

Emma Wu Dowd, Ph.D.

emma.wu.dowd@austin.utexas.edu

WORK EXPERIENCE

- 2019 – **Senior Associate Director**
2018 – 2019 **Senior Research Program Coordinator**
Student Success Initiatives
Division of Enrollment Management
Office of the Executive Vice President and Provost
The University of Texas at Austin
- 2016 – 2018 **Postdoctoral Fellow**
Department of Psychology
The Ohio State University

EDUCATION

- 2016 **Ph.D., Psychology & Neuroscience**
2014 **M.A., Psychology & Neuroscience**
Duke University
- 2011 **M.Sc., Neuroscience**
King's College London
- 2010 **M.Sc., Psychology**
University College London
- 2009 **B.A., Linguistics, *summa cum laude***
Harvard University

AWARDS & HONORS

- 2017 – 2018 NIH Ruth L. Kirschstein National Research Service Award Individual Postdoctoral Fellowship
- 2009 – 2011 Marshall Scholarship
- 2014 Summer Institute in Cognitive Neuroscience Fellowship
- 2014 Duke Graduate School Summer Research Fellowship, Duke University
- 2013 – 2016 Duke Graduate School Conference Travel Awards, Duke University
- 2009 University College London Marshall Scholarship
- 2009 Phi Beta Kappa, Harvard University
- 2009 Harvard College Research Grant, Harvard University
- 2008 Dean's Summer Research Grant, Harvard University

RESEARCH GRANTS

- 9/2017 – 8/2020 **NIH NEI NRSA F32-EY028011**
Title: Neural reconstructions of visual information across dynamic shifts of attention and working memory
PI: Emma Wu Dowd
Total Costs: \$172,926
Early termination in September 2018
- 4/2017 – 3/2018 **NSF BCS-1734081**
Title: 25th Annual Workshop on Object Perception, Attention, & Memory
PI: Andrew Leber
*Senior Personnel: Emma Wu Dowd & J. Eric T. Taylor
Dowd & Taylor were not listed as official PIs due to postdoctoral researcher status, but led the development, writing, and management of the grant.
Total Costs: \$18,260

REFEREED PUBLICATIONS

- Dowd, E. W.**, & Golomb, J. D. (in press). The Binding Problem after an eye movement. *Attention, Perception, & Psychophysics*. (Special issue in honor of Anne Treisman).
- Dowd, E. W.** & Golomb, J. D. (2019). Object-feature binding survives dynamic shifts of spatial attention. *Psychological Science*, 30(3), 343–361.
- Kiyonaga, A.*, **Dowd, E. W.***, & Egner, T. (2017). Neural representation of working memory content is modulated by visual attentional demand. *Journal of Cognitive Neuroscience*, 29(12), 2011-2024. *shared first-authorship
- Dowd, E. W.**, Pearson, J. M., & Egner, T. (2017). Decoding working memory content from attentional biases. *Psychonomic Bulletin & Review*, 24(4), 1252-1260.
- Dowd, E. W.**, Mitroff, S. R., & LaBar, K. S. (2016). Fear generalization gradients in visuospatial attention. *Emotion*, 16(7), 1011-1018.
- Dowd, E. W.**, Kiyonaga, A., Beck, J. M., & Egner, T. (2015). Quality and accessibility of visual working memory during cognitive control of attentional guidance: A Bayesian model comparison approach. *Visual Cognition*, 23(3), 337-356.
- Biggs, A. T., Adamo, S. H., **Dowd, E. W.**, & Mitroff, S. R. (2015). Perceptual and conceptual set biases in multiple-target visual search. *Attention, Perception, & Psychophysics*, 77(3), 844-855.
- Dowd, E. W.**, Kiyonaga, A., Egner, T., & Mitroff, S. R. (2015). Attentional guidance by working memory differs by paradigm: An individual-differences approach. *Attention, Perception, & Psychophysics*, 77(3), 704-712.
- Mitroff, S. R., Biggs, A. T., Adamo, S. H., **Dowd, E. W.**, Winkle, J., & Clark, K. (2015). What can 1,000,000,000 trials tell us about visual search? *Journal of Experimental Psychology: Human Perception and Performance*, 41(1), 1-5.
- Dowd, E. W.**, & Mitroff, S. R. (2013). Attentional guidance by working memory overrides salience cues in visual search. *Journal of Experimental Psychology: Human Perception and Performance*, 39(6), 1786-1796.
- Bays, P. M., **Wu, E. Y.**, & Husain, M. (2011). Storage and binding of object features in visual working memory. *Neuropsychologia*, 49(6), 1622-1631.
- Covington, H. E., Maze, I., Sun, H., Bomze, H. M., DeMaio, K. D., **Wu, E. Y.**, Dietz, D., M., Lobo, M. K., Ghose, S., Mouzon, E., Neve, R., Tamminga, C., & Nestler, E. J. (2011). A role for repressive histone methylation in cocaine-induced vulnerability to stress. *Neuron*, 71(4), 656-670.

