Leyla Isik

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Baltimore, MD 21218

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Academic Appointments

Johns Hopkins University, Clare Boothe Luce Assistant Professor   2019-present

Department of Cognitive Science

Secondary appointment: Biomedical Engineering

Kavli Neuroscience Discovery Institute   2023-present

Data Science and AI Institute   2024-present

Center for Brains, Minds, and Machines, Postdoctoral Associate   2015-2019

Massachusetts Institute of Technology, Brain and Cognitive Sciences
Advisor: Nancy Kanwisher

Boston Children's Hospital, Harvard Medical School
Advisor: Gabriel Kreiman

Education

Massachusetts Institute of Technology, Ph.D. Computational Biology   2015
Advisor: Tomaso Poggio

Johns Hopkins University, B.S. Biomedical Engineering   2010

Honors and Awards

Vision Sciences Society Young Investigator Award, 2025.

Johns Hopkins Catalyst Award, 2024.

Google AI Faculty Research Award, 2019.

Mark Gorenberg Graduate Student Fellowship, McGovern Institute for Brain Research MIT, 2013-2014.

MIT Graduate Women of Excellence Award, 2013.

Teresa Keng Graduate Teaching Prize, MIT Biology Dept., 2012.

Women in Machine Learning NeurIPS Student Award Grant, 2012.

National Science Foundation Graduate Research Fellowship, 2010-2013.

Publications

(mentees underlined)

Preprints

McMahon, E., Im, E., Bonner, M., and **Isik, L.** A spatiotemporal hieararchy for social interaction perception in the lateral visual stream.
`https://osf.io/mdt4u_v1`

Conwell, C., McMahon, E., Jagadeesh, A., Vinken, K., Sharma, S., Prince, J., Alvarez, G., Konkle, T., Livingstone, M., and **Isik, L.** Monkey See Model Knew: Large Language Models Accurately Predict Visual Brain Responses in Humans *and* Non-Human Primates.
`https://biorxiv.org/content/10.1101/2025.03.05.641284v1.abstract`

Conwell, C., Hamblin, C., Boccagno, C., Mayo, D., Cummings, J., **Isik, L.**, Barbu A. Using Multimodal Deep Neural Networks to Disentangle Language from Visual Aesthetics.
`https://arxiv.org/abs/2410.23603`

Peters, B., DiCarlo, J.J., Gureckis, T., Haefner, R., **Isik, L.**, Tenebaum, J., Konkle, T., Naselaris, T., Stachenfeld, K., Tavares, Z., Tsao, D., Yildirim, I., and Kriegeskorte, N. How does the primate brain combine generative and discriminative computations in vision?
`https://arxiv.org/abs/2401.06005`

Peer-reviewed articles

Garcia, K.*, McMahon, E.*, Conwell, C., Bonner, M., and **Isik, L.** (2025) Modeling dynamic social vision highlights gaps between deep learning and humans. *Proceedings of the 42nd International Conference on Learning Representations (ICLR).*
`https://openreview.net/pdf?id=wAXsx2MYgV`

Im, E.*, Shirahatti, A*, and **Isik, L.** (2025) Early neural development of social perception: evidence from voxel-wise encoding in young children and adults. *Journal of Neuroscience.*
`https://doi.org/10.1523/JNEUROSCI.2284-23.2024`

Shi, H., Ye, S., Fang, X., Jin, C., **Isik, L.**, Yen-Ling, K., and Shu, T. (2025) Mumatom: Multi-modal multi-agent theory of mind. *Proceedings of the AAAI Conference on Artificial Intelligence.*
https://arxiv.org/abs/2408.12574

Peters, B., Blohm, G., Haefner, R., **Isik, L.**, Kriegeskorte, N., Lieberman J., Ponce, C., Roig, G., Peters, M. (2025) Generative adversarial collaborations: a new model of scientific discourse. *Trends in Cogntive Sciences*, 29 (1), 1-4.
http://doi.org/10.1016/j.tics.2024.10.015

Small, H., Lee Masson H., Mostofsky, S., and **Isik, L.** (2024) Vision and language representations in multimodal AI models and human social brain regions during natural movie viewing. *NeurIPS workshop on Unifying Representations in Neural Models (UniReps).*
https://neurips.cc/virtual/2024/102639

