
Curriculum Vitae

Michael R. Dougherty

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Education

Ph.D. The University of Oklahoma. Psychology (Cognitive/Decision Making). 1999.
M.S. The University of Oklahoma. Psychology (Cognitive/Decision Making). 1996.
B.S. Kansas State University. Psychology. 1993.

Employment

2013–present Professor, Department of Psychology, University of Maryland
Associate Chair/Director of Graduate Studies (2013–present)

2005–2013 Associate Professor, Department of Psychology, University of Maryland
Associate Chair/Director of Graduate Studies (2012–2013)

1999–2005 Assistant Professor, Department of Psychology, University of Maryland

Awards

Faculty Early Career Development Award (CAREER), National Science Foundation, 2002
Dissertation nominated by University of Oklahoma for Microfilms International best dissertation in the
social sciences (one nomination per university allowed), 2000
Chuck Gettys Award for Outstanding Research in Graduate School, University of Oklahoma, 1999
Hillel Einhorn New Investigator Award, Society for Judgment and Decision Making, 1998
Outstanding Graduate Research Assistant Award, University of Oklahoma, 1997
Outstanding Psychology Undergraduate Research Award, Kansas State University, 1993

Patents/Disclosures Filed

Number Piles, Disclosure No. IS-2009-055 (Dougherty & Atkins)
Alpha-Numeric Memory Builder and Structuring Task, Disclosure No. IS-2009-054 (Atkins, Harbison,
& Dougherty)
Modular Shape Builder, Disclosure No. IS-2009-053 (Dougherty, Atkins, & Dowling)
Matrix Memory Builder, Disclosure No. IS-2009-052 (Harbison, Dougherty, & Atkins)

Research Resources Created

Developed the General Monotone Model (GeMM), a regression model for modeling ordinal properties of
data (MATLAB code available online, R code in progress) (2012–present, ongoing)
Created publicly available measures of cognitive ability available via web (2008–present, ongoing)
Developed suite of cognitive training tasks for training working memory and language (Iraqi Arabic)
(2008–present, ongoing)

Funded Grants

Current

- PI: *Collaborative Proposal: Memory-Based Account of Cue Generation and Predictive Inference*. National Science Foundation, September 1, 2014 – 2017. (Co-PI with Rick Thomas, *Georgia Tech*) (total UMD: \$317,000) ~\$530,000
- PI: *Workshop proposal: Bridging Neuroscience and Learning*. National Science Foundation, Jan 1 – Dec 31, 2015 ~\$30,000

Past

- PI: *Decision and memory: The effect of stopping rules on memory use*. National Science Foundation, September 1, 2010–August 31, 2014 (co-PIs: Eddy Davelaar & Isaiah Harbison). \$325,000
- PI: *Robust cognition through brain plasticity training*. Office of Naval Research, April 1, 2010–October 30, 2013. \$749,231
- Co-PI: *A center for cognitive, social, computational & mathematical neuroscience (ARI-R2)*. National Science Foundation, June 1, 2010–September 30, 2013 (PI: Wallsten). \$1,500,000
- Co-PI: *Effects of brain training on cognitive and language skills (TTO3501)*. Department of Defense, University of Maryland Center for Advanced Study of Language (CASL), September 1, 2007–August 30, 2013. (PI: Michael Bunting, CASL, University of Maryland). \$882,110
- Co-PI: *Effects of brain training on cognitive and language skills*. Department of Defense, Defense Language Institute Foreign Language Center, September 1, 2011–September 30, 2012 (PI: Michael Bunting). \$650,000
- Co-PI: *MRI: Acquisition of a 3-Tesla Magnetic Resonance Imaging (MRI)*. National Science Foundation, September 1, 2009 (with Nathan Fox [PI], Donald Bolger, Bob Dooling, & Colin Philips). \$1,936,855
- PI: *Attention, memory and judgment*. National Science Foundation, August 2006–July 2010. \$350,000
- PI: *Conference grant for Society for Mathematical Psychology*, Air Force Office of Scientific Research (AFOSR), July 2008. \$11,000
- Co-PI: *Support for the 2008 Annual Meeting for the Society for Mathematical Psychology*, National Science Foundation, July 2008 (PI: Trish Van Zandt, Ohio State). \$10,000
- PI: *CAREER: Using memory theory to describe judgment and decision making*. Faculty Early Career Development Award: NSF, SES-0134678, June 1, 2002–May 31, 2008. \$400,000
- PI: Graduate Research Board Award, University of Maryland, 2001. \$2,300
- Co-PI: *Cognitive plasticity training. ACCIAC Fellows in Innovation and Creativity Program*. Grant awarded to fund a Gemstone undergraduate research project. \$4,000

Collaborative Center Grant

- Co-PI: *University of Maryland Center for Advanced Study of Language (CASL)*. Maryland Procurement Office, February 1, 2003–January 31, 2008, \$56,305,200 (total).

Publications

- Dougherty, M. R. P., Gettys, C. F., & Thomas, R. P. (1997). The role of mental simulation in judgments of likelihood. *Organizational Behavior and Human Decision Processes*, 70, 135–148.

- Gronlund, S., Ohrt, D. D., Dougherty, M. R. P., Perry, J., & Manning, C. A. (1998). Role of memory in air traffic control. *Journal of Experimental Psychology: Applied*, 4, 263–280.
- Durso, F. T., Hackworth, C. A., Barile, A. L., Dougherty, M. R. P., & Ohrt, D. D. (1998). Monitoring reality in cyberspace. *International Journal of Cognitive Technology*, 3, 32–38.
- Dougherty, M. R. P., & Shanteau, J. (1999). Averaging expectancies and perceptual experiences in the assessment of quality. *Acta Psychologica*, 101, 49–67.
- Dougherty, M. R. P., Gettys, C. F., & Ogden, E. E. (1999). MINERVA-DM: A memory processes model for judgments of likelihood. *Psychological Review*, 106, 180–209.
- Dougherty, M. R. P. (2001). Integration of the ecological and error models of overconfidence using a multiple-trace memory model. *Journal of Experimental Psychology: General*, 130, 579–599.
- Gronlund, S. D., Canning, J. M., Moertl, P. M., Johansson, J., Dougherty, M. R. P., & Mills, S. H. (2002). An information organization tool for planning in air traffic control. *International Journal of Aviation Psychology*, 12, 377–390.
- Moertl, P. M., Canning, J. M., Gronlund, S. D., Dougherty, M. R. P., Johansson, J. & Mills S. H. (2002). Aiding Planning in Air Traffic Control: An Experimental Investigation of the Effects of Perceptual Information Integration. *Human Factors*, 44, 404–412.
- Franco-Watkins, A., Derks, P., & Dougherty, M. R. P. (2003). Choice behaviour and probability judgements in the Monty Hall problem. *Thinking & Reasoning*, 9, 67–90.
- Dougherty, M. R. P., & Franco-Watkins, A. M. (2003). Reducing bias in frequency judgment by improving source monitoring. *Acta Psychologica*, 113, 23–44.
- Dougherty, M. R. P., & Hunter, J. E. (2003). Hypothesis generation, probability judgment and individual differences in working memory capacity. *Acta Psychologica*, 113, 263–282.
- Dougherty, M. R. P., & Hunter, J. E. (2003). Probability judgment and subadditivity: The role of working memory capacity and constrained retrieval. *Memory & Cognition*, 31, 968–982.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J., & Mills, S. H. (2005). Planning in air traffic control. *International Journal of Aviation Psychology*, 15, 269–293.
- Dougherty, M. R., Scheck, P., Nelson, T. O. & Narens, L. (2005). Using the past to predict the future. *Memory & Cognition*, 33, 1096–1115.
- Sprenger, A., & Dougherty, M. R. (2006). Differences Between Probability and Frequency Judgments: The Role of Individual Differences in Working Memory Capacity. *Organizational Behavior and Human Decision Processes*, 99, 202–211
- Dougherty, M. R., & Sprenger, A. (2006). The influence of improper sets of information on judgment: How irrelevant information can bias judged probability. *Journal of Experimental Psychology: General*, 138, 262–281. (Featured in *APA Monitor*, June 2006)
- Franco-Watkins, A., & Dougherty, M. R. (2006). Does context discrimination in recognition memory depend on the concreteness of the to-be-remembered items? *Memory and Cognition*, 34, 973–985.
- Barnes, K. A., & Dougherty, M. R. (2007). The effect of divided attention on the accuracy of global JOLs. *American Journal of Psychology*, 120, 347–359. (First author's honors thesis).
- Dougherty, M. R., & Harbinson, J. I. (2007). Retrieval failure in memory: How long does one keep going back to the well when the well is dry? *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 33, 1108–1117.

