

STEVEN M. WEISBERG, PHD

Department of Psychology | University of Texas at Arlington
701 S Nedderman Dr, Arlington, TX 76019
steven.weisberg@uta.edu | [Website](#)

ACADEMIC APPOINTMENTS

2025-Present	Assistant Professor Department of Psychology University of Texas at Arlington
2019-Present	Director Spatial Cognition and Navigational Neuroscience Laboratory (SCANN Lab)
2019-2025	Assistant Professor Department of Psychology University of Florida
2015-2019	Postdoctoral Fellow Center for Cognitive Neuroscience University of Pennsylvania Advisor: Dr. Anjan Chatterjee & Russell Epstein

EDUCATION

2015	PhD in Psychology Brain and Cognitive Sciences Temple University Advisor: Dr. Nora Newcombe
2008	BA in Psychology, <i>cum laude</i> Minor in Mathematics College of William and Mary Advisor: Dr. Jeanine Stefanucci

AWARDS AND HONORS

2022	Society Fellowship, Psychonomic Society
2018	Biomedical Postdoctoral Program Travel Award, University of Pennsylvania
2017	Collaborative Symposium Award, Psychonomic Society
2017	Postdoctoral Fellow Award, Cognitive Neuroscience Society
2016	Biomedical Postdoctoral Program Travel Award, University of Pennsylvania
2014	College of Liberal Arts Travel Award, Temple University
2013	Training in fMRI Fellowship, University of Michigan, NIH
2013	Visiting Fellowship, Martinos Center for Biomedical Imaging, Mass. Gen. Hosp.

2013	Collaboration Grant, Science Across Virtual Institutes, NSF
2012	Department of Psychology Travel Award, Temple University
2010-2012	University Fellowship, Temple University
2004-2008	Dean's List, College of William and Mary

LAB MEMBERS

Postdoctoral Fellows (1 former)

Adam Barnas (2021 – 2025)

Research: Spatial attention and navigation in aging and ADRD

Current position: Assistant Professor, Ball State University

PhD Students (5 current, 1 former)

Zoe Cronin (2025 –)

Research: Spatial navigation, visual imagery, aphantasia, object perception, fMRI

Chengsi Yi (2023 –)

Research: Spatial navigation and decision-making, fMRI

Ece Yüksel (2021 –)

Research: Human-computer interaction and navigation support/enhancement

Ashish Sahoo (2021 –)

Research: Structural brain correlates of spatial navigation and segmentation

Ashley Krause (2021 –)

Research: Place authenticity / social psychology

Eliany Perez (2020 – 2025)

Research: Spatial navigation strategy in aging and ADRD

Current position: Data Analyst, Teach.org

Master's Students (1 former)

Aaron Zygala (2020 – 2021)

Research: Deep learning models of human brain structure

Current position: AI Engineer at TEKSystems

Undergraduate Alumni (selected; *honor's thesis)

Kyle Wang (UF '25)

Law student, Emory University

Karina LaRubbio (UF '24)

PhD student, Brown University

Hoorish Abid* (UF '22)

Brandi Reynolds (UF '21)

PhD student, Texas State University

Jacob Frank (UF '20)

Statistical programmer, Mayo Clinic

Sam Trinh* (UPenn '16)

Edward Brakoniecki* (Temple '11)

Staff Alumni (selected)

Jeffrey Kunath (2021 – 2023): NSF GRFP recipient; PhD student at University of Illinois Chicago

Zachary Boogaart (2020 – 2022): MD-PhD student at University of Miami

Manish Alluri (2022 – 2024): Research technician at University of Florida (Dr. Natalie Ebner)

Shashank Kumar (2022 – 2023): Software Engineer at Juniper Networks
Rory McKemey (2022 – 2024): Clinical Psychology PhD student at Virginia Tech

GRANTS

*Direct Costs; †Total Costs; *Trainees in italics*

Current

2025 – 2027

A Novel Intervention to Address Orientation and Navigation Declines with Aging. (McKnight Brain Research Foundation Pilot Grant). **Principal Investigator**, with multi-PI Ebner and Ekstrom, co-I's Hill, Visschner.

2024 – 2029

Neural Correlates of Cognitive-Motor Interactions in ADRD Gait. (NIH 1R01AG089050-01). **Co-Investigator**, with PI Seidler, co-I's Ferris, Ebner, Bowers, Huentelman.

2024 – 2029

Collaborative Research: iVisit: Situated Learning Experiences through Web-based Virtual Field Trips. (NSF IUUSE: EDU Level 3 proposal). **Co-Investigator**, with PI Eiris, co-I's Gheisari, Oprean.

Completed

2021 – 2025

Behavioral and neural properties of spatial direction comprehension in aging and amnesic mild cognitive impairment. (NIH K01-AG070333-01; †\$619,849). **Principal Investigator**, with Primary Mentor Ebner, Co-Mentors DeKosky and Ding.

