

Objective

I'm an **aspiring neural engineer** with a background in academic research who is seeking to gain experience in **nonlinear dynamical modeling of neural systems** & biomedical **hardware development** for the emerging **neurotechnology industry**.

Education

Computational Neuroscience (B.S.) Biomedical Engineering Track Honors in Multimedia Scholarship	The University of Southern California Los Angeles, CA	August 2017 — Present GPA: 3.79
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Experience

USC Center for Neural Engineering Undergraduate Researcher	Los Angeles, CA	December 2018 — Present
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- Currently working on Multi-Input Multi-Output (MIMO) and Memory Decoding (MD) nonlinear dynamical models for use in hippocampal prostheses and the functional restoration of memory in those suffering from dementia, TBI, and other neurological impairment.

Contact: Dong Song — dsong@usc.edu

Hires Lab Undergraduate Researcher	Los Angeles, CA	August 2017 — Present
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- Currently managing our machine learning pipeline for the curation of high-speed videography data.
- Designed and assembled novel experimental rigs for object discrimination tasks.
- Trained and performed surgery on mice to prepare for head-fixed discrimination experiments.
- Manually curated high-speed videography data from tactile discrimination experiments.

Contact: Andrew Hires — shires@usc.edu

Publications

Enhancing Biomimetic Model Estimation with Parallel Computing (forthcoming)

Xiwei She, Brian Robinson, Garrett Flynn, Dong Song, Theodore W. Berger

Automatic Curation of Mouse Whisker Contacts using Convolutional Neural Networks (forthcoming)

Jonathan Sy, Garrett Flynn, Samuel Andrew Hires

Accomplishments

USC Provost's First Generation Undergraduate Research Fellowship (2018)

Awarded \$3000 in summer funding for research in Hires Lab.

USC Resident Honors Program (2017)

A highly selective program that allows high school juniors to enter college a year early.

Yale Young Global Scholars (2016)

Created and presented a capstone project on "Nanorobots for Wound Healing" while attending seminars with exceptional high school students from around the world.

Skills

Programming: MATLAB, Python, Tensorflow, Keras

Design: Adobe Suite (Illustrator, InDesign, Premiere, After Effects)