

Curriculum Vitae

David Eugene Osher, PhD

Department of Psychology
The Ohio State University
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Education and Work Experience

The Ohio State University, Columbus, OH Assistant Professor	Aug 2020-Present
The Ohio State University, Columbus, OH Research Scientist	2017-2020
Boston University, Boston, MA Postdoctoral Researcher Advised by Dr. David Somers	2013-2017
Massachusetts Institute of Technology, Cambridge, MA Ph.D., Computational Neuroscience Advised by Dr. John D.E. Gabrieli Thesis committee: Drs. John D.E. Gabrieli, Robert Desimone, Rebecca Saxe, Bruce Fischl	2007-2013
The Ohio State University, Columbus, OH B.Sc. in Psychology <i>Cum Laude</i> <i>With Honors in the Arts and Sciences</i> <i>With Distinction in Psychology</i>	2001-2006

Grants

Active

1. Center for Cognitive and Brain Sciences Seed Grant (2022-2026, PI). “Neural Plasticity Following Speech Therapy in Chronic Aphasia”
2. NIDCD R01DC017711 (2019-2026, Co-I). “Laying the Groundwork for Personalized Medicine in Aphasia Therapy: Genetic and Cognitive Predictors of Restorative Treatment Response”

Mentored Student Grants

1. NSF GRFP (Awarded to Keara Ginell, Graduate Student, 2025-2028). “Neural Mechanisms of Habitual Attention: A Novel Behavioral and fMRI Approach”
2. NICHD F31HD107961 (Awarded to Fiona Molloy, Graduate Student, Completed 2023). “Brain basis and neural circuitry of habit-like attention in infants and adults”

Awards and Honors

Ohio Supercomputer Champion Award	2019-2024
NEI Early Career Scientist Travel Grant	2019
Hariri Institute for Computing, Computational Science & Engineering Research Award	2016-2017
Hariri Institute for Computing, Computational Science & Engineering Research Award	2014-2015

NIMH Developmental Cognitive Neuroscience	2011-2013
NEI Integrative Training Award in Vision	2008-2011
NSF Graduate Research Fellowship Honorable Mention	2009
NIGMS Integrative Neuronal Systems Training Award	2007
Graduation with Honors and Distinction, Cum Laude, Ohio State University	2006
Trustees Scholarship	2001-2005

Publications and manuscripts

In Review:

Ginell K.M., Hentz R.E., Liao I., Duffy M.L., Molloy M.F., **Osher D.E.** (*in review*). A Novel Attentional Serial Reaction Time Task for Assessing Habit-Like Attention.

Tzalavras A., **Osher D.E.**, Cocuzza C., Chakravarthula L. C. N., Mill R. D., Peterson K. L., Cole M. W. (*in review*). Hierarchical and non-hierarchical network flows generate complementary representational dynamics in human visual cortex.

Chen G., Song D., Fu M., Li S., Cui Z., Xia M., Sun L., He Y., Xu T., Yu X., Zang Y., Zhou J., Zhang K., Qin S., Popal P., Saygin Z.M., **Osher D.E.**, Olson I.R., Rushworth M.F.S., Wang Y. (*in review*). A Tripartite Map of the Ventromedial Prefrontal Cortex.

Liao I., Saygin Z.M., Ginell K.M., Kay K.N., **Osher D.E.** (*in review*). Task-derived Functional Connectivity is Sufficient to Capture Individual Differences in Functional Selectivity Across the Brain.

In Prep:

Diedrichs V.A., Pan X.J., Stark B.C., Fridriksson J., den Ouden D.-B., Rorden C., Newman-Norlund R., ***Osher D.E.**, *Harnish S.M. (*in prep*). Semantics, Phonology, and the Right Hemisphere Resting-State Functional Connectivity of Stroke Survivors with Aphasia.

*These authors contributed equally

Zeng Y., Hentz R.E., **Osher D.E.** (*in prep*). Configural and featural processing in the ventral and dorsal visual streams.

Liao I., Saygin Z.M., Ginell K.M., **Osher D.E.** (*in prep*). Distinct Connectivity Fingerprints Reveal Functional Specialization in the Ventral Visual Stream.

