

## CURRICULUM VITA

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**Melissa R. Beck, Ph.D.**

### **Mailing Address**

Department of Psychology  
236 Audubon Hall  
Louisiana State University  
Baton Rouge, LA 70803

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### **EDUCATION**

- Ph.D. Cognitive Psychology**  
Kent State University (May 2001 – August 2003)
- M.A. Cognitive Psychology**  
Kent State University (August 1998 – May 2001)
- B.A. Psychology, Minor: Mathematics**  
Ohio University (August 1994 - June 1998)

### **APPOINTMENTS**

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|----------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Professor</b><br>Louisiana State University                                   | <b>August 2018 –</b><br>Department of Psychology                        |
| <b>Associate Professor</b><br>Louisiana State University                         | <b>August 2012 - 2018</b><br>Department of Psychology                   |
| <b>Assistant Professor</b><br>Louisiana State University                         | <b>August 2006 - 2012</b><br>Department of Psychology                   |
| <b>National Research Council Research Associate</b><br>Naval Research Laboratory | <b>December 2005 – August 2006</b><br>Supervisor: Greg Trafton PhD.     |
| <b>Research Consultant</b><br>Naval Research Laboratory                          | <b>August 2005-December 2005</b><br>Supervisor: Greg Trafton PhD.       |
| <b>Post Doctoral Fellow</b><br>George Mason University                           | <b>July 2003 – August 2005</b><br>Supervisor: Matthew S. Peterson, PhD. |

### **ADMINISTRATIVE POSITIONS**

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| <b>LSU Multidisciplinary Institute for Neuroscience Discovery (MIND)</b><br>Executive board member<br>Louisiana State University | <b>2018 –</b>                             |
| <b>Cognitive and Brain Sciences Area Head</b><br>Louisiana State University                                                      | <b>2016 -</b><br>Department of Psychology |
| <b>Director of Undergraduate Training</b><br>Louisiana State University                                                          | <b>2014 -</b><br>Department of Psychology |

### **GRANTS**

#### **H&SS Instructional Impact Grant**

**Title:** Brain Science Speaker Series  
\$16,927 2018-2019

#### **Center for Computational Technology Intramural Award: Louisiana State University**

**Title:** The Brain STEM Program: Employing Eye Tracking and Neural Data to Transform STEM training  
\$14,750 2018-2019

#### **Center for Computational Technology Intramural Award: Louisiana State University**

**Title:** The Brain STEM Program: Employing Eye Tracking and Neural Data to Transform STEM training  
\$85,898 2017-2018

**College Summer Research Award**

**Title:** Generalizing trained visual attention strategies: Toward improving performance and retention in STEM college courses.

\$5,000 2016

**Board of Regents Enhancement Fund:**

**Title:** Psychology Department EEG Neuroscience Lab

\$102,811 2015-2016

**United States Department of Transportation**

**Title:** Minimizing driver errors: Detecting unexpected targets in familiar environments

\$56,532 2014-2015

**Manship and College Summer Research Award**

**Title:** Training Optimal Attention Strategies by Changing the Pattern of Eye Movements

\$8,000 2013

**United States Department of Transportation**

**Title:** Minimizing driver errors: Examining factors leading to failed target detection

\$121,723 2011-2012

**College of Humanities and Social Sciences Assistant Professor Summer Research Award**

**Title:** Implicit learning for probable feature changes: Attention and feature binding

\$5,000 2011

**NRL Broad Agency Announcement: Mapping, Charting, and Geodesy**

**Title:** Minimizing adverse effects of visual clutter and optimizing visual search strategies

\$255,077 2010-2015

**Faculty Research Grant: Louisiana State University**

**Title:** Interdisciplinary Study of the Etiology of ADHD: Translating Basic Research Into Clinical Tools

\$40,000 2008

**NRL Broad Agency Announcement: Artificial Intelligence Technologies**

**Title:** Defining visual clutter and its effects on detecting targets in visual search tasks

\$60,000 2007-2009

**Louisiana State University Council on Research Summer Stipend**

**Title:** Maximizing the utility of visual working memory: Can strategies overcome limits during encoding and retrieval?

\$5000 2007

**Board of Regents support fund: Research Competitiveness Subprogram**

**Title:** Maximizing the utility of visual working memory: Can attention strategies overcome limits during encoding and retrieval?

