

Yuan Chang Leong – CV

- CONTACT INFORMATION 450 Serra Mall, Jordan Hall
Stanford University
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Website: <https://ycleong.github.io>
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- EDUCATION **Stanford University**, Stanford, CA
Ph.D. candidate, Psychology June 2019
Advised by: Jamil Zaki, Ph.D. (Expected)
Dissertation: *Bias in the brain – Neurocomputational mechanisms underlying expectancy and motivational influences on information processing*
- Princeton University**, Princeton, NJ
A.B., Psychology, *Summa Cum Laude* June 2013
Certificate in Quantitative and Computational Neuroscience, Highest Honors
Advised by: Yael Niv, Ph.D.
Thesis: *Learning what's relevant in a largely irrelevant world – The role of selective attention in learning*
- AWARDS AND FELLOWSHIPS
Stanford Mind, Brain and Cognition Graduate Training Fellowship, 2018
Organization of Human Brain Mapping: Merit Abstract Award, 2018
Stanford University Bio-X Travel Award, 2018
Social and Affective Neuroscience Society Annual Meeting Poster Award, 2017
Zimbardo Teaching Prize, 2016
John Brinster'43 Neuroscience Senior Thesis Prize, 2013
Outstanding Academic Achievement in Neuroscience, 2013
Howard Crosby Warren Award for Psychology (Seniors), 2013
Phi Beta Kappa, elected to Princeton Chapter, 2013
Sigma Xi, elected to Princeton Chapter, 2013
Society for Neuroscience Undergraduate Student Travel Award, 2012
Howard Crosby Warren Award for Psychology (Juniors), 2012
- JOURNAL ARTICLES (* Equal author contribution)
- Leong, Y.C.**, Hughes, B., Yiyu Wang & Zaki, J. (under review). Neurocomputational mechanisms underlying motivated seeing. Preprint available on *bioRxiv*.
- Morelli, S.*, **Leong, Y.C.***, Carlson R., Kullar M. & Zaki, J. (*in press*). Neural detection of socially valued community members. *Proceedings of the National Academy of Sciences*.
- Leong, Y.C.** & Zaki, J. (2018). Unrealistic optimism in advice taking: A computational account. *Journal of Experimental Psychology: General*, 147(2), 170.
- Leong, Y. C.***, Radulescu, A.* , Daniel, R., DeWoskin, V., & Niv, Y. (2017). Dynamic interaction between reinforcement learning and attention in multidimensional environments. *Neuron*, 93(2), 451-463.
- Chen, J.*, **Leong, Y.C.***, Honey, C., Yong, C.H., Norman, K.A. & Hasson, U. (2017). Shared experience and shared memory reveal a common structure for brain activity during natural recall. *Nature Neuroscience*, 20(1), 115-125.
- Zadbood A., Chen J., **Leong, Y.C.**, Norman, K.A., Hasson U. (2017). How we transmit memories to other brains: constructing shared neural representations via communication. *Cerebral Cortex*. 27(10), 4988-5000.
- Niv, Y., Daniel, R., Geana, A., Gershman, S.J., **Leong, Y.C.** & Wilson, R.C. (2015). Reinforcement learning in multidimensional environments relies on attention mechanisms. *The Journal of Neuroscience*, 35(21), 8145-8157.
- Johnson-Laird, P.N., Kang, O.E. & **Leong, Y.C.** (2012). On musical dissonance. *Music Perception:*

An Interdisciplinary Journal, 30(1), 19-35

PEER-REVIEWED
CONFERENCE
PROCEEDINGS

Velez, N.*, **Leong, Y.C.***, Pan, C., Zaki, J. & Gweon, H. (2016). Learning and making novel predictions about others' preferences, *37th Annual Conference of the Cognitive Science Society, Philadelphia*.

Leong, Y.C. & Niv, Y. (2013). Human reinforcement learning processes act on learned attentionally-filtered representations of the world, *1st Multidisciplinary Conference on Reinforcement Learning and Decision Making, Princeton, NJ*.

