Jiahui Guo, PhD

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APPOINTMENTS

2024- : Incoming Assistant Professor
School of Behavioral and Brain Sciences, The University of Texas at Dallas, USA

2019-2023: Postdoctoral Scholar
Center for Cognitive Neuroscience, Dartmouth College, USA
Advisors: James V. Haxby & M. Ida Gobbini

EDUCATION

2013-2018: Ph.D. in Cognitive Neuroscience
Department of Psychological and Brain Sciences, Dartmouth College, USA
Advisor: Bradley C. Duchaine

2009-2013: B.S. in Psychology
Beijing Normal University, Beijing, China
Advisor: Jia Liu

AWARDS & FELLOWSHIPS

2021: MAIN 2021 Leading women in Neuro-AI UNIQUE-IVADO Award

2019: Dartmouth Marie Center Research Award

2013-2018: Dartmouth Fellowship for Graduate Study and Research

2016: Dartmouth Graduate Program Travel Award

2015-2017: Dartmouth Psychological and Brain Sciences Department Travel Awards

2012: Beijing Normal University First Class Scholarship

2010: Excellent Volunteer in Summer Volunteering Teaching

PUBLICATIONS

Peer-reviewed Publications

Jiahui, G., Feilong, M., Nastase, S.A., Haxby, J.V., Gobbini, M.I. (2023). Cross-movie prediction of individualized functional topography. *eLife* **12**:e86037. https://doi.org/10.7554/eLife.86037

Jiahui, G.[†], Feilong, M.[†], Visconti di Oleggio Castello, M., Nastase, S.A., Haxby, J.V., Gobbini, M.I.[*] (2023). Modeling naturalistic face processing in humans with deep convolutional neural networks. *Proceedings of the National Academy of Sciences (PNAS)*. 120(43), e2304085120. https://doi.org/10.1073/pnas.2304085120

Lee, C., Han, J., Feilong, M., **Jiahui, G.**, Haxby, J.V., Baldassano C. (2023). Hyper-HMM: aligning human brains and semantic features in a common latent event space. *Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS)*.

Feilong, M., Nastase, S.A., **Jiahui, G.**, Halchenko, Y.O., Gobbini, M.I., Haxby, J.V. (2023). The Individualized Neural Tuning Model: Precise and generalizable cartography of functional architecture in individual brains. *ImagingNeuroscience* 1 1–34. doi: https://doi.org/10.1162/imag_a_00032

Parker, B.J., Voorhies, W.I., **Jiahui, G.**, Miller, J.A., Willbrand E., Hallock T., Furl, N., Garrido, L., Duchaine, B., & Weiner, K.S. (2023). Hominoid-specific sulcal variability is related to face perception ability. *Brain structure & function,* 228(2), 677–685. https://doi.org/10.1007/s00429-023-02611-4

Jiahui, G., Yang, H., & Duchaine, B. (2020). Attentional modulation differentially affects ventral and dorsal face areas in both normal participants and developmental prosopagnosics. *Cognitive Neuropsychology*, 1-12. https://doi.org/10.1080/02643294.2020.1765753

Jiahui, G., Feilong, M., Visconti di Oleggio Castello, M., Guntupalli, J.S., Chauhan, V., Haxby, J.V., and Gobbini, M.I. (2020). Predicting individual face-selective topography using naturalistic stimuli. *NeuroImage* 116458. https://doi.org/10.1016/j.neuroimage.2019.116458

Visconti di Oleggio Castello, M., J.S., Chauhan, **Jiahui, G.**, and Gobbini, M.I. (2020). The Grand Budapest Hotel: an fMRI dataset in response to a socially-rich, naturalistic movie. *Scientific Data* 7, 383. https://doi.org/10.1038/s41597-020-00735-4

Peterson, M.F., Zaun, I., Hoke, H., **Jiahui, G.**, Duchaine, B., & Kanwisher, N. (2019). Eye Movements & Eye movements and retinotopic tuning in developmental prosopagnosia. Journal of Vision, *Journal of Vision* 19, 7–7. https://doi.org/10.1167/19.9.7

Jiahui, G., Yang, H., & Duchaine, B. (2018). Developmental prosopagnosics have widespread selectivity reductions across category-selective visual cortex. *Proceedings of the National Academy of Sciences (PNAS)*, 115(28), E6418–E6427. https://doi.org/10.1073/pnas.1802246115

Biotti, F., Wu, E., Yang, H., **Jiahui, G.**, Duchaine, B., & Cook, R. (2017). Normal composite face effects in developmental prosopagnosia. *Cortex, 95*, 63-76. https://doi.org/10.1016/j.cortex.2017.07.018

Jiahui, G., Garrido, L., Liu, R.R., Susilo, T., Barton, J.J.S., & Duchaine, B. (2017). Normal voice processing after posterior superior temporal sulcus lesion. *Neuropsychologia, 105*, 215-222. https://doi.org/10.1016/j.neuropsychologia.2017.03.008

Li, X., Beuckelaer, A. D., **Guo, J.**, Ma, F., Xu, M., & Liu, J. (2014). The gray matter volume of the amygdala is correlated with the perception of melodic intervals: a voxel-based morphometry study. *PLoS ONE*, 9(6), e99889. https://doi.org/10.1371/journal.pone.0099889

Published Packages & Computer Softwares

Feilong, M., **Jiahui, G.**, Gobbini, M. I., Haxby, J.V. (2022). brainplotlib: plotting brain data on cortical surface [Computer software]. *Zenodo*. https://doi.org/10.5281/zenodo.5979819

Manuscripts Under Revision & In Preparation

Kelly, J. P.., Willbrand, E. H., Chen, X., Maboudian, S. A., Parker, B. J., **Jiahui, G.**, Garrido, L., Zhen, Z., Duchaine, B. C., Weiner, K. S. Overlooked sulci in human posteromedial cortex are related to face processing.

