

# Yuan Chang Leong

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## Academic Appointments

<b>University of Chicago</b> Assistant Professor, Department of Psychology	2021 – present
<b>University of California, Berkeley</b> Postdoctoral Scholar, Helen Wills Neuroscience Institute Advisor: Mark D'Esposito, M.D.	2019 – 2021

## Education

<b>Stanford University</b> Ph.D., Psychology Advisor: Jamil Zaki, Ph.D.	2014 – 2019
<b>Princeton University</b> A.B. Psychology, summa cum laude Certificate in Quantitative and Computational Neuroscience Advisor: Yael Niv, Ph.D.	2009 – 2013

## Fellowships and Awards

Neubauer Faculty Development Fellowship	2022
F32 Ruth L. Kirschstein National Research Service Award (NIMH, NIH)	2021
Social and Affective Neuroscience Society Annual Meeting Poster Award	2021
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

## Publications

### Preprints

1. Paterson, R., Lyu, Y. & **Leong, Y. C.** Trial-by-trial fluctuations in amygdala activity track motivational enhancement of desirable sensory evidence during perceptual decision-making. *bioRxiv* (2021)

### Journal Articles

\* Equal author contribution

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. *Scientific Data*. (2021)
2. Rossi-Goldthorpe, R., **Leong, Y. C.**, Leptourgos, P., & Corlett, P. R. A normative account of self-deception, overconfidence, and paranoia. *PLOS Computational Biology*. (2021)
3. **Leong, Y. C.**, Dziembaj, R. & D'Esposito, M. Pupil-linked arousal biases evidence accumulation towards desirable percepts during perceptual decision-making. *Psychological Science*. (2021)
4. **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).
5. **Leong, Y.C.**, Hughes, B., Yiyu Wang & Zaki, J. Neurocomputational mechanisms underlying motivated seeing. *Nature Human Behavior*, 3(9), 962–973 (2019).
6. 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).
7. **Leong, Y.C.** & Zaki, J. Unrealistic optimism in advice taking: A computational account. *Journal of Experimental Psychology: General*, 147(2), 170 (2018).
8. **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).
9. 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).
10. 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).

11. 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).
12. Johnson-Laird, P.N., Kang, O.E. & **Leong, Y.C.** On musical dissonance. *Music Perception: An Interdisciplinary Journal*, 30(1), 19-35 (2012).

### *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).

### **Oral Presentations**

#### *Chaired 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. "An integrative view of motivated cognition". Peking University (2021).
2. "An integrative view of motivated cognition". Social and Personality Brown Bag, University of Illinois at Urbana-Champaign (2021).
3. "An integrative view of motivated cognition". UCLA Brain Mapping Seminar, University of California, Los Angeles (2021).
4. "Motivated perception: How the brain sees what it wants to see". Mind, Brain, Computation and Technology Seminar, Stanford University (2019).
5. "Neurocomputational mechanisms underlying motivated seeing". Affective Brain Lab Seminar Series, University College London (Skype, 2018).
6. "Dynamic modulation of attention during decision-making". National Institutes of Health (2017).
7. "Dynamic modulation of attention during decision-making". Johns Hopkins University (2017).

8. "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).
9. "Optimism bias in advice-taking: A computational account". Stanford-Berkeley-Davis Social and Affective Area Talks, University of California, Berkeley (2017).
10. "Learning what's relevant in a largely irrelevant world". Barbados Workshop in Reinforcement Learning: Planning in Reinforcement Learning (2013).