Published:

Zeng Y., Lu Z., Hentz R.E., **Osher D.E.** (2026). Face-like holistic Processing in Non-Face Stimuli. *Cognitive Psychology*, 164(1), 101801. <https://doi.org/10.1016/j.cogpsych.2026.101801>

Hiersche K.J., Bradley L., **Osher D.E.**, Saygin Z.M. (2026). Functional Dissociation in the Developing Superior Temporal Lobe: Language and Theory of Mind. *Communications Biology*, 9(1), 558. <https://doi.org/10.1038/s42003-026-10040-2>

Diedrichs, V.A.; **Osher, D.E.**, Harnish, S.M., & Meier, E.L. (2026). Semantic and Phonological Brain Networks in Older Adults: A Systematic Scoping Review. *Brain Science*, 16(3), 252. <https://doi.org/10.3390/brainsci16030252>

Hiersche K.J., Saygin Z.M., & **Osher D.E.** (2025). Connectivity and function are coupled across cognitive domains throughout the brain. *Network Neuroscience*, 10 (1), 80–92. <https://doi.org/10.1162/NETN.a.504>

- Molloy M.F., Saygin Z.M., **Osher D.E.** (2024). Predicting High-level Visual Areas in the Absence of Task fMRI. *Scientific Reports*, 14(1), 11376. <https://doi.org/10.1038/s41598-024-62098-9>
- Zeng Y., Fogt N., Toole A., Oechslin T., Widmer D., Manning S., Kulp M.T., **Osher D.E.** (2024). Neural Consequences of Symptomatic Convergence Insufficiency: A Small Sample Study. *Ophthalmic and Physiological Optics*, 44(3), 537–545. <https://doi.org/10.1111/opo.13303>
- Molloy, M. F., & **Osher D. E.** (2023). A personalized cortical atlas for functional regions of interest. *Journal of Neurophysiology*, 130(5), 1067-1080. <https://doi.org/10.1152/jn.00108.2023>
- Molloy, M. F., Yu, E. J., Mattson, W. I., Hoskinson, K. R., Taylor, H. G., **Osher D. E.**, Nelson E. E., & Saygin, Z. M. (2023). Effect of extremely preterm birth on adolescent brain network organization. *Brain Connectivity*, 13(7), 394-409. <https://doi.org/10.1089/brain.2022.0077>
- Howell, A. L., **Osher D. E.**, Li, J., & Saygin, Z. M. (2020). The intrinsic neonatal hippocampal network: rsfMRI findings. *Journal of Neurophysiology*, 124(5), 1458-1468. <https://doi.org/10.1152/jn.00362.2020>
- Li, J., **Osher D. E.**, Hansen, H. A., & Saygin, Z. M. (2020). Innate connectivity patterns drive the development of the visual word form area. *Scientific reports*, 10(1), 18039. <https://doi.org/10.1038/s41598-020-75015-7>
- Osher D. E.**, Brissenden, J. A., & Somers, D. C. (2019). Predicting an individual's dorsal attention network activity from functional connectivity fingerprints. *Journal of neurophysiology*, 122(1), 232-240. <https://doi.org/10.1152/jn.00174.2019>
- Brissenden, J. A., Tobyne, S. M., **Osher D. E.**, Levin, E. J., Halko, M. A., & Somers, D. C. (2018). Topographic cortico-cerebellar networks revealed by visual attention and working memory. *Current Biology*, 28(21), 3364-3372. <https://doi.org/10.1016/j.cub.2018.08.059>
- Tobyne, S. M., Somers, D. C., Brissenden, J. A., Michalka, S. W., Noyce, A. L., & **Osher, D. E.** (2018). Prediction of individualized task activation in sensory modality-selective frontal cortex with 'connectome fingerprinting'. *Neuroimage*, 183, 173-185. <https://doi.org/10.1016/j.neuroimage.2018.08.007>
- *Tobyne, S. M., ***Osher, D. E.**, Michalka, S. W., & Somers, D. C. (2017). Sensory-biased attention networks in human lateral frontal cortex revealed by intrinsic functional connectivity. *Neuroimage*, 162, 362-372. <https://doi.org/10.1016/j.neuroimage.2017.08.020>
- *These authors contributed equally
- Saygin, Z. M., **Osher D. E.**, Norton, E. S., Youssoufian, D. A., Beach, S. D., Feather, J., Gaab, N., Gabrieli, J. D., & Kanwisher, N. (2016). Connectivity precedes function in the development of the visual word form area. *Nature neuroscience*, 19(9), 1250-1255. <https://doi.org/10.1038/nn.4354>
- Brissenden, J. A., Levin, E. J., **Osher D. E.**, Halko, M. A., & Somers, D. C. (2016). Functional evidence for a cerebellar node of the dorsal attention network. *Journal of Neuroscience*, 36(22), 6083-6096. <https://doi.org/10.1523/jneurosci.0344-16.2016>
- Saygin, Z. M., **Osher D. E.**, Koldewyn, K., Martin, R. E., Finn, A., Saxe, R., Gabrieli, J. D., & Sheridan, M. (2015). Structural connectivity of the developing human amygdala. *PloS one*, 10(4), e0125170. <https://doi.org/10.1371/journal.pone.0125170>
- Osher D. E.**, Saxe, R. R., Koldewyn, K., Gabrieli, J. D., Kanwisher, N., & Saygin, Z. M. (2016). Structural connectivity fingerprints predict cortical selectivity for multiple visual categories across cortex. *Cerebral cortex*, 26(4), 1668-1683. <https://doi.org/10.1093/cercor/bhu303>

