DAVID MAILLET – Curriculum Vitae

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Work Experience

University of Toronto

Postdoctoral researcher (Advisor: Cheryl Grady) 2017-now

Harvard University

Postdoctoral researcher (Advisor: Daniel Schacter) 2014-2017

Education

McGill University

Ph.D. Neuroscience 2011-2014

PhD thesis title: Investigation of the role of medial prefrontal cortex during episodic encoding in young and older adults. Advisor: M. N. Rajah.

M.Sc. Neuroscience 2009 - 2011

Master's thesis title: Age-related changes in effective connectivity within and between the task-positive and task-negative networks during spatial and temporal context retrieval. Advisor: M. N. Rajah.

B. A. First Class Honours Psychology 2006 - 2009

Undergraduate theses titles:
1) *Interaction between the Lateral Amygdala and the Dorsal Striatum in Learning and Memory.* Advisor: N. White.
2) *Prefrontal Contributions to the Encoding of Spatial and Temporal Context Memories*. Advisor: M. N. Rajah.

Competitive Academic/Research Awards

CIHR postdoctoral fellowship ($90000) 2017-2019

FRSQ-RQRV postdoctoral training award renewal ($55000) 2016-2017

FRSQ postdoctoral training award ($90000) 2014-2016

QBIN Travel award for OHBM conference in Seattle ($500) 2013

McGill International travel Award ($2000) 2013
- Visiting student in the lab of Dr. Duarte at Georgia Tech, Altanta
- Learned how to collect and analyze EEG data

FRSQ Étudiants-chercheurs étoiles Award ($1000) 2012

NSERC postgraduate scholarship D ($63000) 2011-2014

QBIN Scholarship for Master's training ($5000) 2010-2011

QBIN Travel award to the University of Caen, France ($1166) 2010

McGill Graduate Recruitment Award ($5000) 2009-2010

NSERC Undergraduate Student Research Award ($6000) 2009
- Advisor: M.N. Rajah

Dow-Hickson Scholarship ($2000) 2008-2009

Dean's Honour List (McGill University) 2006-2009

NSERC Undergraduate Student Research Award ($6000) 2008
- Advisor: N. White

Research Grants

MITACS accelerate ($15000) 2012
- This program is designed to promote academia-industry collaborations. I applied for an obtained this grant in collaboration with David Farrow (industry partner, and Guiness World Record holder for memorization of playing cards) to test the effectiveness of a memory training program based on his strategies.

Publications

Maillet, D., Beaty, R., Jordano, M. L., Touron, D. R., Adnan, A., Silvia, P. J., Kwapil, T. R., Turner, G. R., Spreng, N. R. & Kane, M. J. (2018). Age-related differences in mind-wandering in daily life. Psychology and Aging, 33(4), 643-653.

Seli, P., Kane, M. J., Smallwood, J., Schacter, D. L., **Maillet, D.,** Schooler, J. W., & Smilek, D. (2018). Mind-wandering as a natural kind: A family-resemblances view. Trends in Cognitive Sciences, 22(6), 479-490.

Seli, P., Kane, M. J., Metzinger, T., Smallwood, J., Schacter, D. L., **Maillet, D.,** Schooler, J. W., & Smilek, D. (2018). The family-resemblances framework for mind-wandering remains well clad. Trends in Cognitive Sciences.

Maillet, D., Seli, P., & Schacter, D. L. (2017). Mind-wandering and task stimuli: Stimulus-dependent thoughts influence performance on memory tasks and are more often past- versus future-oriented. Conscious Cogn, 52, 55-67.

Seli, P., **Maillet, D**., Smilek, D., Oakman, J. M., & Schacter, D. L. (2017). Cognitive aging and the distinction between intentional and unintentional mind wandering. Psychol Aging, 32(4), 315-324

Turney, I. C., Dennis, N. A., **Maillet, D.**, & Rajah, M. N. (2017). Exploring the influence of encoding format on subsequent memory. *Memory, 25*(5), 686-696.

Maillet, D., & Schacter, D. L. (2016). Default Network and Aging: Beyond the Task-Negative Perspective. *Trends Cogn Sci*, 20(9), 646-648

Maillet, D. & Schacter, D. L (2016). When the mind wanders: Distinguishing stimulus-dependent from stimulus-independent thoughts during incidental encoding in young and older adults. *Psychology and Aging*, Jun;31(4):370-9.

Maillet, D. & Rajah, M. N. (2016). Assessing the neural correlates of task-unrelated thoughts during episodic encoding and their association with subsequent memory in young and older adults. *Journal of Cognitive Neuroscience,* 28(6), 826-841.

Maillet, D. & Schacter, D. L. (2016). From mind wandering to involuntary retrieval: Age-related differences in spontaneous cognitive processes. *Neuropsychologia, 80: 142-156.*

Kwon, D*., **Maillet, D***., Pasvanis, S., Ankudowich, E., Grady, C. L., & Rajah, M. N. (2016). Context Memory Decline in Middle Aged Adults is Related to Changes in Prefrontal Cortex Function. *Cereb Cortex*, 26(6), 2440-2460.
*Contributed equally as first authors to this manuscript.

