IVA K. BRUNEC

Department of Psychology,
University of Toronto
Rotman Research Institute at Baycrest

Email: iva.brunec@gmail.com
Phone: +1-647-770-3262

Education

2015 – Present **PhD Psychology**
University of Toronto, Toronto, Ontario
Rotman Research Institute at Baycrest, Toronto, Ontario
Supervised by Drs. Morris Moscovitch & Morgan Barense

2014 – 2015 **MA Psychology (& Collaborative Program in Neuroscience)**
University of Toronto, Toronto, Ontario
Rotman Research Institute at Baycrest, Toronto, Ontario
Supervised by Drs. Morris Moscovitch & Morgan Barense

2011 – 2014 **BSc Psychology (Hons)**
University College London, London, United Kingdom
First Class Bachelor of Science (BSc) Degree in Psychology with Honours
Honours thesis supervised by Dr. Hugo Spiers

Awards & Scholarships

2016 – 2019 Alzheimer Society of Canada Doctoral Research Award (C$ 66,000)

2018 Society for Neuroscience Trainee Professional Development Award ($1000)

2018 Grid Cell Meeting Travel Award (£ 500)

2017 Jack & Rita Catherall Fund Travel Award (C$ 500)

2017 Faculty of Arts and Science Conference Travel Grant (C$ 400)

2016 – 2017 Ontario Graduate Scholarship (C$ 15,000)

2016 – 2017 Faculty of Arts and Science Fellowship (C$ 15,000)

2016 School of Graduate Studies Conference Travel Grant (C$ 250)

2016 School of Graduate Studies Conference Travel Grant (C$ 1,666)

2015 – 2016 Ontario Graduate Scholarship (C$ 15,000)

2015 – 2016 Faculty of Arts and Science Fellowship (C$ 15,000)

2015 Rotman Research Institute Soupcoff Fellowship (C$ 2,124)

2014 UCL Faculty of Brain Sciences Dean's List

2013 Wellcome Trust Biomedical Vacation Scholarship (£ 1,140)

2011 – 2014 Undergraduate Zois Merit Scholarship (Slovene Human Resources Development and Scholarship Fund (€ 10,404)

Publications

Brunec, I. K., Robin, J., Patai, E. Z., Ozubko, J. D., Javadi, A. H., Barense, M. D., Spiers, H. J., & Moscovitch, M. (*In press*). Cognitive mapping style relates to posterior-anterior hippocampal volume ratio. *Hippocampus.*

Brunec, I. K.*, Bellana, B.*, Ozubko, J. D., Man, V., Robin, J., Liu, Z. X., Grady, C., Rosenbaum, R. S., Winocur, G., Barense, M. D., & Moscovitch, M. (2018; in press). Multiple scales of representation along the hippocampal anteroposterior axis in humans. *Current Biology, 28*(13), 2129-2135.e6.

Brunec, I. K., Ozubko, J. D., Ander, T., Moscovitch, M., & Barense, M. D. (2018; In revision). Does a turn in the road mark a turn of events? Turns along travelled routes provide contextual boundaries during navigation. *PsyArXiv*: https://osf.io/g6dp3/

Brunec, I. K., Moscovitch, M., & Barense, M. D. (2018). Boundaries shape cognitive representations of spaces and events. *Trends in Cognitive Sciences, 22*(7), 637-650.

Brunec, I. K., Javadi, A. H., Zisch, F. E., & Spiers, H. J. (2017). Contracted time and expanded space: The impact of circumnavigation on judgements of space and time. *Cognition,* 166, 425-432.

Brunec, I. K., Ozubko, J. D., Barense, M. D., & Moscovitch, M. (2017). Recollection-dependent memory for event duration in large-scale spatial navigation. *Learning & Memory,* 24,104–114.

Brunec, I. K. (2016). Unified and separable hippocampal representations of time and space. [Journal Club article]. *The Journal of Neuroscience,* 36(49), 12293–12295.

Brunec, I. K.*, Chadwick, M. J.*, Javadi, A. H., Guo, L., Malcolm, C. P., & Spiers, H. J. (2015). Chronologically organized structure in autobiographical memory search. *Frontiers in Psychology*, 6(338).

Javadi, A. H., **Brunec, I. K.**, Walsh, V., Penny, W. D., & Spiers, H. J. (2014). Transcranial electrical brain stimulation modulates neuronal tuning curves in perception of numerosity and duration. *NeuroImage*, 102, 451-457.