Abassi, E., Bognar, A., de Gelder, B., Giese, M., **Isik, L.**, Lappe A., Mukovskiy, A., Poyo Solanas, M., Taubert J., and Vogels, R. (2024) Neural Encoding of Bodies for Primate Social Perception. *Journal of Neuroscience*, 44 (40).
https://doi.org/10.1523/JNEUROSCI.1221-24.2024

Lee Masson, H., Chang, L., and **Isik, L.** (2024) Multidimensional neural representations of social features during movie viewing. *Social Cognitive and Affective Neuroscience*, 19 (1), nsae030.
https://doi.org/10.1093/scan/nsae030

McMahon, E. and **Isik, L.** (2024) Abstract social interaction representations along the lateral pathway. *Trends in Cognitive Sciences*, 28 (5), 392-393 (Letter).
http://doi.org/10.1016/j.tics.2024.03.007

McMahon, E. and **Isik, L.** (2024) The neurodevelopmental origins of seeing social interactions. *Trends in Cognitive Sciences*, 28 (3), 195-196. (Letter).
http://doi.org/10.1016/j.tics.2023.12.007

Soulos, P. and **Isik, L.** (2024) Disentangled deep generative models reveal coding principles of the human face processing network. *PLoS Computational Biology*, 20 (2): e1011887.
https://doi.org/10.1371/journal.pcbi.1011887

Lee Masson, H., Chen, J., and **Isik, L.** (2024) A shared neural code for perceiving and remembering social interactions in the human superior temporal sulcus. *Neuropsychologia*, 108823.
https://doi.org/10.1016/j.neuropsychologia.2024.108823

Malik, M. and **Isik, L.** (2023) Relational visual representations underlie human social interaction recognition. *Nature Communications*, 14 (1), 7317.
http://doi.org/10.1038/s41467-023-43156-8

McMahon, E., Bonner, M., and **Isik, L.** (2023) Hierarchical organization of social action features along the lateral visual pathway. *Current Biology*, 33 (23), 5035-5047.
http://doi.org/10.1016/j.cub.2023.10.015

McMahon, E. and **Isik, L.** (2023) Seeing Social Interactions. *Trends in Cognitive Sciences*, 27 (12), 1165-1179.
http://doi.org/10.1016/j.tics.2023.09.001

Lee Masson, H. and **Isik, L.** (2023) Rapid processing of observed touch via a social perceptual pathway: an EEG-fMRI fusion study. *Journal of Neuroscience*, 43 (45), 7700-7711.
https://doi.org/10.1523/JNEUROSCI.0995-23.2023

Dima, D., Hebart, M, and **Isik, L.** (2023) A data-driven investigation of human action representations. *Scientific Reports*, 13 (1), 5171.
http://doi.org/10.1038/s41598-023-32192-5

De Silva *et al.* (2023) Prospective Learning: Principled Extrapolation to the Future. *Conference on Lifelong Learning Agents (CoLLAs)*, 347-357.
https://proceedings.mlr.press/v232/de-silva23a.html

Dima, D., Tomita, T., Honey, C., and **Isik, L.** (2022) Social-affective features drive human representations of observed actions. *eLife*, 11, e75027.
http://doi.org/10.7554/eLife.75027

Ivanova, A., Schrimpf, M., Anzellotti S., Zaslavsky N., Fedorenko E., and **Isik, L.** (2022) Beyond linear regression: mapping models in cognitive neuroscience should align with research goals. *Neurons, Behavior, Data, and Theory*.
http://doi.org/10.51628/001c.37507

Lee Masson, H. and **Isik, L.** (2021) Functional selectivity for social interaction perception in the human superior temporal sulcus during natural viewing. *Neuroimage*, 245, 118741.
http://doi.org/10.1016/j.neuroimage.2021.118741

Isik, L., Mynick, A., Pantazis D., and Kanwisher N. (2020) The speed of human social interaction perception. *Neuroimage*, 215, 116844.
http://doi.org/10.1016/j.neuroimage.2020.116844

Dobs, K., **Isik, L.**, Pantazis D., and Kanwisher, N. (2019) How face perception unfolds over time. *Nature Communications*, 10 (1), 1258.
http://doi.org/10.1038/s41467-019-09239-1

