

Michael R. Dulas, Ph.D.

Curriculum Vitae

Department of Psychology
Harpur College of Arts and Science
Binghamton University
State University of New York
Binghamton, NY

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Academic Employment History

- **Assistant Professor** (August 2023 – Present)
Binghamton University: Binghamton, NY
Department of Psychology
- **Visiting Research Scientist** (December 2019 – August 2023)
University of Illinois: Urbana, IL
Department of Psychology & Beckman Institute
Memory Systems Lab – PI: Neal J Cohen, Ph.D.
- **Postdoctoral Research Fellow** (August 2014 – December 2019)
University of Illinois: Urbana, IL
Department of Psychology & Beckman Institute
Memory Systems Lab – PI: Neal J Cohen, Ph.D.

Academics

- Ph.D. – Georgia Institute of Technology – Awarded 8/2014
Age-related changes in overcoming proactive interference in associative memory: the role of VLPFC-mediated post-retrieval selection.
Department of Psychology: Cognition and Brain Sciences
Advisor: Audrey Duarte, Ph.D.
- M.S. – Georgia Institute of Technology – Awarded 8/2011
The effect of explicitly directing attention toward item-feature relationships on source memory and aging: an ERP study.
Department of Psychology: Cognition and Brain Sciences
Advisor: Audrey Duarte, Ph.D.
- B.S. (Dual Degree) – University of Michigan – Ann Arbor – Awarded 4/2007
Department of Psychology: Brain, Behavior, and Cognitive Science
Department of English: English

Publications

Submitted and In Prep

- **Dulas, M. R.**, Schwarb, H., Vergara, N., & Cohen, N. J. (In Prep). Memory guided preferential viewing behavior spans context changes.
- **Dulas, M. R.**, Schwarb, H., Vergara, N., & Cohen, N. J. (In Prep). Eye movements reveal proactive interference is resolved upon contextual reinstatement.
- **Dulas, M. R.**, Schwarb, H., & Cohen, N. J. (Submitted). Aging Impacts Context Boundaries and Memory Organization.
- Schwarb, H., **Dulas, M. R.**, Cohen, N. J. (Submitted). The biasing effect of categorical stimuli on

relational memory.

Published

1. **Dulas, M. R.**, Morrow, E. L., Schwarb, H., Cohen, N. J., & Duff, M. C. (2022). Temporal Order Memory Impairments in Individuals with Moderate-Severe Traumatic Brain Injury. *Journal of Clinical and Experimental Neuropsychology*. 44:3, 210-225, doi: 10.1080/13803395.2022.2101620
2. **Dulas, M. R.**, Schwarb, H., Cannavale, C. N., & Cohen, N. J. (2021). Should context hold a special place in hippocampal memory? *The Psychology of Learning and Motivation*. 75, 1-35. doi: 10.1016/bs.plm.2021.07.00. Pre-print available at: www.sciencedirect.com/science/article/pii/S0079742121000219.
3. Morrow, E. L., **Dulas, M. R.**, Cohen, N. J., & Duff, M. C. (2020). Relational Memory at Short and Long Delays in Individuals With Moderate-Severe Traumatic Brain Injury. *Frontiers in Human Neuroscience*, 14, 270.
4. Duarte, A., & **Dulas, M. R.** (2020). *Episodic Memory Decline in Aging*. In A. Thomas and A. Gutches (Eds.) *The Cambridge Handbook of Cognitive Aging: A Life Course Perspective*. (Cambridge Handbooks in Psychology, pp. 200-217). Cambridge: Cambridge University Press. doi:10.1017/9781108552684.013
5. Schwarb, H., Johnson, C. L., **Dulas, M. R.**, McGarry, M. D. J., Holtrop, J. L., Watson, P. D., Wang, J. X., Voss, J. L., Sutton, B., & Cohen N. J. (2019). Structural and Functional MRI Evidence for Distinct Medial Temporal and Prefrontal Roles in Context-Dependent Relational Memory. *JOCN*. doi: 10.1162/jocn_a_01454
6. Horecka, K. M., **Dulas, M. R.**, Schwarb, H., Lucas, H. D., Duff, M., & Cohen, N. J. (2018). Reconstructing relational information. *Hippocampus*. 28(2), 164-177.
7. Rubin, R. D., Schwarb, H., Lucas, H. D., **Dulas, M. R.**, & Cohen, N. J. (2017). Dynamic hippocampal and prefrontal contributions to memory processes and representations blur the boundaries of traditional cognitive domains. *Brain Sciences*. 7(7), 82.
8. **Dulas, M. R.** & Duarte, A. (2016). Age-related changes in overcoming proactive interference in associative memory: The role of PFC-mediated executive control processes at retrieval. *NeuroImage*. 132, 116-128.
9. Leshikar, E. D., **Dulas, M. R.**, & Duarte, A. (2015). Self-referencing enhances recollection in both young and older adults. *Aging, Neuropsychology, and Cognition*. 22(4), 388-412.
10. **Dulas, M. R.** & Duarte, A. (2014). Aging affects the interaction between attentional control and source memory: an fMRI study. *JOCN*. 26(12), 2653-2669.
11. **Dulas, M. R.** & Duarte, A. (2013). The influence of directed attention at encoding on source memory retrieval in the young and old: An ERP study. *Brain Research*. 1500, 55-71.
12. Newsome, R. N., **Dulas, M. R.**, & Duarte, A. (2012). The effects of aging on emotion-induced modulations of source retrieval ERPs: evidence for valence biases. *Neuropsychologia*. 50(14), 3370-3384.
13. **Dulas, M. R.** & Duarte, A. (2012). The effects of aging on material-independent and material-dependent neural correlates of source memory retrieval. *Cerebral Cortex*. 22(1), 37-50.
14. **Dulas, M. R.** & Duarte, A. (2011). The effects of aging on material-independent and material-dependent neural correlates of contextual binding. *NeuroImage*. 57(3), 1192-204.
15. **Dulas, M. R.**, Newsome, R. N., & Duarte, A. (2011). The effects of self-referential processing on source memory in young and older adults: ERP evidence. *Brain Research*, 1377, 84-100.

