

Julie Lallana Freschl

Developmental and Brain Sciences PhD, University of Massachusetts Boston, 100 Morrissey Blvd., Boston, MA 02125
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Education

University of Massachusetts Boston, Boston, MA 2016-present

PhD Developmental and Brain Sciences; Advisor: Dr. Erik Blaser

University of California, Irvine, Irvine, CA 2011-2015

B.A., Psychology (Cognitive Science)

Awards/Honors

- Graduate Assistantship (Sept. 2016 - Present)
- Alternate for the 2017 Cold Spring Harbor Laboratory course - Vision: A Platform for Linking Circuits, Behavior and Perception
- UMass Boston First Year Fellowship (2016 - 2017)
- Fall 2013 Grant Recipient (UC Irvine Undergraduate Research Opportunities Program)
- Fall 2014 Grant Recipient (UC Irvine Undergraduate Research Opportunities Program)
- Deans Honor List (Spring 2013, Winter 2014, Spring 2014, Fall 2014, Winter 2015, Spring 2015)

Skills

- MATLAB Programming, R (Statistical Analysis), SPSS, EMSE Software - Cortech Solutions (EEG analysis), BrainVoyager (fMRI analysis), Tobii eye tracker system (Tobii Studio), Administering Mullen Scales of Early Learning (in training)

Graduate Courses

- Computational Methods: Matlab Programming, Physiological Methods in Neuroscience, Advanced Statistics, Cognitive Neuroscience, Behavioral Neuroscience, Developmental Cognitive Neuroscience, Current Literature Seminar

Memberships

- Society for Neuroscience (2015- 2017)
- International Congress of Infant Studies
- Vision Sciences Society

Grants

- 2017 Dr. Robert W. Spayne Research Grant
- *Under Review*: NSF Graduate Research Fellowships Program (GRFP)

Presentations

Freschl, J.L., Melcher, D., Kaldy, Z., Blaser, E. (2018), Visual temporal integration windows are adult-like in typically developing 5-7 year old children. Poster to be presented at the Vision Science Society Conference. May, 2018, St. Pete Beach, Florida

Freschl, J.L., Melcher, D., Carter AS., Kaldy, Z., Blaser, E. (2018), Visual Temporal Integration Windows are longer in 2-year-old toddlers with ASD. Poster to be presented at the International Congress of Infant Studies, June 30-July 3, 2018, Philadelphia, Pennsylvania

Freschl, J.L., Maniar A., Shah A., Patterson, J.V., Bunney, W.E. Acoustic startle response in patients with schizophrenia and bipolar disorder. *Program No. 227.05. 2015 Neuroscience Meeting. Chicago, IL: Society for Neuroscience, 2015. Online*

Freschl, J.L., Maniar A., Shah A., Patterson, J.V., Bunney, W.E. (2015). Acoustic startle response in patients with schizophrenia and bipolar disorder. *Poster Presentation: Undergraduate Research Opportunities Program 22nd Annual Symposium '15, Irvine, CA*

Freschl, J.L., Chow, M., Tran, T., Patterson, J.V., Bunney, W.E.(2014). The effect of continuous background noise on P50, P200, and N100 evoked brain potentials in schizophrenia and bipolar disorder. *Poster Presentation: Undergraduate Research Opportunities Program 21st Annual Symposium '14, Irvine, CA*

Conference Publications

Freschl, J.L., Maniar A., Shah A., Patterson, J.V. Acoustic startle response in patients with schizophrenia and bipolar disorder. *Program No. 227.05.2015 Neuroscience Meeting. Chicago, IL: Society for Neuroscience, 2015. Online*

Research Experience

University of Massachusetts Boston

9/2016-present

Developmental and Brain Sciences, PhD

Graduate Student

Advisor: Dr. Erik Blaser

- Investigating visual temporal processing across development: measuring temporal integration windows in typically developing children (18-36-months; 5-7-years) and toddlers diagnosed with autism spectrum disorder (18-36-months)

University of California, Irvine Dept. of Cognitive Sciences

5/2015- 8/2016

Visual Perception and Neuroimaging Lab

Research Assistant

Advisor: Dr. Emily D. Grossman

- Extensive training in neuroimaging techniques, specifically fMRI: processed and analyzed fMRI data using BrainVoyager.
- Designed and programmed a memory experiment (n back task and digit span) to measure working memory capacity in blind and sighted individuals using MATLAB