Isik, L.*, Tacchetti, A.*, and Poggio, T. (2018) Fast, invariant representations for human action in the visual system. *The Journal of Neurophysiology*, 119 (2), 631-640.
`http://doi.org/10.1152/jn.00642.2017`

Isik, L., Singer, J., Madsen, J.R., Kanwisher, N., and Kreiman G. (2018) What is changing when: Decoding visual information in movies from human intracranial recordings. *Neuroimage*, 180, 147-159.
`http://doi.org/10.1016/j.neuroimage.2017.08.027`

Ward, E., **Isik, L.**, and Chun, M. (2018) General transformations of object representations in human visual cortex. *The Journal of Neuroscience*, 38 (40), 8526-8537.
`http://doi.org/10.1523/JNEUROSCI.2800-17.2018`

Tacchetti, A., **Isik, L.**, and Poggio, T. (2018) Invariant recognition shapes neural representations of visual input. *Annual Reviews of Vision Science*, 4, 403-422.
`http://doi.org/10.1146/annurev-vision-091517-034103`

Tacchetti, A.*, **Isik, L.***, and Poggio, T. (2017) Invariant recognition drives neural representations of action sequences. *PLoS Computational Biology*, 13 (12), e1005859.
`http://doi.org/10.1371/journal.pcbi.1005859`

Isik, L., Koldewyn, K., Beeler, D., and Kanwisher N. (2017) Perceiving social interactions in the posterior superior temporal sulcus. *Proceedings of the National Academy of Sciences*, 114 (43), E9145-E9152.
`http://doi.org/10.1073/pnas.1714471114`

Chen, F., Roig, G., **Isik, L.**, Boix, X., and Poggio T. (2017) Eccentricity-dependent deep neural networks: Modeling invariance in human vision. *AAAI Spring Symposium Series*.
`https://cdn.aaai.org/ocs/15360/15360-68278-1-PB.pdf`

Isik, L., Meyers, E.M., Leibo, J.Z., and Poggio, T. (2014) The dynamics of invariant object recognition in the human visual system. *The Journal of Neurophysiology*, 111 (1), 91-102.
`http://doi.org/10.1152/jn.00394.2013`

Isik, L., Leibo, J.Z., and Poggio, T. (2012) Learning and disrupting invariance in visual recognition with a temporal association rule. *Frontiers in Computational Neuroscience*, 6, 37.
`http://doi.org/10.3389/fncom.2012.00037`

Carter, H., Chen, S., **Isik, L.**, Tyekucheva, S., Velculescu, V.E., Kinzler, K.W., Vogelstein, B., and Karchin, R., (2009) Cancer-specific high-throughput annotation of somatic mutations: computational prediction of driver missense mutations. *Cancer*

Research, 69 (16), 6660-6667.
`http://doi.org/10.1158/0008-5472.CAN-09-1133`

Research Funding

JHU Catalyst Award (2024). PI $75,000
A computational neuroscience of dynamic, social vision.

NIH R01MH132826 (2023-2028). PI $3,032,513
The neural computations underlying human social interaction recognition.

NIH R21MH129899 (2022-2025). PI $464,876
The neural basis of social interaction perception and its disruption in autism.

JHU COVID-19 Bridge Grant (2021). PI. $50,000

NSF AI Institute Planning Grant (2020-2022). Co-I (PI: Konrad Kording). $76,629
Understanding Biological Intelligence for Active Lifelong Learning.

Google Faculty Research Award (2019). PI $85,240
Deep learning models of human social interaction perception.

NSF STC award (2019-2021). Co-I (PI: Tomaso Poggio). $168,250
A Center for Brains, Minds, and Machines: The Science and the Technology of Intelligence.

Selected Invited Talks

Conferences and Workshops

Dartmouth NeuroAI workshop 2024, Hanover, NH.

Society for Neuroscience Minisymposium 2024, Chicago, IL.

Cognitive Computational Neuroscience Conference 2024, Boston, MA.

Seeing and Acting Workshop 2023, Coimbra, Portugal.

CVPR NeuroVision Workshop 2022, virtual.

Social and Affective Neurosciences (SANS) Symposium 2021, virtual.

NeurIPS workshop on Shared Visual Representations in Humans and Machines 2020, virtual.

