

# Qing-fang Zhang

Postdoctoral Fellow

McGovern Institute for Brain Research

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## EDUCATION

Institute of Neuroscience, Chinese Academy of Sciences, Shanghai, China

Ph.D. Lab of Neural Plasticity Advisor: Prof. Mu-ming Poo 2003.9-2013.1

Central China Normal University, Wuhan, China

B.S. Biology 1998.9-2002.7

Georgetown University, Washington DC

Visiting student Department of Neuroscience Advisor: Prof. Jian-young Wu 2010.1-2010.7

## RESEARCH EXPERIENCE

**McGovern Institute for Brain Research, MIT**

Cambridge, MA, U.S.

*Postdoctoral fellow*

2019.9 - present

*PI: Prof. Ann M. Graybiel*

Research area: Circuit and function of basal ganglia

**Institute of Neuroscience, Chinese Academy of Sciences**

Shanghai, China

*Postdoctoral fellow, Lab of Neural Plasticity*

2013.1-2019.4

*PI: Prof. Mu-ming Poo*

- 1) Functional organization of presynaptic inputs in V1/V2 of tree shrew with two-photon calcium imaging
- 2) V1-V2 anatomical projection principle in tree shrew with anterograde and retrograde tracers
- 3) Preliminary experiments of virus expression and two-photon calcium imaging in marmoset

**Institute of Neuroscience, Chinese Academy of Sciences**

Shanghai, China

*Graduate student, Lab of Neural Plasticity*

2003.9-2013.1

*Advisor: Prof. Mu-ming Poo*

- 1) Priming effect of a brief real motion on the cortical responses to the bi-stable apparent motion with voltage-sensitive dye imaging in awake mouse
- 2) Effect of monocular transient on the cortical responses to binocular rival stimuli in primary visual cortex of anesthetized cat with voltage-sensitive dye imaging
- 3) Attentional modulation on cross-orientation suppression in alert macaque with extracellular recording

## RESEARCH INTEREST

Studying circuit mechanism underlying behavior with cutting-edge technology

## PUBLICATIONS

**Zhang Q.F.\***, Li H.\*, Chen M., Guo A., Wen Y. and Poo M.M. (2018). Functional organization of intrinsic and feedback presynaptic inputs in the primary visual cortex. *Proc Natl Acad Sci USA*. 115(22): E5174-E5182

**Zhang Q.F.\***, Wen Y.\*, Zhang D., She L., Wu J.Y., Dan Y. and Poo M.M. (2012). Priming with real motion biases visual cortical response to bistable apparent motion. *Proc Natl Acad Sci USA*. 109(50): 20691-20696

WenY., **Zhang Q.** (2009). Ensemble cortical responses to rival visual stimuli: Effect of monocular transient. *Biochemical and Biophysical Research Communications*. 380(1): 105-110

\* indicates equal contribution

## CONFERENCE ABSTRACTS

Wen Y., Zhang Q.F., Li H., Guo A., Poo M.M. Functional organization of intrinsic and feedback presynaptic inputs in the primary visual cortex. Society for Neuroscience annual meeting, Washington DC, U.S., 2017

Zhang Q.F.\*, Li H.\*, Guo A., Poo M.M. and Wen Y. Pinwheel-like presynaptic organization of horizontal and feedback connections in the primary visual cortex. Cold Spring Harbor Asia Conference, Suzhou, China, 2017