

# Bryan Hong

## Ph.D. Candidate in Cognitive Neuroscience

🏠 100 St. George Street, Fourth Floor  
Toronto, ON M5S3G3  
Canada

☎ (416) 978-5464  
✉ [bryan.hong@mail.utoronto.ca](mailto:bryan.hong@mail.utoronto.ca)  
🌐 [bryan-hong.netlify.app](http://bryan-hong.netlify.app)

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### ► EDUCATION

- 2017- **Doctor of Philosophy (Ph.D.), Cognitive Psychology**  
University of Toronto, Toronto, Canada  
Supervisor: Dr. Morgan Barense
- 2017 **Masters of Arts (M.A.), Cognitive Psychology**  
University of Toronto, Toronto, Canada  
Thesis: Development of a novel autobiographical memory prosthetic based on cognitive neuroscience.  
Supervisor: Dr. Morgan Barense
- 2016 **Honours Bachelor of Science (H.B.Sc.), Neuroscience & Psychology**  
University of Toronto, Toronto, Canada

### ► PUBLICATIONS

- Yeung, L. K., Olsen, R. K., **Hong, B.**, Mihajlovic, V., D'Angelo, M. C., Kacollja, A., Ryan, J. D. & Barense, M. D. (2019). Object-in-place memory predicted by anterolateral entorhinal cortex and parahippocampal cortex volume in older adults. *Journal of Cognitive Neuroscience*, 31(5), 711-729.
- Newsome, R. N., Trelle, A. N., Fidalgo, C., **Hong, B.**, Smith, V. M., Jacob, A., Ryan, J.D., Rosenbaum, R.S., Cowell, R.A., and Barense, M. D. (2018). Dissociable contributions of thalamic nuclei to recognition memory: novel evidence from a case of medial dorsal thalamic damage. *Learning & Memory*, 25(1), 31-44.

### ► PUBLICATIONS IN PREPARATION

- Hong, B.**, Martin, C.B., and Barense, M.D. (in prep). Commissioned review article for *Wiley Interdisciplinary Reviews: Cognitive Science*.

### ► PATENTS

Barense, M.D., Honey, C.J., **Hong, B.**, Martin, C.B., Newsome, R.N., & Xia, A. *System and method for digital enhancement of hippocampal replay*. Patent Pending.

- UK Patent 1818322.8, filed November 9, 2018
- Canadian Patent 3,030,000, filed January 14, 2019
- US Patent 62/792,082 application, filed January 14, 2019
- PCT application CA2019051595, filed November 8, 2019

## ► AWARDS

- 2021 Ontario Graduate Scholarship, University of Toronto (\$15,000)
- 2020 Department of Psychology Teaching Assistant Excellence Award, University of Toronto (\$250)
- 2019 Three Minute Thesis Semifinalist, University of Toronto
- 2017 The Friends of Patrick Brain Research Scholarship & Acceleration Fund, University of Toronto (\$5,000)
- 2017-20 NSERC Postgraduate Scholarship-Doctoral Program, University of Toronto (\$63,000 total; \$21,000/year)
- 2016-17 NSERC Alexander Graham Bell Canada Graduate Scholarship-Masters', University of Toronto (\$17,500)
- 2016 Faculty of Arts & Science Graduate Admission Award, University of Toronto (\$3,000)
- 2016 University of Toronto Fellowship (\$4,000)
- 2012 Scholarship from the Ashbaugh, University of Toronto (\$200)
- 2012 Wark-Walters Scholarship, University of Toronto (\$1,000)
- 2012 President's Entrance Scholarship, University of Toronto (\$1,000)

## ► ORAL PRESENTATIONS

**Hong, B.** (April 2020). Replay improves spatial memory for novel routes. *Baycrest Rotman Research Institute Rounds*, Toronto, ON.

**Hong, B.** (February 2019). Developing a novel digital memory augmentation program for older adults. *Graduate Speaker Series*, Toronto, ON. Also presented at the *Collaborative Specialization in Psychology and Engineering Seminar Series* (November 2018), Toronto, ON.

**Hong, B.** (September 2018). The neural correlates of digital memory augmentation. Ebbinghaus Empire Series, Toronto, ON.

► **CONFERENCE PROCEEDINGS**

\* indicates a supervised student

**Hong, B.**, \*Tran, M.A., \*Cheng, H., \*Huang, Y., & Barense, M.D. (2020). *How do temporal context and event boundaries affect recall richness for Forrest Gump?* Context and Episodic Memory Symposium, Philadelphia, PA (Conference moved online).