Capital Area Cognition, Attention, and Perception Conference 2020, Washington, DC.

Bernstein Computational Neuroscience Conference Workshop 2018, Berlin, Germany.

Cognitive Neuroscience Society Symposium 2018, Boston, MA.

Departmental Colloquia and Seminars

Carnegie Mellon Department of Psychology Colloquium 2025.

Brown University Cognitive and Psychological Sciences Colloquium 2025.

Johns Hopkins University Psychological and Brain Sciences Colloquium 2024.

Ohio State University Center for Cognitive and Brain Sciences Colloquium 2024.

York University Center for Integrative Neuroscience Seminar 2024.

MIT McGovern Institute MEGIN Symposium 2024.

JHU One Neuroscience Seminar 2024.

New York University Psychology Cognition & Perception Colloqiuim 2023.

Dartmouth Innovators in Cognitive Neuroscience Speaker Series 2023.

MIT Center for Brains, Minds, and Machines Colloquium 2023.

University of Waterloo Centre for Theoretical Neuroscience 2022.

UC Santa Barbara Mellichamp Mind-Machine Summit 2022.

University of Michigan Cognitive Area Talk 2022.

American University Cognition and Cognitive Neuroscience Seminar Series 2021.

John Hopkins University Mind/Brain Institute Bodian Seminar Series 2021.

University of Regensberg Cognitive Neuroscience Seminar 2021.

Dartmouth Center for Cognitive Neuroscience Talk Series 2021.

UC Merced Mind, Technology, & Society Talk Series 2021.

University of Alabama Birmingham, BrainCore Seminar 2021.

Morgan State ASCEND Scholars Seminar 2019.

Rutgers University Women in Neuroscience Seminar 2018.

Johns Hopkins University Biomedical Engineering Special Seminar 2018.

UC Santa Barbara Psychological and Brain Science Seminar 2018.

Northwestern University Psychology Colloquium 2018.

Boston University Biomedical Engineering Seminar Series 2018.

Johns Hopkins University Cognitive Science Seminar 2017.

UC Irvine Cognitive Science Seminar 2017.

Selected Conference Presentations

Qin, W., Malik, M. and **Isik, L.** Relational information predicts human behavior and neural responses to complex social scenes. Talk: Cognitive Science Society 2025, San Francisco, CA.

Garcia, K. and **Isik, L.** Semantic and Social Features Drive Human Grouping of Dynamic, Visual Events in Large-Scale Similarity Judgments. Talk: Vision Sciences Society 2025, St Pete Beach, FL.

    National Eye Institute Travel Award Winner

Small, H., Lee Masson H., Mostofsky, S., and **Isik, L.** High-level visual information underlies social and language processing in the STS during natural movie viewing. Poster: Vision Sciences Society 2025, St Pete Beach, FL.

    FoVEA Travel Award Winner

McMahon, E., Bonner, M., and **Isik, L.** An EEG-fMRI investigation of the spatiotemporal hierarchy of social actions. Poster: Vision Sciences Society 2025, St Pete Beach, FL.

Zhao, Y., McMahon, E., and **Isik, L.** Distinct neural responses for body movement, interpersonal physical interactions, and communicative interactions along the lateral visual pathway. Poster: Vision Sciences Society 2025, St Pete Beach, FL.

Qin, W., Malik, M. and **Isik, L.** Relational gaze information predicts human behavior and neural responses to complex social scenes. Poster: Vision Sciences Society 2025, St Pete Beach, FL.

Chen, Z., Bonner, M., and **Isik, L.** Unraveling the geometry of neural representational dynamics in rapid visual processing. Poster: Vision Sciences Society 2025, St Pete Beach, FL.

Malik, M., Liu, S., Shu, T., and **Isik, L.** A Novel fMRI Dataset to Study the Neural and Computational Basis of Social Scene Understanding. Poster: Vision Sciences Society 2025, St Pete Beach, FL.

Garcia, K., McMahon, E., Conwell, C., Bonner, M., and **Isik, L.** Modeling dynamic social vision highlights gaps between deep learning and humans. Poster: International Conference on Learning Representations (ICLR) 2025, Singapore.

