

Emma Wu Dowd, Ph.D.

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WORK EXPERIENCE

- 2022 – **Executive Director** of Analytics, Data to Insights
Office of the President
The University of Texas at Austin
- 2021 – 2022 **Executive Director**, Institutional Analytics
- 2020 – 2021 **Director**, Enrollment Analytics
Office of the Executive Vice President and Provost
The University of Texas at Austin
- 2019 – 2020 **Senior Associate Director**, Student Success Initiatives
- 2018 – 2019 **Senior Research Program Coordinator**, Student Success Initiatives
Division of Enrollment Management & Student Success
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

SERVICE

- 2018 – Rhodes/Marshall Scholarship Endorsement Committee, Office of Distinguished and Postgraduate Scholarships, The University of Texas at Austin
- 2019 – 2022 University Co-op George H. Mitchell Award Selection Committee, The University of Texas at Austin
- 2017 – 2019 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

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

- Jones, C. M., **Dowd, E. W.**, & Golomb, J. D. (2021). Shifting expectations: Lapses in spatial attention are driven by anticipatory attentional shifts. *Attention, Perception, & Psychophysics*.
- Dowd, E. W.**, & Golomb, J. D. (2020). The Binding Problem after an eye movement. *Attention, Perception, & Psychophysics*, 82 (40 Years of Feature Integration: Special Issue in Memory of Anne Treisman), 168–180.
- Dowd, E. W.**, Nag, S., & Golomb, J. D. (2019). Working memory-driven attention towards a distractor does not interfere with target feature perception. *Visual Cognition*, 27(9–10), 714–731.
- 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.

MANUSCRIPTS UNDER REVIEW & PREPRINTS

- Chen, J., Scotti, P. S., **Dowd, E. W.**, & Golomb, J. D. (preprint). Neural representations of task-relevant and task-irrelevant features of attended objects. Preprint on BioRxiv: <https://doi.org/10.1101/2021.05.21.445168>.

REFEREED CONFERENCE PROCEEDINGS

- Dowd, E. W.**, Pearson, J. M., & Egner, 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., & Egner, 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 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 presented at the annual meeting of the Association for the Study of Higher Education, Portland, OR.

Dowd, E. W., Alvarado, C. G., & Hernandez, R. (2019, October). *Re-evaluating your toolbox of analytics*. Talk presented at the annual Advanced Analytics Summit, Pittsburgh, PA.

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., & Egner, 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., & Egner, 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., & Egner, 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., Scotti, P. S., **Dowd, E. W.**, & Golomb, J. D. (2021, May). *Neural reconstructions of task-relevant and irrelevant features of attended objects*. Poster presented at the annual meeting of the Vision Sciences Society, presented virtually due to COVID-19.

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

October 2022	Guest speaker, "Science in the District", The George Washington University
February 2022	Guest speaker, "Science in the District", The George Washington University
October 2021	Guest speaker, "Science in the District", The George Washington University
January 2020	"SERU: UTell Us", Student Success Symposium, The University of Texas at Austin
October 2019	"Why do students leave UT Austin? Part 2", Student Success Symposium, The University of Texas at Austin
January 2019	"Why do students leave UT Austin? Part 1", 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, Advanced fMRI Analyses, The Ohio State University
2015	Data+ Mentor, Information Initiative at Duke
2014	Pathfinder Fellow, Information Initiative at Duke
2014, 2015	"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 <i>The Biological Bases of Behavior, Introduction to Cognitive Neuroscience, Distinction Thesis Workshop</i>

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