\$85,451 Fall 2007 – Summer 2009

**Kent State University Research Fellowship**

Competitive research funding

\$6000 Spring 2003

**Applied Psychology Center Research Fellowship.**

**Title:** Using and Acquiring Knowledge about the Probability of Change to Guide Visual Attention.

\$500 December 2002

**RESEARCH INTERESTS**

**Broad:** Visual memory and attention, incidental learning

**Specific:** The roles of memory, attention, and decision making in visual perception; using eye movements to measure attention; top down influences on visual processing; incidental learning of regularities in the visual environment; the role of metacognitive beliefs on visual perception, attention and memory; application of visual processing and attention limits to the design of computer interfaces and to understanding of the development of expertise.

## **RESEARCH AWARDS**

### **2009 Naval Research Laboratory Alan Berman Research Publication Award:**

Lohrenz, M.C., Trafton, J.G., **Beck, M.R.**, & Gendron, M.L. (2009). A model of clutter for complex, multivariate, geospatial displays. *The Journal of Human Factors and Ergonomics Society*, 51(1), 90-101.

## **RESEARCH ACTIVITY**

### **Publications**

Moen, K. C., Saltzman, S. M., Burleigh, L. M., Butler, L. G., Ramanujam, J., Cohen, A. S., **Beck, M. R.**, & Greening, S. G. (in press). Strengthening spatial reasoning: Elucidating the attentional and neural mechanisms associated with mental rotation skill development. *Cognitive Research: Principles and Implications*.

Moen, K.C., Guevara Pinto, J.D., Papesh, M.H., & **Beck, M.R.** (2019). Not all information in visual working memory is forgotten equally. *Consciousness and Cognition*, 74.  
<https://doi.org/10.1016/j.concog.2019.102782>

Goldstein, R.R., & **Beck, M.R.**, (2018). Visual search with varying versus consistent attentional templates: Effects on target template establishment, comparison, and guidance. *Journal of Experimental Psychology: Human Perception and Performance*, 44(7), 1086-1102. <http://dx.doi.org/10.1037/xhp0000520>

**Beck, M.R.**, Goldstein, R.R., van Lamsweerde, A.E., & Ericson, J.M., (2018). Attending globally or locally: Incidental learning of optimal visual attention allocation. *Journal of Experimental Psychology: Learning Memory and Cognition*, 44(3), 387-398. <http://dx.doi.org/10.1037/xlm0000428>

Cohen, A.S. Mitchell, K., **Beck, M.R.**, & Hicks, J. (2017). The subjective-objective paradox in psychometrically-defined schizotypy: What it is and why it is important. *Journal of Experimental Psychopathology*, 8(4), 347-363.

Ericson, J.E., Parr, S.A., **Beck, M.R.**, & Wolshon, B. (2017). Compensating for failed attention while driving. *Transportation Research Part F: Traffic Psychology and Behaviour*, 45, 65-74,  
<http://dx.doi.org/10.1016/j.trf.2016.11.015>.

Goldstein, R.R. & **Beck, M. R.** (2016). Inattention blindness: A combination of a relational set and a feature inhibition set? *Attention, Perception, & Psychophysics*, 78, 1245-1254.

van Lamsweerde, A. E., **Beck, M.R.** & Johnson, J.S. (2016). Visual working memory organization is subject to top-down control. *Psychonomic Bulletin and Review*, 23(4), 1181-1189, doi:10.3758/s13423-015-0976-3.

Ericson, J.M., **Beck, M.R.** & van Lamsweerde, A.E. (2016). Binding global and local features in visual working memory. *Attention, Perception, & Psychophysics*, 78(1), 94-106. doi: 10.3758/s13414-015-1008-0

van Lamsweerde, A.E., & **Beck, M.R.** (2015). Incidental learning of probability information is differentially affected by the type of visual working memory representation. *Canadian Journal of Experimental Psychology*, 69(4), 283-296. <http://dx.doi.org/10.1037/cep0000058>

van Lamsweerde, A.E., **Beck, M.R.**, & Elliott, E.M. (2015). Retrieval from long-term memory reduces working memory representations for visual features and their bindings. *Memory & Cognition*, 43, 237-246, doi: 10.3758/s13421-014-0468-0

Trenchard, M.E., & **Beck, M.R.** (2014). How clutter and expertise affect search in geospatial displays. 2013 NRL Review, 222-225.