Rajah, M. N., **Maillet, D**. & Grady, C. L. (2015). Episodic Memory in Healthy Older Adults: The Role of Prefrontal, Parietal and Occipital Cortices, in The Wilkey-Blackwell Handbook on the Cognitive Neuroscience of Memory (eds.) Duarte, A., Barense, M. & Addis, R. D.

Maillet, D & Rajah, M. N. (2014). Age-related differences in brain activity during the subsequent memory paradigm: a meta-analysis. *Neuroscience & Biobehavioral Reviews,* 45: p. 246-57.

Maillet, D. and M. N. Rajah (2014). Dissociable roles of default-mode regions during episodic encoding. *Neuroimage* 89: 244-255.

Maillet, D. and M. N. Rajah (2013). Age-related changes in frequency of mind-wandering and task-related interferences during memory encoding and their impact on retrieval. *Memory* 21(7): 818-831.

Maillet, D., & Rajah, M. N. (2013). Association between prefrontal activity and volume change in prefrontal and medial temporal lobes in aging and dementia: a review. *Ageing Research Reviews*, 12(2), 479-489.

Maillet, D., & Rajah, M. N. (2011). Age-related changes in the three-way correlation between anterior hippocampus volume, whole-brain patterns of encoding activity and subsequent context retrieval. *Brain Res, 1420*, 68-79.

Crane, D., **Maillet, D**., Floden, D., Valiquette, L., Rajah, M.N. (2011). Similarities in the patterns of prefrontal cortex activity during spatial and temporal context memory retrieval after equating for task structure and performance. *Neuroimage, 54*(2), 1549-1564.

Slide Presentations

Maillet, D. (2018) Age-related differences in mind-wandering in daily life. Toronto Area Memory Group (TAMEG) annual conference.

Maillet, D. (2018) Age-related differences in mind-wandering. Rotman Rounds, Baycrest Health Sciences.

Maillet, D. (April, 2014) Investigation of the role of medial frontal cortex during episodic encoding in young and older adults. *Cognition and Circuits Lecture Series*, Montreal Neurological Institute, Montreal, Canada.

Kwon, D., **Maillet, D.,** Fajardo, M. & Rajah, M.N. (November 2013). Age-related changes in fMRI activity during episodic memory tasks in middle-aged vs. young adults. Society for Neuroscience meeting, San Diego, USA

Maillet, D. & Rajah, M. N. (June 2013). Age-related changes in frequency of task-unrelated thoughts and their impact on memory retrieval. Center for Advanced Brain Imaging ,Georgia Tech, Atlanta, USA.

Maillet, D. & Rajah, M.N. (November 2011). Age-related changes in effective connectivity within and between the task-positive and task-negative networks during spatial and temporal context retrieval. Slide presentation, 41st annual Society for Neuroscience meeting, Washington, USA.

Maillet, D. & Rajah, M.N. (April 2010). Multivariate spatio-temporal partial least squares analysis of age-related changes in brain activity during context memory encoding and retrieval. Slide presentation,17th annual Cognitive Neuroscience Society meeting, Montreal, Canada.

Maillet, D. & Rajah, M.N. (March 2010). Partial Least Squares Analysis of Age-Related Changes in Brain Activity During Context Memory Encoding and Retrieval. Slide presentation, Brain Imaging Group Seminar, Douglas Hospital, Montreal, Canada.

Posters

Maillet, D., Beaty, R., Kucyi, A. & Schacter, D. L. Functional networks involved in creative planning while performing an ongoing task. Poster presented at the 2018 Cognitive Neuroscience meeting in Boston, USA.

Maillet, D., Seli, P. & Schacter, D. L. Mind-wandering about stimuli past: assessing the characteristics of stimulus-dependent thoughts. Poster presented at the 2016 Psychonomics conference in Boston, USA.

Maillet, D. & Schacter, D. L. When the mind wanders: Distinguishing stimulus-dependent from stimulus-independent thoughts during incidental encoding in young and older adults. Poster presented at the 2016 Cognitive Aging conference in Atlanta, USA.

Rose, N., Szpunar, K., **Maillet, D**., Postle, B.R. & Schacter, D. L. Similarities and Differences Between Imagining the Future and Remembering the Past: Evidence From Multi-Voxel Pattern Analysis. Poster presented at the 2015 Psychonomics meeting in Chicago, USA.

Maillet, D. & Rajah, M. N. The relationship between the neural correlates of task-unrelated thoughts and unsuccessful episodic memory encoding in young and

older adults. Poster presented at the 2015 Cognitive Neuroscience Society meeting, San Fransisco, USA.

Wallace, L., Ankudowich, E., Swierkot, A., Pasvanis, S., Kwon, D., **Maillet, D.** & Rajah, M. N. Investigating the impact of a family history of Alzheimer's Disease on neural correlates of episodic memory at midlife. Poster presented at the 2015 Cognitive Neuroscience Society meeting, San Fransisco, USA.