**Hong, B.**, \*Chang, M., Rosenbaum, R.S., & Barense, M.D. (2020). *Replay of novel spatial routes improves navigation in older adults.* Annual Meeting of the Cognitive Neuroscience Society, Boston, MA (Conference moved online). Also presented at the Rotman Research Institute Research Day (2020), Toronto, ON.

\*Huang, Y., \*Cheng, H., \*Tran, M.A., **Hong, B.**, Barense, M.D. (2020). *Testing retrieved-context models and event boundaries in naturalistic events.* Lake Ontario Visionary Establishment Conference, Niagara Falls, ON.

\*Chang, M., **Hong, B.**, Rosenbaum, R.S., & Barense, M.D. (2020). *From a novel campus tour to better memory: Improving spatial navigation in older adults through replay.* Lake Ontario Visionary Establishment Conference, Niagara Falls, ON.

Martin, C.B., Newsome, R.N., **Hong, B.**, Xia, A., Honey, C.J., and Barense, M.D. (2019). *Reviewing autobiographical memory cues promotes distinctive neural coding in older adults.* Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.

**Hong, B.**, Martin, C.B., Newsome, R.N., Xia, A., Honey, C.J., and Barense, M.D. (2018). *Using a novel digital memory augmentation program to improve episodic detail recall for autobiographical memory in older adults.* Annual Meeting of the Society for Neuroscience, San Diego, CA.

Martin, C.B., **Hong, B.**, Newsome, R.N., Xia, A., Honey, C.J., and Barense, M.D. (2018). *Digital memory augmentation in older adults promotes distinctive hippocampal coding of autobiographical memory.* Annual Meeting of the Society for Neuroscience, San Diego, CA.

**Hong, B.**, Martin, C.B., Newsome, R.N., \*Rahbarnia, A., \*Tran, M.A., Xia, A., Honey, C.J., and Barense, M.D. (2018). *Improving episodic autobiographical memory in older adults with a novel digital memory augmentation device.* Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.

- Martin, C.B., **Hong, B.**, Newsome, R.N., \*Rahbarnia, A., \*Tran, M.A., Xia, A., Honey, C.J., and Barense, M.D. (2018). *The neurocognitive effects of digital memory augmentation*. Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.
- Hong, B.**, Martin, C.B., Xia, A., Honey, C.J., and Barense, M.D. (2017). *Hippocamera: A novel device to improve autobiographical memory based on cognitive neuroscience*. Lake Ontario Visionary Establishment, Niagara Falls, ON.
- Hong, B.**, Newsome, R.N., Smith, V.M., Jacob, A., Trelle, A.N., D'Angelo, M.C., Ryan, J.D., Rosenbaum, R.S., and Barense, M.D. (2016). *How do perceptual and cognitive interference affect object recognition memory in amnesia?* Canadian Association for Neuroscience Canadian Action and Perception Network/Canadian Physiological Society Satellite Symposium, Toronto, ON.
- Hong, B.**, Newsome, R.N., Guna, A., and Barense, M.D. (2016) *Conjunctive processing of objects and visual interference: An eyetracking study*. NeuroXchange Undergraduate Neuroscience Conference, Hamilton, ON.
- Hong, B.**, Newsome, R.N., Smith, V.M., Jacob, A., Trelle, A.N., D'Angelo, M.C., Ryan, J.D., Rosenbaum, R.S., and Barense, M.D. (2015). *Investigating the effects of perceptual and cognitive interference on recognition memory in amnesia*. Lake Ontario Visionary Establishment Conference, Niagara Falls, ON.

## ► **TEACHING EXPERIENCE**

- 2020      **Course Instructor**
- PSY201: Statistics I [200 students]
- 2016-      **Teaching Assistant**
- PSY100: Introduction to Psychology [2 semesters]
  - PSY201: Statistics I [2 semesters]
  - PSY202: Statistics II [3 semesters]
  - PSY203: Psychological Research [1 semester]
  - PSY270: Introduction to Cognitive Psychology [2 semesters]
  - PSY280: Sensation & Perception [1 semester]
  - PSY379: Human Memory and Learning Laboratory [1 semester]
  - PSY396: Neurochemistry of Behaviour [1 semester]
- 2016-      **Guest Lecturer**
- *Psychological Disorders and Treatment*, PSY100 (2018)
  - *Mood Disorders*, PSY396 (2017)
  - *Visual Imagery*, PSY270 (2017)
  - *Drug Addiction and Reward*, PSY396 (2017)
  - *Language and Thought*, PSY100 (2017)