- Beck, M.R.**, Hong, L.S., van Lamsweerde, A.E., & Ericson, J.M. (2014). The effects of incidentally learned temporal and spatial predictability on response time and visual fixations during target detection and discrimination. *PLoS One*, 9(4): e94539. doi:10.1371/journal.pone.0094539
- Ericson, J. M. & **Beck, M. R.** (2013). Spatial proximity does not influence tracking performance, but changing target trajectories does. *Psychonomic Bulletin and Review*, 20(5), 951-956.
- Beck, M. R.**, Martin, B.A., Smitherman, E. & Gaschen, L. (2013). Eyes-on training and radiological expertise: An examination of expertise development and its effects on visual working memory. *Human Factors*, 55(4), 747-763. doi: 10.1177/0018720812469224
- van Lamsweerde, A. E. & **Beck, M.R.** (2012). Attention shifts or volatile representations: What causes binding deficits in visual working memory? *Visual Cognition*, 20(7), 771-792.  
<http://dx.doi.org/10.1080/13506285.2012.696560>
- van Lamsweerde, A. E. & **Beck, M.R.** (2011). The change probability effect: Incidental learning, adaptability, and shared visual working memory resources. *Consciousness and Cognition*, 20, 1676-1689.  
<http://dx.doi.org/10.1016/j.concog.2011.09.003>
- Levin, D.T., Angelone, B.A., & **Beck, M.R.** (2011). Visual search for rare targets: Distracter-tuning as a mechanism for learning from repeated failed searches. *British Journal of Psychology*. 102(3), 313-327.
- Peterson, M.S. & **Beck, M.R.** (2011). Eye movements and memory. In Simon Liversedge, Iain Gilchrist, Stefan Everling (Eds). *The Oxford Handbook on Eye movements*. Oxford, England.
- Beck, M.R.** & van Lamsweerde, A. E. (2011). Accessing long-term memory representations during visual change detection. *Memory and Cognition*. 39(3), 433-446. doi: [10.3758/s13421-010-0033-4](https://doi.org/10.3758/s13421-010-0033-4)
- Cohen, A. S., **Beck, M. R.**, Najolia, G. M., & Brown, L. A. (2011). Affective disturbances in psychometrically defined schizotypy across direct, but not indirect assessment modes. *Schizophrenia Bulletin*. 128, 136-142.
- Lohrenz, M.C., & **Beck, M.R.** (2011). Clutter avoidance in complex geospatial displays. *2011 NRL Review*, 167-169.
- Beck, M.R.**, Lohrenz, M.C., & Trafton, J.G. (2010). Measuring search efficiency in complex visual search tasks: Global and local clutter. *Journal of Experimental Psychology: Applied*, 16(3), 238-250, doi: [10.1037/a0019633](https://doi.org/10.1037/a0019633).
- Hong, L. S. & **Beck, M. R.** (2010). Uncertainty compensation in human attention: Evidence from response times and eye fixation durations. *PLoS One*, 5(7).
- Cohen, A. S., **Beck, M. R.**, Brown, L. A & Najolia, G., (2010). Decoupling Implicit Measures of Pleasant and Unpleasant Social Attitudes. *Journal of Behavior Therapy and Experimental Psychiatry*. 41(1), 24-30.
- Lohrenz, M.C., **Beck, M.R.**, Trafton, J.G., & Gendron, M. (2009). Measurement and Analysis of Clutter in Electronic Displays. *2008 NRL Review*, 163-165.
- Lohrenz, M.C., Trafton, J.G., **Beck, M.R.**, & Gendron, M.L. (2009). A model of clutter for complex, multivariate, geospatial displays. *The Journal of Human Factors and Ergonomics Society*, 51(1), 90-101.
- Beck, M. R.**, Angelone, B.A., Levin, D.T., Peterson, M.S., & Varakin, A. (2008). Implicit learning for probable changes in a visual change detection task. *Consciousness and Cognition*, 17, 1192-1208.
- Peterson, M.S., **Beck, M.R.** & Wong, J. H. (2008). Were you paying attention to where you looked? The role of executive working memory in visual search. *Psychonomic Bulletin and Review*, 15(2), 372-377.

**Beck, M.R.**, Peterson, M.S., & Angelone, B.A. (2007). The roles of encoding, retrieval, and awareness in change detection. *Memory and Cognition*, 35(4), 610-620.

Peterson, M.S., **Beck, M.R.**, & Vomela, M. (2007). Visual search is guided by prospective and retrospective memory. *Perception and Psychophysics*, 69(1), 123-135.

**Beck, M. R.**, Levin, D.T. & Angelone, B.A. (2007b). Metacognitive errors in change detection: Lab and life converge. *Consciousness and Cognition*, 16, 58-62.