Saygin, Z. M., Norton, E. S., **Osher D. E.**, Beach, S. D., Cyr, A. B., Ozernov-Palchik, O., Yendiki, A., Fischl, B., Gaab, N., & Gabrieli, J. D. (2013). Tracking the roots of reading ability: white matter volume and integrity correlate with phonological awareness in prereading and early-reading kindergarten children. *Journal of Neuroscience*, 33(33), 13251-13258. <https://doi.org/10.1523/jneurosci.4383-12.2013>

*Saygin, Z. M., ***Osher, D. E.**, Koldewyn, K., Reynolds, G., Gabrieli, J. D., & Saxe, R. R. (2012). Anatomical connectivity patterns predict face selectivity in the fusiform gyrus. *Nature neuroscience*, 15(2), 321-327. <https://doi.org/10.1038/nn.3001>

*These authors contributed equally

Osher D. E., Saygin Z., & Gabrieli J. (2011). Predicting functional activity from structural connectivity. *Frontiers in Neuroinformatics*. <https://doi.org/10.3389/conf.fninf.2011.08.00010>

*Saygin, Z. M., ***Osher, D. E.**, Augustinack, J., Fischl, B., & Gabrieli, J. D. (2011). Connectivity-based segmentation of human amygdala nuclei using probabilistic tractography. *Neuroimage*, 56(3), 1353-1361. <https://doi.org/10.1016/j.neuroimage.2011.03.006>

*These authors contributed equally

Conference Presentations

Human Brain Mapping 2026. "Putamen Involvement in Sequence-based Covert Spatial Attentional Habits." Ginell K.M., Hentz R.E., Osher D.E.

Human Brain Mapping 2026. "Task-derived Functional Connectivity Captures Individual Differences in Functional Brain Activity." Liao I., Hentz R.E., Ginell K.M., Saygin Z.M., Osher D.E.

Vision Sciences Society 2026. "Sequential spatial regularities bias visual attention and guide anticipatory eye movements." Ginell K.M., Hentz R.E., Osher D.E.

Vision Sciences Society 2026. "Task-derived Functional Connectivity is Sufficient to Capture Individual Differences in Ventral Visual Selectivity." Liao I., Saygin Z.M., Osher D.E.

Vision Sciences Society 2026. "Holistic processing requires expertise, but expertise may develop rapidly." Zeng Y., Hentz R.E., Osher D.E.

CCBBI Research Day 2025. "Task-derived Functional Connectivity is Sufficient to Capture Individual Differences in Functional Brain Region Activations." Liao I., Saygin Z.M., Osher D.E.

Human Brain Mapping 2025. "Predicting trait sensation seeking using resting-state functional connectivity." Bibb S., Schettini E., Osher D., Saygin Z.

Vision Sciences Society 2025. "Memory-Guided Spatiotemporal Attention." Ginell K.M., Osher D.E.

Vision Sciences Society 2025. "Rethinking Configurational and Feature-Based Processing in Visual Recognition." Zeng Y., Hentz R.E., Osher D.E.

Vision Sciences Society 2025. "Distinct Connectivity Fingerprints Reveal Functional Specialization in the Ventral Visual Stream." Liao I., Osher D.E.

