

Xiuye Chen

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(updated 2016.10)

EDUCATION

Data Scientist/Postdoctoral Fellow (2016 -)

Harvard University
Center for Brain Science / Dept. of Psychology
Advisor: Prof. Talia Konkle

Ph.D. Biology, Systems Neuroscience (2016)

Harvard University
Dept. of Molecular & Cellular Biology / Center for Brain Science
Dissertation: Dissection of complex behavior and whole-brain functional mapping in larval zebrafish
Advisor: Prof. Florian Engert

B.Sc. Biochemistry, with Minor in Chemistry (2009)

Hong Kong University of Science and Technology
Advisor: Prof. Mingjie Zhang

RESEARCH

Postdoctoral Research, 2016-present

- Analysis of whole-brain human fMRI data, to investigate the functional and topographical organization of object representation

Graduate Research, 2010-2016

- Analysis of whole-brain light-sheet calcium imaging data of larval zebrafish at single cell resolution (in collaboration with Misha Ahren's group, Janelia Research Campus, HHMI)
 - Built interactive MATLAB platform for exploratory analysis of functional data
 - Brain-wide mapping of functional neuronal groups
 - Characterization of sensory-motor transformation in the anterior hindbrain
- Discovered and characterized the behavior of temporal phototaxis in larval zebrafish
 - Designed behavioral assay and built closed-loop tracking setup
 - Performed behavioral analysis and constructed behavioral model
- Built Two-Photon Microscope, adapted scanning software and collected functional data with electrophysiological recording of motor commands ("fictive swims")

OTHER EXPERIENCES

Summer course: Neural Data Analysis (inaugural class), Cold Spring Harbor Laboratory, 2015
Summer research: Development of behavioral training assay to discriminate odors sets in mice, Prof. Venkatesh Murthy's lab, Harvard University, 2013

PUBLICATIONS

Xiuye Chen & Florian Engert

"Navigational strategies underlying phototaxis in larval zebrafish." ([link](#))

Front. Syst. Neurosci. 2014;8(March):1–13.

Jing Yan*, Lifeng Pan*, **Xiuye Chen**, Lin Wu, Mingjie Zhang

“The structure of the harmonin/sans complex reveals an unexpected interaction mode of the two Usher syndrome proteins.”

Proc Natl Acad Sci U S A. 2010 Mar 2;107(9):4040-5.

PRESENTATIONS

Xiuye Chen, Yu Mu, Yu Hu, Jason Wittenbach, Jeremy Freeman, Florian Engert, Misha Ahrens, “Brain-wide mapping of functional neuron groups in larval zebrafish.”

- Poster presented at Janelia Conference “Emerging Tools for Acquisition and Interpretation of Whole-Brain Functional Data”, Nov 2015.
- Poster presented at Society for Neuroscience Annual Meeting, Oct 2015.

Xiuye Chen, “Exploratory analysis of whole-brain functional imaging data in larval zebrafish in the context of phototaxis.”

- Seminar given at the Center for Brain Science, Harvard, Apr 2015.

Xiuye Chen & Florian Engert, “History-dependent turning modulation underlies dark avoidance behavior in larval zebrafish.”

- Best Poster Winner at Harvard MCO retreat, May 2013.
- Research talk given at LMU-Harvard Young Scientists' Forum, Munich, July 2013.

Xiuye Chen & Florian Engert, “An efficient strategy for scotophobic behavior in larval zebrafish.”

- Poster presented at Society for Neuroscience Annual Meeting, Oct 2012.
- Research talk given at Harvard MCO retreat, May 2012.

AWARDS

Certificate of Distinction in Teaching, Harvard University, 2014

Swire International Young Fellows Program, HKUST, 2005-2009

- Full scholarship covering tuition and living expenses

TEACHING EXPERIENCE

Teaching Fellow, Harvard University:

Life Sciences 100: **Experimental Research in the Life Sciences**, Spring 2011/2013/2014/2015

MCB 80: **Neurobiology of Behavior**, Fall 2012

Life Sciences 1A: **An Integrated Introduction to the Life Sciences**, Fall 2010/2014

EXTRACURRICULAR EXPERIENCES & SKILLS

Co-chair, Harvard Graduate Women in Science and Engineering, 2013-2014

Clarinet/board member, Dudley House Orchestra, Harvard University, 2011-2015

Languages (native/full professional proficiency): English, Chinese, German

Programming: MATLAB, C#