**Beck, M. R.**, Levin, D.T. & Angelone, B.A. (2007a). Change blindness blindness: Beliefs about the roles of intention and scene complexity in change detection. *Consciousness and Cognition*, 16, 31-51.

**Beck, M. R.**, Peterson, M.S., Boot, W.R., Vomela, M. & Kramer, A.K. (2006). Explicit Memory for Rejected Distractors During Visual Search. *Visual Cognition*, 14(2), 150-174.

**Beck, M.R.**, Peterson, M.S. & Vomela, M. (2006). Memory for where, but not what, is used during visual search. *Journal of Experimental Psychology: Human Perception and Performance*, 32(2), 235-250.

**Beck, M. R.**, Angelone, B.A., & Levin, D. T. (2004). Knowledge about the probability of change affects change detection performance. *Journal of Experimental Psychology: Human Perception and Performance*, 30(4), 778-791.

Levin, D. T. & **Beck, M. R.** (2004). Thinking about seeing: Spanning the differences between metacognitive failure and success. In Daniel Levin (Ed) *Thinking about seeing: Visual metacognition in adults and children*. (pp. 121 – 144). Cambridge MA: MIT Press.

**Beck, M. R.** & Levin, D. T. (2003). The role of representational volatility in recognizing pre- and postchange objects. *Perception and Psychophysics*, 65(3), 458-468.

Levin, D.T., Drivdahl, S., Momen, N, **Beck, M.** (2002). False predictions about the detectability of visual changes: The role of beliefs about attention, memory, and the continuity of attended objects in causing change blindness blindness. *Consciousness and Cognition*, 11, 507-527.

Zaragoza, M. S., Payment, K. E., Ackil, J.K., Drivdahl, S. B., & **Beck, M.** (2001). Interviewing witnesses: Forced confabulation and confirmatory feedback increase false memories. *Psychological Science*, 12(6), 473-477.

## Invited Papers

Lohrenz, M., Trenchard, M. E., & **Beck, M.R.** (2008). Clearing up the clutter. *The Defense Management Journal*, 41, 167-169.

## Proceedings

**Beck, M.R.**, Trenchard, M., van Lamsweerde, A., Goldstein, R. R., & Lohrenz, M. (2012). Searching in clutter: Visual attention strategies of expert pilots. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 1411- 1415.

Lohrenz, M.C., & **Beck, M.R.** (2010). Evidence of clutter avoidance in complex scenes. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 1355-1359

Lohrenz, M.C., **Beck M.R.**, & M.L. Gendron (2010). Human factors analysis of change detection tasks for mine warfare. *Proceedings of the 9th International Symposium on Technology and the Mine Problem*, 17-20.

## Book Reviews

**Beck, M. R.** (2009). Building bridges in event cognition [Review of the book *Understanding event cognition*]. *Applied Cognitive Psychology*, 23(4), 600-602.

## Conference Presentations and Published Abstracts

Saltzman, S.M. & Beck, M.R. (2019, May). Memory for distractors during hybrid search: The effect of target template specificity. Talk presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Moen, K.C. & Beck, M.R. (2019, May). I won't forget that: Partial forgetting in visual working memory is not due to binding errors. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Kim, S. & Beck, M.R. (2019, May). Influences of prediction errors in establishment of attentional control settings during incidental associative learning. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Spitler, S.N. & Beck, M.R. (2019, May). I will never forget you: Direct forgetting and the 3-state model of visual working memory. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Kim, S. & Beck, M.R. (2018, November). Association-change Restores Feature-based Contextual Cueing. Poster presentation at The Object Perception, Attention, and Memory 26th Annual Meeting, New Orleans, Louisiana.

Saltzman, S. M., & Beck, M. R. (2018, November). Memory for Distractors During Hybrid Search: The Effect of Target Template Specificity. Poster presentation at The Object Perception, Attention, and Memory 26th Annual Meeting, New Orleans, Louisiana.

Moen, K. C., Pinto, J. D. G., Papesh, M. H., & Beck, M. R. (2018, November) Feature vs. identity: Directed forgetting in visual working memory. Poster presentation at The Object Perception, Attention, and Memory 26th Annual Meeting, New Orleans, Louisiana.

Beck, M. R., & Moen, K. C. (2018, November). Attention allocation for natural and urban scene: Effects on visual working memory. Talk presented at The Psychonomic Society annual meeting, New Orleans, LA.

