

# Joselyn Ho

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## Research Interests

Music perception, Auditory perception, Speech prosody

## Education

- 2016 – 2021 **Ph.D., Cognitive Science**, *University of California, Irvine*.  
(expected) Advisors: Charles Chubb and Greg Hickok
- 2016 – 2019 **M.S., Cognitive Neuroscience**, *University of California, Irvine*, GPA: 4.0.
- 2012 – 2016 **B.S., Cognitive Science**, *University of California, Los Angeles*, GPA: 3.65.  
Minor: Neuroscience, Specialization in Computing  
Honors Thesis: Associative Mismatch Novelty with Music (Advisor: Jesse Rissman)

## Awards and Honors

- 2021 **Associate Dean Fellowship**, *UC Irvine*.
- 2018 – 2020 **Pre-Doctoral Training Grant**, *UC Irvine Center for Hearing Research*.
- 2019 **Research Travel Grant**, *UC Irvine Associated Graduate Students*.
- 2016 **\$5000 Rapid Grant Award**, *University of California Music Experience Research Community Initiative*.
- 2015 – 2016 **Psychology Departmental Honors Program**, *UCLA*.
- 2015 – 2016 **Deans Honors**, *UCLA*, Spring-Fall 2015 & Winter-Spring 2016.
- 2012 – 2016 **Regents Scholarship**, *UCLA*.

## Publications

- **Ho, J.**, Hickok, G., & Chubb, C. (in prep). Musical Mode Sensitivity Predicts Sensitivity to Speech Independently of Musical Training.
- **Ho, J.** & Chubb, C. (2020). How rests and cyclic sequences influence performance in tone-scramble tasks. *The Journal of the Acoustical Society of America*, 147(6), 3859-3870. <http://bit.ly/HoChubb2020>
- Bufford, C. A., Thai, K. P., **Ho, J.**, Xiong, C., Hines, C. A., & Kellman, P. J. (2016). Perceptual Learning of Abstract Musical Patterns: Recognizing Composer Style. *Proceedings of the 14th International Conference on Music Perception and Cognition*, 8-12. <http://bit.ly/Bufferd2016>

## Conference Presentations

- **Ho, J.** & Chubb, C. (2021, May). Musical Scale-Sensitivity Predicts Sensitivity to Speech Prosody Independently of Musical Training. Talk to be presented at the Expression, Language, & Music Conference, Hartford, CT.
- **Ho, J.** (2019, Sept). The influence of rhythmic and sequential structure on musical scale-sensitivity. Talk presented at the So Cal Hearing Conference, Irvine, CA. <http://bit.ly/Ho2019socalhearing>
- **Ho, J.** & Chubb, C. (2019, Aug). The influence of rhythmic and sequential structure on classifying major vs. minor tone-scrambles. Poster presented at the Biennial Meeting of the Society for Music Perception and Cognition, New York City, NY. <https://osf.io/k3xp4/>

- **Ho, J.**, Hickok, G., & Chubb, C. (2018, Nov). Musical sensitivity correlates with pitch production ability in speech. Poster presented at the 59th Annual Meeting of the Psychonomic Society, New Orleans, LA. 📄 <http://bit.ly/HoHickokChubb2018>
- **Ho, J.** & Chubb, C. (2017, July). Modeling the effect of scale impurities on tonality perception. Poster presented at the Society for Music Perception and Cognition Conference, San Diego, CA. 📄 <http://bit.ly/HoChubb2017>
- Bufford, C. A., Thai, K. P., **Ho, J.**, Xiong, C., Hines, C. A., & Kellman, P. J. (2016, July). Perceptual Learning of Abstract Musical Patterns: Recognizing Composer Style. Poster presented at the 14th International Conference on Music Perception and Cognition, San Francisco, CA. 📄 <http://bit.ly/Bufferd2016poster>
- Hines, C. A., **Ho, J.**, Xiong, C., Bufford, C., Thai, K. P., & Kellman, P. J. (2016, May). Perceptual Learning Intervention Improved Abstract Musical Pattern Recognition. Poster presented at the UCLA Psychology Undergraduate Research Conference, Los Angeles, CA.
- **Ho, J.**, Xiong, C., Bufford, C., Thai, K. P., Chun, J., & Kellman, P. J. (2015, May). Perceptual Learning of Musical Abstract Patterns. Poster presented at the UCLA Psychology Undergraduate Research Conference, Los Angeles, CA, and the Stanford Undergraduate Psychology Conference, Stanford, CA.
- **Ho, J.**, Shiboski, E. M., Xiong, C. Y., Bufford, C., Thai, K. P., & Kellman, P. J. (2014, May). Perceptual Learning of Abstract Patterns in Music. Poster presented at the Stanford Undergraduate Psychology Conference, Stanford, CA, and the Berkeley Interdisciplinary Research Conference, Berkeley, CA.

