-free Bayesian analysis technique with applications to computational models of memory and decision-making. Presented as the recipient of the Bennet B. Murdock Award at the 8th Annual Context and Episodic Memory Symposium, Bloomington, Indiana. May, 2012.

The evolution of approximate Bayesian computation. Presented as part of a weekly seminar for the Artificial Intelligence and Machine Learning Group, University of California, Irvine. February, 2012.