Yuan Chang Leong

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Academic History

University of California, Berkeley *2019 – present*
Postdoctoral Scholar, Helen Wills Neuroscience Institute
Advisor: Mark D'Esposito

Stanford University *2014 – 2019*
Ph.D., Psychology
Advisor: Jamil Zaki

Princeton University *2009 – 2013*
A.B. Psychology
Certificate in Quantitative and Computational Neuroscience
Advisor: Yael Niv

Journal Publications

1. **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* (in press).

2. **Leong, Y.C.**, Hughes, B., Yiyu Wang & Zaki, J. Neurocomputational mechanisms underlying motivated seeing. *Nature Human Behavior, 3(9),* 962–973 (2019).

3. 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).

4. **Leong, Y.C.** & Zaki, J. Unrealistic optimism in advice taking: A computational account. *Journal of Experimental Psychology: General*, *147*(2), 170 (2018).

5. **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).

6. 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).

7. 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).

8. 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).

9. 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. **Leong, Y. C.**, Dziembaj, R. & D'Esposito, M. Pupil-linked arousal biases evidence accumulation towards desirable percepts during perceptual decision-making. *bioRxiv*. (2020)

Conference Proceedings

1. Velez, N.*, **Leong, Y.C.*,** Pan, C., Zaki, J. & Gweon, H. Learning and making novel predictions about others' preferences. *37th 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. *1st 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. *1st Multidisciplinary Conference on Reinforcement Learning and Decision Making* (2013).

Fellowships and Awards

Social and Affective Neuroscience Society Annual Meeting Poster Award (Conference cancelled due to COVID-19 pandemic)	*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

Brain and Decision-Making (Instructor: Brian Knutson) *2019*
Teaching assistant and guest-lecturer on reward learning

Introduction to Statistical Methods (Instructor: Russell Poldrack) *2018*
Teaching assistant and guest-lecturer on confidence intervals and effect sizes

Judgment and Decision-Making (Instructor: Russell Poldrack) *2017*
Teaching assistant and guest-lecturer on reinforcement learning and dopamine

Introduction to Perception (Instructor: Kalanit Grill-Spector) *2016*
Teaching assistant

Introductory Psychology (Instructor: James Gross, Bridgette Martin-Hard) *2015-2016*
Teaching assistant (awarded Zimbardo Teaching Prize)

Outreach and Service

Project SHORT (Student Health Opportunities & Research Training) *2020-*
Mentor for graduate school applications

Bay Area Society for Neuroscience Youth SfN Symposium *2019*
Speaker and Panelist

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

Paths to PhD *2017*
Outreach program for prospective students from underrepresented backgrounds. Panelist.

Computational modeling workshop, Stanford Undergraduate Psychology Research Conference *2016*
Instructor

Stanford Summer Research Early Identification Program *2016*
Graduate student mentor

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

Affective Science Seminar Co-Organizer, Stanford University *2015-2016*
Co-organizer

Student representative, Department of Psychology, Stanford University *2014-2019*

Ad Hoc Reviewer
Cognitive Science • *eLife* • *Nature Communications* • *Nature Human Behavior* • *Neuropsychologia* • *Philos. Trans. R. Soc. B* • *Social Cognitive & Affective Neuroscience*

Mentorship

Senior Thesis Supervision
Samantha Kargilis *(Fulbright Scholar, India)* • Roma Dzjembaj *(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 • 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)