Small, H., Lee Masson H., Mostofsky, S., and **Isik, L.** Vision and language representations in multimodal AI models and human social brain regions during natural movie viewing. Poster: NeurIPS workshop on Unifying Representations in Neural Models (UniReps) 2024, Vancouver, CA.

Conwell, C., McMahon, E., Jagadeesh, A., Vinken, K., Sharma, S., Prince, J., Alvarez, G., Konkle, T., Livingstone, M., and **Isik, L.** Monkey See Model Knew: Large Language Models Accurately Predict Visual Brain Responses in Humans *and* Non-Human Primates. Poster: NeurIPS workshop on Unifying Representations in Neural Models (UniReps) 2024, Vancouver, CA.

Garcia, K., McMahon, E., Conwell, C., Bonner, M., and **Isik, L.** Modeling dynamic social vision highlights gaps between deep learning and humans. Talk: International Conference on Machine Learning (ICML) LatinX in AI workshop 2024, Vienna, Austria.

Best Oral Presentation Award

Garcia, K., McMahon, E., Conwell, C., Bonner, M., and **Isik, L.** Dynamic social vision highlights gaps between deep learning and humans. Talk: Cognitive Computational Neuroscience 2024, Boston, MA.

Im, E., Shirahatti, A., and **Isik, L.** Early neural development of social perception: evidence from voxel-wise encoding in young children and adults. Poster: Cognitive Computational Neuroscience 2024, Boston, MA.

Small, H., Lee Masson, H., Wodka, E., Mostofsky, S., and **Isik, L.** Ubiquitous visual representations during neural processing of a naturalistic movie. Poster: Cognitive Computational Neuroscience 2024, Boston, MA.

Malik, M., Shu, T., Liu, S., Kim, M., and **Isik, L.** Investigating the neural computations underlying visual social inference with graph neural networks. Poster: Cognitive Computational Neuroscience 2024, Boston, MA.

Conwell, C., McMahon, E., Vinken, K., Prince, J., Alvarez, G., Konkle, T., **Isik, L.**, and Livingstone, M. Is visual cortex really "language-aligned"? Perspectives from Model-to-Brain Comparisons in Human and Monkeys on the Natural Scenes Dataset. Poster: Cognitive Computational Neuroscience 2024, Boston, MA.

McMahon, E., Im, J., Bonner, M., and **Isik, L.** An EEG-fMRI Investigation of the Spatiotemporal Hierarchy of Social Actions. Poster: Cognitive Computational Neuroscience 2024, Boston, MA.

Zhao, Y., McMahon, E., and **Isik, L.** Separate neural representations for physical and communicative social interactions along the lateral visual pathway: evidence from data-driven voxel decomposition. Poster: Cognitive Computational Neuroscience 2024, Boston MA.

Small, H., Lee Masson, H., Wodka, E., Mostofsky, S., and **Isik, L.** From point light displays to rich social narratives: neural representations of visual social processing in the superior temporal sulcus. Poster: Vision Science Society 2024, St Pete Beach, FL.
    National Eye Institute Travel Award Winner

Garcia, K., Conwell, C., McMahon, E., Bonner, M., and **Isik, L.** Large-scale Deep Neural Network Benchmarking in Dynamic Social Vision. Talk: Vision Sciences Society 2024, St Pete Beach FL.
    FoVEA Travel Award Winner

Im, E., Shirahatti, A., and **Isik, L.** Early neural development of social perception: evidence from voxel-wise encoding in young children and adults. Talk: Vision Sciences Society 2024, St Pete Beach FL.

Conwell, C., McMahon, E., Vinken, K., Prince, J., Alvarez, G., Konkle, T., **Isik, L.,** and Livingstone, M. Is visual cortex really "language-aligned"? Perspectives from Model-to-Brain Comparisons in Human and Monkeys on the Natural Scenes Dataset. Talk: Vision Sciences Society 2024, St Pete Beach, FL.

Malik, M., Shu, T., Tenebaum, J., and **Isik, L.** Investigating the neural computations underlying visual social inference with graph neural network and inverse planning models. Poster: Vision Science Society 2024, St Pete Beach, FL.

Zhao, Y., McMahon, E., and **Isik, L.** Separate neural representations for physical and communicative social interactions along the lateral visual pathway: evidence from data-driven voxel decomposition. Poster: Vision Sciences Society 2024, St Pete Beach, FL.