- Dougherty, M. R., Franco-Watkins, A., & Thomas, R. P. (2008). The psychological plausibility of fast and frugal heuristics. *Psychological Review*, *115*, 199–211.
- Dougherty, M. R., Thomas, R. & Franco-Watkins, A. M. (2008). PostScript: Vague heuristics revisited. *Psychological Review*, *115*, 211–213.
- Thomas, R. P., Dougherty, M. R., Sprenger, A., & Harbison, J. I. (2008). Diagnostic hypothesis generation and human judgment. *Psychological Review*, *115*, 155–185.
- Harbison, J. I., Dougherty, M. R., Davelaar, E., & Fayyad, B. (2009). The lawfulness of decisions to terminate memory search. *Cognition*, *111*, 3, 397–402. DOI: 10.1016/j.cognition.2009.03.002.
- Pleskac, T. J., Dougherty, M. R., Rivadeneira, A. W., & Wallsten, T. S. (2009). Random error in judgment: The contribution of encoding and retrieval processes. *Journal of Memory and Language*, *60*, 165-179. DOI: 10.1016/j.jml.2008.08.003
- Tomlinson, T., Marwiski, J., & Dougherty, M. R. (2011). Four challenges for understanding memory-based judgment and decision making. *Judgment and Decision Making*, *6* (1), 89–99.
- Sprenger, A. M., Dougherty, M. R., Atkins, S. M., Franco-Watkins, A. M., Thomas, R. P., Lange, N., & Abbs, B. (2011). Implications of cognitive load for hypothesis generation and probability judgment. *Frontiers in Cognitive Science*, *2*(129), 1–15. doi: 10.3389/fpsyg.2011.00129
- Dougherty, M. R., & Thomas, R. P. (2012). Robust decision making in a nonlinear world. *Psychological Review*, *119*(2), 321–344. doi: 10.1037/a0027039
- Sprenger, A., & Dougherty, M. R. (2012). Generating and evaluating options for decision making: The impact of sequentially presented evidence. *Journal of Experimental Psychology: Learning, Memory, And Cognition*, *38*(3), 550–575. doi:10.1037/a0026036.
- Siegel, E. F., Dougherty, M. R., & Huber, D. E. (2012). Manipulating the role of cognitive control while taking the implicit association test. *Journal of Experimental Social Psychology*, *48*(5), 1057–1068. <http://dx.doi.org/10.1016/j.jesp.2012.04.011>
- Chrabaszcz, J., & Dougherty, M. R. (2012). Deliberations on unconscious thought theory. *Frontiers in Psychology*, *3*, 1–3.
- Davelaar, E., Yu, E. C., Harbison, J. I., Hussey, E. K., & Dougherty, M. R. (2013). A rational approach to memory search termination. *Cognitive Systems Research*, *24*, 96–103. doi: 10.1016/j.cogsys.2012.12.012 [[CSR](#)]
- Sprenger, A. M., Atkins, S. M., Bolger, D. J., Harbison, J. I., Novick, J. M., Weems, S. A., Chrabaszcz, J. S., Smith, V., Bobb, S., Bunting, M. F., & Dougherty, M. R. (2013). Training working memory: Limits of transfer. *Intelligence*, *41*, 638–663. [doi.org/10.1016/j.intell.2013.07.013](http://dx.doi.org/10.1016/j.intell.2013.07.013)
- Hussey, E. K., Dougherty, M. R., Harbison, J. I., & Davelaar, E. J. (2014). Retrieval dynamics in self-terminated memory search. *Quarterly Journal of Experimental Psychology*. Vol. 67, No. 2, 394–416, <http://dx.doi.org/10.1080/17470218.2013.816750>
- Yu, E. C., Sprenger, A. M., Thomas, R. P., & Dougherty, M. R. (2014). When heuristics and science collide. *Psychonomic Bulletin and Review*, *21*, 268-82 DOI: 10.3758/s13423-013-0495-z
- Sanborn, A.N., Hills, T.T., Dougherty, M.R., Thomas, R.P., Yu, E.C., & Sprenger, A. M. (2014). Reply to Rouder (2014): Good Frequentist Properties Raise Confidence. *Psychonomic Bulletin & Review*, *21*, 309 – 311.
- Tidwell, J., Dougherty, M. R., Chrabaszcz, J., Thomas, R. P., & Mendoza, J. (2014). What counts as evidence for working memory training? Problems with correlated gains and dichotomization. *Psychonomic Bulletin and Review*, *21*, 620-628.

- Thomas, R.P., Dougherty, M.R., & Buttaccio, D. (2014). Memory constraints on hypothesis generation and decision making. *Current Directions in Psychological Science*, 23, 264-270.
- Atkins, S. M., Sprenger, A. M., Briner, T. L., Buchanan, J. B., Chavis, S. E., Chen, S-y, Iannuzzi, G. L., Kashtelyan, V., Dowling, E., Bolger, D. J., Bunting, M. F., & Dougherty, M. R. (2014). Measuring working memory is all fun and games: A four-dimensional spatial game predicts cognitive task performance. *Experimental Psychology*, 61(6), 417-438. DOI: 10.1027/1618-3169/a000262
- Dougherty, M.R., Harbison, J.I., & Davelaar, E. (2014). Optional stopping in the search of memory. *Current Directions in Psychological Science*, 23 (5), 332-337. DOI: 10.1177/0963721414540170
- Dougherty, M. R., Thomas, R. P., Brown, R., Chrabaszczy, J. S., & Tidwell, J. W. (2015). An introduction to the general monotone model with application to two problematic datasets. *Sociological Methodology*.
- Buttaccio, D., Lange, N., Thomas, R.P., & Dougherty, M.R. (2015). Using a model of hypothesis generation to predict eye movements in a visual search task. *Memory & Cognition*. 43, 247-265. 10.3758/s13421-014-0463-5
- Dougherty, M.R., Hamovitz, T., & Tidwell, J.W. (in press). Re-evaluating the effectiveness of n-back training on transfer through the Bayesian lens: Support for the null. *Psychonomic Bulletin and Review*.

Books

- Reyna, V. F., Chapman, S. B., Dougherty, M. R., & Confrey, J. (Eds.) (2011). *The adolescent brain: Learning, reasoning, and decision making*. Washington, DC: American Psychological Association.
- Novick, J., Bunting, M. F., Dougherty, M. R., & Engle, R. (Eds.) (under contract). *Cognitive and working memory training: Perspectives from psychology, neuroscience, and human development*. Oxford University Press.