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## Research Experience

- Sept 2016 – present **Graduate Student Researcher**, *UC Irvine*, Chubb-Wright Perception Lab (PI: Charles Chubb), Auditory & Language Neuroscience Lab (PI: Greg Hickok).  
Use techniques in psychophysics, statistical modeling, and time-series analyses of neural data from EEG to investigate the following topics:
  - How listeners perceive musical mode
  - Whether musical scale-sensitivity can predict sensitivity to pitch patterns in speech
  - Musical scale-sensitivity and emotion perception in individuals with autism spectrum disorder
- April 2015 – **Research Assistant**, *UCLA*, Rissman Memory Lab (PI: Jesse Rissman).  
June 2016 Conducted an honors thesis project to study the influence of mismatch on memory for audiovisual stimuli. When images are presented alongside melodies, the memory of an image is slightly enhanced when the image is presented with a new melody, compared to when the image is presented with the originally-paired melody.
- Sept 2013 – **Research Assistant**, *UCLA*, Human Perception Lab (PI: Philip Kellman).  
June 2016 Designed and conducted psychophysical experiments to develop perceptual learning-based technology that trains listeners to recognize abstract patterns in algebra and musical composer styles. Demonstrated that perceptual learning-based interventions can effectively accelerate expertise in complex visual and auditory domains.
- April 2014 – **Research Assistant**, *UCLA*, Memory and Lifespan Cognition Lab (PI: Alan Castel).  
Dec 2014 Contributed to projects showing that people tend to identify highly ubiquitous images (e.g., popular logos) incorrectly and with overconfidence, possibly because of attentional saturation.
- April 2013 – **Research Assistant**, *UCLA*, Social Cognitive Neuroscience Lab (PI: Matthew Lieberman).  
June 2013 Contributed to a neuroimaging project that identified the roles of neurocognitive systems during social cognitive processes, such as perspective-taking.

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## Work Experience

July 2018 – **Data Science Intern**, *Northrop Grumman*, Albuquerque, New Mexico.

- Sept 2018
- Threat perception research: Designed, ran, and analyzed a Unity-based experiment to compare the influence of different auditory stressors on threat assessment.
  - Data analysis: Ran statistical tests on large datasets and created visualizations with R.
  - Biometrics research: Designed experiments to record and analyze physiological data under various degrees of stress.

## Teaching Experience

### University of California, Irvine.

Summer I 2020	Instructor	Cognitive Neuroscience
Summer II 2019	Teaching Assistant	Intro to Psychology
Summer II 2018	Teaching Assistant	Intro to Psychology
Spring 2018	Teaching Assistant	Adolescent Psychology
Winter 2018	Teaching Assistant	Intro to Human Memory
Fall 2017	Teaching Assistant	Research Methods in Psychology
Spring 2017	Teaching Assistant	Adolescent Psychology
Winter 2017	Teaching Assistant	Intro to Psychology
Fall 2016	Teaching Assistant	Intro to Psychology

### Johns Hopkins Center for Talented Youth, *Saratoga Springs, NY & Los Angeles, CA.*

Summer I, II 2016	Teaching Assistant	Cognitive Psychology
Summer I 2015	Teaching Assistant	Cognitive Psychology

### University of California, Los Angeles.

Winter 2015	Teaching Assistant	Intro to Psychology
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## Technical Skills

### Research and Analyses

Auditory perception	Statistical modeling	Signal detection analysis
Psychophysical experiments	Time series analysis	

### Programming

Matlab	Python	C#/Unity	PHP	L <sup>A</sup> T <sub>E</sub> X
R	C++	Javascript	HTML/CSS	Praat

## Workshops

Aug 2017 **Functional Magnetic Resonance Imaging Methods and Data Analyses**, *University of Michigan*, sponsored by NIH.

## Leadership and Outreach

### Seminars Organized

March 3, 2020 Laura Dilley (Michigan State University), "Spoken language understanding as inference about prosodic units over noisy accumulated evidence," UC Irvine Center for Hearing Research Seminar Series.

April 2, 2019 Assal Habibi (University of Southern California), "The Brain's Crescendo: How Music Training Impacts Child Development," UC Irvine Center for Hearing Research Seminar Series.

### **Mentorship of Undergraduate Independent Research**

2018 – 2019 Melissa Huynh, Suyeon Hwang – "Assessing emotional processing in people with Autism Spectrum Disorder"

2018 – 2019 Olivia Capizzi, Nellie Kwang, Luis Zambrano – "Harmonic Structure and the Discrimination of Major & Minor Modes"

2018 Karen Gonzalez, Elvira Lopez, Nguyen Pham – "Pitch Discrimination in Tone Sequences and Speech Production" (symposium poster)

### **Campus Organizations**

2019 – 2021 **Ambassador**, *Center for the Neurobiology of Learning and Memory at UC Irvine.*

2015 – 2016 **President**, *Cognitive Science Student Association at UCLA.*

2013 – 2015 **Corporate Relations Director**, *Regents Scholar Society at UCLA.*

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### **Professional Memberships**

Society for Music Perception and Cognition