CURRICULUM VITAE
GREGORY E. COX

Employment and education

2020–Present University at Albany, State University of New York

Assistant Professor, Department of Psychology

2018–2020 Vanderbilt University

Postdoctoral Researcher

2015–2018 Syracuse University

Postdoctoral Researcher

2009–2015 Indiana University, Bloomington

Ph.D., Psychological & Brain Sciences, Cognitive Science

2005–2009 University of Maryland, College Park

B.M., Music Composition

B.S., Psychology

Publications

Cox, G. E., Palmeri, T. J., Schall, J. D., Logan, G. D., & Smith, P. L. (In preparation). A dynamic model of target selection in visual search by neurons in frontal eye fields.

Cox, G. E., Annis, J. (In preparation). A nonparametric baseline model for conducting model checking and model comparison in one step.

Logan, G. D., **Cox, G. E.**, Annis, J., & Lindsey, D. R. B. (In revision). The episodic flanker effect: Memory retrieval as attention turned inward.

Cox, G. E., Logan, G. D., Schall, J. D., & Palmeri, T. J. (Submitted). Decision making by ensembles of accumulators.

Newman, P. M., **Cox, G. E.**, & McNamara, T. P. (Submitted). A computational cognitive model of judgments of relative direction.

Cox, G. E., & Shiffrin, R. M. (In press). Computational models of event memory. In M. J. Kahana & A. Wagner (Eds.), *Oxford Handbook of Human Memory*. Oxford University Press.

Cox, G. E., & Criss, A. H. (2020). Similarity leads to correlated processing: A dynamic model of encoding and recognition of episodic associations. *Psychological Review*. Advance online publication.

Cox, G. E., & Criss, A. H. (2019). Parametric supplements to systems factorial analysis: Identifying interactive parallel processing using systems of accumulators. *Journal of Mathematical Psychology*, *92*, 102247.

Starns, J. J., Cataldo, A. M., Rotello, C. M., Annis, J., Aschenbrenner, A., Bröder, A., **Cox, G. E.**, ..., Wilson, J. (2019). Assessing theoretical conclusions with blinded inference to investigate a potential inference crisis. *Advances in Methods and Practices in Psychological Science*.

Cox, G. E., & Kalish, M. L. (2019). Dial $\hat{M}$ for monotonic: A kernel-based Bayesian approach to state-trace analysis. *Journal of Mathematical Psychology*, *90*, 100–117.

Cox, G. E., Hemmer, P., Aue, W. R., & Criss, A. H. (2018). Information and processes underlying semantic and episodic memory across tasks, items, and individuals. *Journal of Experimental Psychology: General*, *147* (4), 545–590.

Cox, G. E., & Shiffrin, R. M. (2017). A dynamic approach to recognition memory. *Psychological Review*, *124* (6), 795–860.

Cox, G. E., & Criss, A. H. (2017). Parallel interactive retrieval of item and associative information from event memory. *Cognitive Psychology*, *97*, 31–61.

Cox, G. E., & Criss, A. H. (2016). Systems factorial analysis of item and associative retrieval. In A. Papafragou, D. Grodner, D. Mirman, & J. C. Trueswell (Eds.). *Proceedings of the 38th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Cox, G. E., & Shiffrin, R. M. (2015). A dynamic approach to secondary processes in associative recognition. In D. Noelle et al. (Eds.), *Proceedings of the 37th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Nosofsky, R. M., Cao, R., **Cox, G. E.**, & Shiffrin, R. M. (2014). Familiarity and categorization processes in memory search. *Cognitive Psychology*, *75*, 97–129.

Cox, G. E., & Shiffrin, R. M. (2014). Linking memory models and decision models: Insights on frequency and speed/accuracy trade-off. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Nosofsky, R. M., **Cox, G. E.**, Cao, R., & Shiffrin, R. M. (2014). An exemplar-familiarity model predicts short-term and long-term probe recognition across diverse forms of memory search. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *40*(6), 1524–1539.

