CURRICULUM VITAE Jiefeng Jiang, Ph.D

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Email: jiefeng-jiang@uiowa.edu
Phone: +1-319-467-4565
Address: 373 Psychological & Brain Sciences Building, University of Iowa, Iowa City, IA 52242, USA
Website: https://myweb.uiowa.edu/jiefjiang/index.html

Education and Academic Positions

2020- **Assistant Professor**, Department of Psychological & Brain Sciences, **University of Iowa**

2016-2019 **Postdoctoral Research Associate**, Department of Psychology, **Stanford University**
Advisor: **Anthony Wagner**

2014-2016 **Postdoctoral Research Associate**, Center for Cognitive Neuroscience, **Duke University**
Advisor: **Tobias Egner**

2009-2014 **Ph.D** in Psychology, Department of Psychology & Neuroscience, **Duke University**
Advisor: **Tobias Egner**
Dissertation: A Bayesian Framework of Cognitive Control

2009-2012 **M.A** in Psychology, Department of Psychology & Neuroscience, **Duke University**
Advisor: **Tobias Egner**

2006-2009 **M.E** in Pattern Recognition and Intelligent Systems, **Institute of Automation, Chinese Academy of Sciences**
Advisor: **Tianzi Jiang**

1999-2003 **B.E** in Computer Science, **Zhejiang University**

Preprints and Manuscripts in Preparation (*=equal contribution)

Tippett, D. A*., **Jiang, J***., Levy, B., J., & Wagner, A. D. (in preparation). Testing theories of forgetting: The effect of memory suppression strategies on associative memory.

Publications

Madore, K. P., Khazenzon, A. M., Backes, C. W., **Jiang, J**., Uncapher, M., Norcia, A. M., & Wagner, A. D. (2020). Memory failure predicted by attention lapsing and media multitasking. *Nature*, 587(7832): 87-91

Jiang J, von Kriegstein K, **Jiang J.** (2020). Brain mechanisms of eye contact during verbal communication predict autistic traits in neurotypical individuals. *Scientific Reports*, 10:14602.

Trelle, A. N., Carr, V. A., Guerin, S. A., Thieu, M. K., Jayakumar, M., Guo, W., Nadiadwala, A., Corso, N. K., Hunt, M. P., Litovsky, C. P., Tanner, N. J., Deutsch, G. K., Bernstein, J. D., Harrison, M. B., Khazenzon, A. M., **Jiang, J.**, Sha, S. J., Fredericks, C. A., Rutt, B. K., Mormino, E. C., Kerchner, G. A., & Wagner, A. D. (2020). Hippocampal and cortical mechanisms at retrieval explain variability in episodic remembering in older adults. *eLife,* 9:e55335

Jiang, J., Wang, S. F., Guo, W., & Wagner, A. D. (2020). Proactive control in context: Context-cued predictions of task demands facilitate perceptual decisions in virtual environments. *Nature Communications*, 11:2053

Jiang, J., Bramao, I., Khazenzon, A., Wang, S. F., Johansson, M., & Wagner, A. D. (in press). Temporal dynamics of memory-guided cognitive control and generalization of control via mnemonic integration. *Journal of Neuroscience*, 40(11): 2343-2356

Sali, T. W., **Jiang, J**., Egner, T. (in press). Neural mechanisms of strategic adaptation in attentional flexibility. *Journal of Cognitive Neuroscience*, 32(5): 989-1008

Jiang, J., Wagner, A. D., & Egner, T. (2018). Integrated externally and internally generated task predictions jointly guide cognitive control in prefrontal cortex. *eLife,* 7:e39497

Muhle-Kabre, P. S., **Jiang, J.**, & Egner, T. (2018). Causal evidence for learning-dependent frontal-lobe contributions to cognitive control. *Journal of Neuroscience*, 38(4): 962-973

Korb, F. M., **Jiang, J.**, King, J. A., & Egner, T. (2017). Hierarchically organized medial frontal cortex-basal ganglia loops selectively control task- and response-selection. *Journal of Neuroscience,* 37(33): 7893-7905

Chiu, Y. C., **Jiang, J.**, & Egner, T. (2017). The caudate nucleus mediates learning of stimulus-control state associations. *Journal of Neuroscience*, 37(4): 1028-1038

Jiang, J., Summerfield, C., & Egner, T. (2016). Visual prediction error spreads across object features in human visual cortex. *Journal of Neuroscience*, 36(50): 12746-12763

Jiang, J., Brashier, N. M., & Egner, T. (2015). Memory meets control in hippocampal and striatal binding of stimuli, responses, and attentional control states. *Journal of Neuroscience*, 35(44): 14885-14895.

