Jared D. Stokes, PhD

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Highly motivated research scientist with technical experience in virtual reality software development and eye-tracking. Fields of inquiry include memory, spatial navigation, attention and distraction. Over 10 years of experience in experimental design and data analysis.

AREAS OF EXPERTISE

- Virtual and Augmented Reality
- Eye-Tracking
- Human Memory
- Spatial Navigation
- Attention and Distraction
- Data Analysis

SOFTWARE

- Unity
- Python
- R
- Adobe Illustrator and Photoshop
- Matlab

EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS
PhD, Perception, Cognition, and Cognitive Neuroscience, 2018

UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL
BS, Biology, 2005

WORK HISTORY

Postdoctoral Researcher 2018-2021
UC Davis Medical Center, Sacramento, CA

- Developed a virtual reality classroom to investigate attention and distraction under real-world settings.
- Analyzed eye-tracking data collected from virtual reality headsets under real-world conditions.
- Collaborated with investigators and community members to better understand and address attention and distraction disorders.

Lab Manager 2006-2011
Duke University, Durham, NC

- Developed memory tasks to investigate the relationship between lab-based episodic memory and autobiographical memory, as well as tasks to investigate memory in both healthy older adults and MCI patients.
- Hired undergraduate researchers, aided in grant duties, and managed a large cognitive neuroscience lab.

AWARDS AND WORKSHOPS

- Virtual/Augmented Reality Development, Circuit Stream, Spring/Summer 2019
- I-Corps@NCATS Regional Short Course, UC Davis, Fall 2018
- TL1 Postdoctoral Clinical Research Training Program Scholar Award, Spring 2018
- Dissertation Fellowship, UC Davis, Winter 2017
- Dukes Travel Award, UC Davis, Fall 2016

PUBLICATIONS

Stokes, J.D., Rizzo, A., Geng, J.J., Schweitzer, J.B. (2022). Measuring Attentional Distraction in Children With ADHD Using Virtual Reality Technology With Eye-Tracking. Front Virtual Real.

Starrett, M.J., McAvan, A.S., Huffman, D.J., **Stokes, J.D.**, Kyle, C.T., Smuda, D.N., Kolarik, B.S, Laczko, J., Ekstrom, A.D.(2021) Landmarks: A solution for spatial navigation and memory experiments in virtual reality. Behav Res Methods.

Kyle, C.T., **Stokes, J.D.**, Bennett, J., Meltzer, J., Permenter, M.R., Vogt, J.A., Ekstrom, A., Barnes, C.A. (2019). Cytoarchitectonically-driven MRI atlas of nonhuman primate hippocampus: Preservation of subfield volumes in aging. Hippocampus.

Stokes, J.D., Kyle, C., Huffman, D., Ekstrom, A.D. (2018). Integration of novel shape templates during human spatial navigation leads to prototype extraction, non-Euclidean environments. SSRN Electronic Journal.

Starrett, M.J., **Stokes, J.D.**, Huffman, D. Ekstrom, A.D. (2018). Learning-Dependent Evolution of Spatial Representations in Large-Scale Virtual Environments. Journal of Experimental Psychology: Learning, Memory, and Cognition.

Monge, Z.A., Wing, E. A., **Stokes J.**, Cabeza, R. (2017). Search and Recovery of Autobiographical and Laboratory Memories: Shared and Distinct Neural Components. Neuropsychologia.

Bouffard, N., **Stokes, J.**, Kramer, H., Ekstrom, A. (2017). Temporal encoding strategies result in boosts to final free recall performance comparable to spatial ones. Memory & Cognition.

Lieberman, J.S., Kyle, C. T., Schedlbauer, A., **Stokes, J.D.**, Ekstrom, A. D. (2017). A tale of two temporal coding strategies: Common and dissociable brain regions involved in recency vs. associative temporal order retrieval strategies. Journal of Cognitive Neuroscience.

Kyle, C. T., **Stokes, J.D.**, Lieberman, J. S., Hassan, A. S., Ekstrom, A. D. (2015). Successful retrieval of competing spatial environments in humans involves hippocampal pattern separation mechanisms. eLife, 4.

Stokes, J.D., Kyle, C., Ekstrom, A. D. (2015). Complementary Roles of Human Hippocampal Subfields in Differentiation and Integration of Spatial Context. Journal of Cognitive Neuroscience, 27(3), 546-559.

Dolcos, F., Iordan, A. D., Kragel, J., **Stokes, J.D.**, Campbell, R., McCarthy, G., Cabeza, R. (2013). Neural correlates of opposing effects of emotional distraction on working memory and episodic memory: an event-related FMRI investigation. Frontiers in Psychology, 4, 293.

Shafer, A. T., Matveychuk, D., Penney, T., O'Hare, A. J., **Stokes, J.D.**, Dolcos, F. (2012). Processing of emotional distraction is both automatic and modulated by attention: evidence from an event-related fMRI investigation. Journal of Cognitive Neuroscience, 24(5), 1233?1252.

Hayes, S.M., Buchler, N., **Stokes, J.D.**, Kragel, J., Cabeza, R. (2011). Neural correlates of confidence during item recognition and source memory retrieval: Evidence for both dual-process and strength memory theories. Journal of Cognitive Neuroscience.

Cabeza, R., Mazuz, M., **Stokes, J.D.**, Kragel, J., Woldorff, W, Ciaramelli, E., Olson, I., Moscovitch, M. (2011). Overlapping Parietal Activity in Memory and Perception: Evidence for the Attention to Memory (AtoM) Model. Journal of Cognitive Neuroscience, 23, 3209-3217.

Dennis, N., Browndyke, J., **Stokes, J.D.**, Need, A., Burke, J., Welsh-Bohmer, K., Cabeza, R. (2010)

Temporal lobe functional activity and connectivity in young adult APOE e4 carriers. Alzheimer's & Dementia.

SELECTED PRESENTATIONS

Stokes, J.D.(2019) Enhancing attention in children using a virtual classroom. CTSC 15th Annual Scholar Symposium, UC Davis.

Stokes, J.D., Kyle, C., Huffman, D., Ekstrom, A.D. (2018) Human hippocampal representations of novel, irregular environments. International Conference on Learning & Memory, UC Irvine.

Stokes, J.D., Kyle, C., Ekstrom, A. (2015) Integration of familiar and novel spatial templates in episodic memory. Society for Neuroscience Society Abstracts.

Stokes, J.D., Kyle, C., Ekstrom, A. (2014) Dissociable roles of human hippocampal subfields CA3/DG and CA1 during processing of spatial context. Society for Neuroscience Abstracts.

Stokes, J.D., Ekstrom, A. (2012) Representational similarity in CA3/DG tracks changes in spatial context. Cognitive Neuroscience Society Abstracts.

Stokes, J.D., Mazuz, Y., Daselaar, S., Moscovitch, M., Cabeza, R. (2011) Similarities and differences between the neural mechanisms of episodic and autobiographical memory recall. Cognitive Neuroscience Society Abstracts.