Chapters in Books

- Dougherty, M. R. P., & Franco-Watkins, A. M. (2002). The use of memory models to explain judgments of frequency and probability: Minerva 2 and Minerva-DM. In T. Betsch & P. Sedlmeier's (Eds.) *Etc - Frequency Processing and Cognition* (pp. 121–136). Oxford, UK: Oxford University Press.
- Dougherty, M. R. P., Gronlund, S. D., & Gettys, C. F. (2003). Memory as a fundamental heuristic for decision making. In S. L. Schneider & J. Shanteau's (Eds.) *Emerging Perspectives on Judgment and Decision Research* (pp. 125–164). Cambridge, MA: Cambridge University Press.
- Dougherty, M. R., & Thomas, R. (2009). Minerva-DM. *Encyclopedia of Medical Decision Making*. Sage.
- Dougherty, M. R., Thomas, R. P., & Lange, N. (2010). Toward an integrative theory of hypothesis generation, probability judgment, and hypothesis testing. *The Psychology of Learning and Motivation, Volume 52* (pp. 300–342). Academic Press.
- Atkins, S., Bunting, M., Bolger, D. J., & Dougherty, M. R. (2011). Cognitive training, mathematics, and the adolescent brain. In Reyna, V. F., Chapman, S. B., Dougherty, M. R., & Confrey, J. (Eds.) *The adolescent brain: Learning, reasoning, and decision making* (pp. 211–241). Washington, DC: American Psychological Association.
- Reyna, V. F., Chapman, S. B., Dougherty, M. R., & Confrey, J. (2011). Introduction. In Reyna, V. F., Chapman, S. B., Dougherty, M. R., & Confrey, J. (Eds.) *The adolescent brain: Learning, reasoning, and decision making* (pp. 3–11). Washington, DC: American Psychological Association.
- Reyna, V. F., & Dougherty, M. R. (2011). Paradoxes of the adolescent brain in cognition, emotion, and rationality. In Reyna, V. F., Chapman, S. B., Dougherty, M. R., & Confrey, J. (Eds.) *The adolescent*

brain: Learning, reasoning, and decision making (pp. 431–436). Washington, DC: American Psychological Association.

- Pachur, T., Raaijmakers, J. G. W., Davelaar, E. J., Daw, N. D., Dougherty, M. R., Hommel, B., Lee, M. D., Polyn, S. M., Ridderinkhof, K. R., Todd, P. M., & Wolfe, J. M. (2012). Unpacking cognitive search: Mechanisms and processes. In: P. M. Todd, T. T. Hills, & T. W. Robbins (Eds.), *Cognitive search: Evolution, algorithms, and the brain*. Strüngmann Forum Reports, Vol. 9. Cambridge, MA: MIT Press.
- Lange, N., Buttaciao, D., Sprenger, A., Harbison, J. I., Thomas, R. P., & Dougherty, M. R. (2015). A memory theoretic account of hypothesis generation and judgment and decision making. In A. Feeney and V. A. Thompson's *Reasoning as Memory* (pp. 71-92). Current Issues in Thinking and Reasoning. New York: Psychology Press
- Tidwell, J. W., Dougherty, M.R., Chrabaszcz, J. S., Buttaccio, D., & Thomas, R. P. (in press). Sources of confidence in judgment and decision making. To appear in J. Dunlosky's (ed). *Handbook on Metacognition*. Oxford University Press.
- Harbison, I.J., Colflesh, G., & Dougherty, M.R. (in press). **What is trained during working memory training? A cognitive modeling perspective. To appear in Bunting, Novick, Dougherty & Engle's (Eds) Working memory training. Cambridge University Press**

Peer Reviewed Conference Proceedings

- Dougherty, M. R. P., Perry, J. L., Ohrt, D. D., Gronlund, S. D., & Manning, C. A. (1997). Use of spatial memory in air traffic controllers. In R. S. Jensen & L. Rakovan (Eds.) *Proceedings of the Ninth International Symposium on Aviation Psychology* (vol. 2). Ohio State University, Columbus OH.
- Dougherty, M. R. P., Gronlund, S. D., Durso, F. T., Canning, J., & Mills, S. H. (1999). Plan generation in air traffic control. *Proceedings of the Tenth International Symposium on Aviation Psychology*.
- Canning, J., Gronlund, S. D., Johansson, J., Dougherty, M. R. P., & Mills, S. H. (1999). A novel interface for strategic planning in air traffic control. *Proceedings of the Tenth International Symposium on Aviation Psychology*.
- Moertl, P. M., Canning, J. M., Johansson, J., Gronlund S. D., Dougherty, M. R. P., & Mills, S. H. (2000). Workload and Performance in FOPA: A Strategic Planning Interface for Air Traffic Control. *Proceedings of the Human Factors and Ergonomics Society, 44* (3), 65–68.
- Dougherty, M. R., & Thomas, R. (2007). Diagnostic hypothesis generation and human judgment. Symposium on Cognitive Decision Theory. *Proceedings of the Cognitive Science Society*.
- Harbison, J. I., Davelaar, E., & Dougherty, M. R. (2008). Stopping rules and memory search termination decisions. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 575–570). Austin, TX: Cognitive Science Society. (30% of 514 total submissions accepted).
- Thomas, R. P., Hahn, S., Lange, N. D., Buttaccio, D., Alberts, T., Dougherty, M. R., & Rose, L. (2010). Target identification and assessment in visual intelligence, surveillance, & reconnaissance. *Proceedings of the Missile Defense Sensors, Environments and Algorithms*; published by the Military Sensing Information Analysis Center (SENSIAC), a Department of Defense chartered Information Analysis Center (not for public release).
- Harbison, J. I., Atkins, S. M., & Dougherty, M. R. (2011). N-back Training Task Performance: Analysis and Model. *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 120–125). Boston, MA: Cognitive Science Society.

- Davelaar, E., Harbison, J. I., Yu, E. C., Hussey, E. K., & Dougherty, M. R. (2012). Rational search of Associative Memory. In N. Miyake, D. Peebles, & R. Cooper (Eds.) *Proceedings of the 34th Annual Meeting of the Cognitive Science Society*. (pp. 1459–1463). [[PDF](#); [Cog Sci](#)] (Acceptance rate for papers, 38%)
- Harbison, J. I., Hussey, E. K., Dougherty, M. R., & Davelaar, E. (2012). Self-terminated versus experimenter-terminated memory search. In N. Miyake, D. Peebles, & R. Cooper (Eds.) *Proceedings of the 34th Annual Meeting of the Cognitive Science Society*. (pp. 426–431). [[PDF](#); [Cog Sci](#)] (Acceptance rate for papers, 38%)
- Davelaar, E. J., Yu, E. C., Harbison, J. I., Hussey, E. K., & Dougherty, M. R. (2012). A rational analysis of memory search termination. In N. Russwinkel, U. Drewitz, & H. van Rijn (Eds.), *Proceedings of the 11th International Conference on Cognitive Modeling*. (pp. 169–174). Berlin, Germany.
- Harbison, J.I., Davelaar, E.J., Yu, E.C., **Hussey, E.K.**, & Dougherty, M.R. (2013). Intrusions and the decision to terminate memory search. In Knauff, M., Pauen, M., Sebanz, N., & Wachsmuth, I. (Eds.) [Proceedings of the 35th Annual Cognitive Science Society](#), pp. 549-545. (acceptance rate for papers: 28%).

Book Reviews

- Dougherty, M. R. P., & Franco-Watkins, A. M. (2000). A rational analysis of rationality? Review of K. Stanovich's "Who is rational? Studies of individual differences in reasoning." *Applied Cognitive Psychology*, 14, 593–597. Invited by Editor.

Other Non-referred Publications

- Novick, J. M., Bunting, M. F., Dougherty, M. R., Harbison, J. I., & Weems, S. A. (2009). A working memory workout for language practitioners. *The Next Wave*, 18(1), 6–13.

Technical Reports

- Bunting, M. F., Novick, J. M., Dougherty, M. R., Harbison, J. I., Weems, S. A., Atkins, S., Hussey, E. K., Teubner-Rhodes, S., Chrabaszcz, J., Smaliy, A., Clarady, C. K., & Corbett, R. (2010). *Assessing the effects of cognitive training: Improving individuals' ability to reason, to remember, and to resolve sentence ambiguity* (TTO 3501). College Park, MD: University of Maryland Center for Advanced Study of Language.
- Bunting, M. F., Novick, J. M., Dougherty, M. R., Harbison, J. I., Weems, S. A., Atkins, S., Hussey, E. K., Teubner-Rhodes, S., Chrabaszcz, J., Smaliy, A., Clarady, C. K., & Corbett, R. (2010). *Assessing the effects of cognitive training: Improving individuals' ability to reason, to remember, and to resolve sentence ambiguity* (TTO 3501). College Park, MD: University of Maryland Center for Advanced Study of Language.