Jiang, J., Beck, J., Heller, K., & Egner, T. (2015). An insula-frontostriatal network mediates flexible cognitive control by adaptively predicting changing control demands. *Nature Communications*, 6:8165

Weissman, D., **Jiang, J.**, & Egner, T. (2014). Determinants of congruency sequence effects without learning and memory confounds. *Journal of Experimental Psychology: Human Perception and Performance*, 40(5): 2022–2037.

Jiang, J., Heller, K., Egner, T. (2014). Bayesian modeling of flexible cognitive control. *Neuroscience and Biobehavioral Reviews*, 46: 30-43.

Jiang, J. & Egner, T. (2014). Using neural pattern classifiers to quantify the modularity of conflict-control mechanisms in the human brain. *Cerebral Cortex*, 24: 1793-1805.

Jiang, J., Summerfield, C., Egner, T. (2013). Attention sharpens the distinction between expected and unexpected percepts in the visual brain. *Journal of Neuroscience*, 33(47): 18438-18447.

Li, J., Liu, Y., Qin, W., **Jiang, J.**, Qiu, Z., Xu, J., Yu, C., & Jiang, T. (2012). Age of onset of blindness affects brain anatomical networks constructed using diffusion tensor tractography. *Cerebral Cortex*, 23: 542-551.

Jiang, J., Schmajuk, N., Egner, T. (2012). Explaining neural signals in human visual cortex with an associative learning model. *Behavioral Neuroscience*, 126(4): 575-581.

Jiang, J., Zhu, W., Shi, F., Liu, Y., Li, J., Qin, W., Li, K., Yu, C., Jiang, T. (2009). Thick visual cortex in the early blind. *Journal of Neuroscience* 29(7): 2205–2211.

Cheng, J., Shi, F., Wang, K., Song, M., **Jiang. J.**, Xu, L., Jiang, T. (2009) Nonparametric mean shift functional detection in the functional space of task and resting-state fMRI. *Workshop on fMRI data analysis: statistical modeling and detection issues in intra-and inter-subject functional MRI data analysis, in conjunction with the MICCAI 2009*.

Jiang, J., Zhu, W., Shi, F., Zhang, Y., Lin, L., Jiang, T. (2008). A robust and accurate algorithm for estimating the complexity of the cortical surface. *Journal of Neuroscience Methods* 172: 122–130.

Jiang, X., Liu, B., **Jiang, J**., Zhao, H., Fan, M., Zhang, J., Fan, Z., Jiang, T. (2008). Modularity in the genetic disease-phenotype network. *FEBS Letters* 582: 2549–2554.

Jiang, T., Liu, Y., Shi, F., Shu, N., Liu, B., **Jiang, J.**, Zhou, J. (2008). Multimodal Magnetic Resonance Imaging

for Brain Disorders: Advances and Perspectives. *Brain Imaging and Behavior* 2: 249–257.

Zhang, Y., **Jiang, J.**, Lin, L., Shi, F., Zhou, Y., Yu, C., Li, K., Jiang, T. (2008). A Surface-Based Fractal Information Dimension Method for Cortical Complexity Analysis. in T. Dohi, I. Sakuma, and H. Liao (Eds.): *MIAR 2008, LNCS 5128, pp. 133–141, Springer-Verlag Berlin Heidelberg.*

Li, X., **Jiang, J.**, Zhu, W., Yu, C., Sui, M., Wang, Y., Jiang, T. (2007). Asymmetry of prefrontal cortical convolution complexity in males with attention-deficit/hyperactivity disorder using fractal information dimension. *Brain & Development* 29: 649–655.

Shi, F., Liu, Y., Jiang, T., Zhou, Y., Zhu, W., **Jiang, J.**, Liu, H., Liu, Z. (2007). Regional Homogeneity and Anatomical Parcellation for fMRI Image Classification: Application to Schizophrenia and Normal Controls. in N. Ayache, S. Ourselin, A. Maeder (Eds.): *MICCAI 2007, Part II, LNCS 4792, pp. 136–143, Springer-Verlag Berlin Heidelberg.*

Selected Conference Presentations

Jiang, J., Wang, S. F., Guo, W., Fernandez, C., & Wagner, A. D. (2019). Prefrontal reinstatement of contextual task demand is mediated by repulsion in hippocampal activity patterns between contexts. *Annual Meeting of the Society for Neuroscience*, Chicago, CA.

Jiang, J., Wang, S. F., Guo, W., & Wagner, A. D. (2018). Context-cued predictions of task demands facilitate perceptual decisions in virtual environments. *Annual Meeting of the Society for Neuroscience*, San Diego, CA.

Jiang, J., Bramao, I., Khazenzon, A., Johansson, M., & Wagner, A. D. (2018). Generalization of cognitive control demand via overlapping associative memories. *International Conference on Learning & Memory,* Huntington Beach, CA.