## ► COMMUNITY OUTREACH

- 2020- **Mentor** for the **University of Toronto Research Mentorship Program**, designed to provide support to undergraduate students who are interested in pursuing research careers
- 2019- **Certified Instructor** for **The Carpentries**, an international non-profit organization that teaches foundational computational and data literacy skills to researchers
- Led workshops teaching Bash, Python, and R and assisted with workshops on Bash, Git, and regex
- 2019- **Science Fair Coordinator** for **Science Rendezvous**, an annual all-day street festival to foster interest in Toronto youth for the science, technology, engineering, art, and mathematic fields. *Cancelled in 2019 due to COVID-19.*
- 2019- **Social Coordinator, and Graduate Led Academic Speaker Series Coordinator** of the **Psychology Graduate Student Association**, a graduate student organization dedicated to improving all aspects of graduate student life
- 2019 **Mentor** for the **Peer Mentorship Program**, a student-led initiative to provide support for new graduate students in the Department of Psychology at the University of Toronto
- 2019-20 **Panelist** for **PSY309: Research Specialization Practicum**, to share the graduate student experience with undergraduate students interested in pursuing research careers
- 2020 **Judge** for the **Annual Ontario Psychology Undergraduate Thesis Conference**, a conference for undergraduate psychology students to share their research
- 2020 **Lecturer** for the **Brain and Cognition Knowledge Translation Series**, a lecture series covering topics in cognitive neuroscience geared towards community-dwelling older adults offered by the Rotman Research Institute. *Cancelled due to COVID-19.*
- 2020 **Alumni Ambassador** for the **Next Steps Conference**, a conference to help current and recently graduated University of Toronto students explore different career options
- 2019 **Webmaster** of the **Psychology Graduate Student Association**

- 2019 **Guest Speaker** for **Students' Alzheimer's Alliance at the University of Toronto**, a non-profit student organization that aims to raise awareness and educate the public on Alzheimer's disease
- 2019 **Organizing Committee Member** for **PsychHacks**, a hackathon event at the University of Toronto to help graduate and undergraduate students in the Department of Psychology develop and practice programming skills in a research setting
- 2019 **Panelist** for the **Psychology Second-Year Learning Community** program, to share the graduate student experience with undergraduate students interested in pursuing research careers
- 2019 **Panelist** for **PSY305: The Treatment of Psychological Data**, to discuss the importance of data management and scientific communication in research with undergraduate students
- 2018-19 **President** of the **Psychology Graduate Student Association**, helping to organize and facilitate meetings, delegate tasks to other executives, and serve as a liaison between graduate students and the department
- Organized the first **Non-Academic Career Panel**, where former psychology graduate students shared their experience transitioning into careers outside of academia
- 2017-18 **Design Editor** of **Elemental Magazine**, a graduate student magazine aiming to promote mental health awareness
- 2017-18 **Outreach Coordinator** and **Social Coordinator** of the **Psychology Graduate Student Association**
- 2017 **Panelist** for the **Psychology Students' Association Graduate School Info Session**, to share the graduate student experience with undergraduate students interested in pursuing research careers
- 2015-17 **Volunteer** for **Science Rendezvous**
- 2015-16 **Editor** of **Inkblot**, the University of Toronto undergraduate journal of psychology
- 2015-16 **Staff Writer** for **The Varsity**, the University of Toronto student newspaper

## ► **ADDITIONAL TRAINING**

- 2020 BrainIAK, led by Cameron Ellis
- 2019 Neuroimaging analyses in Python, BrainHack 2019
- 2019 Mixed models in R, led by Dr. Henrik Singmann

- 2018 Machine learning in Python, led by Drs. Sergey Fogelson & Ashton Anderson
- 2017 Neuroimaging analyses with Nipype, led by Dr. Anisha Keshavan

### ► STUDENTS SUPERVISED

- 2019- Yinqi Huang
- PSY405: Individual Research Project student
- 2019- Miranda Chang
- ROP299: Research Opportunity Program & PSY405: Individual Research Project student
- 2018- Heidi Cheng
- PSY406: Individual Research Project student
- 2018- My An Tran
- ROP299: Research Opportunity Program
- 2018 Arya Rahbarnia
- PSY405: Individual Research Project student
  - Currently Ph.D. Student at the University of Toronto with Dr. Paul Fletcher

### ► PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Society for Neuroscience  
Cognitive Neuroscience Society

### ► SKILLS

R, Python, Bash, MATLAB, JASP, SPSS, HTML/CSS, JavaScript, Adobe Photoshop, Adobe Illustrator

Last edited 27-Dec-2020