Cognitive Neuroscience Society 2025. "The human brain's functional connectome specifies hierarchical and non-hierarchical visual cortical processing." Tzalavras A., Osher D.E., Cocuzza C., Chakravarthula L.N.C., Mill R.D., Peterson K.L., Cole M.W.

Human Brain Mapping 2024. “Selectivity to object features and configuration in the ventral visual stream.” Zeng Y., Hentz R.E., Osher D.E.

Vision Sciences Society 2024. “An Attentional Serial Reaction Time Task.” Duffy M.L., Molloy M.F., Osher D.E.

Vision Sciences Society 2024. “An Occipitotemporal Region that Identifies Relevant Features.” Zeng Y., Hentz R.E., Osher D.E.

Denman Undergraduate Research Forum 2024. “An Attentional Serial Reaction Time Task.” Duffy M.L., Molloy M.F., Osher D.E.

Society for the Neurobiology of Language 2023. “Semantic and Phonological Networks in Older Adults: A Systematic Scoping Review.” Diedrichs V.A., Meier E.L., Osher D.E., Harnish S.M.

Clinical Aphasiology Conference 2023. “Semantics, phonology, and resting-state connectivity in aphasia.” Diedrichs V.A., Pan X.J., Stark B.C., Fridriksson J., den Ouden D.-B., Rorden C., Newman-Norlund R., Osher D.E.

Human Brain Mapping 2023. “The Neural Consequences of Symptomatic Convergence Insufficiency and Reading.” Zeng Y., Fogt N., Toole A., Kulp M.T., Osher D.E.

Human Brain Mapping 2023. “Predicting Category-Selective Regions of Interest Using Functional Connectivity.” Molloy M.F., Saygin Z.M., Osher D.E.

Vision Sciences Society 2023. “A novel framework to study configural and holistic processing.” Zeng Y., Hentz R.E., Osher D.E.

Neuroscience Research Poster Day 2023. “Relationship between functional connectivity and cognitive domains across individuals.” Mwesigye A., Hiersche K.J., Saygin Z.M., & Osher D.E.

CCBBI Research Day 2023. “Relationship between broad-scale functional connectivity and cognitive domains across individuals.” Mwesigye A., Hiersche K.J., Saygin Z.M., & Osher D.E.

CCBBI Research Day 2022. “The Left Inferior Frontal Gyrus and Language in Healthy Adults and Post-Stroke Aphasia.” Diedrichs, V.A., Osher, D.E., Harnish, S.M.

CCBBI Research Day 2022. “Identifying visual brain regions in the absence of task fMRI.” Molloy, M.F., Saygin, Z.M., Osher D.E. Oral Presentation.

CCBBI Research Day 2022. “Lesion-Symptom Mapping of Semantics and Phonology in People with Aphasia.” Timog, J., Diedrichs, V.A., Osher, D.E., Harnish, S.M.

Academy of Aphasia 2022. “The inferior frontal gyrus and resting state connectivity in aphasia.” Diedrichs, V.A., Osher, D.E., Harnish, S.M.

Vision Sciences Society 2022. “Identifying visual brain regions in the absence of task fMRI.” Molloy, M.F., Saygin, Z.M., Osher D.E. Oral Presentation.

Vision Sciences Society 2022. “A personalized cortical atlas for high level vision.” Molloy, M.F., Osher D.E.

Clinical Aphasiology Conference 2022. “The inferior frontal gyrus and its role in the resting state connectivity of individuals with aphasia.” Diedrichs, V.A., Osher, D.E., Fridriksson, J., den Ouden, D.B., Rorden, C., Newman-Norlund, R., Harnish, S.M.

Association for Clinical and Translational Science 2022. “Resting state fMRI connectivity in individuals with aphasia and the role of the inferior frontal gyrus.” Diedrichs, V.A., Osher, D.E., Harnish, S.M.

CCBBI Research Day 2021. “A personalized cortical atlas, generated from individual subject voxelwise connectivity.” Molloy, M.F., Osher D.E. Oral Presentation.

Eleanor M. Saffran Cognitive Neuroscience Conference 2021. “Neural Compensation in the Language Network: Preliminary Data.” Diedrichs, V.A., Osher, D.E., Harnish, S.M.

Society for Neuroscience 2021. “A personalized cortical atlas, generated from individual subject voxelwise connectivity”. Molloy, M.F., Osher D.E.

