

Michael James Starrett, M.A.<https://mjstarrett.com>

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EDUCATION

- 2018 – **University of Arizona**
Ph.D. Candidate, Psychology | Minor: Cognitive Science
Advisor: Arne D. Ekstrom, Ph.D.
- 2015 – 2018 **University of California, Davis**
M.A. Psychology (December 15, 2017)
Advisor: Arne D. Ekstrom, Ph.D.
- 2007 – 2011 **University of Wisconsin-Madison**
B.A. Psychology (December 24, 2011)

RESEARCH EXPERIENCE

- 2018 – Graduate Assistant, Research, Human Spatial Cognition Laboratory
University of Arizona; PI: Arne Ekstrom, Ph.D.
- 2015 – 2018 Graduate Student Researcher, Human Spatial Cognition Laboratory
University of California, Davis; PI: Arne Ekstrom, Ph.D.
- 2012 – 2015 Associate Research Specialist (Lab Manager), Postlab
University of Wisconsin-Madison; PI: Brad Postle, Ph.D.
- 2010 – 2012 Undergraduate Research Assistant, Postlab
University of Wisconsin-Madison; PI: Brad Postle, Ph.D.

PUBLICATIONS (citations: 347; h-index: 7, i10-index: 5; source: Google Scholar)
*equal contributions** *mentored/supervised†*

Refereed Journal Articles

- in press* **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. (*in press*). Landmarks: A solution for spatial navigation and memory experiments in virtual reality. *Behavior Research Methods*.
- Preciado, C. E.†, **Starrett, M. J.**, & Ekstrom, A. D. (*in press*). Assessment of a short, focused training to reduce symptoms of cybersickness. *Presence*, 27(4).
- Sheldon, A. D., Saad, E., Sahan, M. I., Meyering, E., **Starrett, M. J.**, LaRocque, J. J., Rose, N. S., & Postle, B. R. (*in press*). Attention biases

- competition for visual representation via enhancement of targets and inhibition of nontargets. *Journal of Cognitive Neuroscience*.
- 2020 Hejtmanek, L., **Starrett, M. J.**, Ferrer, E., & Ekstrom, A. D. (2020). How much of what we learn in virtual reality transfers to real-world navigation? *Multisensory Research*, 1-25. doi:10.1163/22134808-20201445
- 2019 **Starrett, M. J.**, Stokes, J. D., Huffman, D. J., Ferrer, E., & Ekstrom, A. D. (2019). Learning-dependent evolution of spatial representations in large-scale virtual environments. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 45(3), 497-514. doi:10.1037/xlm0000597
- 2018 **Starrett, M. J.**, & Ekstrom, A. D. (2018). Perspective: Assessing the Flexible Acquisition, Integration, and Deployment of Human Spatial Representations and Information. *Frontiers in Human Neuroscience*, 12(281). doi:10.3389/fnhum.2018.00281
- Liang, M., **Starrett, M. J.**, & Ekstrom, A. D. (2018). Dissociation of frontal-midline delta-theta and posterior alpha oscillations: A mobile EEG study. *Psychophysiology*, 55:e13090. doi:10.1111/psyp.13090
- Gosseries, O., Yu, Q., LaRocque, J. J., **Starrett, M. J.**, Rose, N. S., Cowan, N., & Postle, B. R. (2018). Parietal-occipital interactions underlying control- and representation-related processes in working memory for nonspatial visual features. *Journal of Neuroscience*, 38(18), 4357-4366. doi:10.1523/JNEUROSCI.2747-17.2018
- 2017 Ekstrom, A. D., Huffman, D. J., & **Starrett, M.** (2017). Interacting networks of brain regions underlie human spatial navigation: A review and novel synthesis of the literature. *Journal of Neurophysiology*, 188(6), 3328-3344. doi:10.1152/jn.00531.2017
- 2016 Rose, N. S., LaRocque, J. J., Riggall, A. C., Gosseries, O., **Starrett, M. J.**, Meyering, E. E., & Postle, B. R. (2016). Reactivation of latent working memories with transcranial magnetic stimulation. *Science*, 354(6316), 1136-1139. doi:10.1126/science.aah7011
- 2015 LaRocque, J. J., Eichenbaum, A. S.*, **Starrett, M. J.***, Rose, N. S., Emrich, S. M., & Postle, B. R. (2015). The short- and long-term fates of memory items retained outside the focus of attention [Special issue]. *Memory and Cognition*, 43(3), 453-468. doi:10.3758/s13421-014-0486-y