Moen, K. C., Saltzman, S. M., Burleigh, L. M., Butler, L. G., Ramanujam, J., Cohen, A. S., Beck, M. R., & Greening, S. G. (2018, November). Strengthening spatial reasoning: Elucidating the neural mechanisms associated with mental rotation skill development. Poster presented at The Annual Meeting of the Society for Neuroscience, San Diego, CA.

Kim, S., & Beck, M. R. (2018, May). Incidental learning of context-feature associations impacts attentional set. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Moen, K. C., Kim, S., Goldstein, R. R., & Beck, M. R. (2018, May). Pay attention to this, not that: Feature repetition prevents task-irrelevant feature processing. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Saltzman, S. M., Moen, K. C., Butler, L. G., Ramanujam, J., Cohen, A. S., Greening, S., Beck, M. R. (2018, May). Coarse and fine visual attention strategies during a 3D mental rotation task. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Wright, A., Moen, K. C., Beck, M. R. (2018, May). Apple of my eye: Incidental learning of change probability biases visual attention to food categories. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Hernandez, E., Moen, K. C., Beck, M. R. (2018, May). The effects of change probability and object typicality on visual working memory and visual attention. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Greening, S., Moen, K. C., Saltzman, S. M., Burleigh, L., Butler, L. G., Ramanujam, J., Cohen, A. S., Beck, M. R. (2018, March) Optimizing STEM skills: A baseline assessment of the neural correlates of mental rotation. Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

Beck, M. R., Moen, K. C., Greening, S., Butler, L. G., Ramanujam, J., & Cohen, A. S. (2018, March) Optimizing STEM skills: Understanding the allocation of attention during mental rotation. Paper presented at the annual meeting of the American Chemical Society, New Orleans, LA.

Kim, S. & Beck, M.R. (May, 2017). Attentional control settings established via statistical learning are changed by context. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Beck, M.R. (May, 2017). Determining the optimal built environment for human behavior and satisfaction. Talk presented at the Beyond Visualization: A Road Map to the Next Generation Building Design Environment for Sustainability, NSF funded workshop, New Orleans, LA

Beck, M.R. Goldstein, R.R., Moen, K.C., Cohen, A.S. & Wolshon, B. (May, 2017). Effects of talking and visual attention load on driving behavior. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Moen, K.C., Saltzman, S.M. & Beck, M.R. (May, 2017). Attentional boost effect: Failure to replicate. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Goldstein, R.R., Delaune, W.J. & Beck, M. R. (May 2017). How task irrelevant content of VWM and LTM affect Attentional Guidance and Disengagement. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Beck, M. R., (November, 2016). Painting Color Art Exhibit, "Color: Perception, Emotion, and Cognition," Presentation and participation in Discussion Panel for the LSU School of Art, Glassell Gallery at the Shaw Center for the Arts, Baton Rouge, LA, United States.

Goldstein, R.R. & Beck, M. R. (November, 2016). What do eye movements reveal about search processes with long-term and visual working memory attentional templates. Poster presented at the Object Perception, Attention & Memory conference, Boston, M.A.

Moen, K. C. & Beck, M.R. (November, 2016). Directed forgetting in visual working memory: Detoured not lost. Talk presented at the Object Perception, Attention & Memory conference, Boston, M.A.

Goldstein, R.R., Delaune, W.J. & Beck, M. R. (May, 2016). Can visual working memory capture result in long-term memory representations of irrelevant features? Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Moen, K. C. & Beck, M.R. (May, 2016). What do the Eyes Reveal? Visual Attention Strategies During Mental Rotation. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Moen, K. C. & Beck, M.R. (November, 2015). Exceeding working memory capacity: Long-term memory to the rescue? Poster presented at the Object Perception, Attention & Memory conference, Chicago, IL.

Beck, M.R., Goldstein, R.R., Moen, K. C. & Clifton, J. (May, 2015). Evidence for bound scene gist representation: Statistical summary representations across multiple dimensions. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Goldstein, R.R. & Beck, M. R. (May, 2015). It's all relative: Attentional set for target distractor relations in inattentive blindness. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Goldstein, R.R. & Beck, M. R. (November, 2014). When associations guide attention: Features or Objects? Poster presented at The Psychonomic Society annual meeting, Long Beach, CA.

Ericson, J.M., & Beck, M. R., (November, 2014). Allocation of attention during multiple object tracking: Parallel allocation and pooling of resources based on task demands. Poster presented at The Psychonomic Society annual meeting, Long Beach, CA.

