

# Bethany Hung

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## EDUCATION

**Brown University**, Sc.B. Candidate in Cognitive Neuroscience

Expected May 2019

- GPA: 4.0/4.0
- Coursework in neuroscience (structure and systems), cognitive neuroscience, visual perception, statistics, public health, physiology, biochemistry, organic chemistry, physics (mechanics and E&M)

## EXPERIENCE

**Stanford Vision & Neuro-Development Lab + Stanford Health Care** — *Visiting Researcher*

May '17-Aug. '17

- Worked with PI Anthony Norcia and Dr. Jeffrey Goldberg on an SVNDL-SHC collaboration project
- Optimized stimuli for selective activation of two parallel visual pathways, with implications for better glaucoma screening
- Collected EEG data, wrote scripts to perform time- and frequency-domain analysis with Reliable Components Analysis
- Developed & published novel code to analyze phase shifts in the frequency domain (post-discrete Fourier transforms)
- Shadowed Dr. Jeffrey Goldberg at the Byers Eye Institute of Stanford (15h)
- Currently co-authoring a paper on dissociating the ON and OFF pathways of retinal ganglion cells

**Perception, Action, & Cognition Lab at Brown University** — *Undergraduate Student Researcher*

Feb. '17-Present

- Works with PI Joo-Hyun Song
- Designing control task for combining EEG with 2D trajectory reach tasks
- Areas of focus: steady-state visually evoked potential (SSVEP) frequency tagging, visual spatial attention, perceptual crowding
- Runs subjects on a 32-channel Easy Cap EEG system & writes MATLAB scripts for data analysis

**3D Shape Lab at Brown University** — *Undergraduate Student Researcher*

Sept. '15-Present

- Works with PI Fulvio Domini
- Assists in designing novel psychophysical tasks and stimuli to examine human depth perception
- Runs human participants through psychophysical and virtual reality experiments; have run over 100 to date
- Conducting independent study on the intersection of visual crowding and the Ebbinghaus illusion
- Co-authoring a paper on 3D visual cue combination

**Stanford Vision and Neuro-Development Lab** — *Visiting Researcher*

June '16-Aug. '16

- Worked with PI Anthony Norcia
- Designed psychophysical EEG paradigms to assess perceptual bistability (how the same stimulus can give rise to different perceptions) & coherent motion perception
- Wrote MATLAB scripts to process psychophysical and EEG data, featuring customized psychometric functions
- Ran subjects on a 128-channel EGI EEG apparatus

**Phage Hunters (HHMI SEA-PHAGES) at Brown University** — *Student*

Sept. '15-May '16

- Used aseptic technique in wet lab to isolate a novel bacteriophage virus from self-collected soil samples
- Digitally annotated/verified a phage DNA transcript and prepared it for publishing

## LEADERSHIP

**Hack@Brown** — *Outreach Team Lead*

Aug. '16-Present

- Maintains all email and social media presence for Brown's annual hackathon, where 500 participants code for 24 hours
- Serves as the interface between organization and public, with four other team members

**NARAL Pro-Choice Brown University** — *Communications Manager*

Oct. '16-Present

- Designs all visual content (e.g. poster campaigns) and maintains social media presence
- Assisted with authoring Brown's first Bill of Reproductive Rights

**B-SIDE Magazine** — *Creative Director*

Sep. '15-Present

- Editorial board member for College Hill's only music-focused magazine (<http://www.bsidemagazine.org/>)
- Responsible for all visuals (web and print); designed first print zine cover

## SKILLS AND KNOWLEDGE

**Programming languages:** MATLAB, Mathematica, R, HTML/CSS, jQuery, Python

**Digital:** Adobe Photoshop, Adobe Illustrator, SPSS, Microsoft Office Suite

**Hobbies:** nail art, graphic design, & collecting metallic clothing