Qiong Zhang

CONTACT Washington Rd, Princeton, NJ 08540 Email: qiongz@princeton.edu

CURRENT

Princeton Neuroscience Institute
C.V. Starr Research Fellow — Sep 2019 - present

EDUCATION

Carnegie Mellon University
PhD jointly in Neural Computation and Machine Learning, — Aug 2019
(Thesis: The when, where, and why of human memory retrieval)
M.S. in Machine Learning, — Dec 2014
Advisors: John R. Anderson, Robert E. Kass

National University of Singapore
B.S. in Computational Biology with 1st Honors, top 1 in cohort — Jul 2013

University of California, San Diego
Study Exchange in Cognitive Neuroscience, — Winter 2012, Spring 2012

RESEARCH EXPERIENCE

Graduate research assistant, Carnegie Mellon University Dec 2013 – Aug 2019
Anderson Lab, P.I. John R. Anderson
NeuroStats Group, P.I. Robert E. Kass

Research intern, Facebook Oculus May – Aug 2018
Cognitive Science Team, with James Hillis and Tanya Jonker

Visiting researcher, University of Groningen May – Aug 2016
Cognitive Modeling Group, P.I. Jelmer Borst, Marieke van Vugt

Research assistant, University of California, San Diego Jan – Jun 2012
de Sa Lab, P.I. Virginia de Sa

Research assistant, California Institute of Technology Summer 2012
Koch Lab, P.I. Christoph Koch

Research assistant, Queensland Brain Institute Summer 2011
Goodhill Lab. P.I. Geoff Goodhill

JOURNALS

Popov, V., **Zhang, Q.**, Koch, G.E., Calloway, R.C., & Coutanche, M.N. (2019). Semantic knowledge influences whether novel episodic associations are represented symmetrically or asymmetrically. *Memory & Cognition*.

Anderson, J.R., Borst , J.P., Fincham, J.M., Ghuman, A.S., Tenison, C., & **Zhang, Q.** (2018). The Common Time Course of Memory Processes Revealed. *Psychological Science*.

Zhang, Q., Walsh, M.M., & Anderson, J.R. (2018). The Impact of Inserting an Additional Mental Process. *Computational Brain & Behavior*.

Zhang, Q., van Vugt, M., Borst, J.P., & Anderson, J.R. (2018). Mapping Working Memory Retrieval in Space and in Time: A Combined Electroencephalography and Electrocorticography Approach. *NeuroImage*. 174, 472-484.

Zhang, Q., Borst, J.P., Kass, R.E.,& Anderson, J.R. (2017). Inter-Subject Alignment of MEG Datasets in a Common Representational Space. *Human Brain Mapping*, 38(9), 4287-4301.

Mousavi, M., Koerner, A.S., **Zhang, Q.**, Noh, E.,& de Sa, V.R. (2017). Improving Motor Imagery BCI with User Response to Feedback. *Brain-Computer Interfaces*, 4(1-2), 74-86.

Zhang, Q. , Walsh, M.M., & Anderson, J.R. (2017). The Effects of Probe Similarity on Retrieval and Comparison Processes in Associative Recognition. *Journal of Cognitive Neuroscience*, 29(2), 352-367.

Anderson, J.R., **Zhang, Q.**, Borst, J., & Walsh, M.M. (2016). The Discovery of Processing Stages: Extension of Sternberg's Method. *Psychological Review*, 123(5), 481.

REFEREED CONFERENCE PROCEEDINGS

Popov, V., **Zhang, Q.**, Koch, G.E., Calloway, R.C., & Coutanche, M.N. (2019). The effect of semantic relatedness on associative asymmetry in memory. *Proceedings of the 41th Annual Conference of the Cognitive Science Society.*

Zhang, Q., Popov, V., Koch, G.E., Calloway, R.C., & Coutanche, M.N. (2018). Fast Memory Integration Facilitated by Schema Consistency. *Proceedings of the 40th Annual Conference of the Cognitive Science Society.*

Zhang, Q., Anderson, J.R.,& Kass, R.E. (2015) Consistency in Brain activation Predicts Success in Transfer. *Proceedings of the 37th Annual Conference of the Cognitive Science Society.*

Koerner, A.S., **Zhang, Q.**, & de Sa, V.R. (2013). The effect of real-time positive and negative feedback on motor imagery performance. *Proceedings of the Fifth International Brain-Computer Interface Meeting: Defining the Future.*

CONFERENCE /WORKSHOP PRESENTATIONS

Zhang, Q., &Anderson, J.R. (2018, July). Exploring Foraging Rules in Human Semantic Search. Talk presented at *the Annual Meeting of Society of Mathematical Psychology*, University of Wisconsin-Madison, USA.

Zhang, Q., van Vugt, M., Borst, J.P.,& Anderson, J.R. (2017, July). A Spatial-Temporal Analysis of a Visual Working Memory Task with EEG and ECoG. Poster presented at *the Annual Meeting of the Cognitive Science Society*, London, UK.

Zhang, Q., Walsh, M.M., &Anderson, J.R. (2017, July). Neural Evidence of Insertion and Subtraction of Information Processing Stages. Talk presented at *the Annual Meeting of Society of Mathematical Psychology*, University of Warwick, UK.