CONFERENCE PROCEEDINGS

Talks

- 2017 **Starrett, M. J.**, Stokes, J. D., & Ekstrom, A. D. (2017, August). Dynamic evolution of spatial representations during free ambulation of novel large-scale virtual environments. Presented at the annual meeting of the

Cognitive Science Association for Interdisciplinary Learning, Hood River, OR.

- 2015 Saad, E., **Starrett, M. J.**, LaRocque, J. J., Rose, N. S., & Postle, B. R. (2015, October). Multivariate assessment of biased competition in human visual attention. In C. Gray (Chair), *Assessment and Modulation of Human Working Memory*. Nanosymposium conducted at the annual meeting of the Society for Neuroscience, Chicago, IL.
- 2014 Riggall, A. C., Rose, N. S., **Starrett, M. J.**, & Postle, B. R. (2014, November). Frontoparietal contributions to the short-term retention of motion and color. *Working Memory*. Nanosymposium conducted at the annual meeting of the Society for Neuroscience, Washington, D.C.

First-Authored Posters

- 2016 **Starrett, M. J.**, Stokes, J. D., Kreylos, O., & Ekstrom, A. D. (2016, November). *Navigation in virtual reality with vestibular and proprioceptive input diminishes orientation-dependent spatial representations*. Poster presented at the annual meeting of the Society for Neuroscience, San Diego, CA.
- Starrett, M. J.**, Stokes, J. D., & Ekstrom, A. D. (2016, August). *Vestibular and proprioceptive contributions to human spatial learning and memory during free-navigation of virtual reality environments*. Poster presented at Spatial Cognition 2016, Philadelphia, PA.
- Starrett, M. J.**, Stokes, J. D., & Ekstrom, A. D. (2016, May). *Vestibular and proprioceptive contributions to human spatial learning and memory during free-navigation of virtual reality environments*. Poster presented at the Experiential Technology & Neurogaming Conference and Expo, San Francisco, CA.
- Starrett, M. J.**, Stokes, J. D., & Ekstrom, A. D. (2016, March). *Head- and body- based information contribute to immersive experience during virtual reality navigation*. Poster presented at the 3rd Northern California Consciousness Meeting, Davis, CA.
- 2015 **Starrett, M. J.**, Gosseries, O., LaRocque, J. J., Saad, E., Cowan, N., & Postle, B. R. (2015, October). *Delay-period activity of the parietal cortex depends on working memory load, not interference*. Poster presented at the annual meeting of the Society for Neuroscience, Chicago, IL.
- Starrett, M. J.**, Rose, N. S., Riggall, A. C., Samaha, J., & Postle, B. R. (2015, March). *EEG and behavioral effects of delay-period rTMS*. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
- 2014 **Starrett, M. J.**, Rose, N. S., Riggall, A. C., & Postle, B. R. (2014, November). *Behavioral and EEG effects of rTMS on recall of items inside*

versus outside the focus of attention. Poster presented at the annual meeting of the Society for Neuroscience, Washington, D.C.

Starrett, M. J., LaRocque, J. J., Rose N. S., & Postle, B. R. (2014, April). *In short-term memory but outside the focus of attention: A role for long-term memory?* Poster presented at the annual meeting of the Cognitive Neuroscience Society, Boston, MA.