Cox, G. E., Lewis, N. J., & Shiffrin, R. M. (2013). On the dynamics of information accumulation in recognition. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Cox, G. E., Kachergis, G., & Shiffrin, R. M. (2013). Similarity and strategic effects in recognition memory. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Kachergis, G., **Cox, G. E.**, & Shiffrin, R. M. (2013). The effects of repeated sequential context on recognition memory. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Nokes-Malach, T. J., VanLehn, K., Belenky, D. M., Lichtenstein, M., & **Cox, G. E.** (2013). Coordinating principles and examples through analogy and self-explanation. *European Journal of Psychology of Education*, *28*(4), 1237–1263.

Cox, G. E., Kachergis, G., & Shiffrin, R. M. (2012). Gaussian process regression for trajectory analysis. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Cox, G. E., & Shiffrin, R. M. (2012). Exploring decision rules and sampling dynamics in recognition memory. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Cox, G. E., & Shiffrin, R. M. (2012). Criterion setting and the dynamics of recognition memory. *Topics in Cognitive Science*, *4*(1), 135–150.

Cox, G. E., & Shiffrin, R. M. (2011). Criterion setting and the dynamics of recognition memory. In L. Carlson, C. H ölscher, & T. Shipley (Eds.), *Proceedings of the 33rd annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Cox, G. E., Kachergis, G., Recchia, G., & Jones, M. N. (2011). Toward a scalable holographic word-form representation. *Behavior Research Methods*, *43*(3), 602–615.

Kachergis, G., **Cox, G. E.**, & Jones, M. N. (2011). OrBEAGLE: Integrating orthography into a holographic model of the lexicon. In *Artificial Neural Networks and Machine Learning—ICANN 2011*. Berlin Heidelberg: Springer.

Cox, G. E. (2010). On the relationship between entropy and meaning in music: An exploration with recurrent neural networks. In S. Ohisson and R. Catrambone (Eds.), *Proceedings of the 32nd annual conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Cox, G. E., Harbison, J. I., & Davelaar, E. J. (2008). From list learning to semantic knowledge: Search and learning of associative memory. In *Proceedings of the 30th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Awards and honors

2017 Finalist, Society for Experimental Psychology and Cognitive Science Psychonomics Poster Award

2016 Select-Speaker Award, Psychonomic Society

2015 Robert J. Glushko and Pamela Samuelson Foundation Student Travel Grant, Cognitive Science Society

2015 Outstanding Research Award, Cognitive Science Program, Indiana University, Bloomington

2014 William K. Estes Summer Research Award, Department of Psychological & Brain Sciences, Indiana University, Bloomington

2012 Robert J. Glushko and Pamela Samuelson Foundation Student Travel Grant, Cognitive Science Society

2011 Computational Modeling Prize for Higher-Level Cognition, Cognitive Science Society

2009 Mark S. Harper Award for Excellence in Psychology by an Undergraduate, University of Maryland, College Park

2005–2009 Banneker/Key Scholarship, University of Maryland, College Park

2005–2009 National Merit Scholarship, University of Maryland, College Park

2005–2009 Maryland Distinguished Scholar, University of Maryland, College Park

2007–2008 Keith Steyer Scholarship, University of Maryland, College Park

Grants and fellowships

2010–2013 Graduate Research Fellowship, National Science Foundation

2009 Graduate Fellowship, Indiana University, Bloomington

Invited talks

2017 Information and Processes Underlying Semantic and Episodic Memory Across Tasks, Items, and Individuals. Boston University, May 17.

2016 Understanding the Dynamics of Item and Associative Retrieval. New York University, February 26.

2015 A Dynamic Approach to Recognition Memory. University of Massachusetts, Amherst, February 25.

2014 Unpacking Models of Response Time: A Case Study from Recognition Memory (in Workshop on Sequential Sampling Models for Cognitive and Perceptual Decision Making). Annual Conference of the Cognitive Science Society, July 23–26.

2014 An Introduction to Gaussian Processes in Psychology (with Joseph W. Haupt and Richard M. Shiffrin). Annual Meeting of the Society for Mathematical Psychology, July 18–21.

Conference presentations

2019 A nonparametric baseline model for conducting model checking and model comparison in one step. Annual Meeting of the Society for Mathematical Psychology, July 19–22.

2019 A dynamic model of target selection in visual search by neurons in frontal eye fields. Annual Meeting of the Society for Mathematical Psychology, July 19–22.

2018 Dial $\hat{M}$ for Monotonic: A Kernel-Based Bayesian Approach to State-Trace Analysis. Annual Meeting of the Society for Mathematical Psychology, July 21–24.