Articles submitted or in preparation

- Buttaccio, D., Lange, N., Thomas, R.P. & Dougherty, M.R. (revise and resubmit). Constraining Retrieval Reduces Search Efficiency. *Quarterly Journal of Experimental Psychology*.
- Harbison, J. I., Atkins, S. M., & Dougherty, M. R. (revise and resubmit). Modeling n-back performance: What is trained during working memory training? *Journal of Experimental Psychology: General*
- Buttaccio, D. R., Dougherty, M.R., Hamovitz, T., & Thomas, R.P. (in prep). Retrieving irrelevant information from memory in cue-based inference.
- Buttaccio, D. R. & Dougherty, M.R. (in prep). **The biasing effects of hypothesis generation on visual information search.**

- Chrabaszcz, J.S., Dougherty, M. R., Sprenger, A.M., Bolger, D. J., Colflesh, G., Atkins, S. M., & Bunting, M. F. (in prep). The relative importance of need for cognition and WM measures in predicting performance on Ravens.
- Chrabaszcz, J., Dougherty, M. R., Yu, E. C., Sprenger, A. M., Thomas, R. P., & Lawrence, A. (revision). The paradox of ecological rationality and the prediction of random events.
- Lawrence, A., Thomas, R., & Dougherty, M. R. (submitted). A non-monotonic approach to ordinal prediction. *Psychological Methods*.
- Tidwell, J. W., Dougherty, M. R., Chrabaszcz, J., & Thomas, R. P. (in prep). Order constrained linear optimization.
- Chrabaszcz, J., & Dougherty, M. R. (in prep). Reaction times reveal logarithmic processing of value comparisons.
- Thomas, Dougherty, Gonzalez, & Illingsworth (in prep). The ecology of overconfidence. *Frontiers in Cognitive Science*.
- Lawrance, Thomas, and Dougherty. A model cue generation and inference. *Psychological Review*.
- Bolger et al. A reanalysis of WM training data*
- Bolger et al. Mapping shapebuilder to brain and behavior*
- Bolger et al. APOE and neural correlates*
- Chrabaszcz et al. WM training and stress.*

Invited Colloquia

- Dougherty, M. R. P. (1999). Invited Presentation. *Using memory theory to account for judgment and decision making phenomena*. German Science Foundation's Small Group Meeting: "Frequency Processing." Heidelberg, Germany, Nov. 26 – 28.
- Dougherty, M. R. P. (2002). Invited Presentation. *Intuitive Hypothesis Generation*. Kansas State University, Manhattan KS, Nov. 26.
- Dougherty, M. R. P. (2003). Invited Presentation. *Probability judgment and subadditivity: The role of working memory capacity and constraining retrieval*. Carnegie Mellon University, Pittsburg, Pa, June 15.
- Dougherty, M. R. (2004). Invited Presentation. *The Importance of Attentional Control and Working Memory for Diagnostic Decision Making*. Columbia University, New York, April, 8.
- Dougherty, M. R., & Sprenger, A. (2005). Invited Presentation. *Proactive interference and judgments of probability: How irrelevant information can bias probability judgments*. Carnegie Mellon University, Pittsburg, Pa, March 23. (presented by M.R.D.)
- Dougherty, M., Tomlinson, T., Sprenger, A., & Harbison, I. (2006). Invited presentation. *What does a judgment theorist have to say about memory, and vice versa?* University of Oklahoma, Norman OK. March 23. (presented by M.R.D.)
- Dougherty, M. R. (2006). Invited Presentation. *Dissociating measures of accuracy: Why we can't trust an accurate judge*. University of Oklahoma, Norman, Oklahoma, Mar. 25.

Dougherty, M. R., Thomas, R. P., & Sprenger, A. (2006). *Invited Presentation. Diagnostic Hypothesis Generation and Human Judgment*. University of Canterbury, Christchurch New Zealand. (presented by M. Dougherty).

Dougherty, M. R. (2008, September). Diagnosing diagnostic hypothesis generation in adolescents. *NSF workshop on Higher order cognition in Adolescents*. Arlington, VA.

Dougherty, M. R. (2010). Addressing early achievement discrepancies through brain plasticity training. *Benjamin Banneker Association mini-conference on "Beyond the numbers: Celebrating the Best of how Teachers Teach and African American Students Learn Math."* Temple University. Feb 26–27, 2010 (postponed until June due to weather).

Dougherty, M. R. (2014). Improving cognitive functioning through targeted brain training: Does it work? Kansas State University, Manhattan Kansas, Sept. 26, 2014.

Dougherty, M.R. (2014). Diagnostic hypothesis generation and human judgment. United States Institute for Peace. USIP Dialogue Series: Choice and Decision-Making Processes. Washington DC. October 6, 2014

Dougherty, M.R. (2015). University of Virginia. January 21, 2015.

Dougherty, M.R. (2015). A skeptics guide to working memory training. Invited symposium on WM training. *Association of Psychological Science*, New York City, May 23, 2015.

Conference Presentations & Participation

Dougherty, M. R. P., & Shanteau, J. (1993). *A model for the placebo effect: Averaging of expectations and perceptions*. Presented at the 26th annual Mathematical Psychology meetings, Norman, OK, August.

Gettys, C. F., & Dougherty, M. R. P. (1993). *A new model for feelings of likelihood or certainty: A lot of bull, a little data*. Presented at the Fall 1993 Oklahoma Judgment and Decision Making Conference, Norman, OK, October.

Gettys, C. F., & Dougherty, M. R. P. (1994). *At last...At last...data at last: Empirical data for a model of likelihoods*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making meeting, Stillwater, OK, April 29.

Dougherty, M. R. P., & Gettys, C. F. (1994). *Instance recall and judgments of likelihood: Does instance probability matter?* Paper presented at the 12th annual Oklahoma Psychological Society, Stillwater, OK.

Gettys, C. F., & Dougherty, M. R. P. (1994). *Decision models based on modern memory theory: An instance-based theory of certainty*. Poster presented at the annual meeting of the Society for Judgment and Decision Making, St. Louis, MO, November 14–16.

Shanteau, J. S., & Dougherty, M. R. P. (1995). *Expectancy effects in consumer products*. Workshop on choice behavior. Presented at Columbia University, New York, May.

Gettys, C. F., & Dougherty, M. R. P. (1995). *Advances in the likelihood memory model*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making meeting, Oklahoma City, OK, May 5.

Gettys, C. F., Dougherty, M. R. P., & Ogden, E. E. (1996). *Beyond heuristics: A memory-processes model for judgments of likelihood*. Paper presented at the Eastern Psychological Association, Philadelphia, PA, March.

- Gettys, C. F., Dougherty, M. R. P., & Ogden, E. E. (1996). *Beyond heuristics: A memory-processes model for judgments of likelihood*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making conference, Norman, OK, April.
- Dougherty, M. R. P., & Gettys C. F. (1996). *Single-path vs. several-path reasoning in decision making*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making conference, Norman, OK, April.
- Gettys, C. F., Dougherty, M. R. P., & Ogden, E. E. (1996). *A MINERVA model for frequency and likelihood estimates*. Paper presented at the Meeting of the Psychonomic Society, Chicago, IL, November 1–3.
- Gettys, C. F., Dougherty, M. R. P., & Ogden, E. E. (1996). *The pieces put together: An umbrella theory for likelihood judgments called MINERVA-DM*. Paper presented at the annual meeting of the Society for Judgment and Decision Making, Chicago, IL, November 2–4.
- Gettys, C. F., Dougherty, M. R. P., & Ogden, E. E. (1997). *The pieces put together: An umbrella theory for likelihood judgments called MINERVA-DM*. Paper presented at Bayesian conference, Los Angeles, CA, February 17.
- Durso, F. T., Hackworth, C. A., Barile, A. L., Shi Lin Eng, S., Ohrt, D. D., Dougherty, M. R. P., & Linville, P. E. (1997). *Monitoring reality in cyberspace*. Paper presented at the First U. S. Conference on Cognitive Technology, Indiana State University, April 3–5.
- Ogden, E. E., Gettys, C. F., & Dougherty, M. R. P. (1997). *Encoding bias explanation of the availability heuristic*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making meeting, Norman, OK, April 12.
- Thomas, R. P., Dougherty, M. R. P., Gettys, C. F., & Ogden, E. E. (1997). *The conjunction fallacy as a memory phenomenon*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making meeting, Norman, OK, April 12.
- Dougherty, M. R. P., Gettys, C. F., & Ogden, E. E. (1997). *The effect of experience and learning on the calibration of probabilities*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making meeting, Norman, OK, April 12.
- Gronlund, S. D., Dougherty, M. R. P., Ohrt, D. D., Perry, J. L., & Manning, C. A. (1997). *Memory and air traffic control*. Paper presented at the Ninth International Symposium on Aviation Psychology, Columbus OH, April 27–May 1.
- Barile, A., Hackworth, C. A., Ohrt, D. D., Dougherty, M. R. P., & Durso, F. T. (1997). *Reality monitoring in cyberspace*. Paper presented at the American Psychological Society, Washington, May 23–26.
- Dougherty, M. R. P., Thomas, R. P., Gettys, C. F., & Ogden, E. E. (1997). *The conjunction error as a memory retrieval phenomenon*. Poster presented at the meeting of the Society for Judgment and Decision Making, Philadelphia, Nov. 22–24.
- Session Chair, 1997, Society for Judgment and Decision Making, Philadelphia, Nov. 22–24.
- Dougherty, M. R. P. (1998). *The misinformation effect: How irrelevant information can bias judgments*. Paper presented at the Oklahoma-Kansas Judgment and Decision Making meeting, Stillwater, OK, March 6.
- Dougherty, M. R. P., Gronlund, S. D., Canning, J., Durso, F. T., & Mills, S. (1998). *Strategic awareness in air traffic control*. Poster presented at the Fourth conference on Naturalistic Decision Making, Washington DC, May 29–June 1.