2023 – 2024

An fMRI real-time neurofeedback intervention to affect navigation strategy selection in older adults. (Cognitive Aging and Memory Center Pilot Grant; *\$12,500). **Principal Investigator**

2024

Exploring Risk Tolerance and Decision-Making Across Contexts: Implications for Healthy Cognitive Aging and Alzheimer's Disease. (Scientific Research Network on Decision Neuroscience and Aging; SRNDNA). **Mentor**, with PI Perez, co-I's Barnas, Ebner, Kvam, & Bowers.

2023 – 2024

Critical Life Event Supplement to K01-AG070333-02 (NIH K01-AG070333-01; †\$70,000). **Principal Investigator**, with Primary Mentor Ebner, Co-Mentors DeKosky and Ding.

2022 – 2024

Novel behavioral and neural markers of Alzheimer's Disease progression. (Ed and Ethel Moore Alzheimer's Disease Research Program – 22A12; †\$100,000). **Mentor** with PI - Barnas.

2023

fMRI Equipment Grant (MBI Programmatic Research & Equipment Support Grant; †\$81,375).

Principal Investigator (Contact PI Bodison); Co-PIs Gurka and Scott.

2021 – 2023

Go your own way: Evaluating neurofeedback-induced plasticity to improve spatial navigation behavior in older adults at risk for Alzheimer's disease. (Ed and Ethel Moore Alzheimer's Disease Research Program – 21A09; †\$247,613). **Principal Investigator**, with multi-PI Ebner, co-I Bowers.

2020 – 2023

Volumetric and connectivity measures of navigation and memory skill acquisition. (NIH R21-NS120237-01; †\$434,125). **Principal Investigator**, with multi-PI Ekstrom.

2021 – 2021

What mind matters? Machine learning approaches to linking structural variation in the brain to individual differences in spatial behavior (UF Research AI Catalyst – OR-DRD-AI2020; *\$50,000).

Principal Investigator, with co-I Zare.

2016 – 2018

Neural representations of spatial directions in language, schemas, and images. (NRSA F32DC015203; †\$162,642). **Principal Investigator**, with Mentors Chatterjee and Epstein.

PEER-REVIEWED PUBLICATIONS

*After first author, authorship order is alphabetical; †Co-first authors. *Trainees in italics*

Zheng, L., Boogaart, Z., McAvan, A., Garren, J., Doner, S., Wilkes, B.J., Groves, W., Yüksel, E., Cherep, L., Ekstrom, A.D., & **Weisberg, S.M.** (in revision). Newly trained navigation and verbal memory skills elicit changes in task-related networks but not brain structure. *eLife*.

Weisberg, S.M., Barnas, A.J., Abid, H., Kumar, S., Sahoo, A.K., & Yuksel, E. (under review). Drawing down: The structure of spatial direction representations in drawing and categorization.

Yuksel, E., Boogaart, Z., & **Weisberg, S.M.** (in revision). This is not the way: Global directional cues do not improve spatial navigation in an immersive virtual environment. *Cognitive Research: Principles & Implications*

Barnas, A.J., Kunath, J.T., Perez, E., Boogaart, Z., Bowers, D., Ebner, N.C., & **Weisberg, S.M.** (2025). Spatial navigation strategy in older adults: Preference or ability? *Psychology & Aging*.

Perez, E., Kvam, P.D., & **Weisberg, S.M.** (2025). The role of risk tolerance in navigation strategy decisions. *Journal of Experimental Psychology: Learning, Memory, & Cognition*