Research Funding

- *A multimodal investigation of repetitive head impact exposure from sports on neurophysiology, cognition, and neurological and clinical outcomes*; (PI: Shi), Binghamton University ICG Grant.
 - *Neurological, Clinical, Motor, Cognitive, and Takeover Performance in Conditionally Automated Vehicle: A Study of Healthy and Concussed Individuals* (PI: Shi); Binghamton University TAE Grant.
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Presentations and Posters

Invited Conference Talks

- *The Impact of Age, Attention, and Brain Lesions on Context Boundary Effects.* (May, 2017). Talk presented at the Context and Episodic Memory Symposium, Philadelphia, PA.
- *Aging affects the interaction between attentional control and source memory: An fMRI study.* (November, 2013). Talk presented at Society for Neuroscience Conference 2013, Nanosymposium: Human Cognition: Cognitive Aging. San Diego, CA.
- *The neuroscience of aging.* (September, 2011). Talk presented at Georgia Institute of Technology's Brain Connections: Advances in Neuroscience Symposium. Atlanta, GA.

Conference Posters

- **Dulas, M. R.**, Schwarb, H., Morrow, E., Patel, N., Cohen, N. J., & Duff, M. C. (April, 2024). *The relationship between mnemonic discrimination and relational memory impairments in Traumatic Brain Injury.* Cognitive Neuroscience Society Conference 2024.
- **Dulas, M. R.**, Morrow, E., Schwarb, H., Cohen, N. J., & Duff, M. C. (March, 2023). *Traumatic Brain Injury Impairs Relational Memory Across Domains.* The 14th World Congress on Brain Injury.
- **Dulas, M. R.**, Morrow, E., Schwarb, H., Cohen, N. J., & Duff, M. C. (April, 2022). *Temporal Order Memory Impairments in Individuals with Moderate-Severe Traumatic Brain Injury.* Cognitive Neuroscience Society Conference 2022.
- **Dulas, M. R.**, Schwarb, H., & Cohen, N. J. (October, 2019). *Memory guided preferential viewing behavior spans context changes.* Society for Neuroscience Conference 2019.
- **Dulas, M. R.**, Schwarb, H., Covington, N. V., Cohen, N. J., & Duff, M. C. (March, 2019). *Traumatic brain injury impairs both spatial and temporal relational memory.* The 13th World Congress on Brain Injury.
- Morrow, E., **Dulas, M. R.**, Cohen, N. J., & Duff, M. C. (March, 2019). *Hippocampal-Dependent Relational Memory at Short and Long Delays in Individuals with Moderate-Severe Traumatic Brain Injury.* The 13th World Congress on Brain Injury.
- Horecka, K. M., **Dulas, M. R.**, & Cohen, N. J. (November, 2017). *Using virtual reality environments to assess context boundary effects and temporal memory performance via spatiotemporal exploration.* Society for Neuroscience Conference 2017.
- **Dulas, M. R.**, Duff, M.C., & Cohen, N.J. (November, 2016). *The impact of ventromedial PFC and hippocampal lesions on episodic segmentation and relational memory.* Society for Neuroscience Conference 2016.
- Horecka, K.M., **Dulas, M. R.**, Widdowson, C., & Cohen, N.J. (November, 2016). *Using virtual reality environments to assess context segmentation and spatial memory performance using a 2D and virtual reality test environment.* Society for Neuroscience Conference 2016.
- Chiu, Y., **Dulas, M. R.**, Watson, P., Gonzalez, R., & Cohen, N.J. (April, 2016). *Stability enhances relational but not item information and influences memory organization as indexed by eye-movements.* Cognitive Neuroscience Society Conference 2016.
- Horecka, K.M., **Dulas, M. R.**, Widdowson, C., & Cohen, N.J. (April, 2016). *Using virtual reality environments to assess within and across context segmentation and spatial memory performance.* Cognitive Neuroscience Society Conference 2016.
- **Dulas, M. R.** & Duarte, A. (April, 2014). *Post-retrieval selection modulates processing of retrieved associates to overcome interference in memory.* Cognitive Neuroscience Society Conference 2014.
- **Dulas, M. R.** & Duarte, A. (April, 2014). *Age-related changes in overcoming proactive interference in associative memory: the role of VLPFC-mediated post-retrieval selection.* Cognitive Aging Conference 2014.
- **Dulas, M. R.** & Duarte, A. (October, 2012). *Age-related alterations in post-retrieval monitoring with and without directed attention at encoding: An fMRI Study.* Society for Neuroscience Conference 2012.
- **Dulas, M. R.**, Jiang, J., & Duarte, A. (April, 2012). *The Effect of Explicitly Directing Attention Towards*