McMahon, E., Conwell, C., Garcia, K., Bonner, M., and **Isik, L.** Language model prediction of visual cortex responses to dynamic social scenes. Poster: Vision Sciences Society 2024, St Pete Beach, FL.

Im, E., Shirahatti, A., and **Isik, L.** Investigating the neural development of social scene perception in young children using naturalistic stimuli. Talk: Seeing and Acting Workshop 2023, Coimbra, Portugal.
    ANT Neuro Travel Award Winner.

Malik, M. and **Isik, L.** Human Social Interaction Judgements are Uniquely Explained by both Bottom-up Graph Neural Networks and Generative Inverse Planning Models. Poster: Cognitive Computational Neuroscience 2023, Oxford, UK.

Lee Masson, H. and **Isik, L.** Rapid processing of observed social touch through a social perceptual pathway: an EEG-fMRI fusion study. Poster: Cognitive Computational Neuroscience 2023, Oxford, UK.

McMahon, E., Abel, T., Gonzalez-Martinez, J., Bonner, M., Ghuman, A., and **Isik, L.** The spatiotemporal dynamics of social scene perception in the human brain. Talk: Vision Sciences Society 2023, St Pete Beach, FL.

    National Eye Institute Travel Award Winner.

Lee Masson, H. and **Isik, L.** Observed social touch is processed in a rapid, feedforward manner: an EEG-fMRI fusion study. Talk: Vision Sciences Society 2023, St Pete Beach, FL.

Malik, M. and **Isik, L.** Both Purely Visual and Simulation-based Models Uniquely Explain Human Social Interaction Judgements. Poster: Vision Sciences Society 2023, St Pete Beach, FL.

Small, H. and **Isik, L.** Lateralization of dynamic social interaction perception. Poster: Vision Sciences Society 2023, St Pete Beach, FL.

Shirahatti, A. and **Isik, L.** Developmental differences in social brain responses during movie viewing. Poster: Cognitive Computational Neuroscience 2022, San Francisco, CA.

Malik, M. and **Isik, L.** Social Inference from Relational Visual Information: An Investigation with Graph Neural Network Models. Poster: Cognitive Computational Neuroscience 2022, San Francisco, CA.

McMahon, E., Bonner, M., and **Isik, L.** Hierarchical representations of naturalistic social interactions in the lateral visual pathway. Poster: Cognitive Computational Neuroscience 2022, San Francisco, CA.

Soulos, P. and **Isik, L.** Disentangled face representations in deep generative models and the human brain. Poster: Cognitive Computational Neuroscience 2022, San Francisco, CA.

Malik, M. and **Isik, L.** Social inference from relational visual information. Talk: Vision Science Society 2022, St Pete Beach, FL.

McMahon, E., Bonner M., and **Isik L.** Naturalistic two-person social perception in the brain. Poster: Vision Science Society 2022, St Pete Beach, FL.

Lee Masson, H., Chang, L., Chen, J. and **Isik L.** Neural basis of remembering details of a social versus non-social scene shown in a natural movie. Poster: Vision Science Society 2022, St Pete Beach, FL.

Dima, D., Tomita, T., Honey C., Hebart M., and **Isik, L.** A data-driven investigation of human action representations. Poster: Vision Sciences Society 2021, virtual.

Lee Masson, H., and **Isik, L.** Selective processing of social interactions during natural movie viewing. Poster: Vision Sciences Society 2021, virtual.

McMahon, E., Bonner, M., and **Isik, L.** A large-scale naturalistic dataset of two-person social actions. Poster: Vision Sciences Society 2021, virtual.

Soulos, P. and **Isik, L.** Disentangled face representations in deep generative models and the human brain. Poster: NeurIPS workshop on Shared Visual Representations in Humans and Machines (SVRHM) 2020, virtual.

Dima, D., Tomita, T., Honey, C., and **Isik, L.** The representational space of action perception. Poster: Vision Sciences Society 2020, virtual.

Dima, D., Tomita, T., Honey, C., and **Isik, L.** Disentangling the features of human action perception. Talk: Capital Area Cognition, Attention, and Perception Conference 2020, Washington, DC.

Teaching

Cajal Summer Course in Neuroscience and AI. Summer 2025, Lisbon, Portugal.