AWARDS AND FELLOWSHIPS

2017	Psychology Professional Development Travel Fellowship (\$500) <i>University of California, Davis</i>
2016	Duke's Travel Award (\$500) <i>University of California, Davis</i>
2015	Psychology Department Fellowship (\$18,167) <i>University of California, Davis</i>
2010 – 2011	Undergraduate Research Scholar Award (\$500) <i>University of Wisconsin-Madison</i>
2010	Dean's List, College of Letters and Sciences – Fall Semester <i>University of Wisconsin-Madison</i>

PROFESSIONAL SERVICE

Mentorship	Mentor-Mentee Program in Humanities, Arts, Cultural Studies and Social Sciences – Winter & Spring quarters, 2018 <i>University of California, Davis</i> Program Coordinator: Victoria White
	UC Davis Young Scholars Program – Summer Session I, 2017 <i>University of California, Davis</i> Director: J. Richard Pomeroy, Ph.D.
	Mentorships for Undergraduate Research in Agriculture, Letters and Science (MURALS) program – Winter & Spring quarters, 2017 <i>University of California, Davis</i> Program Coordinator: Raynell Hamilton-Starks, M.A.
	UC Davis Young Scholars Program – Summer Session I, 2016 <i>University of California, Davis</i> Director: J. Richard Pomeroy, Ph.D.
Outreach	Poster Presenter, 2 nd annual Neuroscience Initiative to Enhance Diversity, Apr 21-22; UCD School of Medicine Neurosciences, Davis, CA.
	Poster presenter, Brain Awareness Week Neuroscience Public Seminars: The Healthy Aging Brain, Mar 12; Center for Neuroscience, Davis, CA.

- Conferences Organizing committee, *UC Davis 3D Imaging and Visualization Conference (ucd3d)*, January 22-23, 2018; Davis, CA.
- Ad hoc reviewer *Behavior Research methods, Transactions on Applied Perception, Scientific Reports, PLOS Computational Biology, Psychological Research*

TEACHING EXPERIENCE

- UC, Davis **Teaching Assistant**
Cognitive Neuroscience (Fall 2017), Arne Ekstrom, Ph.D.
Advanced Cognitive Neuroscience (Spr. 2017), Arne Ekstrom, Ph.D.
Introduction to Cognitive Psychology (Sum. 2016), Branden Kolarik
Development of Memory (Spr. 2016), Simona Ghetti, Ph.D.
General Psychology (Win. 2016), Erin Freed
- UW-Madison **“Pre-Lab” Meeting Facilitator**
Cognitive Neuroscience of Working Mem. (2012-15), Brad Postle, Ph.D.

TECHNICAL EXPERIENCE

- Languages MATLAB, R, C#, Python, bash, (some) C++
- Software Unity 3D (SteamVR, VRTK, Landmarks*), MATLAB (EEGLab, Fieldtrip, PsychToolBox), R (various packages), MPlus, SPSS, Git, Visual Studio, Blender
 * *Maintainer* (github.com/mjstarrett/)
- Hardware EEG (Nexstim, Brain Vision), TMS (Magstim, Nexstim), Virtual reality head-mounted displays (Oculus DK2, Oculus Go, Oculus Quest, HTC Vive, HTC Vive Pro), Virtual reality omnidirectional treadmills (Cyberith Virtualizer, Cyberith Virtualizer Elite, Cyberith Virtualizer Elite 2, KatVR Kat Walk), Eye tracking (Pupil Labs, Tobii Pro)
- Trainings Fieldtrip Bootcamp: ECoG/sEEG FieldTrip toolkit course at UC, Davis Lectures and hands-on experience covering preprocessing, frequency analysis, connectivity, and various statistical methods. UC, Davis Medical Center, Sacramento, CA.

AFFILIATIONS

- 2014 – present Society for Neuroscience
- 2013 – 2015 Cognitive Neuroscience Society