

Song Qi

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Postdoctoral Researcher
Mobbs Lab, Caltech

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EDUCATION

- 8/2016–7/2019 **Ph.D.(Social Decision Neuroscience), California Institute of Technology, USA**
Supervisors: Dean Mobbs, John O’Doherty and Ralph Adolphs
- 6/2014–8/2016 **M.A. (Psychology), Columbia University in the City of New York, USA**
Supervisors: Dean Mobbs and James Curley
- 8/2010–6/2014 **B.S. (Electronic Information & Biomedical Engineering), UESTC, China**
Supervisors: Keith M. Kendrick and Benjamin Becker

PUBLICATIONS

- Qi S.**, Cross, L., Wise, T., Fung, B., O’doherly, J., and Mobbs,D. (in prep). Spatial margin of safety decisions in the face of precarious attack locations
- Silston, B., Wise T., **Qi S.**, Sui, X., Dayan, P., and Mobbbs, D. (in prep). Opponent risk dilution vs. competition avoidance strategies during foraging under threat and safety
- Zbozinek, T., **Qi S.**, Charpentier, C., and Mobbs,D. (submitted) Computational Dissociation of Trait Anxiety and Trait Depression: Risk, Loss, and Ambiguous Outcome Magnitude
- Qi S.***, Fung B.*, Hassabis, D., Daw N., and Mobbs D. (2019). Slow escape decisions are swayed by trait anxiety. **Nature Human Behavior**,3,702-708
- Qi S.**, Hassabis, D., Sun J., Guo,F., Daw N., and Mobbs,D. (2018). How cognitive and reactive fear circuits optimize escape decisions in humans, **Proceedings of the National Academy of Sciences** 115 (12), 3186-3191
- Qi S.***, Footer O.*, Camerer, C.F. and Mobbs,D. (2018). A collaborator’s reputation can bias decisions and anxiety under uncertainty, **Journal of Neuroscience** 38 (9), 2262-2269
- Yao, S., **Qi S.**, Kendrick, K.M. and Mobbs,D. (2018). Attentional Set to Safety recruits the ventral medial prefrontal cortex, **Scientific reports**, 8(1),1-9
- Qi S.***, Hu J.*, Becker B.*, Luo L., Gao S., Gong Q., Hurlemann R. and Kendrick K.M. (2015). Oxytocin selectively facilitates learning with social feedback and increases activity and functional connectivity in emotional memory and reward processing regions, **Human Brain Mapping** 36(6), 2132-2146
- Silston, B., **Qi S.**, and Mobbs,D. 3D Navigation and adaptive freezing (project in progress)

ACADEMIC WORK EXPERIENCE

- 9/2014–present Research Assistant: Mobbs Lab for Social, Affective and Ecological Neuroscience, Caltech, USA
Fear and decision making under threat, with **fMRI** techniques and **computational modelling**
Supervisors: Dean Mobbs, in collaboration with John O’doherly and Ralph Adolphs
- 3/2012–6/2014 Research Assistant: Social Cognition and Affective Neuroscience Group, UESTC, China
Oxytocin’s selective facilitation of socially reinforced learning
Supervisors: Keith M. Kendrick, Benjamin Becker and Jiehui Hu
- 7/2013–10/2013 Visiting Research Assistant, Immunotraficking lab, University of Manitoba, Canada
Collective Electrotaxis of Epithelial Cell
Supervisor: Francis Lin
- 6/2013–7/2013 Visiting Research Assistant, Neuromodulation of Emotion Group, Universität Bonn, Germany
Experimental TMS therapy for depression patients
Supervisor: Rene Hurlemann

ACADEMIC AWARDS AND HONOURS

- 8/2016 **Davidson's Fellowship & Lipper Fellowship**
California Institute of Technology
- 9/2014 **Dean's Fellowship**
Columbia University in the City of New York
- 8/3/2013 **Honorable Mention**
The 2013 ICM (Interdisciplinary Contest of Modelling)

CONFERENCE PRESENTATIONS (SELECTION)

Talks:

- Qi S.** (2020) "Decision making under threat: an ecological framework".
@Computational and System Neuroscience (Cosyne) 2020, Breckenridge, Colorado
- Qi S.** (2019) "Spatial margin of safety decisions in the face of volatile attack distances".
@T & C Chen Social and Decision Neuroscience Symposium, Caltech, Pasadena, USA
- Qi S.** (2018) "Cognitive/reactive fear circuits and decision under threat".
@Society for Affective Science, 5th Annual Conference, Los Angeles, USA
- Qi S.** (2017) "How Cognitive and reactive fear circuits optimize escape decisions in humans".
@Social & Affective Neuroscience Society, 10th Annual Meeting, Los Angeles, USA

Posters:

- Qi S.,** Cross L., Fung, B., O'Doherty, J., Mobbs, D. (2019) "Spatial margin of safety decisions in the face of volatile attack distances". Social & Affective Neuroscience society, 12th Annual Conference, Miami, USA
- Qi S.,** Hassabis, D., Sun J., Guo, F., Daw N., Mobbs, D. (2018) "How Cognitive and reactive fear circuits optimize escape decisions in humans". Society for Affective Science, 5th Annual Conference, Los Angeles, USA
- Qi S.*,** Footer O.*, Camerer, C.F. and Mobbs, D. (2016). "A collaborator's reputation can bias decisions and anxiety under uncertainty". Social & Affective Neuroscience Society, 9th Annual Meeting, New York
- Qi S.*,** Hu J.*, Luo L., Gao S., Becker B., Gong Q., Hurlmann R., Kendrick K.M. (2013) Oxycontin facilitates learning with social feedback and activity in emotion and reward regions. 2013 Annual Conference of Society for Social Neuroscience, Guangzhou, China

MEDIA COVERAGE

[A Tale of Two Fears: Anxiety is selective in modulating decisions under different types of threat.](#) (Behavior & Social Sciences, Nature Human Behavior)

[You don't think your way out of a tiger attack.](#) (Caltech News)

SKILLS

- Techniques **fMRI** (Single-voxel with SPM and FSL, multi-voxel pattern analysis with PyMVPA)
Computational modelling (Bayesian modelling, reinforcement learning)
- Programming Experienced with **MATLAB, Python** and **R**. Working knowledge for C++ and JAVA.
- Languages Chinese (native), English (fluent), Japanese (fair)
- Tools Psychopy, Pygames, Psychtoolbox, Cogent, SPSS, Adobe Photoshop, Inkscape, LaTeX.

TEACHING & SUPERVISION

- 9/2014-9/2016 Introduction to Psychology (Teaching assistant with guest lectures)
With Patricia Lindemann, Columbia University in the City of New York
- 3/2018–Present Principles of Cognitive Neuroscience (Teaching assistant)
With Dean Mobbs, Caltech