2018 Dynamic Retrieval and Encoding of Associative Memory. Annual Meeting of the Society for Mathematical Psychology, July 21–24.

2018 What's in an association? The relationship between similarity and episodic memory for associations. Context and Episodic Memory Symposium, May 7–8.

2017 Relations and Similarity in the Encoding of Associations in Event Memory. Annual Meeting of the Psychonomics Society, November 9–12.

2017 Information and Processes Underlying Semantic and Episodic Memory Across Tasks, Items, and Individuals. Context and Episodic Memory Symposium, May 4–5.

2016 Parallel Facilitatory Retrieval of Item and Associative Information from Event Memory. Annual Meeting of the Psychonomics Society, November 17–20.

2016 Systems Factorial Analysis of Item and Associative Retrieval. Annual Conference of the Cognitive Science Society, August 10–13.

2016 Parallel Facilitatory Retrieval of Item and Associative Information from Event Memory: Insights from Systems Factorial Technology. Annual Meeting of the Society for Mathematical Psychology, August 4–7.

2016 Parallel Facilitatory Retrieval of Item and Associative Information from Event Memory. Context and Episodic Memory Symposium, May 5–6.

2015 A Dynamic Approach to Secondary Processes in Associative Recognition. Annual Conference of the Cognitive Science Society, July 23–25.

2015 The Dynamics of Single Item and Associative Recognition. Annual Meeting of the Society for Mathematical Psychology, July 17–21.

2015 Hierarchical Bayesian Modeling of Item-Level Effects in Item and Associative Memory. Annual Meeting of the Society for Mathematical Psychology, July 17–21.

2015 A Dynamic Approach to Item and Associative Recognition. Annual Summer Interdisciplinary Conference, July 10–15.

2015 A Dynamic Approach to Item and Associative Recognition. Context and Episodic Memory Symposium, May 7–8.

2014 Linking Memory Models and Decision Models: Insights on Frequency and Speed/Accuracy Trade-off. Annual Conference of the Cognitive Science Society, July 23–26.

2014 Mechanisms of Recognition Memory: Insights from a Dynamic Approach. Annual Meeting of the Society for Mathematical Psychology, July 18–21.

2014 Modeling Information Accumulation in Recognition Memory: Speed-Accuracy Functions and Response Time Distributions. Annual Summer Interdisciplinary Conference, June 23–28.

2014 Insights from a Dynamic Approach to Recognition: Word Frequency, Speed/Accuracy Trade-off, and Decision Mechanisms. Context and Episodic Memory Symposium, May 8–9.

2013 Effects of Perceptual Similarity and Encoding Strategy in Recognition Memory. Annual Meeting of the Society for Mathematical Psychology, August 4–7.

2013 Similarity and Strategic Effects in Recognition Memory. Annual Conference of the Cognitive Science Society, July 31–August 3.

2013 Dynamics of Information Accumulation in Recognition. Annual Summer Interdisciplinary Conference, July 24–30.

2013 Effects of Perceptual Similarity and Encoding Strategy in Recognition Memory. Midwest Cognitive Science Conference, May 18.

2013 Information Accumulation for Recognition: Dynamic Presentation and Diagnosticity. Context and Episodic Memory Symposium, May 9–10.

2012 The Dynamics of Sentence (In)comprehension. Annual Conference of the Cognitive Science Society, August 1–4.

2012 Dynamic Effects of Perceptual and Categorical Similarity on Recognition Memory. Annual Conference of the Cognitive Science Society, August 1–4.

2012 Gaussian Process Regression for Trajectory Analysis. Annual Conference of the Cognitive Science Society, August 1–4.

2012 Exploring Decision Rules and Sampling Dynamics in Recognition Memory. Annual Conference of the Cognitive Science Society, August 1–4.

2012 Priming and Fluency within a Dynamic Model of Recognition. Annual Meeting of the Society for Mathematical Psychology, July 21–24.

2012 Analyzing Trajectories with Gaussian Process Regression. Annual Summer Interdisciplinary Conference, June 7–12.

2012 A Dynamic Model for Fluency. Annual Summer Interdisciplinary Conference, June 7–12.

2012 Modeling of Recognition Decision Making. Context and Episodic Memory Symposium, May 10.

2012 Gaussian Process Modeling of Behavioral Trajectories. Midwest Cognitive Science Conference, May 7.

2011 Criterion Setting and the Dynamics of Recognition Memory. Annual Conference of the Cognitive Science Society, July 20–23.