Item-Feature Relationships on Source Memory in the Young and Old: An fMRI Study. Cognitive Aging Conference 2012.

- **Dulas, M. R.**, Jiang, Y., & Duarte, A. (November, 2011). *Directed encoding of item-feature associations reduces dorsolateral prefrontal contributions to source memory retrieval.* Society for Neuroscience Conference 2011.
- Redick, T. S., Ahrens, A. N., Schwarb, H., **Dulas, M. R.**, Schumacher, E. H., & Engle, R. W. (April, 2011). *Functional MRI investigation of variation in working memory capacity: Looking forward or looking backward?* Cognitive Neuroscience Society Conference 2011.
- **Dulas, M. R.** & Duarte, A. (April, 2011). *The influence of directed attention on source memory retrieval in the young and old: an ERP study.* Cognitive Neuroscience Society Conference 2011.
- **Dulas, M. R.** & Duarte, A. (April, 2010). *Effects of aging on material general and material-specific source memory retrieval.* Cognitive Aging Conference 2010.
- Duarte, A. & **Dulas, M. R.** (March, 2010). *Frontal activity changes at study and test underlie domain-general source memory impairments in older adults.* Rotman Research Institute Conference: The Frontal Lobe.
- **Dulas, M. R.** & Duarte, A. (February, 2010). *Effects of aging on material-general and material-specific source memory retrieval.* Georgia Institute of Technology Research and Innovation Conference 2010.
- Newsome, R. N., **Dulas, M. R.**, & Duarte, A. (October, 2009). *The effects of self-referential processing on source memory in young and older adults: ERP evidence.* Society for Neuroscience Conference 2009.
- **Dulas, M. R.** & Duarte, A. (October, 2009). *Effects of aging on domain general and domain specific source memory.* Society for Neuroscience Conference 2009.
- Newsome, R. N., **Dulas, M. R.**, & Duarte, A. (March, 2009). *The effects of aging on self-referential processing.* Georgia Institute of Technology Spring UROP Symposium 2009.

Internal and Brown Bag Presentations

- *Context Bias in Relational Memory: An “Error” that’s a good thing?* (September, 2024). Talk presented at the Binghamton University Cognitive & Brain Sciences Cog Lunch.
- *Toward a more precise picture of memory performance.* (April, 2024). Talk presented at the Binghamton University Center for Cognitive Applications (CAPS) Meeting.
- *Relational Memory in Age and Pathology.* (September, 2023). Talk presented at the Binghamton University Cognitive & Brain Sciences Cog Lunch.
- *Does Traumatic Brain Injury Particularly Impact Hippocampally-Mediated Relational Memory.* (March, 2022). Talk presented at the UIUC Cognitive Neuroscience Brown Bag.
- *Aging and brain lesions impact contextual organization of spatial and temporal memory.* (April, 2019). Talk presented to the UIUC Cognition, Lifespan Engagement, Aging, and Resilience Initiative Seminar.
- *The role of context boundaries in the organization of spatial and temporal memory.* (November, 2017). Talk presented at the UIUC Cognitive Brown Bag.
- *Aging, the prefrontal cortex, and associative memory: what we know and what we can do about it.* (February, 2015). Talk presented at UIUC Cognitive Neuroscience Brown Bag.
- *Age-related changes in overcoming proactive interference in associative memory: The role of VLPFC-mediated post-retrieval selection.* (February, 2014). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.
- *Age-related changes in overcoming proactive interference in associative memory: The role of VLPFC-mediated post-retrieval selection.* (March, 2013). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.
- *Post-retrieval Processing and Aging.* (November, 2012). Talk presented at Georgia Institute of Technology Cognition and Brain Sciences Brown Bag.
- *Attention, Source Memory, and Post-Retrieval Monitoring: Converging Findings from ERP and fMRI.* (October, 2012). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.

