

Dr. Zhongzheng (Brooks) Fu

Last updated: May, 2022

ORCID: [0000-0002-2572-6284](https://orcid.org/0000-0002-2572-6284)

Email: zzbrooksfu@gmail.com

Website: brooksfu.github.io

Chen Neuroscience Research Building
1200 East California Boulevard
Pasadena, CA 91125
United States

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 **International Exchange** (1 year), 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](https://doi.org/10.1126/science.abm9922).
- 2019 @ **Z. Fu**, D. A. J. Wu, I. Ross, J. M. Chung, C. M. Reed, 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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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. *Nature Reviews Neuroscience*. In revision.

Awards & Honors

2022 Trainee Highlight Award, The BRAIN Initiative Meeting.

2019 Spot research award for outstanding publication, Department of Neurosurgery, Cedars-Sinai Medical Center

2010 Rising Star of Research. 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
- Frontiers in Neuroscience
- Journal of Neuroscience Methods
- British Journal of Psychology
- Scientific Reports

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 & Presentations

Conferences

2022	Annual Meeting of the Cognitive Neuroscience Society
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
2017	American Association of Neurological Surgeons Annual Scientific Meeting
2016	Berkeley Summer Course in Mining and Modeling Neuroscience Data, University of California at Berkeley
2009	International Genetically Engineered Machine Competition (iGEM), Gold Awards
2009	Summer Research Award, University of Hong Kong
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
------	--

Miscellaneous

Professional society membership

2021 – on	Cognitive Neuroscience Society
2013 – on	Society for Neuroscience