Cognitive and Brain Sciences CogFest 2020. “Predicting pain regions in the cingulate cortex using functional connectivity.” Flanagan J.P., Saygin Z.M., Lenz F., Osher D.E.

Cognitive Neuroscience Society 2020. “The developmental trajectory of the domain-general cortex.” A. Howell, D. Osher, J. Li, Z.M. Saygin.

CCBBI Research Day 2019. “Cortical selectivity driven by connectivity: Innate connectivity patterns of the visual word form area.” Li J., Osher D.E., Hansen H.A., Saygin Z.M. Oral Presentation.

CCBBI Research Day 2019. “Parcellation of the cingulate gyrus using anatomical connectivity profiles.” Flanagan J., Saygin Z.M., Lenz F., Osher D.E.

CCBBI Research Day 2019. “The Developmental Trajectory of the Domain-General Cortex.” Howell, A.L., Osher, D.E., Li, J., Saygin, Z.M.

Society for Neuroscience 2019. “The connectivity fingerprinting toolbox.” Osher D.E., Saygin Z.M. Oral Presentation.

Society for Neuroscience 2019. “Innate connectivity patterns of the visual word form area.” Li J., Osher D.E., Hansen H.A., Rhodes M.R., Howell A.L., Saygin Z.M. Oral Presentation.

Society for Neuroscience 2019. “The intrinsic neonatal hippocampal network: rsfMRI findings.” Howell A.L., Osher D.E., Li J., Saygin Z.M.

Vision Sciences Society 2019. “Connectivity Fingerprints for the Visual Brain and Behavior.” Osher D.E., Saygin Z.M.

Cognitive Neuroscience Society 2018. “Visual Field Representations in Human Cerebellum.” Brissenden J.A., Tobyne S.M., Osher D.E., Levin E.J., Halko M.A., Somers D.C.

Center for Cognitive and Brain Sciences Fall Retreat 2019. “Visual Attention in Cerebral and Cerebellar Networks.” Osher D.E.

Vision Sciences Society 2018. “Predicting the location of macaque face patches with functional connectivity.” Osher D.E., Fuller-Deets J., Conway B.

Vision Sciences Society 2017. "Predicting an individual's own Dorsal Attention Network from their functional connectivity fingerprint." Osher D.E., Tobyne S.M., Brissenden J.A., Noyce A.L., Michalka S.W., Levin E.J., Somers D.C.

Vision Sciences Society 2017. "Visuospatial attentional selectivity within the cerebellum." Brissenden J.A., Osher D.E., Levin E.J., Halko M.A., Somers D.C.

Vision Sciences Society 2017. "Mapping Task Response Profiles in Visual-biased Frontal Cortex." Tobyne S.M., Noyce A.L., Osher D.E., Brissenden J.A., Levin E.J., Michalka S.W., Somers D.C.

Vision Sciences Society 2017. "Visual, spatial, or visuospatial? Disentangling sensory modality and task demands in frontal cortex." Noyce A.L., Tobyne S.M., Michalka S.W., Osher D.E., Shinn-Cunningham B., Somers D.C.

Vision Sciences Society 2016. "Connectivity precedes function in the development of the visual word form area." Kanwisher, N., Osher, D., Norton, E., Youssoufian, D., Beach, S., Feather, J., Gabrieli, J., & Saygin, Z.

Neuroscience 2016. "Visuospatial representations within cerebellar node of the dorsal attention network." Brissenden J.A., Osher D.E., Levin E.J., Halko M.A., Somers D.C. Oral Presentation.

Neuroscience 2016. "Functional connectivity predicts individual differences in sensory-biased caudolateral prefrontal cortex response to attention and working memory." Tobyne S.M., Osher D.E., Michalka S.W., Noyce A.L., Somers D.C. Oral Presentation.

Neuroscience 2016. "Connectivity precedes function in the development of the visual word form area." Saygin Z.M, Osher D.E, Norton E., Youssoufian D., Beach S., Feather J., Gaab N., Gabrieli J., Kanwisher N. Oral Presentation.

Human Brain Mapping 2015. "Connectivity precedes function in the development of the visual word form area." Kanwisher N., Osher D., Norton E., Youssoufian D, Beach S, Feather J, Gabrieli J, Saygin Z.

Human Brain Mapping 2015. "COMA: A registration approach specifically for subcortical structures." Osher D.E., Tobyne S.M., Congden K., Somers D.C.