- *Pay attention! Can direction of attention reduce age-related declines in source memory accuracy?* (January, 2012). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.
- *The effect of explicitly directing attention toward item-feature relationships on source memory: Converging evidence from EEG and fMRI.* (October, 2011). Talk presented at Georgia Institute of Technology Cognition and Brain Sciences Brown Bag.
- *The influence of directed attention on source memory retrieval in aging: an ERP study.* (March, 2011). Talk presented at Georgia Institute of Technology Cognition & Brain Sciences Brown Bag.
- *The effect of explicit item-feature binding on age-related source memory impairments.* (October, 2010). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.
- *The effect of explicit encoding instruction on age-related source memory impairments.* (April, 2010). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.
- *The effect of explicit item-feature binding on age-related source memory impairments.* (April, 2010). Talk presented at Georgia Institute of Technology Cognition and Brain Sciences Brown Bag.
- *The Effects of Age and Stimulus on Contextual Binding.* (October, 2009). Talk presented at Georgia Institute of Technology Cognitive Aging Brown Bag.
- *Distinct Brain Regions Support Source Memory for Words & Objects.* (April, 2009). Talk presented at Georgia Institute of Technology Cognition and Brain Sciences Brown Bag.
- *Item Type and Source Memory Interactions.* (November, 2008). Talk presented at Georgia Institute of Technology Cognition and Brain Sciences Brown Bag.

Community/Public Presentations

- *Effects of Stress on Brain and Cognitive Health.* (August, 2024). Talk presented to the Fenton Free Library, Fenton, NY.
- *Current Trends in Aging Research.* (June, 2024). Talk Presented with Dr. Ian McDonough to the First Ward Senior Center, Johnson City, NY.
- *Memory Across the Lifespan: What We Know and What We Can Do About It.* (May, 2024). Talk presented to the First Ward Senior Center, Johnson City, NY.

Teaching History

Binghamton University

- Psyc 497A – Senior Seminar: Prefrontal Cortex & Executive Function; Fall 2024
- Psyc 351 – Perception; Spring 2024, Spring 2025
- Psyc 511 – Graduate Module: Memory; Fall 2023

University of Illinois

- Psyc 224 – Introduction to Cognitive Psychology; Spring 2023

Georgia Institute of Technology

- Psyc 1101 – Introduction to Psychology; Spring 2014
- Psyc 1101 – Introduction to Psychology; Summer 2014

Awards and Honors

- Finalist: Glenn Foundation for Medical Research Postdoctoral Fellowships in Aging Research (2019)
- Finalist: Irene Diamond Fund/AFAR Postdoctoral Transition Awards in Aging (2018)
- APA Dissertation Award (2013)
- Georgia Institute of Technology School of Psychology's Most Outstanding Graduate Student (2013)
- Ruth L. Kirschstein NRSA Pre-doctoral Trainee: Research training grant in cognitive aging, NIA T32 AG000175-21(2010-2013)
- Georgia Institute of Technology Presidential Fellowship (2008-2013)
- Cold Spring Harbor Labs Biology & Disorders of Learning & Memory Invitee (2013)
- Summer Institute in Cognitive Neuroscience - UCSB Invitee (2012)

- Delta Epsilon Iota Academic Honor Society (2007)
 - Psi Chi National Honor Society in Psychology (2007)
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Departmental Service

- Member of Equity, Diversity, and Inclusion Committee; Binghamton University – 2023-Present
- Peer reviewer for University of Illinois Campus Research Board – Fall 2021
- University of Illinois Neuroscience Program Seminar Speaker/Postdoctoral Breakfast Organizer: Fall 2018 – Spring 2020
- Center for Advanced Brain Imaging/Cognition and Brain Science Job Candidate Search Committee: 2013
- Georgia Tech College of Science Dean Search Graduate Student Panel: 2013
- Student Representative to the Faculty: Cognition & Brain Science Rep: 2011-2012
- Student Representative to Psychology Chair's Advisory Committee: 2011-2012

Ad-Hoc Reviewer

- *APA Dissertation Awards: 2017, 2023, 2024*
- *Aging, Neuropsychology, & Cognition; BMC Neuroscience; Cerebral Cortex; Cortex; Cognitive Neuropsychology; Current Directions in Psychological Science; Hippocampus; Journal of Neuroscience; Memory; Memory & Cognition; Neurobiology of Aging; NeuroImage; Neuropsychologia; others*