Ankudowich, E., **Maillet, D**., Kwon, D., Pasvanis, S., & Rajah, M. N. Differences in encoding networks related to retrieval accuracy across the lifespan for spatial and temporal context information. Poster presented at the 2015 Cognitive Neuroscience Society meeting, San Francisco, USA.

Rajah, M.N., **Maillet, D.**, Kwon, D., Pasvanis, S., Ankudowich, E., & Grady, C. L. (2015). Context memory decline in middle aged adults is related to changes in prefrontal cortex function. Poster presented at the 25th annual Rotman research institute conference.

Ankudowich, E., Kwon, D., **Maillet, D**., Pasvanis, S., Swierkot, A., Wallace, L. & Rajah, M. N. Investigating the neural correlates of spatial and temporal context memory across the adult lifespan. Poster presentation at the 44th Annual Meeting of the Society for Neuroscience (SfN), Nov 15-19, 2014 in Washington, DC, USA.

Wallace L, Kwon D, **Maillet D**, Pasvanis S, Swierkot A, Ankudowich L, Rajah MN. Evaluating the impact of a family history of Alzheimer's Disease on neural correlates of context memory at midlife. Poster presentation at the 44th Annual Meeting of the Society for Neuroscience (SfN), Nov 15-19, 2014 in Washington, DC, USA.

Turney, I. C., **Maillet, D**., Johnson, C.E., Rajah, M. N., & Dennis, N. A. (April 2014) Exploring the Influence of Encoding Format on Subsequent Memory for Related Information in Older and Younger Adults. Cognitive Aging Conference, Atlanta, USA.

Maillet, D. & Rajah, M. N. (2013). Dissociable roles of default-mode network regions during episodic encoding. Poster to be presented at the 2013 Society for Neuroscience meeting, San Diego, USA.

Maillet, D. & Rajah, M. N. (2013). Age-related changes in regions co-activated with the dorsolateral prefrontal cortex during memory encoding and retrieval. Poster presented at the 2013 Human brain mapping conference, Seattle, USA.

Maillet, D. & Rajah, M.N. (2012). Age-related changes in the frequency of task-unrelated thoughts at encoding and their impact on memory retrieval. Poster presented at the 2012 Society for Neuroscience meeting, New Orleans, USA.

Fajardo, M.***, Maillet, D.***, & Rajah, M.N. (2012). Context memory across the adult lifespan. Poster presented at the 2012 Society for Neuroscience meeting, New Orleans, USA.
*: Shared first authors

Borja, K., Gordon, R., Wintterton-Perks, Z., **Maillet, D**. & Rajah, M.N. (2012). Age-related changes in D1 receptor density and fMRI activity on episodic and working memory tasks. Poster presented at the 2012 Society for Neuroscience meeting, New Orleans, USA.

Maillet, D. & Rajah, M.N. (2010). Age-related differences in whole-brain networks related to hippocampal head volume and performance in context memory encoding. Poster presented at the 40th annual Society for Neuroscience meeting, San Diego, USA.

Maillet, D. & Rajah, M.N. (2010). Age-related differences in prefrontal cortex activations during spatial and temporal context encoding. Poster presented at the 5th annual Canadian society for life science research, Montreal, Canada.

Teaching

Teaching fellowship:

- PSY 15: Social psychology, Winter 2016 (Harvard University; Professor: Fiery Cushman)
    - Led mandatory weekly seminars
    - Graded student book commentaries, project proposals and final projects
    - Created exam questions

Visiting lecturer:

- PSYC470: Memory and the Brain. Lecture entitled *Episodic memory and the prefrontal cortex*. February 25, 2014, McGill University.
- PSYC470: Memory and the Brain. Lecture entitled *Episodic memory and the prefrontal cortex*. February 26, 2013, McGill University.

Voluntary teaching:

- *Understanding your brain series*: Gave two presentations on attention and aging to community-dwelling older adults at Ryerson University and Baycrest Hospital (2018).
- *Brain Awareness week:* Gave several slide presentations in elementary school classes about the brain and the 5 senses (2008-2011)

Mentorship:
During the second year of my MSc, I became the senior student in Dr. Rajah's lab and mentored all incoming students (11 students) in my next four years in the lab. I also created several how-to lab manuals on behavioral and functional magnetic resonance imaging in Dr. Rajah's lab.

As a postdoc in the lab of Dr. Schacter, I mentored two undergraduate students and helped them write a research project.

Peer review

Conducted peer review for:
Aging, Neuropsychology and Cognition, Behavioral and Brain Functions, Brain and Cognition, Brain Research (5), Consciousness and Cognition, Cortex, Current Biology, Human Brain Mapping, Journal of Cognitive Neuroscience, Journal of Gerontology: Psychological Sciences, Journal of Neuroscience, Frontiers in Perceptual Science, Frontiers in Psychology, Neurobiology of Aging, Neuroimage (3), Neuropsychologia (3), Psychological Research.

Reviewed 13 abstracts for the 2015 Organization for Human Brain Mapping meeting.