Feilong, M., **Jiahui, G.**, Gobbini, M.I., Haxby, J.V. A cortical surface template for human neuroscience.

SELECTED CONFERENCE PRESENTATIONS

Jiahui, G., Setti, F., Feilong, M., Bottari, D., Gobbini, M.I., Pietrini, P., Ricciardi, E., and Haxby, J.V. (2023). Shared Connectome and Organization in the Human High-level Visual Cortex Irrespective of Sensory Experience. *Society for Neuroscience (SFN)*

Jiahui, G., Feilong, M., Nastase, S.A., Haxby, J.V., and Gobbini, M.I. (2023). Cross-movie Prediction of Individualized Functional Topography. *Cognitive Neuroscience Society (CNS)*

Jiahui, G., Feilong, M., Visconti di Oleggio Castello, M., Nastase, S.A., Haxby, J.V., and Gobbini, M.I. (2022). Modeling naturalistic face processing in humans with deep convolutional neural networks. *Conference on Cognitive Computational Neuroscience (CCN)*

Jiahui, G., Feilong, M., Visconti di Oleggio Castello, M., Haxby, J.V., and Gobbini, M.I. (2021). Representational similarity between brain and DCNNs responses in high-dimensional space. *Organization for Human Brain Mapping (OHBM)*

Jiahui, G., Feilong, M., Visconti di Oleggio Castello, M., Guntupalli, J.S., Chauhan, V., Haxby, J.V., and Gobbini, M.I. (2020). Predicting individual face-selective topography using naturalistic stimuli. *Organization for Human Brain Mapping (OHBM)*

Jiahui, G., & Duchaine, B. (2019). Heritability of visual category-selectivity. *Organization for Human Brain Mapping (OHBM)*

Jiahui, G., Yang, H., & Duchaine, B. (2018). Developmental prosopagnosics have widespread selectivity reductions in category-selective areas. *Vision Science Society (VSS)*

Jiahui, G., Yang, H., & Duchaine, B. (2017). Developmental prosopagnosics show reduced category-selectivity in right hemisphere areas selective for faces and other categories. *Society for Neuroscience (SFN)*

Jiahui, G., Yang, H., & Duchaine, B. (2017). Attentional modulation in the face network in participants with normal face processing and developmental prosopagnosia. *Vision Science Society (VSS)*

Jiahui, G., Garrido, L., Liu, R.R., Susilo, T., Barton, J.J.S., & Duchaine, B. (2016). Voice perception and recognition after lesion to face selective posterior temporal sulcus. *Society for Neuroscience (SFN)*

Guo, J., Yang, H., Rezlescu, C., Susilo, T., & Duchaine, B. (2016). Gray matter differences are associated with non-identity face perception in developmental prosopagnosia. *Vision Science Society (VSS)*

Guo, J., Susilo, T., & Duchaine, B. (2015). Decreased activation to faces in lateral occipital cortex in acquired prosopagnosia. *Vision Science Society (VSS)*

SELECTED INVITED TALKS

2023: Understanding Human High-level Perception. Department of Psychology, *University of California, Riverside*

2022: Understanding Human High-level Perception via Multiple Approaches. *Centre for Sleep and Cognition (CSC) Seminar, National University of Singapore*

2022: Not so fast: Limited validity of deep convolutional neural networks as *in silico* models for human naturalistic faces processing. *Vision Science Society (VSS)*

2020: Predicting individual face-selective topography using naturalistic stimuli. *Cognitive Brown Bag (CBB), Dartmouth College*

2018: Developmental Prosopagnosics Have Widespread Selectivity Reductions Across Category-Selective Visual Cortex. *Cognitive Brown Bag (CBB), Dartmouth College*

2017: Face Attention Modulation in Normal Participants & Developmental Prosopagnosia. *Cognitive Brown Bag (CBB), Dartmouth College*

2016: Open Neuropsychology. *Cognitive Brown Bag (CBB), Dartmouth College*

2015: Voice processing after posterior superior temporal sulcus lesion. *Center for Cognitive Neuroscience (CCN) Annual Retreat, Dartmouth College*

TEACHING EXPERIENCE

2019-20: Computational Methods for Studying the Neural Code (FA19, FA20), TA

2017: Cognition (SP17), TA

2016-17: Experimental Design, Methodology, and Data Analysis Procedures (SP16, WT17), TA
2014: Systems Neuroscience Sections 01 and 02 (FA14), TA
2010: Physics, volunteer lecturer

AD HOC MANUSCRIPT REVIEW

Nature Communications   *Journal of Neuroscience*

NeuroImage   *Trends in Cognitive Science*

Neuropsychologia   *Scientific Reports*

Human Brain Mapping   *Perception*

Behavioural Brain Research   *PLOS Computational Biology*

Cortex   *Frontiers in Neuroscience*

PROFESSIONAL AFFILIATIONS

Cognitive Neuroscience Society
Organization for Human Brain Mapping
Society for Neuroscience
Vision Science Society

DATA ANALYSIS/CODING SKILLS

Machine Learning, Computational Modeling, Stats, and Data Visualization
   Scikit-learn, NumPy, SciPy, PyMVPA, TensorFlow, SciPy, Pandas, R, SPSS, MATLAB
   Matplotlib, seaborn, ggplot2, ImageMagick
Neural Imaging
   Nibabel, fmriprep, FreeSurfer, AFNI, Human Connectome Workbench
Experiments and Web-based Coding
   Psychotoolbox, PsychoPy, Javascript, HTML, CSS