

## Pengcheng Zhou

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<b>Contact Information</b>	PhD student, joint Program in Neural Computation & Machine Learning Center for the Neural Basis of Cognition Machine Learning Department Carnegie Mellon University	Mellon Institute 116B, 4400 Fifth Ave Pittsburgh, PA, 15213, USA zhoupc1988@cmu.edu
<b>Research Interests</b>	Mechanism of Neural Computation, Mathematical and Statistical Model of the Brain, Application of Machine Learning to Neuroscience Research, High-Performance Computational Tools for Analyzing Large-Scale Neural Data.	
<b>Employment</b>	PostDoc, Department of Statistics, Columbia University in the City of New York Advisor: Liam Paninski, 2017-Present	
<b>Education</b>	<b>Carnegie Mellon University</b> , Pittsburgh, PA  Ph.D., Joint Program in Neural Computation and Machine Learning, 2011-2016 <ul style="list-style-type: none"><li>• Center for the Neural Basis of Cognition, Machine Learning Department</li><li>• Thesis advisor: Professor Robert E. Kass</li></ul> <b>University of Science and Technology of China</b> , Hefei, China  B.S., Optical Information Science and Technology, 2006-2010 <ul style="list-style-type: none"><li>• School of Physical Science</li><li>• Advisor: Guoqiang Bi</li><li>• Thesis: Super-Resolution Optical Microscopy through Single Molecular Location and its Application in Neuroscience</li></ul>	
<b>Publication</b>	<b>Fast Active Set Methods for Online Deconvolution of Calcium Imaging Data.</b> J Friedrich, P Zhou, L Paninski. arXiv(2016).  <b>Efficient and accurate extraction of in vivo calcium signals from microendoscopic video data.</b> P Zhou, SL Resendez, GD Stuber, RE Kass, L Paninski. arXiv(2016).  <b>Establishing a Statistical Link between Network Oscillations and Neural Synchrony.</b> P Zhou, SD Burton, AC Snyder, MA Smith, NN Urban, RE Kass. PLOS Computational Biology (2015)  <b>False discovery rate regression: an application to neural synchrony detection in primary visual cortex.</b> JG Scot, RC Kelly, MA Smith, P Zhou, RE Kass. Journal of the American Statistical Association (2015)  <b>Impact of neuronal heterogeneity on correlated colored noise-induced synchronization.</b> P Zhou, SD Burton, NN Urban, GB Ermentrout. Frontiers in Computational Neuroscience (2013)	

**Teaching**            **undergraduate Program for Neural Computation (uPNC)**, TA, 2012-2013 Summer  
**Statistical Methods for Neuroscience and Psychology** (Lecturer: Robert Kass), TA, 2014 Spring  
**Machine Learning** (Lecturer: Seyoung Kim), TA, 2015 Fall

**Core courses**        **Machine Learning:** Machine Learning, Intermediate Statistics, Statistical Machine Learning, Algorithms in Real World, Convex Optimization, Regression Analysis

**Neuroscience:** Neural Computation, Statistical Model of the Brain, Mathematical Neuroscience, Computational Neuroscience, Cognitive Neuroscience, Advanced System Neuroscience, Advanced Cellular Neuroscience

**Skills**                Programming languages: MATLAB, Python, R, C/C++  
                              Operating systems: Mac, Linux, Windows