Wang, S. F., Carr, V. A., Favila, S. E., Bailenson, J. N., Brown, T. I., **Jiang, J.**, & Wagner, A. D. (2018). Representations of local information in human medial temporal lobe during memory-guided spatial navigation. *International Conference on Learning & Memory,* Huntington Beach, CA.

Trelle, A., Carr, V. A., Guerin, S., Guo, W., Harrison, M. B., Jayakumar, M., **Jiang, J.**, Kerchner, G., Momino, E., Tanner, N., Thieu, M., & Wagner, A.D. (2018). Parietal and occipitotemporal cortical reinstatement differentially predict successful associative memory retrieval in older adults. *Annual Meeting of the Cognitive Neuroscience Society,* Boston, MA.

Jiang, J., LaRocque, K. F., Guerin, S. A., Fernandez, C., & Wagner, A. D. (2017). Hippocampal contribution to cortical reinstatement during episodic retrieval. *Annual Meeting of the Society for Neuroscience*, Washington, DC.

Trelle, A., Bernstein, J., Carr, V. A., Fredericks, C., Guerin, S., Guo, W., Jayakumar, M., **Jiang, J.**, Kerchner, G., Khazenzon, A., Litovsky, C., Sharon, S., Thieu, M., & Wagner, A.D. (2017). Cortical and hippocampal predictors of individual differences in episodic memory in putatively healthy older adults. *Annual Meeting of the Society for Neuroscience*, Washington, DC.

Muhle-Kabre, P., **Jiang, J.,** & Egner, T. (2017). Causal evidence for learning-dependent frontal lobe contributions to cognitive control. *Annual Meeting of the Cognitive Neuroscience Society,* San Francesco, CA.

Jiang, J., Summerfield, C., & Egner, T. (2016). Surprise spreads across different features of an object to form object-level expectation in visual cognition. *Annual Meeting of the Cognitive Neuroscience Society*, New York, NY.

Jiang, J., Brashier, N., & Egner, T. (2015). Memory meets control in hippocampal and striatal binding of multi-level event features. *Annual Meeting of the Cognitive Neuroscience Society,* San Francesco, CA.

Jiang, J., & Egner, T. (2014). Neurocomputational Mechanisms of flexible cognitive control. *Annual Meeting of the Cognitive Neuroscience Society*, Boston, MA.

Jiang, J., Summerfield, C., & Egner, T. (2013). Attention amplifies or suppresses neural prediction error responses in a regionally specific manner. *Annual Meeting of the Cognitive Neuroscience Society,* San Francesco, CA.

Egner, T., & **Jiang, J.** (2011). Information-based brain mapping of stimulus- versus response-based interference control processes. *Annual Meeting of the Cognitive Neuroscience Society,* San Francesco, CA.

Research Grants

2020	**Old Gold Summer Fellowship, University of Iowa**	$6,000
2018-2020	**Co-investigator, NIH R21AG058111, NIA**	$431,750
2017	**Stanford Center for Cognitive and Neurobiological Imaging Innovation Award**	$4,725
2017-2019	**NIH NRSA Postdoctoral Fellowship, NIA**	$174,090

Teaching

University of Iowa

Spring 2021 **PSY2811: Research Methods and Data Analysis I**

Fall 2020 **PSY4020: Laboratory in Psychology**

Spring 2020 **PSY5070: Programming for Psychologists**

Stanford University

03/2018 **Guest lecturer in undergraduate course 'Thinking matters'**,

Duke University

07/2016 **Instructor and organizer**, Amazon Mechanical Turk workshop

2011-2013 **Graduate teaching assistant**, *Statistical Methods in Psychology* and *Introduction to Psychology*

2010-2013 **Instructor**, Brain Awareness Week

Mentoring

Ph.D Students	Woo-Tek Lee (2020-)
Research assistants	Wanjia Guo (2017-2018)
Undergraduate students	Daylon Tippit (2016-2018) recipient of the *Firestone Medal for Excellent Undergraduate Research* (highest award for honors thesis at Stanford)

Invited Talks

2020 University of Oregon
Neural substrates supporting the associative memory of cognitive control

Neurochat conference
Prefrontal reinstatement of contextual task demand is mediated by separable hippocampal patterns

Reviewing Service

Brain Imaging and Behavior, Cerebral Cortex, Cognitive Affective and Behavioral Neuroscience, Current Opinion in Behavioral Sciences, eLife, European Journal of Neuroscience, Experimental Brain Research, Frontiers in Psychology, Human Brain Mapping, Journal of Alzheimer's Disease, Journal of Cognitive Neuroscience, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Learning Memory and Cognition, Journal of Neuroscience, Nature Communications, Neural Plasticity, NeuroImage, Neuropsychologia, PLOS Biology, PLOS ONE, Scientific Reports, Social Cognitive and Affective Neuroscience

Professional Affiliations

Cognitive Neuroscience Society
Society for Neuroscience