Vision Sciences Society 2015. "Structural and functional connectivity of visual and auditory attentional networks: insights from the Human Connectome Project." Osher D.E., Tobyne S.M., Congden K., Michalka S.W., Somers D.C.

Vision Sciences Society 2015. "Cerebellar contributions to visual attention and visual working memory revealed by functional MRI and intrinsic functional connectivity." Brissenden J.A., Levin E.J., Osher D.E., Devaney K.J., Halko M.A., Somers S.C.

Cognitive Neuroscience Society 2015. "Connectivity fingerprints for the social brain." Saygin Z.M., Osher D.E., Koldewyn K., Gabrieli J.D.E., Saxe R.R., Kanwisher N. Oral Presentation.

Cognitive Neuroscience Society 2015. "Attentional modulation in the cerebellum revealed by a multiple object tracking task and cerebro-cerebellar functional connectivity." Levin E.J., Brissenden J.A., Devaney K.J., Rosen M.L., Osher D.E., Halko M.A., Somers S.C.

Cognitive Neuroscience Society 2015. "Cerebro-cerebellar functional connectivity predicts cerebellar activation during visual working memory task performance." Brissenden J.A., Levin E.J., Osher D.E., Devaney K.J., Halko M.A., Somers S.C.

Neuroscience 2014. “Frontal networks for visual and auditory attention: Mining *structural connectivity* in the Human Connectome Project.” Osher D.E., Tobyne S.M., Michalka S.W., Somers D.C. Oral Presentation.

Neuroscience 2014. “Frontal networks for visual and auditory attention: Mining *functional connectivity* in the Human Connectome Project.” Tobyne S.M., Osher D.E., Michalka S.W., Somers D.C. Oral Presentation.

Neuroscience 2013. “Structural connectivity fingerprints predict cortical selectivity for faces, bodies, objects, and scenes.” Saygin Z. M., Osher D. E., Koldewyn K., Gabrieli J., Saxe R., Kanwisher N. Oral Presentation.

Neuroscience 2012. “The functional connectomics underlying dyslexic adaptation deficits.” Osher D.E., Saygin Z.M., Perrachione T., Gabrieli J.D.E.

Neuroscience 2012. “Structural connectivity predicts risk for dyslexia in kindergarteners.” Saygin Z.M., Norton E.S., Osher D.E., Beach S. B., Cyr A.B., Ozranov-Palchik O., Gaab N., Gabrieli J.D.E.

Neuroscience 2011. “Anatomical connectivity predicts whole-brain functional responses to visual categories.” Osher D.E., Saygin Z.M., Koldewyn K., Saxe R.R., Gabrieli J.D.E. Oral Presentation.

Neuroscience 2011. “Structural connectivity of the developing human amygdala.” Saygin Z.M., Osher D.E. Martin R., Reynolds G., Koldewyn K., Gabrieli J.D.E, Sheridan M. Oral Presentation.

Neuroinformatics 2011. “Predicting functional activity from structural connectivity.” Osher D.E., Saygin Z.M. and Gabrieli J.D.E.

Neuroscience 2010. “Predicting face-selective fusiform voxels from diffusion-based connectivity alone.” Saygin Z.M., Osher D.E., Saxe R.R., Gabrieli J.D.E. Oral Presentation.

Human Brain Mapping 2010. “Connectivity-based segmentation of human amygdala nuclei using probabilistic tractography.” Saygin Z.M., Osher D.E., van der Kouwe A., Gabrieli J.D.E. Oral Presentation.

Richard J. & Martha D. Denman Undergraduate Research Forum 2006. “A Method for Assessing Attentional Bias in Anxious Rats.” Osher DE, Vasey, M. W., Givens, B.

Ohio St. Psychology Dept. Undergraduate Research Colloquium 2006. “Attentional Bias and Anxiety in Rodents.” Osher DE, Vasey, M. W., Givens, B.