Conference Posters

Brunec, I. K.*, Bellana, B.*, Ozubko, J. D., Barense, M. D., & Moscovitch, M. (2018, May). Spatiotemporal scaling along the hippocampal long axis. Poster presented at the 2018 Grid Cell Meeting, London, UK.

Brunec, I. K.*, Bellana, B.*, Barense, M. D., & Moscovitch, M. (2017, November). Patterns of hippocampal long axis dynamics change across the lifespan. Poster accepted for the 2017 Society for Neuroscience Annual Meeting, Washington D.C., USA.

Brunec, I. K.*, Bellana, B.*, Ozubko, J. D., Barense, M. D., & Moscovitch, M. (2017, June). Distinct patterns of inter-voxel dynamics along the hippocampal longitudinal axis. Poster

presented at the 2017 Organization for Human Brain Mapping Annual Meeting, Vancouver, BC.

Brunec, I. K., Ozubko, J. D., Moscovitch, M., & Barense, M. D. (2016, November). Enhanced temporal order memory for events preceding contextual boundaries during navigation. Poster presented at the 2016 Society for Neuroscience Annual Meeting, San Diego, USA.

Brunec, I. K., Barense, M. D., & Moscovitch, M. (2016, August). Familiarity with spatial context interacts with the encoding of novel information. Poster presented at the 2016 International Conference on Memory, Budapest, Hungary.

Brunec, I. K., Ozubko, J. D., Barense, M. D., & Moscovitch, M. (2016, April). Temporal and ordinal memory for events in large-scale virtual navigation. Poster presented at the 2016 Cognitive Neuroscience Society Annual Meeting, New York, USA.

Brunec, I. K., Ozubko, J. D., Moscovitch, M., & Barense, M. D. (2015, June). Memory for duration and temporal order in a spatial navigation task. Poster presented at the 2015 Collaborative Program in Neuroscience Research Day, University of Toronto, ON.

Brunec, I. K., Ozubko, J. D., Moscovitch, M., & Barense, M. D. (2015, February). Memory for temporal information during spatial navigation. Poster presented at the 2015 Lake Ontario Visionary Establishment conference, Niagara Falls, ON.

Talks & Seminars

Brunec, I. K., Bellana, B., Ozubko, J. D., Robin, J., Barense, M. D., & Moscovitch, M. (2018, November) Global and local hippocampal representations during virtual reality spatial navigation. Nanosymposium talk presented at the 2018 Society for Neuroscience Annual Meeting, San Diego, USA.

Brunec, I. K., Bellana, B., Grady, C., Barense, M. D., & Moscovitch, M. (2018, May). Patterns of anterior-posterior hippocampal functional connectivity: Implications for memory. Talk delivered at the 2018 Toronto Area Memory Meeting, University of Toronto, ON.

Brunec, I. K., Bellana, B., Barense, M. D., Moscovitch, M. (2017, September). Changes in coarse vs. fine voxelwise representations along the hippocampal anteroposterior axis across the lifespan. Talk delivered at Ebbinghaus Empire data blitz, University of Toronto, ON.

Brunec, I. K., Ozubko, J. D., Ander, T., Moscovitch, M., & Barense, M. D. (2017, May). Memory for time and location during navigation: The role of turns as contextual boundaries. Talk delivered at the Toronto Area Memory Group meeting, University of Toronto, ON.

Brunec, I. K., Ozubko, J. D., Ander, T., Moscovitch, M., & Barense, M. D. (2017, May). Boundaries during navigation shape memory for event order and duration. Talk delivered at a data blitz session at the Context and Episodic Memory Symposium, University of Pennsylvania, USA.

Ozubko, J. D., Robin, J., Bellana, B., **Brunec, I. K.**, Grady, C., Rosenbaum, R. S., Winocur, G., & Moscovitch, M. (2016, November). Using Google Street View to examine cognition in

virtualized real-world environments. Talk delivered at the Perception and Imagery nanosymposium at the Society for Neuroscience Annual Meeting 2016, San Diego, USA.

Brunec, I. K., Ozubko, J. D., Barense, M. D., & Moscovitch, M. (2015, October). Memory for event duration and temporal order in large-scale virtual navigation. Talk delivered at the Rotman Research Institute Rounds, Baycrest, Toronto, ON.