Lane, S. & Beck, M. (June, 2014). Virtual immersive training for law enforcement. National Sheriff's Association Conference, Ft. Worth, TX.

Beck, M. R, Lane, S.M., Williams, S.T., & Harmon, F.J., (May, 2014). Virtual immersive training for law enforcement. IADLEST Annual Conference, Miramar Beach, FL.

Brown, N.L., Hicks, J.L, & Beck, M.R. (May, 2014). The impact of visual attention on prospective memory. Poster presented at the International Conference on Prospective Memory annual meeting, Naples, Italy.

Beck, M.R., van Lamsweerde, A.E., Goldstein, R.R., & Ericson, J.M., (May, 2014). The change probability effect for high and low spatial frequency items accompanied by a shift in the allocation of attention during encoding. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

DeCorte, B., van Lamsweerde, A.E., & Beck, M.R. (May, 2014). The effects of spatial and temporal predictability on reaction time in a continuous performance task: predicting where but not when. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Ericson, J.M., Goldstein, R.R. & Beck, M. R., (May, 2014). My attention is over there: A serial component to multiple object tracking. Poster presented at the Vision Sciences Society conference, St Pete Beach, FL.

Ericson, J.M., Beck, M. R., Parr, S. & Wolshon, B. (January, 2014). Distracting driving, inattentive blindness, and analysis of failed pedestrian detection. Talk given at the Transportation Research Board annual meeting, Washington, D.C.

Ericson, J.M., Beck, M. R., Parr, S. & Wolshon, B (November, 2013). Inattentive Blindness in Simulated Driving Environments. Poster presented at The Psychonomic Society annual meeting, Toronto, Ontario.

Goldstein, R.R. & Beck, M. R. (November, 2013) Can ensemble statistics in the periphery be used to guide search? Poster presented at The Psychonomic Society annual meeting, Toronto, Ontario.

Van Lamsweerde, A. E. & Beck, M. R. (November, 2013). Multiple types of visual working memory representations: Grouping within and across objects and feature dimensions. Poster presented at the Object Perception, Attention & Memory conference, Toronto, Ontario.

Cornett, D.J., & Beck, M. R. (May, 2013). The global precedence effect and differences in political temperament. Poster presented at the Vision Sciences Society conference, Naples, FL.

Ericson, J.M., Goldstein, R.R., & Beck, M. R. (May, 2013). Capture and tracking: Where does attention go? Poster presented at the Vision Sciences Society conference, Naples, FL.

Goldstein, R.R. & Beck, M. R. (May, 2013). The effect of distractor presentation frequency on saccade reaction times and curvature. Poster presented at the Vision Sciences Society conference, Naples, FL.

Scheithauer, M.C., Advokat, C.A., & Beck, M.R. (May, 2013). Evaluating delayed-discounting values among adults prescribed psycho-stimulant medication using an abbreviated computerized assessment. Poster presented at the Association for Behavior Analysis International conference, Minneapolis, MN.

Van Lamsweerde, A. E. & Beck, M. R. (May, 2013). Multi-featured objects: Parallel and serial access to all features. Poster presented at the Vision Sciences Society conference, Naples, FL.



Beck, M.R., Trenchard, M. van Lamsweerde, A.E., Goldstein, R.R., Lohrenz, M. (October 2012). Searching in clutter: Visual attention strategies of expert pilots. Talk presented at the Human Factors and Ergonomics Society annual meeting, Boston, MA.

Beck, M.R. & Van Lamsweerde, A. E. (July, 2012). Maintaining Feature Bindings in Visual Working Memory: Attention Shifts and Representation Volatility. Talk presented at the 2012 IDeA States Mini-Conference on Visual and Cognitive Neuroscience, Fargo, ND.

Beck, M. R. & Van Lamsweerde, A. E. (May, 2012). Active retrieval from long-term memory aids change detection. Poster presented at the Vision Sciences Society conference, Naples, FL.

Ericson, J. & Beck, M. R. (May, 2012). Features or levels? Evidence for binding levels better than features. Poster presented at the Vision Sciences Society conference, Naples, FL.

Van Lamsweerde, A. E. & Beck, M. R. (May, 2012). Statistical regularities about features are incidentally learned and used to improve change detection performance only when features are unique. Poster presented at the Vision Sciences Society conference, Naples, FL.

