

CURRICULUM VITA

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

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

ADMINISTRATIVE POSITIONS

- | | |
|---|--|
| Director of Graduate Training
Louisiana State University | 2021-
Department of Psychology |
| LSU Multidisciplinary Initiative for Neuroscience Discovery (MIND)
Executive board member
Louisiana State University | 2018 – |
| Cognitive and Brain Sciences Area Head
Louisiana State University | 2016 -
Department of Psychology |
| Director of Undergraduate Training
Louisiana State University | 2014 - 2020
Department of Psychology |

AWARDS

2021 LSU Alumni Association Faculty Excellence Award

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.

GRANTS**NSF 21-588 EHR Core Research (PI)**

Title: Enhancing STEM Success: A Multi-modal Investigating of Spatial Reasoning and Training in Undergraduate Education
 \$1,076,515 2023-2027

LSU Provost Fund for Innovation in Research Big Idea Award

Title: Well Informatics: Decoding Human Well-being in Built Environments
 \$74,980 2023

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 2007 –2009

Kent State University Research Fellowship

Competitive research funding

\$6000 2003

Applied Psychology Center Research Fellowship.

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

\$500 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 ACTIVITY**Publications**

Eich, B & **Beck, M.R.** (2023). Differences in the duration of the attentional blink when viewing nature vs. urban scenes. *Attention, Perception, and Psychophysics*. <https://doi.org/10.3758/s13414-023-02749-7>

Kim, S. & **Beck, M.R.** (2023). Loss aversion in the control of attention. *Psychonomic Bulletin & Review*. <https://doi.org/10.3758/s13423-023-02287-1>

Saltzman, S.M., Moen, K.C., Eich, B.J., Chaisson, F.M., Fan, G., Goldstein, R.R., **Beck, M.R.**, Lucas, H.D., (2023). Behavioral and electrophysiological evidence for the flexible recruitment of feature- and object-based processing in visual working memory comparison. *Biological Psychology*, 178: 108528. doi.org/10.1016/j.biopsycho.2023.108528

Sedghikhanshir A, Zhu Y, **Beck MR**, Jafari A. (2022). The Impact of Visual Stimuli and Properties on Restorative Effect and Human Stress: A Literature Review. *Buildings*, 12(11):1781. doi.org/10.3390/buildings12111781

Kim, S. & **Beck, M.R.** (2022). Diminishing sensitivity and absolute difference in value-driven attention. *Journal of Vision*. 22(12). <https://doi.org/10.1167/jov.22.1.12>

Emamjomeh, A., Zhu, Y. & **Beck, M.R.** (2020). The potential of applying immersive virtual environment to biophilic building design: a pilot study. *Journal of Building Engineering*. 32(1):101481. [10.1016/j.jobbe.2020.101481](https://doi.org/10.1016/j.jobbe.2020.101481)

Beck, M.R., Goldstein, R.R., Moen, K. C., Cohen, A.C., & Wolshon, B. (2020). The impact of leaving a voicemail, environment familiarity, and pedestrian predictability on driving behavior. *Transportation Research Part F*, 74, 487-506. <https://doi.org/10.1016/j.trf.2020.09.006>

Kim, S. & **Beck, M.R.** (2020). Non-spatial context-driven search. *Attention, Perception, & Psychophysics*. 82(6), 2876-2892. <https://doi.org/10.3758/s13414-020-02063-6>

Kim, S. & **Beck, M.R.** (2020). Impacts of relative and absolute values on selective attention. *Psychonomic Bulletin & Review*, 27, 735–741. <https://doi.org/10.3758/s13423-020-01729-4>

Moen, K. C., **Beck, M. R.**, Saltzmann, S. M., Burleigh, L. M., Butler, L. G., Ramanujam, J., Cohen, A. S., & Greening, S. G. (2020). Strengthening spatial reasoning: Elucidating the attentional and neural mechanisms associated with mental rotation skill development. *Cognitive Research: Principles and Implications*, 20(5). <https://doi.org/10.1186/s41235-020-00211-y>

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](https://doi.org/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 post-change 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

Eich, B. Saltzmann, S.M., & Beck, M.R., Jiang, X., & Fan, G. (May, 2023). Sphere stimuli in the mental rotation task: a new set of ecologically valid stimuli with comparative performance to traditional cube stimuli. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Ramzaoui, H. & Beck, M.R. (May, 2023). Influence of perceptual grouping on comparison processes in visual working memory. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Saltzmann, S.M., Eich, B. & Beck, M.R. (May, 2023). Prioritization of information during maintenance in visual working memory: stimulus presentation and cue type. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Eich, B. & Beck, M.R. (May, 2022). The influence of clutter on target prevalence and decision making. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Jiang, X. & Beck, M.R. (May, 2022). Visual attention during scene viewing: Eye tracking discovery with K-means and gaussian mixture model. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Saltzmann, S.M. Moen, K., Chaisson, F., Eich, B., Fan, G., Beck, M.R. & Lucas, H. (2022, May). Neural correlates of task-irrelevant feature processing in visual working memory. Poster presented at The Annual Meeting of the Vision Science Society, St. Pete Beach, FL.

Kim, S., & Beck, M. R. (2021, November). Loss aversion in selective attention. Poster presented at The Psychonomic Society annual meeting, Virtual.

Eich, B. & Beck, M.R. (2021, May). The Attentional Blink when viewing Natural and Urban Scenes. Poster presented at The Annual Meeting of the Vision Science Society, Virtual.

Fan, G. & Beck, M.R. (2021, May). Meaningfulness affects performance in Navon Task and Embedded Figures Task. Poster presented at The Annual Meeting of the Vision Science Society, Virtual.

Kim, S., Harman, J.L., & Beck, M. R., (2020, November). Prospect Theory in Selective Attention. Poster presented at The Psychonomic Society annual meeting, Virtual.

Saltzmann, S.M. & Beck, M.R. (2020, May). The Influence of Long-Term Memory on Working Memory Accuracy. Poster presented at The Annual Meeting of the Vision Science Society, Virtual.

Kim, S. & Beck, M.R. (2020, May). Impacts of Relative and Absolute Values on Selective Attention. Poster presented at The Annual Meeting of the Vision Science Society, Virtual.

Saltzmann, 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., Saltzmann, 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, inattentional 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). Inattentional 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 23rd 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

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