

Natalia Vélez

37 Angell Ct. Apt. #220
Stanford, CA 94305

nvelez@stanford.edu
(787) 587-0501

Education

Stanford University 2014–
Ph.D. Student in Developmental Psychology Advisor: Dr. Hyowon Gweon

Massachusetts Institute of Technology 2010–2014
B.S. in Brain & Cognitive Sciences

Research experience

Stanford Social Learning Laboratory Aug. 2014–
PI: Dr. Hyowon Gweon

- Currently investigating how neural representations of costs and benefits are integrated when evaluating or choosing to carry out prosocial actions
- Currently developing an in-house toolkit for fMRI studies, including protocols, data management tools, and original Matlab wrapper scripts for FSL and SPM
- Designed, published, and currently maintain the Social Learning Lab website and logo

MIT Social Cognitive Neuroscience Laboratory Various dates
PI: Dr. Rebecca Saxe

Representations of beliefs in mentalizing regions June 2013–June 2014

- Investigated how abstract features of other people's beliefs, such as the reliability and perceptual source of their knowledge, are encoded in brain regions involved in Theory of Mind
- Helped create a set of original children's stories to use as stimuli, then tested the stories through behavioral experiments with children at the Boston Children's Museum and ratings on mTurk
- Created original scripts in MATLAB and Python for behavioral tests and data analysis
- Worked with a team of researchers to collect and analyze adult fMRI data
- Recruited participants, coordinated team schedules, and assisted in collecting and analyzing data for an fMRI study with typically developing children aged 7-12

Cross-cultural conflict interventions August 2010–June 2011

- Traveled to Phoenix, AZ with a small research team to interview Mexican immigrants and non-Hispanic Americans as part of a study on the effects of experimental interventions on cross-cultural empathy
- Helped prepare materials for the study, including recruiting and scheduling confederates, preparing questionnaires in Spanish, and translating data to English
- Interviewed and collected data from 76 Mexican immigrants over the span of one month

MIT Littleton Laboratory Jan. 2012–June 2013
PI: Dr. J. Troy Littleton

- Conducted a forward genetic screen for suppressors of Huntington's disease pathogenesis in *Drosophila* models
- Used techniques from molecular biology to quantify the effects of the strongest candidate suppressors on Huntingtin gene expression, protein levels, and disease phenotype

ESPCI-ParisTech June 2012–Aug. 2012
PI: Dr. Zsolt Lenkei

- Investigated how exposure to cannabinoids affects cannabinoid receptor 1 (CB1) distribution and neuronal connectivity in mammalian cell cultures and mouse models, respectively
- Traced intercellular CB1 trafficking using FRET probes and video microscopy

- Used immunohistochemistry techniques to analyze long-term structural remodeling in mouse brains with abnormal levels of CB1 activity

MIT Wexler lab/Normal Language Lab

May 2011–August 2011

PI: Dr. Kenneth Wexler

- Studied the linguistic development of children with ASD using a battery of language assessment tests, including PPVT and TROG

Teaching & mentorship experience

Stanford Splash

Various dates

Designed and co-taught 2-hour lectures for groups of 25 high school students, introducing them to various topics within cognitive neuroscience and developmental psychology:

The Social Brain

Spring 2015

Why Babies Are Little Scientists

Fall 2015

MIT Associate Advisor

August 2013–June 2014

- Advised a group of 8 freshmen throughout their first year at MIT
- Helped coordinate a weekly advising seminar, kept track of advisees' academic progress and personal wellbeing, and held study breaks for freshmen
- Proposed and helped organize a series of dorm-wide workshops on essential college skills, such as cooking, choosing a major, and seeking an undergraduate research position

MIT Educational Studies Program

Various dates

Introduction to Neuroscience

June 2013–August 2013

- Taught a 50-hour, intensive introductory course in neuroscience for 15 high school students
- Designed the curriculum for the course and worked closely with other members of the Educational Studies Program to polish teaching style and develop hands-on activities
- Guided students through independent study in their preferred subfield of neuroscience by selecting individualized study materials, discussing journal articles critically in class, and providing one-on-one consultation beyond the classroom

Sensation and Perception

January 2013–June 2013

- Taught a 6-week, 12-hour course on the neural bases of perception for 10 high school students
- Designed hands-on activities for each class, including guiding a miracle berry tasting, curating auditory and visual illusions, and building a miniature Ames room
- Provided guidance outside of the classroom for students seeking research experience and interested in learning more about cognitive neuroscience

Students advised

Chelsey Pan

January 2014-present

Awards & Fellowships

CNI Innovation Seed Grant

2015

NSF Graduate Research Fellowship

2015

Stanford EDGE-SBE Fellowship

2014

MIT Hans-Lukas Teuber Award for Outstanding Academics

2014

MIT Undergraduate Research Opportunities Program (UROP) Spotlight

2013

MIT Amgen-UROP Scholar

2013

National Merit Scholar

2010