- Dougherty, M. R. P. (1998). *The effect of experience on the calibration of probability judgments*. Paper presented at 31st annual meeting of the Society for Mathematical Psychology, Nashville TN, August 7–9.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J., & Mills, S. (1998). *Strategic planning in air traffic control*. Poster presented at the 39th annual meeting of the Psychonomic Society, Dallas, TX, Nov. 19–22.
- Dougherty, M. R. P. (1998). *A memory processes account of the calibration of probability judgments*. Poster presented at the Society for Judgment and Decision Making meeting, Dallas TX, Nov. 24–26.
- Dougherty, M. R. P. (1998). *Using a mathematical memory model to account for judgment and decision phenomena*. Invited Address, Society for Judgment and Decision Making, Dallas TX, Nov. 24–26.
- Canning, J., Gronlund, S. D., Johanssen, J., Dougherty, M. R. P., Durso, F. T., & Mills, S. H. (1999). *Interface to aid strategic planning in air traffic control*. Paper presented at the 10th International Symposium on Aviation Psychology, Columbus OH, April 29–May 3.
- Gronlund, S. D., Dougherty, M. R. P., Canning, J., Durso, F. T., & Mills, S. H. (1999). *Strategic planning in air traffic control*. Paper presented at the 10th International Symposium on Aviation Psychology, Columbus OH, April 29–May 3.
- Franco-Watkins, A., & Dougherty, M. R. P. (1999). *How does the specificity of the retrieval cue affect judgments of probability?* Poster presented at the Society for Judgment and Decision Making meeting, Los Angeles, CA, May. 21–23.
- Moertl, P. M., Canning, J. M., Johansson, J., Gronlund S. D., Dougherty, M. R. P., Mills, S. H. (2000). *Workload and Performance in FOPA: A Strategic Planning Interface for Air Traffic Control*. HFES 2000 Congress, San Diego, July 30–Aug. 4.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. M., & Mills, S. H. (2000). *Evolution of strategic planning in a complex environment*. Presented at the OKJDM Workshop, Oklahoma City, OK, April, 2000.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. M., & Mills, S. H. (2000). *Evolution of strategic planning in a complex environment*. Presented at the Missouri Cognition Conference, St. Louis, MO, May, 2000.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. M., & Mills, S. H. (2000). *Evolution of Planning Behavior in a Dynamic Environment*. Society for Applied Research on Memory and Cognition, Orlando, June.
- Franco-Watkins, A. M., & Dougherty, M. R. P. (2000). *Regret and endowment in the 3- 4- and 5- door Monty Hall problem*. Society for Judgment and Decision Making, New Orleans, LA. Nov. 19–21.
- Dougherty, M. R. P., & Franco-Watkins, A. M. (2000). *Availability biases in frequency judgment: A failure of source monitoring?* Society for Judgment and Decision Making, New Orleans, LA. Nov. 19–21.
- Pleskac, T. J., Hunter, J. E., Franco-Watkins, A., Scheck, P., Kim, J., & Dougherty, M. R. P. (2001). *Confidence in predictive statements: Manipulations of source and presentation*. Poster presented at Society for Judgment and Decision Making, Orlando, FL, Nov. 20–21.
- Dougherty, M. R. P., & Hunter, J. (2001). *Working memory constraints induce sub-optimal hypothesis generation and subadditivity*. Paper presented at Society for Judgment and Decision Making, Orlando, FL, Nov. 20–21.
- Dougherty, M. R. P., & Franco-Watkins, A. M. (2001). *Context Discrimination and Source Monitoring in Judgments Of Frequency*. Poster presented at Psychonomic Society, Orlando, FL, Nov. 19–21.

- Dougherty, M. R. P., & Hunter, J. (2002). *Individual Differences in Probability Judgment and Subadditivity*. Poster presented at Psychonomic Society, Kansas City, MO, Nov. 21–24.
- Franco-Watkins, A. M. & Dougherty, M. R. P. (2002). *Estimating Frequency: Does Typicality affect Strategy Use?* Poster presented at Society for Judgment and Decision Making, Kansas City, MO, Nov. 24–25.
- Hunter, J. E., & Dougherty, M. R. P. (2002). *Effects of Time Pressure on Probability Judgments and Subadditivity*. Poster presented at Society for Judgment and Decision Making, Kansas City, MO, Nov. 24–25.
- Dougherty, M. R. P. (2003). *Probability judgment and subadditivity: The role of working memory capacity and constraining retrieval*. Paper presented at the Research Conference on Subjective Probability, Utility and Decision Making (SPUDM-19). Zurich, Switzerland, Aug. 25–27.
- Dougherty, M. R., & Barnes, K. A. (2003). *Divided attention and metamemory judgments*. Poster presented at Psychonomic Society meeting, Vancouver Canada, Nov. 6–9.
- Lehman, A., & Dougherty, M. R. (2003). *Differences Between Probability and Frequency Judgments: The Role of Individual Differences in Working Memory Capacity*. Poster presented at Society for Judgment and Decision Making, Vancouver Canada, Nov. 9–10.
- Dougherty, M. R. (2004). *The Role of Attentional Control and Working Memory in Hypothesis Generation and Probability Judgment*. Poster presented at Third Annual Summer Interdisciplinary Conference, Cavalese, Val di Fiemme, Dolomiti, Italy, June 27–July 2.
- Pleskac, T. J., Dougherty, M. R., & Wallsten, T. S. (2004). *Cognitive processes in confidence and recognition: Encoding, retrieval, and mapping*. 36th Annual Mathematical Psychology Meeting, Ann Arbor Michigan, July 29–31.
- Sprenger, A., & Dougherty, M. R. (2004). *Proactive interference in judgments of probability*. 36th Annual Mathematical Psychology Meeting, Ann Arbor Michigan, July 29–31.
- Thomas, R. & Dougherty, M. (2004). *A memory theoretic account of hypothesis generation, evaluation, and testing*. Society for Judgment and Decision Making, Minneapolis MN. November 15.
- Sprenger, A., & Dougherty, M. (2004). *The Role of Proactive Interference in Probability Judgment* Society for Judgment and Decision Making, Minneapolis MN, November 15.
- Dougherty, M. R., & Sprenger, A. (2005). (presented by A. Sprenger). *Proactive interference and judgments of probability: How irrelevant information can bias probability judgment*. Paper presented at the Research Conference on Subjective Probability, Utility and Decision Making (SPUDM-20). Stockholm Sweden, August 24, 2005.
- Thomas, R., Dougherty, M., & Sprenger, A. (2006). *Diagnostic Hypothesis Generation and Human Judgment: HyGene*, 5th Annual Summer Interdisciplinary Conference. Andalsnes, Norway.
- Dougherty, M., Sprenger, A., & Thomas, R. (2006). *Violations of set theoretical assumptions as a result of error prone memory processes*. The 4th International Conference on Memory, Sydney Australia, July 16–July 21, 2006.
- Harbison, J. I., Dougherty, M. R., & Davelaar, E. (2006). Stopping memory search: When and why do people terminate memory search. Psychonomic Society meeting, Houston, TX, Nov. 2006

