

# Zhongzheng (Brooks) Fu, Ph.D.

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

Email: [zzbrooksfu@gmail.com](mailto:zzbrooksfu@gmail.com)

Website: [brooksfu.github.io](https://brooksfu.github.io)

Chen Neuroscience Research Building  
1200 East California Boulevard MC 228-77  
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. In revision.

## Awards & Honors

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2022      Trainee Highlight Award, The BRAIN Initiative Meeting.  
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 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

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### 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

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### 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

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### 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
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
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## Professional Membership

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