- Krause, A.N., Meagher, B.R., & **Weisberg, S.M.** (2024). Unlocking Coherence: The Lock-and-Key Metaphor in the Psychology of Place. *Ecological Psychology*, 36(4), 283-299. [[Paper](#)]
- Lin, T., Rana, M., Liu, P., Polk, R., Heemskerk, A., **Weisberg, S.M.**, Bowers, D., Sitaram, R., & Ebner, N.C. (2024). Real-time fMRI neurofeedback training of selective attention in older adults. *Brain Sciences*. [[Paper](#)]
- Barnas, A.J., Ebner, N.C., **Weisberg, S.M.** (2024). Allocation of Space-Based Attention is Guided by Efficient Comprehension of Spatial Direction. [[Preprint](#)] [[Paper](#)]. *Journal of Cognition*, 7, 1.
- Weisberg, S.M.**, Ebner, N.C., & Seidler, R.D. (2023). Getting LOST: A conceptual framework for supporting and enhancing navigation in aging. *WIREs Cognitive Science*. [[Preprint](#)] [[Paper](#)].
- Jaeger, A.J., **Weisberg, S.M.**, Nazareth, A., & Newcombe, N.S. (2023). A picture or a thousand words: Neither improve spatial knowledge of a complex virtual environment. *Cognitive Research: Principles and Implications*. [[Preprint](#)] [[Pre-reg](#)] [[Code and Data](#)].
- Weisberg, S.M.**, Schinazi, V.R., Ferrario, A., & Newcombe, N.S. (2022). Evaluating the effects of a programming error on a virtual environment measure of spatial navigation behavior. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 49(4), 575-589. [[Preprint](#)] [[Pre-reg](#)] [[Code and Data](#)] [[Paper](#)].
- Weisberg, S.M.**, & Ekstrom, A.D. (2021). Hippocampal volume and navigation ability: The map(ping) is not to scale. *Neuroscience and Biobehavioral Reviews*. 126, 102-112. [[Preprint](#)] [[Paper](#)].
- Weisberg, S.M.**, & Chatterjee, A. (2021). Spatial direction comprehension in images, arrows, and words in two patients with posterior cortical atrophy. *Neuropsychologia*. 151. [[Preprint](#)] [[Data](#)] [[Pre-reg](#)] [[Paper](#)]
- Weisberg, S.M.**, & Chatterjee, A. (2020). Reference frames in spatial communication for navigation and sports: An empirical study in ultimate frisbee players. *Cognitive Research: Principles and Implications*. 5, 53. [[Preprint](#)] [[Data and Pre-reg](#)] [[Paper](#)]
- Nazareth, A., Newcombe, N.S., Shipley, T.F., Velazquez, M., & **Weisberg, S.M.** (2019). Beyond small-scale spatial skills: Navigational skills and geoscience education. *Cognitive Research: Principles and Implications*. 4, 17. [[Preprint](#)] [[Paper](#)]
- Weisberg, S.M.**, Newcombe, N.S., & Chatterjee, A. (2019). Everyday taxi drivers: Do better navigators have larger hippocampi? *Cortex*. 115, 280-293. [[Preprint](#)] [[Data and Code](#)] [[Paper](#)]
- Weisberg, S.M.**, Marchette, S.A., & Chatterjee, A. (2018). Behavioral and neural representations of spatial directions across words, schemas, and images. *Journal of Neuroscience*, 38(21), 4996-5007 [[Paper](#)] [[Behavioral Data and Code](#)]

- Weisberg, S.M.**, & Newcombe, N.S. (2018). Cognitive maps: Some people make them, some people struggle. *Current Directions in Psychological Science*. 27(4), 220-226. [[Preprint](#)] [[Paper](#)]
- Weisberg, S.M.**, Badgio, D., & Chatterjee, A. (2018). Feel the way with a vibrotactile compass: Does a navigational aid aid navigation? *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 44(5), 667-679. [[Paper](#)] [[Data](#)]
- Nazareth, A., **Weisberg, S.M.**, Margulis, K., & Newcombe, N.S. (2018). Charting the development of cognitive mapping. *Journal of Experimental Child Psychology*, 170, 86-106. [[Paper](#)]
- Galati, A., **Weisberg, S.M.**, Newcombe, N.S., & Avraamides, M.N. (2018). When gestures show us the way: Self-generated gestures selectively facilitate navigation and spatial memory. *Spatial Cognition and Computation*. [[Paper](#)]
- Blacker, K.J., **Weisberg, S.M.**, Newcombe, N.S., & Courtney, S.M. (2017). Navigation ability, relational and location working memory. *Visual Cognition*, 25(7-8), 691-702. [[Paper](#)]
- Weisberg, S.M.**, Badgio, D., & Chatterjee, A. (2017). A CRISPR new world: Public attitudes towards innovations in genetic modification. *Frontiers in Public Health: Public Health Policy*. [[Paper](#)]
- Atit, K., **Weisberg, S.M.**, Newcombe, N.S., & Shipley, T.F. (2016). Learning to interpret topographic maps: Understanding layered spatial information. *Cognitive Research: Principles & Implications*. [[Paper](#)]
- Cromley, J.G., **Weisberg, S.M.**, Dai, T., Newcombe, N.S., Schunn, C.D., Massey, C., & Merlino, F.J. (2016). Improving middle school science learning using diagrammatic reasoning. *Science Education* 100(6), 1184-1213. [[Paper](#)]
- Weisberg, S.M.**, & Newcombe, N.S. (2016). How do (some) people make a cognitive map? Routes, places, and working memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 42(5), 768-785. [[Paper](#)]
- Ngo, C., **Weisberg, S.M.**, Newcombe, N.S., & Olson, I.R. (2016). The relation between navigation strategy and associative memory: An individual differences approach. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 42(4), 663-670. [[Paper](#)]
- Holmes, C.A., Nardi, D.N., Newcombe, N.S., & **Weisberg, S.M.** (2015)*. Children's use of slope to guide navigation: Sex differences relate to spontaneous slope perception. *Spatial Cognition and Computation*, 15(3), 170-185. [[Paper](#)]
- Weisberg, S.M.** & Newcombe, N.S. (2014). A slippery directional slope: Individual differences in using slope as a directional cue. *Memory & Cognition*, 42, 648-661. [[Paper](#)]

Weisberg, S.M., Nardi, D.N., Newcombe, N.S., & Shipley, T.F. (2014). Up by upwest: Is slope like north? *Quarterly Journal of Experimental Psychology*. 67(10), 1959-1976. [[Paper](#)]

Weisberg, S.M., Schinazi, V.R., Newcombe, N.S., Shipley, T.F., & Epstein, R.A. (2014). Variations in cognitive maps: Understanding individual differences in navigation. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 40(3), 669-682. [[Paper](#)]

CHAPTERS, PROCEEDINGS, COMMENTARIES, REPORTS, ETC.