Professional Memberships

Cognitive Neuroscience Society	2020-present
Vision Sciences Society	2015-present
International Neuroinformatics Coordinating Facility	2011-2012
Gordon Research Conference Membership	2009-2011
Organization for Human Brain Mapping	2008-present
American Association for the Advancement of Science	2008-2013
Society for Neuroscience	2005-present

Invited Talks, Teaching, Guest Lectures

Invited Talks

The Ohio State University CCBBI Research Day “Comparing resting state with task-based functional connectivity for connectivity fingerprinting”	Dec 11 2025
The Ohio State University Humanities & Cognitive Sciences Summer Institute “Introduction to fMRI”	Jul 16 2025
The Ohio State University Humanities & Cognitive Sciences Summer Institute “Introduction to fMRI”	Jul 22 2024
The Ohio State University Humanities & Cognitive Sciences Summer Institute “Introduction to fMRI”	Jul 17 2023
Vision Sciences Society “Identifying visual brain regions in the absence task fMRI”	May 15 2022
The Ohio State Medical Center “The Neural Circuitry of High-Level Vision and Attention: Probing Individual Differences in the Human Brain”	Mar 2 2021
University of Texas at Arlington “Neurobiological Mechanisms of Perception and Attention”	Dec 12 2019
Society for Neuroscience “The Connectivity Fingerprinting Toolbox”	Oct 23 2019
Nationwide Children’s Hospital “Using Diffusion Weighted Imaging to Probe the Circuitry of the Visual System”	Sep 11 2019
Carnegie Mellon University “Individual Variation in Structure and Function of the Visual and Attentive Brain”	Aug 20 2019
University of California, Irvine “Structure and Function in the Visual and Attentive Brain”	Mar 13 2019
The Ohio State University “Visual Attention in Cerebral and Cerebellar Networks”	Sep 15 2018
The Ohio State University “Structural and functional connectivity fingerprints in vision and attention”	Oct 18 2017
The Ohio State University “Functionally Relevant Networks”	Feb 12 2016
Society for Neuroscience “Frontal networks for visual and auditory attention: Mining structural connectivity in the Human Connectome Project.”	Nov 16 2014
Harvard University “Statistical Approaches and Analytical Strategies for Dense Network Data”	Jul 14 2014
Johns Hopkins University “Diffusion Weighted Imaging: A Tutorial on Principles, Analysis, and Applications”	Dec 10 2013
Biomedical Imaging and Analysis Seminar Series at CSAIL “Predicting functional activity from anatomical connectivity”	Apr 19 2012
MIT Mini-Symposium on Research in Development and Cognitive Neuroscience “Predicting neural responses from anatomical connectivity, and its application to developmental disorders”	Mar 30 2012
Society for Neuroscience “Anatomical connectivity predicts whole-brain functional responses to visual categories”	Nov 14 2011
MIT Seminar Series “Predicting brain responses from connectivity alone”	Aug 31 2011

Teaching

High Level Vision, Ohio State University	Fall 2025
OSC Bootcamp, Ohio State University	Summer 2025

Honors Sensation & Perception, Ohio State University	2021-present
Sensation & Perception, Ohio State University	2020-present
Current Research in Cognitive Neuroscience, Ohio State University	2022-2024
Cognitive Psychology Proseminar, Ohio State University	2022-2024
MRI Bootcamp, Ohio State University	Summer 2019
Perception and Behavior, Boston University	Spring 2017
Physiological Psychology, Boston University	Spring 2017
Neurophysiology of Memory, MIT	Fall 2009
Cognitive Neuroscience, MIT	Fall 2008

Guest Lectures

Holistic perception emerges from configural properties. PSYCH 7894, OSU	Fall 2025
Sensation & Perception. PSYCH 6880, OSU	Fall 2025
Sensation & Perception. PSYCH 6880, OSU	Fall 2024
Configural and featural processing in the human visual system. PSYCH 7894, OSU	Fall 2023
Neural circuitry is what makes us unique: Leveraging connectivity to map brain structure and function in individuals. PSYCH 7894, OSU	Fall 2022
Sensation & Perception. PSYCH 6880, OSU	Fall 2022
The Neural Circuitry of High-Level Vision and Attention: Probing Individual Differences in the Human Brain. PSYCH 7894, OSU	Fall 2021
Sensation & Perception. PSYCH 6880, OSU	Fall 2021
Sensation & Perception. PSYCH 6880, OSU	Fall 2020
Functional Connectivity. SHS 8950, OSU	Spring 2020
Visual Perception. PSYCH 5628, OSU	Fall 2018
Structure and function in the visual and attentive brain. PSYCH 7894, OSU	Fall 2017
Information Processing in the Hippocampus. 9.31, MIT	Fall 2009