JHU Cognitive Science Department, Deep Learning for Cognitive Neuroscience. Fall 2024.

JHU Cognitive Science Department, Computational Social Cognition. Fall 2021-2023.

JHU Cognitive Science Department, Visual Cognition. Spring 2020-2022.

MIT Biology Department, 7.QBWx Quantitative Biology Workshop. Instructor for section on "Introduction to Machine Learning and Biology". January 2014, January 2016. Available on EdX.

Advising

JHU (current)

Abdul-Rahim Deeb (Postdoc) 2025-present.

Yuan-fang Zhao (Postdoc) 2023-present.

Paul Soulos (MA, PhD) 2019-present.

Manasi Malik (PhD) 2021-present.

Hannah Small (PhD) 2021-present.

    NSF GRFP recipient 2023

Kathy Garcia (PhD) 2022-present.

    NSF GRFP recipient 2024

Wenshuo Qin (lab manager) 2024-present.

Riad Dajani (MA) 2024-present.

Astrid Jiang (undergraduate, MA) 2024-present.

Aydan Huang (undergraduate) 2025-present.

Ishi Jain (undergraduate) 2025-present.

JHU (former)

Emalie McMahon (PhD) 2019-2024.

    NSF GRFP recipient 2019

    Current position: Postdoctoral associate, MIT.

Colin Conwell (Postdoc) 2023-2024.

    Current position: Founding Research Scientist, Stealth AI startup

Haemy Lee Masson (Postdoc) 2020-2022.

    Current position: Assistant Professor of Psychology, Durham University

Diana Dima (Postdoc) 2019-2021.

    Current position: Postdoctoral fellow, Western University

Elizabeth Im (Research Assistant/Lab manager) 2022-2024.

    Current position: PhD student, Stanford University

Angira Shirahatti (MA) 2021-2022.

Gemma Nicholson (MA) 2019-2020.

Undergraduate mentees: Veric Tan (2023), Jiewan Hong (2023), Seojin Lee (2022-2023), Raven Foster (2022), Lucy Chang (2020-2023), Victoria Liu (2021-2022), Josh Kim (2021-2022), Jihoon Kim (2021-2022), Cora Mentor Roy (2020-2021), Emmanuel Ochieng (2020-2022), Susan Liu (2020-2021), Melody Lee (2020-2021), Bethany Kemp (2020-2021)

Service

JHU

One Neuroscience Initiative Steering Committee 2024-present.

Data Science and AI Institute Colloquium Committee 2024-present.

Cognitive Science Department High-level Vision Search Committee 2024-2025.

Cognitive Science Department Vision and Language Search Committee 2024-2025.

Psychological and Brain Sciences Department Cognitive Neuroscience Search Committee 2024-2025.

Cognitive Science Department Computational Psycholinguistics Search Committee 2022-2023.

Cognitive Science Department Diversity and Representation Committee. 2020-present.

Cognitive Science Department Brown Bag Talk Coordinator. 2020-2024.

Graduate Board Oral / Thesis Committees

2025: Yoonjung Lee (PBS), Qihan Wu (PBS)

2024: Qiong Cao (PBS), Emalie McMahon (Cog Sci)

2023: Natalia Talmina (Cog Sci), Alex Mitko (PBS), Yun-Fei Liu (PBS), Angtian Wang (Computer Science), Simon Faghel-Soubeyrand (U Montréal)

2022: Chenxiao Guan (PBS), Hongru Zhu (Cog Sci)

2021: Donald Li (Cog Sci), Jasmine Perez (PBS)

2020: Li Guo (PBS)

External

Cognitive Science Society Annual Meeting (CogSci) Program Committee. 2024.

Cognitive Computational Neuroscience (CCN) Program Committee. 2020-2023. Co-Chair 2022-2023.

Neuromatch Academy research team mentor. 2020.

Associate Editor PLoS Computational Biology. 2019-2022.

Ad-hoc review panelist: NSF Cognitive Neuroscience, NIH Human Complex Mental Function.

Ad-hoc reviewer: Nature, Nature Neuroscience, Nature Communications, PNAS, Neuron, Journal of Neuroscience, Cerebral Cortex, PLoS Biology, PLoS Computational Biology, eLife, IEEE Transactions, Scientific Reports, PLoS ONE.