Perez, E., & **Weisberg, S.M.** (2023). Individual differences in spatial navigation. *Encyclopedia of the Human Brain*, 2nd edition.

Weisberg, S.M. & Newcombe, N.S. (2017). Embodied cognition and STEM learning: Overview of a topical collection in CR:PI. *Cognitive Research: Principles and Implications*, 2(38). [[Paper](#)]

Weisberg, S.M.¹, Newcombe, N.S.¹, Atit, K., Jacovina, M.E., Ormand, C.J., & Shipley, T.F. (2015). The lay of the land: Sensing and representing topography. *Baltic International Yearbook of Cognition, Logic and Communication*: Vol. 10. [[Paper](#)]

Nardi, D.N., Holmes, C.A., Newcombe, N.S., & **Weisberg, S.M.** (2015)*. Sex differences and errors in the use of terrain slope for navigation. *Cognitive Processing*, 16(1), 323-326. [[Paper](#)]

Weisberg, S.M., & Newcombe, N.S. (2013). Are all types of vertical information created equal? *Behavioral and Brain Sciences*, 36, 568-569. [[Paper](#)]

Weisberg, S.M. (2012). Embodied cognition approaches in integrated science, technology, engineering, and mathematics (iSTEM) education. Commissioned report for the National Academy of Engineering Committee on Integrated STEM Education. Published in *Toward Integrated STEM Education: Developing A Research Agenda* (2014).

PRESS

Scientific American (2024). <https://www.scientificamerican.com/article/why-some-people-always-get-lost-and-others-never-do/>

Nature Technology (2022). <https://www.nature.com/articles/d41586-022-00217-0>

Ultiworld (2020). <https://ultiworld.com/2020/11/25/how-we-communicate-on-the-ultimate-field-spatial-communication-research/>

INVITED TALKS

2025

University College of London – Spiers Lab invited seminar

2024

BigTeamScience Conference

Ernst Strungmann Forum – Navigation Research: Mapping the Future, Frankfurt, Germany

University of Florida – McKnight Brain Institute Seminar Series

iNav – International Navigation Conference: Invited talk

Ball State University – Departmental Brown Bag

Georgia Tech – Psychology Department Colloquium

University of Texas at Arlington – Psychology Department Colloquium

Georgia State University – Psychology Department Colloquium

2023

University of Florida – Department of Kinesiology Seminar (Center for Exercise Science)

University of Pennsylvania – Penn Center for Neuroaesthetics

Bilingualism Matters – Psychonomics Affiliate Conference

University of Florida – Cognitive Aging and Memory Center Research Day

2022

CogNav – Royal Society of Navigation

iNAV – International Navigation Conference: Invited talk (Conference cancelled; COVID-19)

2021

Texas A&M – Cognoscenti Series

University of Florida – AI Catalyst Series

University of Florida – Spring Hipergator Symposium

2020

University of California, Irvine

University of Florida – Neuromedicine Summer Seminar Series

2019

University of Florida – Language and Brain Symposium

University of California - Santa Cruz

ADDITIONAL SPOKEN PRESENTATIONS

Weisberg, S. M. (2023). Symposium V Organizer Introductory Remarks: Finding the way: Advances in spatial navigation research. Psychonomics, San Francisco, CA, USA.

Weisberg, S. M. & Ekstrom, A.D. (2023). How Does the Brain Encode New Complex Cognitive Skills? Psychonomics, San Francisco, CA, USA.

Perez, E., Kunath, J., Barnas, A. J., Boogaart, Z., Ebner, N. C., & Weisberg, S. M. (2022). Neural correlates of strategy shifts in navigation behavior. Data Blitz. Florida Consortium on the Neurobiology of Cognition, Tallahassee, FL, USA.

Weisberg, S.M. (2020). The cognitive map is not to scale: Relating spatial navigation abilities to hippocampal volume. Talk presented at *Florida Consortium on the Neurobiology of Cognition*. (virtual).

Weisberg, S.M. (2020). Paradigm-based spatial navigation research as a model to enhance reproducibility in cognitive neuroscience. Talk presented at *Research Reproducibility 2020*. Gainesville, Florida (held virtually).