2011 Modeling Recognition of Different Stimulus Classes with a Dynamic Activation Model. Annual Meeting of the Society for Mathematical Psychology, July 15–18.

2011 Modeling Recognition of Different Stimulus Classes with a Dynamic Activation Model. Annual Summer Interdisciplinary Conference, July 7–12.

2011 A Dynamic Model for Recognition Memory: Towards a Solution to the Problem of Criterion Setting. Midwest Cognitive Science Meeting, April 16.

2010 Towards a Scalable Holographic Word-Form Representation. Annual Meeting of the Society for Computers in Psychology, November 18.

2010 On the Relationship Between Entropy and Meaning in Music: An Exploration With Recurrent Neural Networks. Annual Conference of the Cognitive Science Society, August 11–14.

2010 Developing Knowledge and Probing Its Structure with Primed Lexical Decision. Annual Meeting of the Society for Mathematical Psychology, August 7–10.

2010 On the Formation of Associative Structure in Knowledge. Annual Summer Interdisciplinary Conference, July 31–August 5.

2009 The Role of Information Ecology in Judgment: A Computational Account of Expertise Bias. Annual Meeting of the Society for Mathematical Psychology, August 1–4.

2008 From List Learning to Semantic Knowledge: Search and Learning of Associative Memory. Annual Conference of the Cognitive Science Society, July 23–26.

Departmental talks

2018 Dynamic Recognition and Encoding of Associative Memory, or What's in an Association? Cognition and Cognitive Neuroscience Brown Bag Series, September 26.

2018 What's in an Association? Syracuse University Cognition, Brain, and Behavior professional Seminar, January 26.

2017 Insights from a Dynamic Approach to Memory. Syracuse University Cognition, Brain, and Behavior professional seminar, February 10.

2016 Parallel Facilitatory Retrieval of Item and Associative Information from Event Memory. Syracuse University Cognition, Brain, and Behavior professional seminar, February 12.

2016 Principles of Good Figure Design. Syracuse University Cognition, Brain, and Behavior professional seminar, January 29.

2015 A Dynamic Approach to Understanding Episodic Associations. Syracuse University Cognition, Brain, and Behavior professional seminar, September 11.

2015 A Dynamic Approach to Recognition Memory. Syracuse University Cognition, Brain, and Behavior professional seminar, February 13.

2014 Insights from a Dynamic Approach to Recognition Memory. Indiana University "Cognitive Lunch" talk series, March 26.

2014 Different Windows on the Hypothesized Bilingual Advantage. Indiana University "Grey Matters" talk series, February 10.

2012 Gaussian Process Regression for Dummies, or, Rich's Revenge: How I Learned to Stop Worrying and Love the Kernel. Indiana University "Cognitive Lunch" talk series, November 7.

2012 The Varieties of Musical Experience: Music and Information Theory. Indiana University "Grey Matters" talk series, February 13.

2011 A Dynamic Model for Recognition Memory. Indiana University "Cognitive Lunch" talk series, October 5.

Teaching Experience

2018 Statistical Methods, instructor.

2017 Research in Cognitive Psychology, instructor.

2016 "Learning from Data", graduate tutorial in statistics and modeling.

2015 Bayesian Data Analysis, guest lecturer.

2012 Experimental Methods in Psychology, associate instructor.

Professional Service

2018–Present Organizer, Vanderbilt University Cognition and Cognitive Neuroscience Modeling Seminar.

2016–Present Reviewer, *Journal of Mathematical Psychology*

2015–Present Reviewer, *Canadian Journal of Experimental Psychology*

2014–Present Reviewer, *Psychological Review*

2014–Present Reviewer, *Psychonomic Bulletin and Review*

2014–Present Reviewer, *Quarterly Journal of Experimental Psychology*

2011–Present Reviewer, Proceedings of the Annual Conference of the Cognitive Science Society.

2016 External reader, doctoral committee for Timothy Ivancic.

2012–2013 Organizer, Indiana University "Cognitive Lunch" talk series.