Daniel, R., DeWoskin, V., **Leong, Y.C.**, Radulescu, A. & Niv, Y. (2013) Humans employ selective attention when learning in complex environments: evidence from computational modeling and neuroimaging, *1st Multidisciplinary Conference on Reinforcement Learning and Decision Making, Princeton, NJ*

INVITED TALKS

Neurocomputational mechanisms underlying motivated seeing (2018), Affective Brain Lab Seminar Series, University College London, London, United Kingdom (Skype)

Dynamic modulation of attention during decision-making (2018), National Institutes of Health, Bethesda, MD

Dynamic modulation of attention during decision-making (2017), Johns Hopkins University, Baltimore, MD

Neural prediction of social support hubs in emerging social networks (2017), Langfeld Conference: From micro-level cognitive phenomena to large-scale social dynamics, Princeton, NJ

Optimism bias in advice-taking: A computational account (2017), Stanford-Berkeley-Davis Social and Affective Area Talks, UC Berkeley, Berkeley, CA

Learning what's relevant in a largely irrelevant world (2013). Barbados Workshop in Reinforcement Learning: Planning in Reinforcement Learning, Holetown, Barbados.

CONFERENCE TALKS

Neurocomputational mechanisms underlying motivated seeing (2018), Bay Area Affective Science Annual Meeting, Stanford, CA

Neurocomputational mechanisms underlying motivational biases in perceptual decision-making (2018), Organization of Human Brain Mapping Annual Meeting, Singapore

Shared patterns of neural activity during narrative recall reveal shared structure in memory representations across individuals (2018), Association for Psychological Science Annual Convention, San Francisco, CA

Neurocomputational mechanisms underlying motivated seeing (2018), Social and Affective Neuroscience Society Meeting, New York, NY.

Neural detection of socially-valued community members (2017). Neural detection of socially-valued community members, Society for Neuroscience Annual Meeting, DC.

Inflated perception of expertise: A computational account (2017). Society for Personality and Social Psychology Annual Meeting, San Antonio, TX

Dynamic interaction between reinforcement learning and attention in multidimensional environments (2015). Interdisciplinary Symposium on Decision Neuroscience, Boston, MA

Dynamic interaction between reinforcement learning and attention in multidimensional environments (2014). Manhattan Area Memory Meeting, New York City, NY

ORGANIZED
SYMPOSIA

First Impressions: When Are They Updated? When Are They Maintained? (2017) Society for Personality and Social Psychology, San Antonio, TX (Co-chair: Jack Cao)

CONFERENCE
POSTERS

Leong, Y.C., Hughes, B., Y. Wang & Zaki, J. (2018) Neurocomputational mechanisms underlying motivational biases in perceptual decision-making. *Organization of Human Brain Mapping*

Annual Meeting, Singapore (Merit Abstract Award)

Leong, Y.C., Hughes, B. & Zaki, J. (2017) Seeing what we want to see: Motivation shapes perceptual judgments and category-selective activity in the ventral visual stream. *Social and Affective Neuroscience Society Annual Meeting, Los Angeles, CA (Poster Award)*

Leong, Y.C., Morelli, S., Carlson, R., Kullar M. & Zaki, J. (2017) Neural Prediction of Social Support Hubs in Emerging Social Networks. *Social and Affective Neuroscience Society Annual Meeting, Los Angeles, CA*

Leong, Y.C., Hughes, B. & Zaki, J. (2016) Seeing what we want to see: Motivation shapes perceptual judgments and category-selective activity in the ventral visual stream. *Society for Neuroscience Annual Meeting, San Diego, CA*

Leong, Y.C. & Zaki, J. (2016). Excessive optimism when evaluating and following advice. *Society of Personality and Social Psychology Annual Meeting, San Diego, CA*

Leong, Y.C., Radulescu, A., Daniel, R. & Niv, Y. (2015). Computation and update of neural value signals are biased by attention in a multidimensional decision-making task. *Cognitive Neuroscience Society Annual Meeting, San Francisco, CA*