Weisberg, S.M. (2017). How to get the point: Spatial language and gesture can help teach topographic maps. Talk presented at the meeting of the *European Society for Cognitive Psychology (ESCoP)*. Potsdam, Germany.

Galati, A., **Weisberg, S.M.**, Newcombe, N.S., & Avraamides, M.N. (2015). Effects of gesturing strategies on navigation performance and spatial memory. Talk presented at *Psychonomic Society*. Chicago, IL.

Weisberg, S.M., & Newcombe, N.S. (2015). It's not can but how: Navigation aptitude and strategy. Talk presented at *International Conference on Spatial Cognition*. Rome, Italy.

Weisberg, S.M. (2014). I get around, how do you? Individual differences in navigation aptitude. Invited Colloquium, ETH-Zurich, Switzerland.

Weisberg, S.M., & Newcombe, N.S. (2014). Remembering what and where: The relation between components of navigation ability and working memory. Paper presented at the 1st annual *Pennsylvania Spatial Cognitive Symposium*. University Park, PA.

Weisberg, S.M., Epstein, R.A., Newcombe, N.S., Schinazi, V.R., & Shipley, T.F. (2012). Where do you think you are: A virtual environment assessment of navigation ability. Doctoral colloquium at *Spatial Cognition 2012*. Bavaria, Germany.

Weisberg, S.M., Brakoniecki, E., & Newcombe, N.S. (2012). The other side of the mountain: Slope as a cue in navigation. Paper presented at the *International Conference on Spatial Cognition*. Rome, Italy.

Weisberg, S.M., Brakoniecki, E., & Newcombe, N.S. (2012). The other side of the mountain: Slope as a cue in navigation. Paper presented at *Cognitive Science Society*. Sapporo, Japan.

Weisberg, S.M. (2012). Structural alignment approach to contour map interpretation. Colloquium, Northwestern University. Evanston, IL.

Weisberg, S.M. & Newcombe, N. S. (2011). Slope and navigation: All downhill? *Graduate Fellows Research Symposium*, Temple University. Philadelphia, PA.

POSTERS

Yüksel, E., & **Weisberg, S.M.** (2024). Navigating the metaverse: The relation between scale and expertise in spatial knowledge of immersive and desktop virtual reality. Poster presented at the 65th Annual Meeting of the Psychonomic Society, NYC.

Yi, C., Lin, T., Alluri, M., Kunath, J., Bowers, D., Ebner, N.C., & **Weisberg, S.M.** (2024). GPS Recalibrated: Exploring Navigation Strategy Shifts under Real-time fMRI Neurofeedback. Poster presented at the 65th Annual Meeting of the Psychonomic Society, NYC.

- Sahoo, A. K., Geldimuradov, H., Zygala, A., Cui, Y., Lotfollahi, M., Gong, K., Smith, K., Zare, A., & **Weisberg, S. M.** (2024). Deep learning approaches to associate neural structure with spatial navigation function. Poster presentation at the 65th Annual Meeting of the Psychonomic Society. New York, NY.
- Perez, E., Barnas, A. J., Kunath, J., Kvam, P., Ebner, N. C., Bowers, D., & **Weisberg, S. M.** (2024). *Navigating Uncertainty: Age- and ADRD-related Differences in Explore-Exploit tradeoffs Across Gambling and Navigation*. Poster presentation at the 65th Annual Meeting of the Psychonomic Society, New York City, NY.
- Sahoo, A. K., Geldimuradov, H., Zygala, A., Cui, Y., Lotfollahi, M., Gong, K., Smith, K., Zare, A., & **Weisberg, S. M.** (2024). Deep learning approaches to associate neural structure with spatial navigation function. UF AI Days.
- Perez, E., Kvam, P., **Weisberg, S. M.** (2023). The role of risk tolerance in navigation strategy decisions. 64th Annual Meeting of the Psychonomic Society. San Francisco, CA, USA. Awarded a J. Frank Yates Graduate Student Travel Award.
- Sahoo, A.K., **Weisberg, S. M.** (2023). Temporal divisions: Segmenting space through time. Poster presentation at the 64th Annual Meeting of the Psychonomic Society. San Francisco, CA.
- Yuksel, E., **Weisberg, S. M.** (2023). Navigating the metaverse: The relation between scale and expertise in spatial knowledge of immersive and desktop virtual reality. Poster presentation at the Symposium for Individual Differences in Cognition. San Francisco, CA.
- Yüksel, E., Boogart, Z., **Weisberg, S.M.** (2023). This is not the way: Global directional cues do not improve spatial navigation in an immersive virtual environment. Poster presentation at the 64th Annual Meeting of the Psychonomic Society. San Francisco, CA. Awarded a Graduate Conference Award.
- Barnas, A. J., Bowers, D., Ebner, N. C., & **Weisberg, S. M.** (2023). Novel behavioral and neural markers of Alzheimer's disease progression: A case for visual orienting. Poster presentation at the 2023 Ed and Ethel Moore Alzheimer's Disease Research Symposium. Florida Department of Health, University of Central Florida.
- Barnas, A. J., Ebner, N. C., & **Weisberg, S. M.** (2023). Allocating space-based attention with schemas, words, and scenes. Poster presentation at the 64th Annual Meeting of the Psychonomic Society. San Francisco, CA.
- Barnas, A. J., Bowers, D., Ebner, N. C., & **Weisberg, S. M.** (2023). Individual differences in visual attention correlate with spatial navigation behavior in aging. Poster presentation at the Symposium for Individual Differences in Cognition. San Francisco, CA.