Covington, H. E., Maze, I., LaPlant, Q. C., Vialou, V. F., Ohnishi, Y. N., Berton, O., Fass, D., M., Renthal, W., Rush, A., J., **Wu, E. Y.**, Ghose, S., Krishnan, V., Russo, S. J., Tamminga, C., Haggarty, S., J., & Nestler, E., J. (2009). Antidepressant actions of histone deacetylase inhibitors. *Journal of Neuroscience*, 29(37), 11451-11460.

SUBMITTED MANUSCRIPTS

Dowd, E. W., Nag, S., & Golomb, J. D. (in revision). Working memory-driven attention towards a distractor does not interfere with target feature perception.

REFEREED CONFERENCE PROCEEDINGS

Dowd, E. W., Pearson, J. M., & Egnér, T. (2015). Mind-reading without the scanner: Behavioural decoding of working memory content. Summary published in Object Perception, Attention, and Memory (OPAM) 2015 Conference Report, *Visual Cognition*, 23(7), 862-866.

Dowd, E. W., Kiyonaga, A., Beck, J. M., & Egnér, T. (2014). Probability of guessing, not precision, changes in mixture models of visual working memory during cognitive control of attentional guidance. Summary published in Object Perception, Attention, and Memory (OPAM) 2014 Conference Report, *Visual Cognition*, 22(8), 1027-1030.

TALK PRESENTATIONS

Dowd., E. W., & Alvarado, C. G. (2019, November). *Sense of belonging, supportive environments, and access to cultural capital: How institutional agents impact the college experience of low-income students*. Paper to be presented at the annual meeting of the Association for the Study of Higher Education, Portland, OR.

Dowd., E. W., Gutierrez, J. M., & Alvarado, C. G. (2019, November). *Reimagining the narrative of student departure: Why do students leave late in college?* Paper to be presented at the annual meeting of the Association for the Study of Higher Education, Portland, OR.

Dowd., E. W., & Golomb, J. D. (2018, May). *Object-feature binding survives dynamic shifts of spatial attention*. Talk presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Dowd, E. W., Pearson, J. M., & Egnér, T. (2015, November). *Mind-reading without the scanner: Behavioural decoding of working memory content*. Talk presented at the annual Object Perception, Attention, and Memory conference, Chicago, IL.

Mitroff, S. R., Biggs, A. T., Ericson, J. M., Winkle, J., Adamo, S. H., & **Dowd, E. W.** (2015, June). *Using mobile technology (and big data) to inform radiological research*. Talk presented at the biennial Medical Image Perception Society conference, Ghent, Belgium.

Dowd, E. W., Kiyonaga, A., & Egnér, T. (2015, May). *Competitive tradeoffs between working memory and attention: An fMRI approach*. Talk presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Dowd, E. W., Kiyonaga, A., Beck, J. M., & Egnér, T. (2014, November). *Probability of guessing, not precision, changes in mixture models of visual working memory during cognitive control of attentional guidance*. Talk presented at the annual Object Perception, Attention, and Memory conference, Long Beach, CA.

Mitroff, S. R., Biggs, A. T., Adamo, S. H., **Dowd, E. W.**, Winkle, J., & Clark, K. (2014, November). *What can 1,000,000,000 trials tell us about visual search?* Talk presented at the annual meeting of the Psychonomic Society, Long Beach, CA.

Mitroff, S. R., Biggs, A. T., Cain, M. S., Darling, E. F., Clark, K., Adamo, S. H., & Dowd, E. W. (2012, November). *In search of experience effects: How TSA officers differ from undergraduates on visual search tasks*. Talk presented at the annual meeting of the Psychonomic Society, Minneapolis, MN.

Dowd, E. W., & Mitroff, S. R. (2012, May). *Attentional guidance by working memory overrides saliency cues in visual search*. Talk presented at the annual meeting of the Vision Sciences Society, Naples, FL.

POSTER PRESENTATIONS

Chen, J., Dowd, E. W., Starks, M. D., & Golomb, J. D. (2019, May). *Neural reconstructions of attended object features using fMRI and EEG*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Jones, C. M., Dowd, E. W., & Golomb, J. D. (2019, May). *A matter of expectations: Lapses in spatial attention may be driven by anticipatory attentional shifts*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Dowd, E. W., & Golomb, J. D. (2018, November). *Attentional updating after eye movements—but not shifts of covert attention—induces unbound errors*. Poster presented at the annual meeting of the Psychonomic Society, New Orleans, LA.

Dowd, E. W., & Golomb, J. D. (2018, March). *Object-feature binding is maintained under dynamic shifts of spatial attention*. Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

Dowd, E. W., & Golomb, J. D. (2017, November). *Neural reconstructions of multi-feature objects*. Poster presented at the annual meeting of the Society for Neuroscience, Washington, D.C.

