

# Yuan Chang Leong

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## Academic History

<b>University of California, Berkeley</b> Postdoctoral Scholar, Helen Wills Neuroscience Institute Advisor: Mark D'Esposito	2019 – present
<b>Stanford University</b> Ph.D., Psychology Advisor: Jamil Zaki	2014 – 2019
<b>Princeton University</b> A.B. Psychology Certificate in Quantitative and Computational Neuroscience Advisor: Yael Niv	2009 – 2013

## Journal Publications

1. **Leong, Y. C.**, Dziembaj, R. & D'Esposito, M. Pupil-linked arousal biases evidence accumulation towards desirable percepts during perceptual decision-making. *Psychological Science*. (accepted)
2. **Leong, Y. C.**, Chen, J., Willer, R. & Zaki, J. Conservative and liberal attitudes drive polarized neural responses to political content. *Proceedings of the National Academy of Sciences*, 117(44), 27731-27739 (2020).
3. **Leong, Y.C.**, Hughes, B., Yiyu Wang & Zaki, J. Neurocomputational mechanisms underlying motivated seeing. *Nature Human Behavior*, 3(9), 962–973 (2019).
4. Morelli, S.\*, **Leong, Y.C.\***, Carlson R., Kullar M. & Zaki, J. Neural detection of socially valued community members. *Proceedings of the National Academy of Sciences*, 115(32), 8149-8154 (2019).
5. **Leong, Y.C.** & Zaki, J. Unrealistic optimism in advice taking: A computational account. *Journal of Experimental Psychology: General*, 147(2), 170 (2018).
6. **Leong, Y. C.\***, Radulescu, A.\*, Daniel, R., DeWoskin, V., & Niv, Y. Dynamic interaction between reinforcement learning and attention in multidimensional environments. *Neuron*, 93(2), 451-463 (2017).
7. Chen, J.\*, **Leong, Y.C.\***, Honey, C., Yong, C.H., Norman, K.A. & Hasson, U. Shared experience and shared memory reveal a common structure for brain activity during natural recall. *Nature Neuroscience*, 20(1), 115-125 (2017).

8. Zadbood A., Chen J., **Leong, Y.C.**, Norman, K.A., Hasson U. How we transmit memories to other brains: constructing shared neural representations via communication. *Cerebral Cortex*. 27(10), 4988-5000 (2017).
9. Niv, Y., Daniel, R., Geana, A., Gershman, S.J., **Leong, Y.C.** & Wilson, R.C. Reinforcement learning in multidimensional environments relies on attention mechanisms. *The Journal of Neuroscience*, 35(21), 8145-8157 (2015).
10. Johnson-Laird, P.N., Kang, O.E. & **Leong, Y.C.** On musical dissonance. *Music Perception: An Interdisciplinary Journal*, 30(1), 19-35 (2012).

\* Denotes equal author contribution

## Preprints

1. Nastase, S. A., Liu, Y. F., Hillman, H., Zadbood, A., Hasenfratz, L., Keshavarzian, N., ... **Leong, Y. C.**, ... & Hasson, U. Narratives: fMRI data for evaluating models of naturalistic language comprehension. *bioRxiv*. (2020)

## Conference Proceedings

1. Velez, N.\*, **Leong, Y.C.\***, Pan, C., Zaki, J. & Gweon, H. Learning and making novel predictions about others' preferences. *37<sup>th</sup> Annual Conference of the Cognitive Science Society* (2016).
2. **Leong, Y.C.** & Niv, Y. Human reinforcement learning processes act on learned attentionally-filtered representations of the world. *1<sup>st</sup> Multidisciplinary Conference on Reinforcement Learning and Decision Making* (2013).
3. Daniel, R., DeWoskin, V., **Leong, Y.C.**, Radulescu, A. & Niv, Y. Humans employ selective attention when learning in complex environments: evidence from computational modeling and neuroimaging. *1<sup>st</sup> Multidisciplinary Conference on Reinforcement Learning and Decision Making* (2013).

## Fellowships and Awards

Social and Affective Neuroscience Society Annual Meeting Poster Award	2020
Stanford Mind, Brain and Cognition Graduate Training Fellowship	2018
Stanford Center for Cognitive and Neurobiological Imaging Seed Grant	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, Stanford University	2016
John Brinster'43 Neuroscience Senior Thesis Prize, Princeton University	2013
Outstanding Academic Achievement in Neuroscience, Princeton University	2013
Howard Crosby Warren Award for Psychology, Princeton University	2013

Society for Neuroscience Undergraduate Student Travel Award	2012
Nancy J. Newman, MD'78 & Valerie Biousse, MD Award for Neuroscience	2012
Quantitative and Computational Neuroscience Training Grant	2012

## **Oral Presentations**

### **Organized symposia**

1. "First Impressions: When Are They Updated? When Are They Maintained?". Society for Personality and Social Psychology Annual Meeting (Co-chair: Jack Cao, 2017).