University of California, Irvine Dept. of Cognitive Sciences

1/2015- 5/2016

Research Assistant

Advisor: Dr. Bruce G. Berg

- Focused on the psychophysics of complex sounds, utilizing computational models of complex sounds
- Analyzed perceptual dichotic, diotic, and binaural data using MATLAB, R, SPSS
- Evaluated and summarized relevant research articles targeting sound perception, speech recognition, and computational models of hearing

University of California, Irvine Dept. of Psychiatry

6/2015- 8/2016

UC Irvine Neuropsychiatric Center

Junior Specialist

Advisor: Dr. Julie V. Patterson

- Trained undergraduate research assistants in EEG set up, analysis, data input, and running MATLAB visual experiment
- Analyzed electromyography (EMG) data
- Measured the prepulse inhibition and startle habituation levels in patients with schizophrenia and bipolar disorder using EMSE data editor

University of California, Irvine Dept. of Psychiatry

6/2013- 6/ 2015

UC Irvine Neuropsychiatric Center

Research Assistant

Advisor: Dr. Julie V. Patterson

- Worked directly with patients with bipolar I disorder, schizophrenia, and patients diagnosed with major depressive disorder
- Experienced in performing and setting up EEG tests
- Processed and analyzed EEG data of patients with schizophrenia, bipolar disorder, healthy controls, and first-degree relatives using EMSE suite software by Source Imaging Incorporated
- Administered SCID
- Administered CMINDS (Computerized Multiphasic Interactive Neurocognitive Dual Display): computer-interfaced program that measures cognitive processes (e.g. working memory)
- Analyzed data using NCSS Statistical Software

UC Irvine Undergraduate Research Opportunities Program (UROP)

9/2014-5/2015

Dept. of Psychiatry

Advisor: Dr. Julie V. Patterson

- Conducted a student driven research project
- Project Title: Acoustic Startle Response in Patients with Schizophrenia and Bipolar Disorder
- Analyzed EOG data of patients with schizophrenia, bipolar disorder, healthy controls, and first-degree relatives
- Investigated the acoustic startle response as a potential biomarker, measuring peak amplitudes of patients and controls
- Presented the completed project at UC Irvine's 22nd Annual Poster Presentation (May 2015)

UC Irvine Undergraduate Research Opportunities Program (UROP)

9/2013-5/2014 **Dept. of Psychiatry**

Advisor: Dr. Julie V. Patterson

- Student driven research project
- Proposal: "The Effect of Continuous Background Noise on P50 and P200 Evoked Brain Potentials in Schizophrenia and Bipolar Disorder"
- Responsible for setting up and performing EEG tests, as well as analyzing the data using EMSE suite software.
- Composed grand averages out of the tone alone (TA) and tone in noise (TIN) responses of individuals with schizophrenia, bipolar I disorder, and controls.
- Presented the completed project at UC Irvine's 21st Annual Poster Presentation (May 2014)

University of California, Irvine Dept. of Ecology and Evolution

2011- 2012

Rose Lab

Research Assistant

Advisor: Dr. Michael Rose

- Drosophila Melanogaster lab
- Performing analysis of the species' heart performance through a shocking mechanism
- Member of the Data Analysis Team
- Collecting data involving the fecundity of female fruit flies

Clinical Experience

Novata Behavioral Health

3/2014- 6/2015

Behavioral Tutor

- Provided in home, Applied Behavioral Analysis (ABA), to children with autism spectrum disorder (ASD) (ages 3-6)
- Completed extensive training in behavioral therapy techniques: Discrete Trial Training (DTT), functional behavior analysis, and Pivotal Response Treatment (PRT)
- Worked closely with case supervisor in creating behavior goal sheets
- Implemented goals specific to each child
- Assisted in parent training
- Assessing connection between specific behavior and the child's environment

MendAbility- Sensory Enrichment Therapy

10/

2013- 6/2015

Volunteer

- Clinically validated home-based autism therapy
- Based on a previous study done by Dr. Michael Leon, Associate Dean of Biological Sciences at UC Irvine
- Meeting twice a week, performing activities that involve all the senses
- Utilizing auditory, visual, aromatic, and touch stimuli

CampCare Nevada Counselor

7/2013

Volunteer

- Counselor for a camp involving individuals with cognitive and genetic disorders
- Assisted individuals with Down Syndrome, autism spectrum disorder, and epilepsy