### *Conference Talks*

1. "Neurocomputational approaches to motivated visual perception". Society for Experimental Social Psychology Annual Meeting (2021).
2. "Threat-related and moral-emotional language drive polarized neural responses between conservatives and liberals watching political videos". Society for Experimental Social Psychology Annual Meeting (2021)
3. "Neural divergence between politically dissimilar individuals viewing real-world political messages". European Society for Cognitive and Affective Neuroscience 2021 Convention (2020).
4. "Polarized neural responses to political content are associated with biased assimilation of political information and subsequent attitude change". Society for Neuroeconomics Annual Meeting (2020).
5. "The role of pupil-linked arousal processes in dynamically modulating motivational biases in perceptual decision-making". Reading Emotions Symposium (2020)
6. "Neurocomputational mechanisms underlying motivated seeing". Bay Area Affective Science Meeting (2018).
7. "Neurocomputational mechanisms underlying motivational biases in perceptual decision-making". Organization of Human Brain Mapping Annual Meeting (2018)
8. "Shared patterns of neural activity during narrative recall reveal shared structure in memory representations across individuals". Association for Psychological Science Annual Convention (2018)
9. "Neurocomputational mechanisms underlying motivated seeing". Social and Affective Neuroscience Society Meeting (2018)
10. "Neural detection of socially-valued community members". Society for Neuroscience Annual Meeting (2017).
11. "Inflated perception of expertise: A computational account". Society for Personality and Social Psychology Annual Meeting (2017).
12. "Dynamic interaction between reinforcement learning and attention in multidimensional environments". Interdisciplinary Symposium on Decision Neuroscience (2015).

13. “Dynamic interaction between reinforcement learning and attention in multidimensional environments”. Manhattan Area Memory Meeting (2014).

## **Advising and Teaching**

### *Master’s Students*

Emily Russell (MA Program in the Social Sciences)  
Zhimei Niu (MA Program in the Social Sciences)

### *Undergraduate and Post-bac Research Assistants*

Ren Paterson (*University of Chicago*)  
Yizhou Lyu (*University of Chicago*)  
Rohan Vencat (*University of Chicago*)  
Samantha Kargilis, BA (*MPhil student at Oxford University*)  
Yiyu Wang, BA (*PhD student in Psychology at Northeastern University*)  
Roma Dzijembaj, MS (*Product Manager, Phil. Inc.*)  
Chelsey Pan, BA (*PhD student in Psychology at USC*)  
Deshawn Sambrano, BA (*PhD in Psychology student at Harvard University*)

### *Graduate Applications Advising*

Lavonna Mark, BA (*PhD student in Neuroscience at Stanford University*)  
Khai Qing Chua, BA  
Alison Li, BA (*PhD student in Psychology at UCSB*)  
Sarah Mier, BA (*PhD student in Psychology at Vanderbilt University*)  
Jiaying Xu (*PhD student in Psychology at UCSD*)

### *Teaching*

Instruction to Social Psychology, Instructor	2021
Brain and Decision-Making, Stanford University, Teaching Assistant	2019
Introduction to Statistical Methods, Stanford University, Teaching Assistant	2018
Judgment and Decision-Making, Stanford University, Teaching Assistant	2017
Introduction to Perception, Stanford University, Teaching Assistant	2017
R Bootcamp, Stanford University	2016
Computational Modeling Workshop, Stanford Undergraduate Psychology Research Conference	2016
Psychology One, Stanford University, Teaching Fellow	2015-2016

## **Professional Service and Activities**

### *Ad Hoc Reviewing*

*Cognitive Science*  
*eLife*  
*Frontiers in Psychiatry – Social Cognition*  
*Nature Communications*  
*Nature Human Behavior*  
*Network Neuroscience*  
*Neuropsychologia*  
*Philos. Trans. R. Soc. B*  
*Science Advances*  
*Social Cognitive & Affective Neuroscience*  
*Journal of Experimental Social Psychology*

#### *University and Departmental Committees*

Affective Science Seminar Organizing Committee, Stanford University	2019
Department Student Representative, Stanford University	2014-2019

#### *Outreach*

Project SHORT Mentor for Graduate School Applications	2020-
Bay Area Society for Neuroscience Youth SfN Symposium Speaker	2019
SPSP Summer Program for Undergraduate Research Mentor	2018
Paths to PhD Speaker, Stanford University	2017
Stanford Summer Research Early Identification Program Mentor	2016
Leadership Alliance Summer Research Early Identification Program Mentor	2016

### **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

### **Media Coverage**

Big Think, BBC Mundo, BrainPost, Goggles Optional (podcast), KCBS Radio, Medscape Medical News, Psychology Today, PsyPost, Radiology Business, Slate (FR), Science Daily, Science Magazine, Vox, WebMD, UC Berkeley News