- Kunath, J., *Barnas, A. J., Perez, E., Boogaart, Z., Ebner, N. C., & Weisberg, S. M.* (2023). Modifying spatial navigation strategy through task instruction in younger and older adults. Poster presentation at the 64th Annual Meeting of the Psychonomic Society. San Francisco, CA.
- Perez, E., Kvam, P., Weisberg, S. M.* (2023). The role of risk tolerance in navigation strategy decisions. Scientific Research Network on Decision Neuroscience & Aging, Santa Barbara, CA, USA.
- Perez, E., Kunath, J., Barnas, A. J., Boogaart, Z., Ebner, N. C., & Weisberg, S. M.* (2023). Neural correlates of strategy shifts in navigation behavior. Poster presentation. Organization for Human Brain Mapping. Montreal, CA.
- Yüksel, E., Boogaart, Z., Weisberg, S.M.* (2023). This is not the way: Global directional cues do not improve spatial navigation in an immersive virtual environment. Poster presentation. 13th Annual North Central Florida Society for Neuroscience Chapter Conference, Gainesville, FL, United States.
- Barnas, A. J., Ebner, N. C., & Weisberg, S. M.* (2023). Spatial navigation detriments in older adults: A role for visual attention? Poster presentation. Dallas Aging & Cognition Conference. Dallas, TX.
- Perez, E., Kunath, J., Barnas, A. J., Boogaart, Z., Ebner, N. C., & Weisberg, S. M.* (2023). Neural correlates of strategy shifts in navigation behavior. Poster presentation. Dallas Aging & Cognition Conference. Dallas, TX.
- Perez, E., Kunath, J., Barnas, A. J., Boogaart, Z., Ebner, N. C., & Weisberg, S. M.* (2022). Neural correlates of strategy shifts in navigation behavior. Poster presentation. Interdisciplinary Navigation Symposium (virtual).
- Perez, E., Weisberg, S.M.* (2021). The road less traveled: Neural and behavioral correlations between risk-taking and spatial navigation strategy choice. Poster presented at *CNS*, (virtual).
- Weisberg, S.M.**, Aguirre, G.K. (2020). Bayesian adaptive stimulus selection with real-time fMRI. Poster presented at *VSS*, (virtual). [[Abstract](#)].
- Weisberg, S.M.**, Newcombe, N.S., & Chatterjee, A. (2018). Everyday taxi drivers: Do gifted navigators have larger hippocampi? Poster presented at *iNav*, Mt. Tremblant, Canada.
- Weisberg, S.M.**, Newcombe, N.S., & Chatterjee, A. (2018). Everyday taxi drivers: Do gifted navigators have larger hippocampi? Poster presented at *Cognitive Neuroscience Society*. Boston, MA.

- Weisberg, S.M.**, Marchette, S.A., & Chatterjee, A. (2017). Which way: Neural decoding of spatial directions in images, schemas, and words. Poster presented at *Cognitive Neuroscience Society*. San Francisco, CA. Awarded the Postdoctoral Fellow Award.
- Nazareth, A., **Weisberg, S.M.**, Margulis, K., Do, A., Haj, R., & Newcombe, N.S. (2016). Age-related differences in cognitive mapping during spatial navigation. Poster presented at *Psychonomic Society*. Boston, MA.
- Weisberg, S.M.**, Badgio, D., & Chatterjee, A. (2016). Feel the way: Does a vibrotactile compass help you learn a space? Poster presented at *Interdisciplinary Navigation Symposium (iNav)*. Bad Gastein, Austria.
- Weisberg, S.M.**, Trinh, S., & Chatterjee, A. (2016). Recalculating...Processing words, schemas, and images of spatial directions. Poster presented at *Cognitive Neuroscience Society*. New York, NY.
- Weisberg, S.M.**, Atit, K., Newcombe, N.S., & Shipley, T.F. (2015). How to get the point: Spatial language interacts with gesture in learning topographic maps. Poster presented at *Psychonomic Society*. Chicago, IL.
- Blacker, K., **Weisberg, S.M.**, Newcombe, N.S., & Courtney, S.M. (2015). How working memory for spatial locations versus spatial relations predicts navigation ability. Poster presented at *Psychonomic Society*. Chicago, IL.
- Ngo, C., **Weisberg, S.M.**, Newcombe, N.S., & Olson, I.R. (2015). The relation between navigation strategy and associative memory: An individual differences approach. Poster presented at *International Conference on Spatial Cognition*. Rome, Italy.
- Weisberg, S.M.**, Beswick, M., & Chatterjee, A. (2015). Vento-medial Prefrontal Cortex and Stability in Art Preference. Poster presented at *Cognitive Neuroscience Society*. San Francisco, CA.
- Galati, A., **Weisberg, S.M.**, Newcombe, N.S., & Avraamides, M.N. (2014). Self-generated gestures selectively influence navigation performance and spatial memory. Poster presented at *Psychonomic Society*. Long Beach, CA.
- Ngo, C., Newcombe, N.S., Olson, I.R., & **Weisberg, S.M.** (2014). The relation between navigation strategy and associative memory: An individual differences approach. Poster presented at *Psychonomic Society*. Long Beach, CA.
- Weisberg S.M.** & Newcombe, N.S. (2014). Remembering what and where: The relation between components of navigation ability and working memory. Poster presented at *Psychonomic Society*. Long Beach, CA.