- Harbison, J. I., & Dougherty, M. R. (2006). Conditional memory search. Society for Judgment and Decision Making, Houston, TX, Nov. 2006
- Thomas, R. P., & Dougherty, M. R. (2006). Psychological Plausibility of fast and frugal heuristics. Brunswik Society, Houston, TX, 2006.
- Harbison, J. I., & Dougherty, M. R. (2006). Belief updating and delusional ideation. Society for Judgment and Decision Making, Houston TX, Nov. 2006
- Tomlinson, T., & Dougherty, M. R. (2006). Part-set cuing and retrieval induced forgetting in judgment. Society for Judgment and Decision Making, Houston, TX, Nov. 2006
- Dougherty, M. R., & Thomas, R. P. (2007). Diagnostic hypothesis generation and human judgment. Symposium on Cognitive Decision Theory. 29th annual meeting of the Cognitive Science Society, Nashville, TN, Aug. 1–4.
- Tomlinson, T. D., & Dougherty, M. R. (2007). The Effect of Juror Ethnicity on Judgments and Perceptions of Courtroom Testimony. Society for Judgment and Decision Making, Long Beach CA Nov. 15.
- Harbison, J. I., & Dougherty, M. R. (2007). The Changing of an Occupied Mind: Belief Adjustment under Divided Attention. Society for Judgment and Decision Making, Long Beach, CA Nov. 15.
- Harbison, J. I., Dougherty, M. R., Davelaar, E., & Faayed (2008). On the lawfulness of the decision to terminate memory search. Cognitive Science Meeting. Washington, DC.
- Dougherty, M. R., Thomas, R. P., & Atkins, S. (2008). The mediating role of memory on judgments of probability. Society for Mathematical Psychology. Washington, DC.
- Dougherty, M. R., Sprenger, A., Atkins, S., Franco-Watkins, A., & Thomas, R. P. (2008). The mediating role of memory and attentional control in probability judgment. Psychonomic Society, Chicago, IL, November.
- Atkins, S. & Dougherty, M. R. (2008). Hypothesis guided information search and the deployment of visual attention in judgment tasks. Psychonomic Society, Chicago, IL, November.
- Harbison, J. I., Dougherty, M. R., & Bunting, M. (2008). Block span: A new automated working memory task. Psychonomic Society, Chicago, IL, November.
- Thomas, R. P., Lange, N. D., & Dougherty, M. R. (2008). A Memory Theoretic Account of Hypothesis Generation & Information Search. Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November.
- Siegel, E., Curtis, R., & Dougherty, M. (2008). Jekyll and Hyde Meet Task Switching: The Influence of Perceived Threat on Task Switching. Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November.
- Dougherty, M. & Hanges, P. (2008). Reexamining the white-male effect: The mediating role of cognitive skill in the judged probability. Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November.
- Hussey, E. K. & Dougherty, M. R. (2008). Cognitive Foundations of Risk Perception and Risk-Seeking Behavior. Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November.

- Harbison, J. I., & Dougherty, M. R. (2008). Judgment and the Termination of Memory Search. Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November.
- Tomlinson, T. D., & Harbison, J. I., Sprenger, A., Dougherty, M. R. (2008). Unpacking the Relationship Between Judgments and Working Memory. Annual Meeting of the Society for Judgment and Decision Making, Chicago, IL, November.
- Dougherty, M. R., Hussey, E., & Harbison, J. I. (2009). Implications for self-terminated memory search for understanding the dynamics of memory retrieval. Psychonomic Society, Boston, MA, November 18–22.
- Hussey, E., Teubner-Rhodes, S., Dougherty, M. R., & Novick, J. (2009). Psychonomic Society, Boston, MA, November 18–22.
- Harbison, J. I., Bunting, M. F., Atkins, S., & Dougherty, M. R. (2009). Adaptive N-back training. Poster presentation at Psychonomic Society, Boston, MA, November 18–22.
- Atkins, S., Harbison, J. I., Dougherty, M. R., & Bunting, M. F. (2009). Validation of two new automated measures of cognitive ability. Psychonomic Society, Boston, MA, November 18–22.
- Atkins, Dougherty et al., (2010). The Transferability And Persistence Of Working Memory Training Over Time. Psychonomic Society, Nov. 19, 2010
- Hussey, E., Teubner-Rhodes, S., Novick, J., Dougherty, M. R., Harbison, J. I., & Bunting, M. F. (2010). Improving garden-path recovery through cognitive control training. AMLaP. York, United Kingdom., Sept. 6, 2010.
- Teubner-Rhodes, S., & Dougherty, M. (2010). Emotional interference: The magnitude and time-course of automatic emotional language processing. Neurobiology of Language Conference. San Diego California, Nov 11 - Nov13, 2010
- Teubner-Rhodes, Hussey, Harbison, Dougherty, Bunting, & Novick (2010) Improving garden-path recovery through cognitive control training. Psychonomic Society. Saint Louis, Missouri, Nov. 19, 2010
- Thomas, R. P., Hahn, S., Lange, N. D., Buttaccio, D., Alberts, T., Dougherty, M. R., & Rose, L. (Oct. 2010). *Target identification and assessment in visual intelligence, surveillance, & reconnaissance*. Paper to be presented as the MSS Missile Defense Sensors, Environment and Algorithms, Orlando, FL.
- Hussey, Teubner-Rhodes, Novick, Dougherty, Harbison, & Bunting (2011) Improving garden-path recovery through cognitive control training. CUNY
- Atkins, Harbison, & Dougherty (2011). N-back Assessment Performance: Analysis and Model. Annual Meeting of the Psychonomic Society. Seattle, WA, November 2011.
- Harbison, Atkins & Dougherty (2011). [N-back Training Task Performance: Analysis and Model](#). Cognitive Science. Boston MA, July 2011
- Dougherty & Thomas (2011). Robust decision making in a monotone world. Advanced Summer Institute on Cognitive Science (ASIC). Caldes de Boi, Spain, July 2011.
- Chrabaszcz, J S., Dougherty, M.R., (2012, November). Revealing Non-Linear Numerical Perception Using Reaction Time. Annual Meeting of the Psychonomic Society. Minneapolis, MN.