Zhang, Q., Borst, J.P., Kass, R.E.,& Anderson, J.R. (2017, June). Inter-Subject Alignment of MEG Datasets at the Neural Representational Space. Poster presented at *the Annual Meeting of the Organization of Human Brain Mapping*, Vancouver, Canada.

Mousavi, M., Koerner, A.S., **Zhang, Q.**, Noh, E.,& de Sa, V.R. (2017, July). Detection

of feedback-related mental states with error-related spectral. Poster presented at *the Neuroadaptive Technology*, Berlin, Germany.

Zhang, Q., Walsh, M.M., &Anderson, J.R. (2016, August). Isolating the Effects of Probe Similarity on Processing Stages in Associative Recognition. Talk presented at *the Annual Meeting of Society of Mathematical Psychology*, Rutgers University, USA.

Mousavi, M., Koerner, A.S., **Zhang, Q.**, Noh, E.,& de Sa, V.R. (2016, June). Improving Motor Imagery BCI with User Response to Feedback. Poster presented at *the Sixth International Brain-Computer Interface Meeting*, Pacific Grove, USA.

Zhang, Q., Anderson, J.R., & Kass, R.E. (2015, December). A hierarchical Bayesian framework for modeling individual differences in mental processing stages with a hidden semi-Markov model. Spotlight talk and poster presented at *the 5th NIPS Workshop on Machine Learning and Interpretation in NeuroImaging*, Montreal, Canada.

Zhang, Q. , Anderson, J.R., & Kass, R.E. (2015, July). Consistency in Brain Activation Predicts Success in Transfer. Poster presented at *the Annual Meeting of the Cognitive Science Society*, Pasadena, USA.

Zhang, Q., Anderson, J.R. & Kass, R.E. (2015, June) Characterization of brain consistency via a data-driven brain parcellation. Poster presented at *the Seventh International Workshop on Statistical Analysis of Neural Data*, Pittsburgh, USA.

Mudrik, L., Maoz, U., Xu, D., Duncan, C., **Zhang, Q.**, & Koch, C. (2013, June). Dissecting different types of decision making: an ERP study of reasoned vs. unreasoned voluntary decisions. Poster presented at *the Annual Meeting of Society for Neuroscience*, San Diego, USA.

Rajagopal, V., **Zhang, Q.** & Kamm, R.D. (2013, September). A Multiscale Framework for Modeling and Investigating Cell Mechanics in 3D Extracellular Matrix Environments. Talk presented at *the Annual Meeting of Biomedical Engineering Society*, Seattle, USA.

AWARDS

Richard King Mellon Foundation Presidential Fellowship in the Life Sciences for the 2015-16 academic year. –Carnegie Mellon University

Women Travel and Networking Award, 2018 - MathPsych/ICCM

The 2018 Young Stars Estes Awards to attend workshop on Deep, fast and shallow learning in humans and machines 2018 - Indiana University Bloomington

Student Travel Award, 2016, 2017, 2018 - MathPsych/ICCM

Scholarship to attend Brains, Minds and Machines Summer Course 2017 - Massachusetts Institute of Technology

Lijen Industrial Development Medal –National University of Singapore
Presented to the student with the best academic exercise/projects in the discipline upon graduation, July 2013.

Lim Soo Peng Book Prize – National University of Singapore
Presented to the Best Student in the Computer Science Stream of the Year 2010/2011.

Provost Honors – University of California, San Diego
On the basis of academic merits. Spring 2012. Winter 2012.

Dean's List – National University of Singapore.
In recognition of outstanding academic achievements. 2009/2010, 2010/2011.

Singapore-MIT Undergraduate Research Fellowship – Singapore-MIT Alliance for Research and Technology. 2012.

Summer Undergraduate Research Fellowships – Caltech. 2012.

Undergraduate Summer Research Scholarship – University of Queensland. 2011.

TEACHING EXPERIENCE

85-426/726: Learning in Humans and Machines Jan – May 2018
Carnegie Mellon University, Department of Psychology

Instructor: Charles Kemp

Responsibilities (guest lecturer, teaching assistant): give lectures and recitations; create and grade homework assignments

10-701: Introduction to Machine Learning Jan – May 2016
Carnegie Mellon University, Machine Learning Department

Instructor: Tom Mitchell

Responsibilities (teaching assistant): give recitations and exam review sessions; create and grade homework assignments/exams; supervise students on their final project work

SERVICE

Ad hoc reviewer for NeuroImage, Computational Brain & Behavior, Behavior Research Methods, PLOS One, Annual Meeting of the Cognitive Science Society, Organization for Human Brain Mapping,
Student volunteer in CogSci 2017, MathPsych 2015
Student Affairs Committee member in Neural Computation Program 2017-2018
Representative for Machine Learning Department in Graduate Student Assembly 2016-2017

PROFESSIONAL AFFILIATIONS

Psychonomic Society
Association for Psychological Science
Society for Mathematical Psychology
Cognitive Science Society
Organization of Human Brain Mapping