Angelone, B. A., Beck, M.R. & Levin, D. T. (November, 2011). OMG did u c that? An Investigation of Technology Usage and Metacognition in Producing Driving Errors. Poster presented at The Psychonomic Society annual meeting, Seattle, Washington

Van Lamsweerde, A. E., Beck, M. R., Lohrenz, M.C., & Tran, H. (November, 2011) Clutter slows visual search but improves contextual cueing . Poster presented at The Psychonomic Society annual meeting, Seattle, Washington

Ericson, J. & Beck, M. R. (November, 2011). Spatial proximity does not influence tracking performance, but changing target trajectories does. Poster presented at the Object Perception, Attention & Memory conference, Seattle, Washington

Varakin, D. A. & Beck, M. (May, 2011). A Bidirectional Relationship Between Visual Statistical Learning and Visual Short-Term Memory. Poster presented at the Association for Psychological Science 23<sup>rd</sup> Annual Convention in Washington D.C.

Beck, M. R. & Lohrenz, M.C., (May, 2011). Coarse-to-Fine Search Strategy when Searching in Clutter. Poster presented at the Vision Sciences Society conference, Naples, FL.

Ericson, J. & Beck, M. R. (May, 2011). Is There a Bias Toward Global Information in Visual Working Memory? Poster presented at the Vision Sciences Society conference, Naples, FL.

van Lamsweerde, A. E. & Beck, M. R. (May, 2011). Central attention is used to maintain feature bindings in visual working memory. Poster presented at the Vision Sciences Society conference, Naples, FL.

Beck, M. R. & Hong, L. S. (November, 2010). Orienting attention in a sustained attention task: Temporal and spatial predictability. Talk presented at The Psychonomic Society annual meeting, St. Louis, MS.

Lohrenz, M.C., & Beck, M.R. (September, 2010). Evidence of clutter avoidance in complex scenes, Human Factors and Ergonomics Society's 54th Annual Meeting. San Francisco, California.

Lohrenz, M.C., Beck, M.R., & Gendron, M.L. (May, 2010). Human factors analysis of change detection tasks for mine warfare, The 9th International Symposium on Technology and the Mine Problem, Naval Postgraduate School, Monterey, CA.

van Lamsweerde, A. E. & Beck, M. (May, 2010). Attention is not required to maintain feature bindings in visual working memory. Poster presented at the Vision Sciences Society conference, Naples, FL.

Varakin, D. A. & Beck, M. (May, 2010). Accessing newly learned spatial statistics takes time. Poster presented at the Vision Sciences Society conference, Naples, FL.

Beck, M. R., & van Lamsweerde, A. E. (November, 2009). Accessing large capacity and durable representations during change detection. Poster presented at The Psychonomic Society annual meeting, Boston, MA.

Beck, M. R., Martin, B., Smitherman, E., & Gaschen, L. (May, 2009). General and Specific Effects of Expertise on Change Detection. Poster presented at the Vision Sciences Society conference, Naples, FL.

van Lamsweerde, A. E. & Beck, M. R. (November, 2008). Implicit learning of change probability information. Poster presented at The Psychonomic Society Annual Meeting, Chicago, IL.

Beck, M.R., Lohrenz, M.C., Trafton, J.G., & Gendron, M.L. (May, 2008). The role of local and global clutter in visual search. Poster presented at the Vision Sciences Society conference, Naples, FL.

Beck, M.R. (November, 2007) Capacity Limits of Encoding and Retrieval during Change Detection. Talk presented at The Psychonomic Society annual meeting, Long Beach, CA.

Angelone, B.A., Beck, M.R., Amante, K., Sikorski, K., & Klimas, D. (May, 2007). The effects of spatial and object working memory on change detection using the flicker paradigm. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Beck, M.R. & Trafton, J.G. (May, 2007). Local Spatial Layout Consistency affects Strategies but not Memory during Visual Search. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Beck, M.R. & Peterson, M.S. (November, 2006). Identification of distractors during visual search does not guarantee explicit memory, Poster presented at the Object Perception, Attention & Memory conference in Huston, TX.

Angelone, B.A., Beck, M.R., Amante, K., Sikorski, K.E., & Materna, A.A. (May, 2006). Visuospatial and object working memory in naturalistic scene change detection. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Peterson, M.S., Beck, M.R., & Wong, J. (May, 2006). Effects of Executive Functioning on Visual Search. Talk given at the Vision Sciences Society conference, Sarasota, FL.

