Jefferey S. **Mentch**

Music and Neuroscience Researcher
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Experience

Massachusetts Institute of Technology, Kanwisher Lab (Dr. Caroline Robertson)
Cambridge, MA

Technical Associate — *Sep. 2017 - Present*

- Developing a VR panoramic real-world eye-tracking experiment to investigate visual salience and attention in autism.
- Recruited and tested autists and control participants for an ongoing binocular rivalry study using head-mounted-displays.
- Coordinating a pharmaceutical study (arbaclofen) investigating the role of GABA in visual perception.

Dartmouth College, Bregman Media Labs (Prof. Michael Casey)
Hanover, NH

Research Assistant, TA, Student — *Sep. 2015 - Sep. 2017*

- Poster presentation at *The Neurosciences and Music VI - Music, Sound and Health* - Boston, MA - Jun. 2017
- Implemented a neural encoding model based stimulus reconstruction framework on the supercomputer cluster applying multivariate pattern analysis to 7T fMRI data (in preparation for publication).

Abington Neurological Associates, Clinical Trial Center (Dr. David Weisman)
Willow Grove, PA

Clinical Research Coordinator — *Sep. 2014 - Aug. 2015*

- Coordinated phase II and phase III clinical trials of investigational drugs for the treatment of Alzheimer's disease.
- Patient care including: patient interviews, dispensing investigational products, collecting lab samples, taking vital signs.

The Pennsylvania State University, Deep Sea Lab (Prof. Charles Fisher)
University Park, PA

Research Assistant — *Jan. 2013 – Aug. 2014*

- Investigated the impact of the 2010 Deepwater Horizon oil spill - Research Cruise - E/V Nautilus, 2014
- Conducted multivariate statistical analysis using Primer and R and digitization of divesite mosaics using ArcGIS.

QuantTera, R&D Microelectronics Company
Scottsdale, AZ

NSF REU intern, Seasonal Research Assistant — *Apr. 2011 - Jan. 2013*

- Investigated novel techniques for semiconductor device wafer bonding and processed and tested semiconductors.
- Technical representative at the 2013 Consumer Electronics Show - Las Vegas, NV

Children's Hospital of Philadelphia, Center for Applied Genomics
Philadelphia, PA

Undergraduate Research Intern — *Summer 2011*

- Used pharmacological inhibitors to delineate Decoy Receptor 3 (DcR3) signaling pathway in EBV transformed cell lines to investigate the proteomics of inflammatory bowel disease.

Education

Dartmouth College
Hanover, NH

Master of Arts, Digital Musics — *June 2017*

- **Thesis Title:** *Stimulus-Model-Based Reconstruction of Naturalistic Music Stimuli from High-Field fMRI*
- Course work including functional magnetic resonance imaging, MVPA, electroencephalography, music information retrieval, data visualization, multi-variate calculus, programming, sonic arts, computer music composition, music production
- TA: Intro to Sonic Arts (*Ashley Fure*), Sonic Space and Form (*Sangwook "Sunny" Nam*), Intro to Sonic Arts (*Clara Latham*)

The Pennsylvania State University
University Park, PA

Bachelor of Science, Biology — *May 2014*

- Minor in Music Technology
- Dean's List, GPA last 2 years: 3.8

Skills

General Software	Python, bash, p5.js, MaxMSP, Adobe Creative Suite, ArcGIS, Logic Pro, Ableton Live, LaTeX
Neuroimaging	PyMVPA, AFNI, FreeSurfer, FSL (actively improving proficiency with these tools)
Biological Assays	Western blot, PCR, ELISA, MTT, cell electroporation, siRNA knockdown
GRE	170/170V, 167/170Q
Languages	English, Spanish