Weisberg, S.M., & Newcombe, N.S. (2014). Remembering what and where: The relation between components of navigation ability and working memory. Poster presented at *Spatial Cognition 2014*. Bremen, Germany.

Weisberg, S.M., Newcombe, N.S., & Shipley, T.F. (2013). What predicts understanding of topographic maps? Poster presented at *Psychonomic Society*. Toronto, CA.

Holmes, C.A., Nardi, D., Newcombe, N.S., & **Weisberg, S.M.** (2013). Hitting the slopes: The strength of gradient cues in child navigation. Poster presented at the Society for Research in Child Development (SRCD) Biennial Meeting, Seattle, WA.

Weisberg, S.M., Newcombe, N.S., & Shipley, T.F. (2013). Using analogical learning to improve contour map reading. Poster presented at the 6th annual *inter-Science of Learning Center*. Philadelphia, PA.

Holmes, C., Newcombe, N.S., **Weisberg, S.M.**, & Nardi, D.N. (2013). Hitting the slopes: Children's use of gradient cues for reorientation. Poster presented at the 6th annual *inter-Science of Learning Center*. Philadelphia, PA.

Weisberg, S.M., Nardi, D., Newcombe, N.S. & Shipley, T.F. (2012). Sensing the slopes: Sensory modality effects on a goal location task. Poster presented at *Psychonomic Society*. Minneapolis, MN.

Weisberg, S.M., Epstein, R.A., Newcombe, N.S., Schinazi, V.R., & Shipley, T.F. (2012). Developing a virtual environment assessment of navigation ability. Poster presented at *Association for Psychological Science Convention*. Chicago, Illinois.

Weisberg, S.M., Newcombe, N.S., & Shipley, T.F. (2012). Teaching contour maps using analogical learning. Poster presented at the 5th annual *inter-Science of Learning Center Conference*. San Diego, CA.

Weisberg, S.M. & Newcombe, N.S. (2011). The role of slope as a navigational cue. Poster presented at the 4th annual *inter-Science of Learning Center Conference*. Washington, D.C.

SYMPOSIA

2023 Organizer and Presenter: *Finding the Way: Advances in Spatial Navigation Research*, Psychonomic Society Conference. Speakers: Nora Newcombe, Arne Ekstrom, Elizabeth Chrastil, Mary Hegarty, Denise Head, Merve Tansen.

2015 Organizer and Presenter: *Individual Differences in Navigating*, International Conference on Spatial Cognition, Rome, Italy. Speakers: Steven Weisberg, Steven Marchette, James Negen, Tim McNamara

STUDENT ACHIEVEMENTS

- 2025 Sallie P. Asche Travel award to *Ashish Sahoo*; Goldman Dissertation award to *Ece Yüksel*; Summer Institute in Social Psychology and Personality Award and Interdisciplinary Existential Psychology Research SPSP Conference Award, *International Society for the Science of Existential Psychology* to *Ashley Krause*
- 2024 Auburn University's Bridges into Inclusive Excellence Fellowship; Cluff Aging Research Award; Porter Horne Memorial Scholarship; Dissertation research award to *Eliany Perez*; Balkhi Foundation Experiential award to *Chengsi Yi*; NSF GRFP to *Jeffery Kunath*; Travel awards to *Ece Yüksel*, *Chengsi Yi*, *Ashish Sahoo*, *Eliany Perez*; Goldman scholarship to *Ece Yüksel*; Outstanding Student Award, International Society for the Science of Existential Psychology; Worth Publisher's-Macmillan Leaning Student Conference Award, International Society for the Science of Existential Psychology to *Ashley Krause*
- 2023 Sallie P. Asche Travel award, Gerber Behavioral and Cognitive Neuroscience Psychology Research Award, O. Ruth McQuown Graduate Award, 2023 Levitt Award for Student Research on Aging, Psychonomic Society Yates Conference Award, T32 Fellowship, SRNDNA award, Goldman Spring Scholarship awarded to *Eliany Perez*; Travel awards to *Eliany Perez*, *Adam Barnas*; University Scholars Program (funded undergraduate research) to *Merrill Garlington*; Graduate Conference award to *Ece Yüksel*
- 2022 CLAS UF Graduate Student travel awards to *Eliany Perez*
- 2021 Goldman Spring Scholarship awarded to *Eliany Perez*
- 2020 Diversity enhancement award to *Eliany Perez*