Leong, Y., Radulescu, A., Daniel, R. & Niv, Y. (2014). Behavioral and neural correlates of attention control during reinforcement learning. *Cognitive Neuroscience Society Annual Meeting, Boston, MA*

Leong, Y. & Niv, Y. (2012). The role of selective attention in learning. *Society for Neuroscience Annual Meeting, New Orleans, LA (SfN Undergraduate Travel Award)*

RESEARCH AND
TRAINING GRANTS

Stanford Center for Cognitive and Neurobiological Imaging Seed Grant, 2018

Stanford Center for Cognitive and Neurobiological Imaging Seed Grant, 2016

Nancy J. Newman, MD'78 & Valerie Biousse, MD Award for Neuroscience, 2012

Quantitative and Computational Neuroscience Training Grant, 2012

TRAINING
EXPERIENCES

Visiting Graduate Scholar, Johns Hopkins University, 2018

Summer School in Social Neuroscience and Neuroeconomics, Duke University, 2018

SRNDA-Stanford Center for Reproducible Neuroscience Better Science Workshop, UCLA, 2017

Shanghai Neuroeconomics Collective Summer School, NYU-Shanghai, 2015

Summer Workshop in Computational Social Science, Stanford University, 2014

Cognitive Science Undergraduate Summer Workshop, University of Pennsylvania, 2012

Princeton Neuroscience Institute Summer Research Program, Princeton University, 2011

TEACHING

Teaching Assistant, Introduction to Statistical Methods, 2018

Teaching Assistant, Judgment and Decision-Making, 2016

Teaching Assistant, Introduction to Perception, 2016

Teaching Fellow, Psychology One, 2015-2016

OUTREACH AND
DEPARTMENTAL
SERVICE

Graduate student mentor for Society for Personality and Social Psychology Summer Program for Undergraduate Research, 2018

Panelist for Paths to PhD outreach program for prospective students from underrepresented backgrounds, 2017

Organizer for the workshop "A primer to computational modeling in psychology and neuroscience"

at the Stanford Undergraduate Psychology Research Conference , 2016

Graduate student mentor for Stanford Summer Research Early Identification Program, 2016

Co-organizer for R Bootcamp for summer interns, 2016-2017

Co-organizer for Affective Science Seminar, 2015-2016

Stanford graduate admissions committee, 2015-2016

Student representative (Cohort of 2014), 2014-present

UNDERGRADUATE
ADVISING

Samantha Kargilis, B.S. candidate in Human Biology, Stanford University (2017-present)

Yiyu Wang, incoming Ph.D. candidate in Psychology, Northeastern University (2017-2018)

Courtney Gao, B.S. candidate in Human Biology, Stanford University (2017)

Deshawn Sambrano, Ph.D. candidate in Psychology, New York University (2016)

Elizabeth Frankel, B.A. candidate in Linguistics, Stanford University (2016)

Derek Kincade, B.A. in Psychology, Stanford University (2014-2017)

Chelsey Pan, B.A. in Psychology, Stanford University (2014-2018)

HIGH SCHOOL
ADVISING

Hanxi Zeng, B.S. candidate in Civil Engineering, UC Irvine (2016)

Xiaochen Du, B.S. candidate in Chemistry, Duke University (2015)

TECHNICAL SKILLS

Matlab, R, Web programming (Javascript, HTML, CSS), Shell scripting, Python

FSL, Nilearn, PyMVPA Toolbox, Psychophysics toolbox

fMRI analyses: univariate modeling, multivariate classification and regression, intersubject correlation, representational similarity analyses

Trial-by-trial computational modeling, eye-tracking, pupillometry

REFERENCES

Jamil Zaki, Ph.D.,
Assistant Professor
Department of Psychology
Stanford University
Email: jzaki@stanford.edu

Yael Niv, Ph.D.,
Associate Professor
Psychology Department & Princeton Neuroscience Institute
Princeton University
Email: yael@princeton.edu

Janice Chen, Ph.D.
Assistant Professor
Psychological and Brain Sciences
Johns Hopkins University
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Sylvia Morelli, Ph.D.,
Assistant Professor
Department of Psychology
University of Illinois at Chicago
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