

# Matthew K. Robison

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Assistant Professor, University of Texas at Arlington  
501 S Nedderman Ave, Box 19528, Arlington, TX 76019  
✉ [matthew.robison@uta.edu](mailto:matthew.robison@uta.edu) | Updated: Sept. 28, 2021

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## Employment

*University of Texas at Arlington* 2020-present  
Assistant Professor, Department of Psychology

*Arizona State University* 2018-2020  
Postdoctoral Research Associate

## Education

*University of Oregon*, Ph.D. Psychology 2018

*University of Oregon*, M.S. Psychology 2014

*University of Notre Dame*, B.B.A. Entrepreneurship, Psychology 2013

## Publications

+denotes undergraduate student co-author

Ball, B. H., Robison, M. K., Coulson, A., & Brewer, G. A. (In press). Individual differences in disqualifying monitoring underlie false memories across different paradigms. *Memory & Cognition*.

Unsworth, N., Miller, A. L., & Robison, M. K. (In press). No consistent correlation between baseline pupil diameter and cognitive abilities after controlling for confounds—A comment on Tsukahara and Engle (2021). *Cognition*.

Unsworth, N., Robison, M. K., & Miller, A. L. (In press). On the relation between working memory capacity and the antisaccade task. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

Robison, M. K., Obulasetty, M. O., Wingert, K. M., Blais, C., & Brewer, G. A. (In press). The effect of binaural beat stimulation on sustained attention. *Psychological Research*.

Robison, M. K., Ellis, D. M., Pitaes, M. M., Karoly, P., & Brewer, G. A. (In press). Acute pain impairs sustained attention. *Journal of Experimental Psychology: Applied*.

Unsworth, N., Miller, A. L., & Robison, M. K. (In press). Are individual differences in attention control related to working memory capacity? A latent variable mega-analysis. *Journal of Experimental Psychology: General*.

Unsworth, N., Robison, M. K., & Miller, A. L. (In press). Individual differences in lapses of attention: A latent variable analysis. *Journal of Experimental Psychology: General*.

Robison, M. K., Unsworth, N., & Brewer, G. A. (2021). Examining the effects of goal-setting, feedback, and incentives on sustained attention. *Journal of Experimental Psychology: Human Perception and Performance*, 47, 869-891.

- Ellis, D.M., Robison, M. K., & Brewer, G. A. (2021). The cognitive underpinnings of multiply-constrained problem-solving. *Journal of Intelligence*, 7, 9.
- Unsworth, N., Miller, A. L., & Robison, M. K. (2021). Is working memory capacity related to baseline pupil diameter? *Psychonomic Bulletin & Review*, 28, 228-237.
- Chowdry, M. S. N., Dutta, A., Robison, M. K., Blais, C., Brewer, G. A., & Bliss, D. W. (2020). Deep neural network for visual stimulus-based reaction time. *Sensors*, 20, 6090.
- Robison, M. K., & Brewer, G. A. (2020). Individual differences in working memory capacity and the regulation of arousal. *Attention, Perception, & Psychophysics*, 82, 3273-3290.
- Robison, M. K., Miller, A. L., & Unsworth, N. (2020). A multi-faceted approach to understanding individual differences in mind-wandering. *Cognition*, 198, 104078.
- Unsworth, N., Miller, A. L., & Robison, M. K. (2020). Individual differences in lapses of sustained attention: Oculometric indicators of intrinsic alertness and preparatory control. *Journal of Experimental Psychology: Human Perception and Performance*, 46, 569-592.
- Chowdry, M. S. N., Dutta, N., Robison, M. K., Blais, C., Brewer, G. A., & Bliss, D. W. (2020). A generalized model to estimated reaction time corresponding to visual stimulus using single-trial EEG. *42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*. Montréal, QC, Canada. *Peer-reviewed conference paper*.
- Unsworth, N., & Robison, M. K. (2020). Working memory capacity and sustained attention: A cognitive-energetic perspective. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 46, 77 – 103.
- Unsworth, N., Robison, M. K., & Miller, A. L. (2019). Individual differences in baseline oculometrics: Examining variation in baseline pupil diameter, spontaneous eye blink rate, and fixation stability. *Cognitive, Affective, & Behavioral Neuroscience*, 19, 1074 – 1093.
- Unsworth, N., Miller, A. L., & Robison, M. K. (2019). Individual differences in encoding strategies and free recall dynamics. *The Quarterly Journal of Experimental Psychology*, 72, 2495 – 2508.
- Robison, M. K., Miller, A. L., & Unsworth, N. (2019). Examining the effects of probe frequency, response options, and framing within the thought-probe method. *Behavior Research Methods*, 51, 398 – 408.
- Robison, M. K., & Unsworth, N. (2019). Pupillometry tracks fluctuations in working memory performance. *Attention, Perception, & Psychophysics*, 81, 407 – 419.
- Unsworth, N., & Robison, M. K. (2018). Tracking mind-wandering and arousal state with pupillometry. *Cognitive, Affective, & Behavioral Neuroscience*, 18, 638 – 664.
- Unsworth, N., Robison, M. K., & Miller, A. L. (2018). Pupillary correlates of fluctuations in sustained attention. *Journal of Cognitive Neuroscience*, 30, 1241 – 1253.
- Adam, K. C. S., Robison, M. K., & Vogel, E. K. (2018). Contralateral delay activity tracks fluctuations in working memory performance. *Journal of Cognitive Neuroscience*, 30, 1229 – 1240.
- Robison, M. K., Miller, A. L., & Unsworth, N. (2018). Individual differences in working memory capacity and filtering. *Journal of Experimental Psychology: Human Perception and Performance*, 44, 1038 – 1053.