Fidalgo, C., **Brunec, I. K.**, Yeung, L., Lee, A. C. H., & Barense, M. D. (2015, September). Source memory deficits associated with aging and impaired cognitive status. Presented at Ebbinghaus Empire data blitz, University of Toronto, ON.

Brunec, I. K., Ozubko, J. D., Barense, M. D., & Moscovitch, M. (2015, June). Memories of times past: The role of temporal information in episodic memory. Talk delivered at the Graduate Academic Seminar Series, University of Toronto, ON.

Brunec, I. K., Javadi, A. H., & Spiers, H. J. (2014, September). How long did it take you to get here? Time estimation in virtual reality navigation. Talk delivered at Ebbinghaus Empire data blitz, University of Toronto, ON.

Brunec, I.K., Javadi, A. H., & Spiers, H. J. (2014, March). Why we arrive late: Characterization of cognitive biases in time estimation. Presented at the UCL Faculty of Brain Sciences undergraduate conference, University College London, London, UK.

Prior Research Experience

January – March 2014 — Intern/Research Assistant, **Live Science – Science Museum**
Supervised by PhD student Liam Pollock, Dr Magda Osman's lab at Queen Mary, University of London

2012 – 2014 — Undergraduate Research Assistant
Dr Hugo Spiers's Lab, Institute of Behavioural Neuroscience, UCL

2012 — Research Assistant, **School Transition and Adjustment Research Study**
Project leader: Dr Frances Rice, Department of Clinical, Educational and Health Psychology, UCL

Teaching Experience

November 2018 — **Guest Lecturer**
PSY372 – Human Memory – University of Toronto
Lecture: Non-declarative and semantic memory

March 2017 — **Guest Lecturer**
PSY372 – Human Memory – University of Toronto
Lecture: Memory across the lifespan

January 2017 — **Lecturer**

Neurosci101 – High school neuroscience course organized by the Collaborative Program in Neuroscience – University of Toronto
Lecture: Learning and Memory

June 2016 **Guest Lecturer**
PSY280 – Sensation and Perception – University of Toronto
Lecture: Interactions between memory and perception

December 2015 **Lecturer**
Neurosci101 – High school neuroscience course organized by the Collaborative Program in Neuroscience – University of Toronto
Lecture: Learning and Memory

November 2015 **Guest Lecturer**
PSY372 – Human Memory – University of Toronto
Lecture: Spatial and non-spatial views on the hippocampus

2014 – Present **Teaching Assistant**
University of Toronto, St George Campus
Courses:
PSY100 – Introduction to Psychology
PSY270 – Introduction to Cognitive Psychology
PSY260 – Learning and Plasticity
PSY280 – Perception
PSY372 – Human Memory
PSY473 – Social Cognitive Neuroscience

Professional Activities

Ad-hoc peer reviewer:
Cerebral Cortex, Cognition, Current Biology, Experimental Brain Research, Journal of Experimental Social Psychology, Hippocampus, The Journal of Neuroscience, Memory, Memory & Cognition, Nature Human Behavior, Neurobiology of Aging, Neuron, Neuroscience Letters, Quarterly Journal of Experimental Psychology

Memberships:

2016-2018	Society for Neuroscience (student member)
2017	Organization for Human Brain Mapping (student member)
2016	Cognitive Neuroscience Society (student member)

Mentoring & Supervision

Independent projects: Chunan (Lana) Duan, Wendy Tu, Alana Brown, Alyssa Sinclair
Research opportunity projects: Ruoran (Rona) Guo, Nathaniel Chen, Sarah Wong, Natalie Holtby
VIC One research writing program: Anuj Mukherjee

Outreach & Non-Academic Experience

Sept 2018 - Present	Alzheimer Society Toronto Music Project volunteer
April 2018	Toronto Brain Bee student judge
March 2018	Alzheimer Society Walk Toronto Walk for Memories volunteer
2016 & 2017	Lecturer in Neurosci101 course for high school students
2016-2015	Coordinator of the Graduate Academic Seminar Series in Psychology
May 2015	Science Rendezvous demonstrator
2014-2015	Representative for Psychology MA students
2012-2014	Support worker for the National Autistic Society, UK

Technical Skills

Neuroimaging, data analysis, programming: FSL, AFNI, FreeSurfer, MATLAB, R

References

Available upon request.