### **Invited Talks**

1. "Motivated perception: How the brain sees what it wants to see". Mind, Brain, Computation and Technology Seminar, Stanford University (2019).
2. "Neurocomputational mechanisms underlying motivated seeing". Affective Brain Lab Seminar Series, University College London (Skype, 2018).
3. "Dynamic modulation of attention during decision-making". National Institutes of Health (2017).
4. "Dynamic modulation of attention during decision-making". Johns Hopkins University (2017).
5. "Neural prediction of social support hubs in emerging social networks". Langfeld Conference: From micro-level cognitive phenomena to large-scale social dynamics, Princeton University (2017).
6. "Optimism bias in advice-taking: A computational account". Stanford-Berkeley-Davis Social and Affective Area Talks, University of California, Berkeley (2017).
7. "Learning what's relevant in a largely irrelevant world". Barbados Workshop in Reinforcement Learning: Planning in Reinforcement Learning (2013).

### **Conference Talks**

1. "Polarized neural responses to political content are associated with biased assimilation of political information and subsequent attitude change". Society for Neuroeconomics Annual Meeting (2020).
2. "The role of pupil-linked arousal processes in dynamically modulating motivational biases in perceptual decision-making". Reading Emotions Symposium (2020)
3. "Neurocomputational mechanisms underlying motivated seeing". Bay Area Affective Science Meeting (2018).
4. "Neurocomputational mechanisms underlying motivational biases in perceptual decision-making". Organization of Human Brain Mapping Annual Meeting (2018)

5. "Shared patterns of neural activity during narrative recall reveal shared structure in memory representations across individuals". Association for Psychological Science Annual Convention (2018)
6. "Neurocomputational mechanisms underlying motivated seeing". Social and Affective Neuroscience Society Meeting (2018)
7. "Neural detection of socially-valued community members". Society for Neuroscience Annual Meeting (2017).
8. "Inflated perception of expertise: A computational account". Society for Personality and Social Psychology Annual Meeting (2017).
9. "Dynamic interaction between reinforcement learning and attention in multidimensional environments". Interdisciplinary Symposium on Decision Neuroscience (2015).
10. "Dynamic interaction between reinforcement learning and attention in multidimensional environments". Manhattan Area Memory Meeting (2014).

## Teaching

<b>Brain and Decision-Making (Instructor: Brian Knutson)</b> <i>Teaching assistant and guest-lecturer on reward learning</i>	2019
<b>Introduction to Statistical Methods (Instructor: Russell Poldrack)</b> <i>Teaching assistant and guest-lecturer on confidence intervals and effect sizes</i>	2018
<b>Judgment and Decision-Making (Instructor: Russell Poldrack)</b> <i>Teaching assistant and guest-lecturer on reinforcement learning and dopamine</i>	2017
<b>Introduction to Perception (Instructor: Kalanit Grill-Spector)</b> <i>Teaching assistant</i>	2016
<b>Introductory Psychology (Instructor: James Gross, Bridgette Martin-Hard)</b> <i>Teaching assistant (awarded Zimbardo Teaching Prize)</i>	2015-2016

## Outreach and Service

<b>Project SHORT (Student Health Opportunities &amp; Research Training)</b> <i>Mentor for graduate school applications</i>	2020-
<b>Bay Area Society for Neuroscience Youth SfN Symposium</b> <i>Speaker and Panelist</i>	2019

<b>Society for Personality and Social Psychology Summer Program for Undergraduate Research</b> <i>Graduate student mentor</i>	2018
<b>Paths to PhD</b> <i>Outreach program for prospective students from underrepresented backgrounds. Panelist.</i>	2017
<b>Computational modeling workshop, Stanford Undergraduate Psychology Research Conference</b> <i>Instructor</i>	2016
<b>Stanford Summer Research Early Identification Program</b> <i>Graduate student mentor</i>	2016
<b>R Bootcamp for summer interns</b> <i>Co-organizer</i>	2016-2017
<b>Affective Science Seminar Co-Organizer, Stanford University</b> <i>Co-organizer</i>	2015-2016
<b>Student representative, Department of Psychology, Stanford University</b>	2014-2019
<b>Ad Hoc Reviewer</b> <i>Cognitive Science • eLife • Nature Communications • Nature Human Behavior • Neuropsychologia • Philos. Trans. R. Soc. B • Social Cognitive &amp; Affective Neuroscience</i>	
<b>Review Editor</b> <i>Frontiers in Psychiatry – Social Cognition</i>	

## Mentorship

### Senior Thesis Supervision

Samantha Kargilis (*Fulbright Scholar, India*) • Roma Dziejmbaj (*Current MS student*) • Chelsey Pan (*Current PhD student*)

### Leadership Alliance Summer Research Early Identification Program

Deshawn Sambrano (*Current PhD student*)

### Society for Personality and Social Psychology Summer Program for Undergraduate Research

Yvette Lugo

### **Research Supervision**

Yiyu Wang (*Current PhD student*) • Courtney Gao • Elizabeth Frankel • Derek Kincade • Gloria Wong

### **Graduate Applications Advising**

Lavonna Mark • Khai Qing Chua • Alison Li • Sarah Meier • Jiaying Xu (*Current PhD student*)

### **College Applications Advising**

Hanxi Zeng • Xiaochen Du

## **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 Workshop (2017)  
Shanghai Neuroeconomics Collective Summer School (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 (2012)

## **References**

### **1. Mark D'Esposito, M.D.**

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### **2. Jamil Zaki, Ph.D.**

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### **3. Yael Niv, Ph.D.**

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### **4. Janice Chen, Ph.D.**

Assistant Professor  
Department of Psychological  
and Brain Sciences  
Johns Hopkins University  
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