Nag, S., Dowd, E. W., & Golomb, J. D. (2017, November). *How does attentional capture by working memory impact feature binding?* Poster presented at the annual Object Perception, Attention, and Memory conference, Vancouver, BC.

Dowd, E. W., Nag, S., & Golomb, J. D. (2017, May). *Attentional capture by working memory does not interfere with feature perception*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Dowd, E. W., Gunseli, E., Meeter, M., Olivers, C. N. L., & Egner, T. (2016, May). *Changes in task-irrelevant context invoke updating of task-relevant representations in working memory*. Poster presented at the annual meeting of the Vision Sciences Society, St. Pete Beach, FL.

Dowd, E. W., Pearson, J. M., & Egner, T. (2016, April). *Mind-reading without the scanner: Behavioral decoding of working memory content*. Poster presented at the annual meeting of the Cognitive Neuroscience Society, New York, NY.

Kiyonaga, A., Dowd, E. W., & Egner, T. (2015, March). *Working memory and visual attention compete for neural resources*. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Biggs, A. T., Adamo, S. H., Dowd, E. W., & Mitroff, S. R. (2014, November). *Perceptual and conceptual set biases in multiple-target visual search*. Poster presented at the annual meeting of the Psychonomic Society, Long Beach, CA.

Dowd, E. W., Monroe, D. M., LaBar, K. S., & Mitroff, S. R. (2014, April). *Attentional prioritization of threat may be driven by perceptual changes*. Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

Dowd, E. W., Kiyonaga, A., Egner, T., & Mitroff, S. R. (2013, May). *Individual differences may reveal distinct mechanisms of attentional guidance*. Poster presented at the annual meeting of the Vision Sciences Society, Naples, FL.

- Mitroff, S. R., Biggs, A. T., Cain, M. S., Darling, E. F., Clark, K., Adamo, S. H., & Dowd, E. W. (2012, May). *Visual search at the airport: Testing TSA officers*. Poster presented at the annual meeting of the Vision Sciences Society, Naples, FL.
- Dowd, E. W., & Mitroff, S. R. (2012, February). *Attentional guidance by working memory overrides saliency cues in visual search*. Poster presented at the annual meeting of the North Carolina Cognition Conference, Chapel Hill, NC.
- Bays, P. M., Wu, E. Y., & Husain, M. (2011, May). *Estimates of working memory capacity reflect recall precision not how many items are stored*. Poster presented at the annual meeting of the Vision Sciences Society, Naples, FL.

INVITED TALKS

- January 2019 Student Success Symposium, The University of Texas at Austin.
- November 2018 Dean's Scholars Seminar, The University of Texas at Austin
- September 2018 Lewis-Peacock Lab, The University of Texas at Austin
- March 2018 Vision Science Seminar, College of Optometry, The Ohio State University
- September 2016 Cognitive Proseminar Series, The Ohio State University
- December 2015 Vision & Cognitive Neuroscience Lab, The Ohio State University
- December 2015 CogNeuro Group, The George Washington University

TEACHING & MENTORING

- 2016 Guest lecturer, *Multivariate Pattern Analysis Tutorial*, Advanced fMRI Analyses, The Ohio State University
- 2015 Data+ Mentor, Information Initiative at Duke
- 2014 Pathfinder Fellow, Information Initiative at Duke
- 2014, 2015 Participated in a week-long assessment of undergraduate honors theses as part of the NSF grant "Understanding the Role of Writing in Promoting Learning and Engagement for Diverse Undergraduate Thesis Writers." (PIs Julie Reynolds and Robert Thompson, Duke University)
- 2013 – 2015 Teaching assistant, Duke University
The Biological Bases of Behavior, *Introduction to Cognitive Neuroscience*, *Distinction Thesis Workshop*

SERVICE

- 2019 University Co-op George H. Mitchell Award Selection Committee, The University of Texas at Austin
- 2018 Rhodes/Marshall Scholarship Endorsement Committee, Office of Distinguished and Postgraduate Scholarships, The University of Texas at Austin
- 2017 – Consulting Editor, *Attention, Perception & Psychophysics*
- 2017 Reader, Marshall Scholarship Selection Committee, Chicago Region
- 2016, 2017 Co-Organizer, Object Perception, Attention, and Memory (OPAM) Conference
- 2015 Marshall Scholarship Endorsement Committee, Office of Distinguished Scholarships, University of North Carolina-Chapel Hill
- 2013, 2014 International Scholarship Committee, Office of Undergraduate Scholars and Fellows, Duke University

AD-HOC REVIEWER

Aging, Neuropsychology, & Cognition

Applied Cognitive Psychology

Attention, Perception, & Psychophysics

Cerebral Cortex

Cognition

Cognitive, Affective & Behavioral Neuroscience

Journal of Cognitive Psychology

Journal of Experimental Psychology: Applied

Journal of Experimental Psychology: Human Perception & Performance

Language, Cognition and Neuroscience

Memory

Memory & Cognition

Mind & Language

PloS ONE

Psychonomic Bulletin & Review

Visual Cognition