SERVICES AND LEADERSHIP

- 2016 Local Planning Committee, Spatial Cognition Conference, Philadelphia, PA
- 2013 Local Planning Committee, inter-Science of Learning Center Conference, Philadelphia, PA
- 2012 SILC Planning Representative: Co-Chair, Networking Committee, inter-Science of Learning Center Conference, San Diego, CA

General Public Dissemination:

- 2025 Panelist, Gainesville Highschool, seminar for careers in psychology
- 2014 Presenter, Quadrangle Sunrise Senior Living Services, Social Issues Committee Presentation Series
- Presenter, Philadelphia Science Festival, Spatial Intelligence and Learning Center
- 2013 Guest Lecture, Conestoga High School AP Psychology
- 2012 Presenter, Philadelphia Science Festival, Spatial Intelligence and Learning Center

Consulting Editor: Journal of Experimental Psychology: Learning, Memory, and Cognition

Handling Editor: *Cognitive Processing*

Review Editor: *Frontiers in Aging Neuroscience*

Ad Hoc Reviewer (peer-reviewed journals, verified record on [Publons](#)):

American Journal of Psychology
Attention, Perception, & Psychophysics
Behavioral and Brain Sciences
Behavioral and Brain Research
Behavioral Research Methods

Child Development
Cognition
Cognitive Processing
Cognitive Psychology
Communications Biology
Cortex
Cognitive Research: Principles & Implications
European Journal of Neuroscience
Frontiers in Aging Neuroscience
Frontiers in Psychology: Developmental
Hippocampus
Intelligence
Journal of Experimental Education
Journal of Experimental Psychology: Applied
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of Neuroscience
Journal of Visualized Experiments
Learning and Individual Differences
Memory
Memory & Cognition
Nature Computational Science
Neuroimage
Psychology & Aging
Quarterly Journal of Experimental Psychology
Spatial Cognition and Computation
Scientific Reports
Topics in Cognitive Science

Ad Hoc Reviewer (other):

NSF ad hoc review (2025)
SRNDNA Pilot proposals (2024)
UK Research and Innovation ad hoc review (2024)
NIH Study Section (ad hoc member) – HCMF (2023)
NIH Study Section (Early Career Researcher) – BIVT (2022)
NSF ad hoc review (2022)
DFG (German National Science Foundation) Grant Review (2021)
IEEE VR 2021 (2020)
Cognitive Science Society Conference (2018)
International Conference of Spatial Cognition (2012, 2015)
inter-Science of Learning Center Conference (2011, 2012)
Spatial Cognition Conference (2016, 2018)
Special Issue, Spatial Cognition X Proceedings (2017)

TEACHING EXPERIENCE

2023	Primary Instructor, Graduate seminar: Methods in Neuroimaging
2020	Primary Instructor, Graduate level Introduction to Cognitive Neuroscience
2019-2023	Primary Instructor, Introduction to Cognitive Neuroscience
2014	Guest Lecturer, Spatial Cognition, Sensation & Perception
2013	Primary Instructor, Foundations in Cognitive Psychology

PRESENT POSITIONS

2019-Present	Assistant Professor, Department of Psychology, University of Florida
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PAST POSITIONS

2015-2019	Post-doctoral Fellow, University of Pennsylvania <i>Advisor: Dr. Anjan Chatterjee</i>
2015-2019	Digital Associate Editor, Psychonomic Society
2016	Guest Editor, Special issue of <i>Cognitive Research: Principles & Implications</i> , Embodied Cognition and STEM Education
2010-2014	Graduate Student, Temple University, Spatial Intelligence and Learning Center <i>Advisor: Dr. Nora Newcombe</i>
2013	Primary Instructor, Foundations in Cognitive Psychology, Temple University
2010	Research Assistant, Temple University, Spatial Intelligence and Learning Center <i>Advisor: Dr. Nora Newcombe</i>
2007-2008	Research Assistant, College of William and Mary, Psychology Department <i>Advisor: Dr. Jeanine Stefanucci</i>

PROFESSIONAL MEMBERSHIPS

2015-Present	Member, Cognitive Neuroscience Society
2022-Present	Fellow, Psychonomic Society
2010-Present	Member, Spatial Intelligence and Learning Center
2010-2012	Member, Cognitive Science Society
2010-2012	Member, Association for Psychological Science
2019-2022	Member, Vision Sciences Society