- Unsworth, N., & Robison, M. K. (2018). Tracking working memory maintenance with pupillometry. *Attention, Perception, & Psychophysics*, *80*, 461 – 484.
- Robison, M. K., & Unsworth, N. (2018). Cognitive and contextual correlates of spontaneous and deliberate mind-wandering. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *44*, 85 – 98.
- Unsworth, N., & Robison, M. K. (2017). The importance of arousal for variation in working memory capacity and attention control: A latent variable pupillometry study. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *43*, 1962 – 1987.
- Robison, M. K., & Unsworth, N. (2017). Individual differences in working memory capacity predict learned control over attentional capture. *Journal of Experimental Psychology: Human Perception and Performance*, *43*, 1912 – 1924.
- Unsworth, N. & Robison, M. K. (2017). A locus coeruleus-norepinephrine account of individual differences in working memory capacity and attention control. *Psychonomic Bulletin & Review*, *24*, 1282 – 1311.
- Robison, M. K., & Unsworth, N. (2017). Variation in the use of cues to guide attention in visual working memory. *Attention, Perception, & Psychophysics*, *79*, 1652 – 1665.
- Robison, M. K., McGuirk, W. P., & Unsworth, N. (2017). *No evidence for enhancements to visual working memory with transcranial direct current stimulation to prefrontal or posterior parietal cortices. Behavioral Neuroscience*, *131*, 277 – 288.
- Robison, M. K., & Unsworth, N. (2017). Working memory capacity and mind-wandering during low-demand cognitive tasks. *Consciousness and Cognition*, *52*, 47 – 54.
- Unsworth, N., & Robison, M. K. (2017). Pupillary correlates of covert shifts of attention during working memory maintenance. *Attention, Perception, & Psychophysics*, *79*, 782 – 795.
- Robison, M. K., & Unsworth, N. (2017). Individual differences in working memory capacity and resistance to belief bias in syllogistic reasoning. *The Quarterly Journal of Experimental Psychology*, *70*, 1471 – 1484.
- Robison, M. K., Gath, K. I.,<sup>+</sup> & Unsworth, N. (2017). The neurotic wandering mind: An individual differences investigation of neuroticism, mind-wandering, and executive control. *The Quarterly Journal of Experimental Psychology*, *70*, 649 – 663.
- Robison, M. K., & Unsworth, N. (2017). Working memory capacity, strategic allocation of study time, and value-directed remembering. *Journal of Memory and Language*, *93*, 231 – 244.
- Unsworth, N., & Robison, M. K. (2016). Pupillary correlates of lapses of sustained attention. *Cognitive, Affective, & Behavioral Neuroscience*, *16*, 601 – 615.
- Robison, M. K., & Unsworth, N. (2016). Do participants differ in their cognitive abilities, task motivation, or personality characteristics as a function of time of participation? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *42*, 897 – 914.
- Unsworth, N., & Robison, M. K. (2016). The influence of lapses of attention on working memory capacity. *Memory & Cognition*, *44*, 188 – 196.
- Robison, M. K., & Unsworth, N. (2015). Working memory capacity offers resistance to mind-

wandering and external distraction in a context-dependent manner. *Applied Cognitive Psychology*, 29, 680 – 690.