- Atkins, S. M., Dougherty, M. R., Bunting, M. F., & Bolger, D. J. (2012, November) Examining Visual Spatial Working Memory Training. Annual Meeting of the Psychonomic Society. Minneapolis, MN.
- Buttaccio, D. R., Lange, N. D., Thomas, R.P., Hahn, S., & Dougherty, M.R. (2012). Hypothesis Generation Supports Visual Search: The Influence of Alternative Outcomes and Working Memory Capacity. Annual Meeting of the Psychonomic Society. Minneapolis, MN.
- Yu, E.C., Hussey, E.K., Dougherty, M.R., Harbison, J.I., & Davelaar, E. (2012, November). Terminating Search in Retrieval From Memory. Annual Meeting of the Psychonomic Society. Minneapolis MN
- Chrabaszcz, J S., Dougherty, M.R., Sprenger, A.M., Yu, E. Thomas, R P., Lawrence, A. (2012, November). Using Heuristic Models to Predict Utterly Random Events. Society for Judgment and Decision Making, Minneapolis, MN.
- Yu., E. C., Dougherty, M. R., Sprenger, A. M., & Thomas, R. P. (2012, November). When Decision Heuristics and Science Collide. Society for Judgment and Decision Making, Minneapolis, MN.
- Dougherty, M. R., Thomas, R. P., & Brown, R. (2012, November). Robust Decision Making in a Nonlinear World. Society for Judgment and Decision Making, Minneapolis, MN.
- Lawrence, A. M., Thomas, R. P., & Dougherty, M. R. (2012, November). Modeling Monotonic Relationships: A Comparison of OLS, GeMM, and OMR. Society for Judgment and Decision Making, Minneapolis, MN.
- Atkins, S. M., Bolger, D. J., Bunting, M. F., & Dougherty, M. R. (2012, November). Efficiency Following Visual-Spatial Working Memory Training: Increases in Default Mode and Decreases in Fronto-Parietal Activation. Poster presented at Cognitive Neuroscience Society, Chicago, IL.
- Davelaar, E. J., Harbison, J. I., Yu, E. C., Hussey, E. K., Dougherty, M. R. (2012, July). Rational search of associative memory. Poster to be presented at the 34th Annual meeting of the Cognitive Science Society. Sapporo, Japan.
- Yu, E. C., Hussey, E., Dougherty, M. R., Harbison, J. I., & Davelaar, E. J. (2012, April). Is termination of memory search rational? Paper presented at 54th Tagung experimentell arbeitender Psychologen, Mannheim, Germany.
- Yu, E. C., Hussey, E., Dougherty, M. R., Harbison, J. I., & Davelaar, E. J. (2012, April). Is termination of memory search rational? Paper presented at the meeting of the Experimental Psychological Society, Hull, UK.
- Atkins, S. M., Bolger, D. J., Bunting, M. F., & Dougherty, M. R. (2012). Training-related Plasticity in Brain Activity Following Visual Spatial Working Memory Training. Poster presented at Organization for Human Brain Mapping, Beijing, China.
- Harbison, J. I., Atkins, S. M., & Dougherty, M. R. (2012). N-back performance: Comparing assessment and training performance. Paper presented at the 34th Annual Conference of the Cognitive Science Society, Sapporo Japan.
- Davelaar, E. J., Yu, E. C., Harbison, J. I., Hussey, E. K., & Dougherty, M. R. (2012, April). A rational analysis of memory search termination. Paper presented at 11th International Conference on Cognitive Modeling. Berlin, Germany.
- Davelaar, E. J., Harbison, J. I., Yu, E. C., Hussey, E. K., & Dougherty, M. R. (2012, July). Rational search of associative memory. Paper presented at 34th Annual meeting of the Cognitive Science Society. Sapporo, Japan.
- Harbison, J. I., Hussey, E. K., Dougherty, M. R., & Davelaar, E. J. (2012, July). Self-terminated vs. experimenter-terminated memory search. Paper presented at 34th Annual meeting of the Cognitive Science Society. Sapporo, Japan.

- Chrabaszcz, J. S., & Dougherty, M. R. (2012, November). Revealing Non-Linear Numerical Perception Using Reaction Time. Annual Meeting of the Psychonomic Society. November, 16, Minneapolis MN
- Atkins, S. M., Dougherty, M.R., Bunting, M. F., & Bolger, D. J. (2012, November) Examining Visual Spatial Working Memory Training. Annual Meeting of the Psychonomic Society. November, 16, Minneapolis MN
- Buttaccio, D. R., Lange, N. D., Thomas, R.P., Hahn, S., & Dougherty, M.R. (2012, November). Hypothesis Generation Supports Visual Search: The Influence of Alternative Outcomes and Working Memory Capacity. Annual Meeting of the Psychonomic Society. November, 16, Minneapolis MN
- Chrabaszcz, J. S., Dougherty, M. R., Sprenger, A. M., Yu, E., Thomas, R. P., & Lawrence, A. (2012, November). Using Heuristic Models to Predict Utterly Random Events. Society for Judgment and Decision Making, November, 18, Minneapolis MN.
- Yu., E. C., Dougherty, M. R., Sprenger, A. M., & Thomas, R. P. (2012, November). When Decision Heuristics and Science Collide. Society for Judgment and Decision Making, November, 18, Minneapolis, MN.
- Dougherty, M., Thomas, R. P., & Brown, R. (2012, November). Robust Decision Making in a Nonlinear World. Society for Judgment and Decision Making, November, 18, Minneapolis, MN.
- Lawrence, A. M., Thomas, R. P., & Dougherty, M. R. (2012, November). Modeling Monotonic Relationships: A Comparison of OLS, GeMM, and OMR. Society for Judgment and Decision Making, November, 18, Minneapolis, MN.
- Atkins, S. M., Bolger, D. J., Bunting, M. F., & Dougherty, M. R. (2012). Efficiency Following Visual-Spatial Working Memory Training: Increases in Default Mode and Decreases in Fronto-Parietal Activation. Poster presented at Cognitive Neuroscience Society, Chicago, IL.

Tidwell et al. (2014). Psychonomics

Chrabaszcz et al (2014). Psychonomics

Dougherty et al. (2014) SJDM

Chrabaszcz et al. (2014). SJDM

Thomas et al. (2014). SJDM

Dougherty et al (2015). Exploring potential moderators of working memory training and transfer. Symposium on Working memory training. American Psychological Society, 2015

Invited Workshops

NSF Workshop: Workshop on Higher Cognition in Adolescents and Young Adults, Arlington Virginia, Sept. 28–30, 2008 (Organizer: Valerie Reyna)

NSF Workshop: Bridging the Cyber, Physical and Social Worlds, Kansas City, MO, May 27–28, (Organizer: Bruce McMillin)

NSF Conference: *Beyond the numbers: Celebrating the Best of How Teachers Teach and African American Students Learn Math*. Philadelphia, PA, Feb 26–27, 2010 (organizer: Jacqueline Leonard)

Ernst Strungmann Forum: Cognitive Search: Evolution, Algorithms, and the Brain (Chairpersons: Peter M. Todd and Trevor Robbins), Berlin Germany, Feb. 2011

Psychonomics Leading Edge Workshop on the Process of Explanation. Fall 2015

Teaching and Mentorship

Courses Taught

Undergraduate

Psyc100H: Introductory Psychology (honors section)
Psyc341: Memory & Cognition
Psyc440: Experimental Psychology: Cognitive Processes
Psyc443: Thinking and Problem Solving

Graduate

Psyc601: Statistical Methods I
Psyc607: Cognitive Psychology
Psyc778: Seminar in Cognitive Psychology

Student and Post Doctoral Advisees

Post Doctoral Advisees

J. Isaiah Harbison (2006–2009, Research Faculty, University of Maryland Center for Advanced Study of Language)
Amber M. Sprenger (2010–2012, MITRE Corporation)
Erica C. Yu (2010–2013, Bureau of Labor and Statistics)
Sharona Atkins (2011–2013)

PhD Students

Ana Franco-Watkins, PhD (2004, Associate Professor, Auburn University)
Rickey P. Thomas, PhD (2004, Kansas State University, advised PhD research, Associate Professor, Georgia Tech University)
Amber Sprenger, PhD (2007, MITRE Corporation)
Tracy Tomlinson, PhD (2009, Lecturer, University of Maryland)
Xing Tian, PhD (2008, co-advised with David Huber, Post Doc, New York University)
Sharona Atkins, PhD (2011, Post doc, University of Maryland)
Erika Hussey, PhD (2012, Post doc, University of Illinois at Urbana-Champaign)
Susan Teubner-Rhodes, PhD (2014, Post doc Medical School of South Carolina)
Jeffrey Chrabaszcz (PhD expected 2015)
Joe Tidwell (PhD expected 2016)
Alison Robey (PhD expected 2016)
Roselind Nguyen (PhD expected 2020)

MS Students

Jennifer Hunter, MS (2002)
Andrew Herst, MS (2009)

Undergraduate Students and Advisees

Amir Goren (2000–2001, received PhD from Princeton)
Brandon Abbs (2000–2003, co-authored article, received PhD from University of Iowa, now at Harvard Med school)
Adnan Abassi (1999–2000)
Kelly Barnes (2001–2003, co-authored article, received PhD from Georgetown, currently at NIH)
Renee Richards (2001)
Jared Smith (2001, received PhD from UC Irvine)
Steven Pipe (2002)
John Salogiannis, Advisor (2002, attended medical school)