Public Media

- OSU News 10/27/2025 <https://news.osu.edu/a-birds-eye-view-of-how-human-brains-operate/>
- US News & World Report 10/29/2020 <https://www.usnews.com/news/health-news/articles/2020-10-29/newborn-brains-dont-process-emotions-like-adults>
- USA Today 10/23/2020 <https://www.usatoday.com/videos/tech/2020/10/23/newborns-see-words-birth-according-new-study/3740898001/>
- OSU News 10/22/2020 <https://news.osu.edu/humans-are-born-with-brains-prewired-to-see-words>
- ArsTechnica 08/11/16. <http://arstechnica.com/science/2016/08/brain-wiring-needed-for-reading-isnt-learned-but-in-place-prior-to-reading/>
- MIT featured news 08/08/16. <http://news.mit.edu/2016/brain-connections-key-reading-0808>
- NPR news 08/14/13. <http://commonhealth.wbur.org/2013/08/tracking-dyslexia-in-the-preschool-brain>
- CBS news 08/14/13. http://www.cbsnews.com/8301-204_162-57598512/brain-scans-may-diagnose-dyslexia-before-kids-can-even-read
- FOX news 08/14/13. <http://www.foxnews.com/health/2013/08/14/can-mri-brain-scans-identify-children-with-dyslexia/>
- BBC news 08/13/13. <http://www.bbc.co.uk/news/health-23679363>
- US News & World Report 08/13/13. <http://health.usnews.com/health-news/news/articles/2013/08/13/mri-might-allow-earlier-diagnosis-of-dyslexia-study>
- MIT featured news 08/13/13. <http://web.mit.edu/newsoffice/2013/brain-scans-may-help-diagnose-dyslexia-0813.html>
- MIT featured news 01/03/12. <http://web.mit.edu/newsoffice/2012/face-recognition-0103.html>
- Simons Foundation Autism Research Initiative 11/15/11. <http://sfari.org/news-and-opinion/conference-news/2011/society-for-neuroscience-2011/amygdalas-links-to-other-brain-regions-wane-with-age>

Simons Foundation Autism Research Initiative 05/18/11. <https://sfari.org/news-and-opinion/toolbox/2011/imaging-tool-maps-regions-within-amygdala>

Service

Psychology Admissions Committee	2025-present
CCBBI Mentoring and Training Committee	2025-present
“Take your professor to lunch” Program Participant	2024
Faculty advisor, Cognitive Psychology and Neuroscience Club	2023-2025
Psychology REP Committee	2023-present
Psychology Ethics Committee	2023-2025
Psychology Speakers Committee	2021-2025
CCBBI Outreach and Talks Committee	2021-2024
CCBBI Summer Program Panelist	2021
Psychology Diversity Committee	2020-2021
CCBBI Technical Committee	2019-2021
Ohio Supercomputer Champion User	2019-present
Interview Weekend Panel Member, MIT	2009-2011
Co-chair, CogLunch Colloquium, MIT	2008-2009
President, Neuroscience and Psychobiology Student Association, OSU	2005-2006
Vice-President, Neuroscience and Psychobiology Student Association, OSU	2005

Peer-Reviewing

Communications Biology
Nature Communications
Nature Neuroscience
Cerebral Cortex
NeuroImage
Journal of Neuroscience
Journal of Neurophysiology
Network Neuroscience
PLOS ONE
PLOS Computational Biology
Scientific Reports
Brain Structure and Function
Frontiers in Neuroscience
Brain Imaging and Behavior
Human Brain Mapping

Mentorship

Graduate Students

OSU

Joseph Gera (2025-present)
Keara Ginell (2024-present)
Yi-Jen (Isaac) Liao (2024-present)
Derrek Montalvo (2024-present)
Yuxuan Zeng (2021-present)
Victoria Diedrichs
Fiona Molloy

Boston University

Sean T Byrne
James Brissenden

Undergraduates

OSU

Terra Miller (Honors thesis)
Sam Froehle
Ajuna Mwesigye
Maggie Duffie (Honors thesis)
Ren Hentz
Jess Timog (Honors thesis)
Jack Filson
Ashley Learned
Justin Flanagan

Boston University

John Baublitz
Keith Congden
Aparna Panja (Honors thesis)
Akshay Ajban

MIT

Heather Acuff
Amber Li
Elisha Gray
Nathan Arce