Unsworth, N. & Robison, M. K. (2015). Individual differences in the allocation of attention to items in working memory: Evidence from pupillometry. *Psychonomic Bulletin & Review*, 22, 757 – 765.

Gibson, B. S., Gondoli, D. M., Johnson, A. C., & Robison, M. K. (2014). Recall initiation strategies must be controlled in training studies that use immediate free recall tasks to measure the components of working memory capacity across time. *Child Neuropsychology*, 20, 536-556.

### **Manuscripts under review**

Ellis, D. M., Robison, M. K., Karoly, P., & Brewer, G. A. (2021). Acute pain differentially impacts problem solving in an analogue setting. Submitted to *Quarterly Journal of Experimental Psychology*.

Robison, M. K., & Brewer, G. A. (2021). Individual differences in working memory capacity, attention control, fluid intelligence, and pupillary measures of arousal. Submitted to *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

### **Research funding**

*Developing a Working Memory Training Program that Targets the Secondary Component of Working Memory*

Undergraduate Research Opportunity Program (Notre Dame)

Amount: \$4,500 (Funded)

*Low-cost eye-tracking equipment for psychological research*

Cialdini Leap Forward Fund (ASU Internal Award)

Amount: \$7,500 (Funded)

*A latent state-trait analysis of arousal regulation and cognition*

National Science Foundation

Amount: \$838,755 (Submitted)

*Behavioral and Physiological Indicators of Vigilance and Cognitive Fatigue*

Office of Naval Research

Amount: \$711,584 (Submitted)

*Predictive Modeling of Student Engagement with Virtual and Online Learning*

James S. McDonnell Foundation Opportunity Program

Amount: \$250,000 (Not funded)

*LC-NE Regulation and Attention*

NIH Ruth L. Kirschstein NRSA Individual Postdoctoral Fellowship  
Amount: \$187,662 (Not funded)

*The Impact of Physical Fatigue on the Cognitive Health of Student Athletes*  
ASU Global Sport Institute  
Amount: \$20,000 (Not funded)

### **Professional service**

Consulting Editor, *Psychonomic Bulletin & Review* 2021 – present

Ad Hoc Reviewer: *Acta Psychologica; Applied Cognitive Psychology; Attention, Perception, and Psychophysics; Behavior Research Methods; Biological Psychology; Consciousness and Cognition; Cognition; Cortex; Discourse Processes; Frontiers in Psychology; Heliyon; International Journal of Psychology; Journal of Applied Research in Memory and Cognition; Journal of Educational Psychology; Journal of Experimental Child Psychology; Journal of Experimental Psychology: Applied; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory, and Cognition; Journal of Vision; Language and Linguistics Compass; Learning & Behavior; Learning and Individual Differences; Memory; Memory & Cognition; Neuropsychologia; Perspectives in Psychological Science; PLoS ONE; Psychonomic Bulletin & Review; Research in Developmental Disabilities; The Quarterly Journal of Experimental Psychology; Scientific Reports*

### **Departmental Service**

Graduate Curriculum Committee Member 2021 - present

### **Advising**

Doctoral Dissertation Committees

Maxine Geltmeier 2021

Master's Thesis Committees

Durna Alakbarova 2021

Honors Thesis Advising

Olivia Anchondo (UT-Arlington) 2021

Ben Pope (Arizona State) 2020

Faith Brown (Arizona State) 2020

Deanna Strayer (Arizona State) 2019

Dylan Vas (University of Oregon) 2017

Katherine Gath (University of Oregon) 2015

Kyung Hoon Jeong (University of Oregon) 2015

Christian Arenas (University of Oregon)	2014
Beth Ngan (University of Oregon)	2014
Cognitive Neuroscience Faculty Search Committee	2016-17
Graduate Student Representative	

## References

Nash Unsworth, Professor, University of Oregon

[nashu@uoregon.edu](mailto:nashu@uoregon.edu)

Gene Brewer, Associate Professor, Arizona State University

[gene.brewer@asu.edu](mailto:gene.brewer@asu.edu)

Thomas Redick, Associate Professor, Purdue University

[tsredick@purdue.edu](mailto:tsredick@purdue.edu)

Samuel McClure, Professor, Arizona State University

[samuel.mcclure@asu.edu](mailto:samuel.mcclure@asu.edu)