Jennifer Joy (2003, received PhD from University of Virginia)
 Leah Meltzer (2003)
 Francine Drummand (2002–2006, attended dental school)
 Shannon Carbery (2004)
 Matthew Sams (2004)
 Basma Faayed (2004–2006, co-authored article in *Cognition*)
 Gregory Cox (2010, *Proceedings in Cognitive Science*, several conference presentations, PhD program, Indiana)
 Brian Lerner (2009–2010, attended Psychonomics conference)
 David Alexander (2006–2008, MS in Counseling Psychology)
 Pooja Datta (2008–2010)
Over 50 other undergraduates have been mentored in my lab

Service

Departmental Service

Tenure Review Committee, junior faculty representative (1999–2000)
 Undergraduate Studies Committee (2000–2006)
 Statistics Task Force (2001–2002)
 Policy Review Committee (Spring 2001, 2002–2003)
 Policy Review Committee, alternate (2001–2002, 2004–2005)
 Departmental Human Subjects Review Board Committee (2002–present)
 Human Subjects Allocation Committee (2003–2006)
 Salary Review Committee (2005)
 Cognitive Psychology Search Committee (2005–2006)
 Developmental Search Committee (2006)
 Chair/organizer of Departmental retreat (2006)
 Executive Committee (2008–2009, 2012–present)
 fMRI Director Search Committee (2009–2010)
 Faculty Hiring Committee (2009–2012)
 Graduate Studies Committee (2006–present)
 NACS Executive Committee (2008–2010)
 I/O Quant Search Committee (2011–2012)
 Associate Chair/Director of Graduate Studies (2012–present)
 Area head Cognitive and Neural System (CNS, 2014–present)

University Service

Graduate Council (2003–2006)
 Graduate Council committee Chair (2003–2004), ad hoc committee on use of GRB research funds for library staff
 Graduate Council Fellowship committee (2004–2005)
 Chair Graduate Council dissertation fellowship committee (2005)
 Invited presentation for New student orientation (invited by Dr. Allen Stairs, Dept. of Philosophy) (2003, 2004)
 Invited speaker, First year honors seminar (invited 2003, 2004)
 Panel Discussant, “Building a CV” Center for Teaching Excellence (Spring 2005)
 Gemstone Mentor, Team IAMSPIE (2006–2008)
 Gemstone team subject matter expert for Team OM (2007)
 Gemstone Mentor, Team Cognitive Training (2008–2011)
 Faculty Senate (2008–2010)
 BSOS Distinguished Dissertation Award (2012–2013)

Co-founder (with Rebecca Ratner) and Spokes person, Decision Science Field Committee (2012-present)
LOSC (Safety committee) (2014-2015)

Service to Professional Organizations

Society for Judgment and Decision Making (SJDM), Student Poster Committee (2001, 2003, 2004, 2006)
Federation of Associations in Behavioral & Brain Sciences (FABBS), SJDM Representative (2007–present)
Representative on NSF-SBE communications committee

Advisory and Grant Panels

Committee of Visitors, Decision Risk, and Management Science, National Science Foundation (2006)
Advisory Panel, Kansas State University, Department of Psychology (2010–2013)
Major Research Instrumentation, Grant panel, National Science Foundation (2009)
Secure and Trustworthy Cyberspace (SaTC), Grant panel, National Science Foundation (2012, 2013)

Grant Reviewer

Air Force Office of Scientific Research (AFOSR): external reviewer (2000, 2004, 2006)
National Science Foundation: External reviewer (2001–2003, 2005, 2011–2013)
Israeli Science Foundation: External reviewer (2004–2005)
European Research Council: External reviewer (2010)

Editorial Boards

Journal of Experimental Psychology: Learning, Memory, & Cognition, Consulting Editor (2002–2005, 2010–2011)
Frontiers in Cognitive Science, Associate Editor (2009–present)

Ad Hoc Reviewer

1999

Journal of Experimental Psychology: Applied
Acta Psychologica
Organizational Behavior and Human Decision Processes
Wiley, Handbook of Applied Cognition (1999)

2000

Psychological Review
Acta Psychologica

2001

Journal of Experimental Psychology: Applied
Journal of Experimental Psychology: Learning, Memory & Cognition
Organizational Behavior and Human Decision Processes
Oxford University Press (2001)
Thompson Press (2001)

2002

Journal of Experimental Psychology: Learning, Memory & Cognition
Experimental Psychology

2003

Journal of Experimental Psychology: Learning, Memory, & Cognition
Memory & Cognition
Journal of Experimental Psychology: Applied
Psychology and Aging

- Acta Psychologica
Organizational Behavior and Human Decision Processes
- 2004
Journal of Experimental Psychology: Learning, Memory, & Cognition
Psychology and Aging
- 2005
Journal of experimental Psychology: Learning, Memory, & Cognition
Organizational Behavior and Human Decision Processes
Applied Cognitive Psychology
- 2006
Journal of Experimental Psychology: Learning, Memory, & Cognition
Memory & Cognition
Handbook of Applied Cognitive Psychology
Psychonomic Bulletin & Review
Psychological Review
Organizational Behavior and Human Decision Processes
European Journal of Cognitive Psychology
Cognition
- 2007
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, & Cognition
Memory and Cognition
Cognition
Psychological Review
- 2008
Journal of Experimental Psychology: Learning Memory, & Cognition
Memory & Cognition
Acta Psychologica
Abnormal Psychology
Psicológica
Cognition
Cognitive Psychology
Current Directions in Psychological Science
- 2009
Judgment and Decision Making
Psychological Bulletin
Psychological Science
Psychonomic Bulletin & Review
Memory & Cognition
Thinking and Reasoning
Journal of Experimental Psychology: Learning, Memory, & Cognition
Journal of Experimental Psychology: General
- 2010
Judgment and Decision Making
Psychological Bulletin
Journal of Experimental Psychology: Learning, Memory, & Cognition
Psychonomic Bulletin & Review
Journal of Behavioral Decision Making
Psychological Science
Cognition
Organizational Behavior and Human Decision Processes

2011

Judgment and Decision Making
Psychological Bulletin
Journal of Experimental Psychology: Learning, Memory, & Cognition
Psychological Science
Cognition
Memory & Cognition
Frontiers in Cognitive Science
Psychonomic Bulletin and Review

2012

Psychological Science
Journal of Experimental Psychology: Learning, Memory, & Cognition
Topics in Cognitive Science
Psychonomic Bulletin & Review
Journal of Experimental Psychology: General
Frontiers in Cognitive Science
Psychological Methods

2013

Psychological Science
Journal of Experimental Psychology: General
Memory
Quarterly Journal of Experimental Psychology
Psychonomic Bulletin and Review
Memory and Cognition
Journal of Memory and Language

2014

Frontiers in neuroscience
Frontiers in cognitive science
Psychological Review
Memory and Cognition
Decision
Quarterly Journal of Experimental Psychology
Journal of Experimental Psychology: Learning, Memory, & Cognition
Psychological Methods
Psychological Science
Experimental Psychology

2015

Psychological Methods
Psychonomic Bulletin and Review
Journal of Experiment Psychology: General
Perspectives in Psychological Science
Psychological Methods
Transactions on Neural Systems & Rehabilitation Engineering
Journal of American Medical Association Pediatrics

Professional Memberships

Society for Judgment and Decision Making
Psychonomics Society
Cognitive Science Society

Research Interests

Judgment and decision making

- Hypothesis generation
- Probability judgment
- Heuristic algorithms
- Quantitative estimation
- Hypothesis testing and visual information search
- Application of memory theory to judgment and decision making
- Implicit attitude expression and cognitive control

Memory

- Measurement of working memory
- Role of working memory in judgment
- Stopping decisions in information retrieval
- Role of motivation in memory search and hypothesis generation

Methodology and statistics

- Statistical modeling of ordered data
- Selection biases in the evaluation of decision models

Translational and applied interests

- Cognitive and brain plasticity training
- Quantitative abilities and cognitive control