Zhongzheng (Brooks) Fu, Ph.D.

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Professional Appointments

2020 – on **Postdoctoral Scholar**
Department of Neurosurgery
Cedars-Sinai Medical Center
Los Angeles, CA, USA

2019 – 2020 **Visiting Postdoctoral Scholar**
Division of the Humanities and Social Sciences
California Institute of Technology
Pasadena, CA, USA

Education

2012 – 2018 **Ph.D. in Control and Dynamical Systems**, California Institute of Technology, Pasadena, CA, USA

2010 **Academic Exchange**, University of California at Berkeley, Berkeley, CA, USA

2008 – 2011 **B.Sc. in Physics**, University of Hong Kong, Hong Kong, China

Publications

Peer-reviewed Papers

2022 **Z. Fu**, D. Beam, J. M. Chung, C. M. Reed, A. N. Mamelak, R. Adolphs, U. Rutishauser. The geometry of domain-general performance monitoring in the human medial frontal cortex. ***Science***. 376, eabm9922 doi:10.1126/science.abm9922.

2019 ∂ **Z. Fu**, D. A. J. Wu, I. Ross, J. M. Chung, A. N. Mamelak, R. Adolphs, U. Rutishauser. Single-neuron correlates of error monitoring and post-error adjustments in human medial frontal cortex. ***Neuron***. 101, 165-177.e5 doi:10.1016/j.neuron.2018.11.016.

2017 **Z. Fu**, U. Rutishauser. Single-neuron correlates of awareness during attentional blinks. ***Trends in Cognitive Sciences***. 22(1), 5-7 doi:10.1016/j.tics.2017.10.005.

S. Sun, S. Zhen, **Z. Fu**, D. A. J. Wu, S. Shimojo, R. Adolphs, R. Yu, S. Wang. Decision ambiguity is mediated by a late positive potential originating from cingulate cortex. ***Neuroimage***. 157, 400-414. doi:10.1016/j.neuroimage.2017.06.003.

2013 ∂ F. Klein, R. Diskin, J. F. Scheid, C. Gaebler, H. Mouquet, I. S. Georgiev, M. Pancera, T. Zhou, R. Incesu, **Z. Fu**, P. NP. Gnanapragasam, T. Y. Oliveira, M. S. Seaman, P. D. Kwong, P. J. Bjorkman, M. C. Nussenzweig. Somatic mutations of the immunoglobulin framework are generally required for broad and potent HIV-1 neutralization. ***Cell***. 153, 126-138. doi:10.1016/j.cell.2013.03.018.

Papers in progress

2022 **Z. Fu**, A. Sajad, S. P. Errington, J. D. Schall, U. Rutishauser. Neurophysiological mechanisms of performance monitoring in human and nonhuman primates. In revision.

Awards & Honors

2022 Trainee Highlight Award, The BRAIN Initiative Meeting

2022 CNSM Prize for an Exceptional Publication, Center for Neural Science and Medicine, Cedars-Sinai Medical Center

2019 Spot Research Award for Outstanding Publication, Department of Neurosurgery, Cedars-Sinai Medical Center

2010 Rising Stars of Research Award, University of British Columbia

2009 Overseas Research Fellowship, University of Hong Kong

2009 International Genetically Engineered Machine Competition (iGEM), Gold Awards

2009 Summer Research Award, University of Hong Kong

Academic Service

Reviewer

- Nature Communications
- Cell Reports
- Journal of Neural Engineering
- Cognitive, Affective, & Behavioral Neuroscience
- Molecular Autism
- Neuroimage
- Frontiers in Neuroscience
- Journal of Neuroscience Methods
- British Journal of Psychology
- Scientific Reports
- Agence Nationale de la Recherche

Mentoring Experience

Undergraduate

2020 – 2021 Danielle Beam
Project: Hierarchical Bayesian modeling of flexible cognitive control
Cedars-Sinai Medical Center

2020 Elise. Y. Liu, California Institute of Technology
Project: Domain generality of conflict adaptation effects
Caltech SURF program

Elizabeth (Rae) Moar
Project: Perceptual straightening in autism using hierarchical Bayesian modelling
Caltech SURF program

Conferences, Workshops & Presentations

Invited Workshops

2018 Sloan-NOMIS Summer School on Cognitive Foundations of Economic Behaviors, University of Zurich

2018 Junior Scientist Workshop on Mechanistic Cognitive Neuroscience, Janelia Farm Research Campus, Howard Hughes Medical Institute

2016 Berkeley Summer Course in Mining and Modeling Neuroscience Data, University of California at Berkeley

Conferences

2022 Annual Meeting of the Cognitive Neuroscience Society

2017 American Association of Neurological Surgeons Annual Scientific Meeting

2014 – 2021 Annual Meetings of the Society for Neuroscience

Talks

2017 Talk title: Single-neuron correlates of error monitoring in the human medial frontal cortex
American Association of Neurological Surgeons Annual Scientific Meeting

Professional Membership

2021 – on Cognitive Neuroscience Society

2013 – on Society for Neuroscience