Beck, M.R., Angelone, B.A., Levin, D.T., Peterson, M.S., & Varakin, D. A. (May, 2006) Implicit learning of base rate information in change detection occurs for location but not identity. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Peterson, M.S., Beck, M.R., Boot, W.R., Vomela, M. & Kramer, A.F. (November, 2005). Distractor location, but not identity, is remembered during visual search. Talk given at The Psychonomic Society annual meeting, Toronto, Canada.

Beck, M.R., Peterson, M.S., & Angelone, B.A. (May, 2005). The roles of attention, memory, comparison failures, and decision making in top-down influences on change detection. Talk given at the Vision Sciences Society conference, Sarasota, FL.

Angelone, B.A., Beck, M.R., & Levin, D.T. (2005, May). Incidental change detection and working memory load in a dual-task paradigm. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Peterson, M.S., Beck, M.R., Boot, W.R., Vomela, M. & Kramer, A.F. (2005, May). Little is remembered about rejected distractors in visual search. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Peterson, M.S., Beck, M.R., & Vomela, M. (2004, May). The guidance of attention by retrospective and prospective memory during visual search. Talk given at the Vision Sciences Society conference, Sarasota, FL.

Beck, M.R., Peterson, M.S. & Vomela, M. (2004, May). Where but not what is remembered during visual search. Talk given at the Vision Sciences Society conference, Sarasota, FL.

Beck, M.R., & Levin, D.T. (2003, May). The guidance of visual attention: Using and acquiring knowledge about the probability of change. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Levin, D.T. & Beck, M.R. (2002, November). Intentional theory of mind combined with mischaracterizations of visual attention produce drastic errors of visual metacognition in adults. Talk given at The Psychonomic Society annual meeting, Kansas City, Missouri.

Beck, M.R., & Levin, D.T. (2002, May). The role of object stability in change blindness blindness. Poster presented at the Vision Sciences Society conference, Sarasota, FL.

Beck, M. R., & Levin, D. T. (2001, May). The role of beliefs about intention in producing change blindness blindness. Poster sessions presented at the Vision Sciences annual meeting, Sarasota, Florida.

Levin, D. T. & Beck, M. R. (2000, November). Change blindness blindness: The role of beliefs about intention. Poster session presented at The Psychonomic Society annual meeting, New Orleans, Louisiana.

Beck, M. R., & Levin, D. T. (2000, May) Recognizing pre- and post-change objects: The role of representational volatility in change detection. Poster sessions presented at the ARVO annual meeting, Fort Lauderdale, Florida.

Carlson, B. W., Friel, S. A., & Beck, M. R. (1999, June). Accessibility of verbal anchors affects numerical estimation. Poster session presented to the annual meeting of the American Psychological Society, Denver, CO.

Beck, M. R., & Carlson, B. W. (1998, May). Anchoring effects in numerical estimation with verbal anchors. Poster presented at the Annual Meeting of the American Psychological Society, Washington, DC.

Beck, M. R., Jokinen, J. D., & Carlson, B. W. (1997, May). Anchoring and adjustment with verbal anchors: The role of familiarity. Poster presented at the Annual Meeting of the American Psychological Society, Washington, DC.

## **PATENTS**

U.S. Patent 9,442,565: "System and method for determining features in a visual display," September 13, 2016

## **EXHIBITIONS**

Beck, D. J., Hinterlang, A. & **Beck, M. R.** (2013). Saccadic Domestic Conglomerations, Art presentation at the Earth Moves: Shifts in Ceramic Art and Design presented by the Arvada Center for the Arts and Humanities in partnership with the National Council on Education for the Ceramic Arts, Arvada, Colorado.

## **EDITORIAL EXPERIENCE**

Vision Sciences Society Abstract Review Committee	2016-
Consulting Editorial Board: Attention, Perception, & Psychophysics	2015-
Editorial Board: Journal of Experimental Psychology: Human Perception and Performance	2019-

**TEACHING EXPERIENCE**

<b>Cognitive Psychology: Graduate Core</b>	Course Instructor	Louisiana State University
<b>Graduate seminar in Visual Memory</b>	Course Instructor	Louisiana State University
<b>Graduate seminar in Visual Attention</b>	Course Instructor	Louisiana State University
<b>Senior Capstone</b>	Course Instructor	Louisiana State University
<b>Research Methods</b>	Course Instructor	Kent State University Louisiana State University
<b>Sensation &amp; Perception</b>	Course Instructor	Kent State University Louisiana State University
<b>Quantitative Methods I</b>	Course Instructor	Kent State University
<b>Writing in Psychology</b>	Course Instructor	Kent State University