

Education

- 2016-present Ph.D., University of Toronto, Canada
Psychology
Advisors: Amy Finn, Katherine Duncan
- 2015-16 M.A., University of Toronto, Canada
Psychology
Advisor: Donald Mabbott
- 2008-13 B.A., McGill University, Canada

Research Interests

Learning and memory, sustained and selective attention, exerting effort, motivation, brain development and plasticity, educational environments and academic outcomes, neuromodulators (acetylcholine, norepinephrine)

Awards, Scholarships and Grants

- 2020-21 William Line Memorial Graduate Scholarship (\$4,200), University of Toronto
- 2020-21 Doctoral Completion Award (\$5000), University of Toronto
- 2020-21 Ontario Graduate Scholarship (\$15,000), Ontario, Canada
- 2020 Dataquest Underrepresented Genders Scholarship
- 2019-20 Ontario Graduate Scholarship (\$15,000), Ontario, Canada
- 2018-22 Canadian Institutes of Health Research Project Grant (\$1,147,500)
- 2018-20 Brain Canada-Kids Brain Health Network Training Award (\$70,000)
- 2017 School of Graduate Studies Conference Grant (\$450), University of Toronto
- 2017 School of Graduate Studies Conference Grant (\$1,100), University of Toronto

Peer-Reviewed Publications

+ denotes equal contributions

Decker, A. L., Duncan, K.+, Finn, A. S.+, & Mabbott, D. J.+ (2020). Children's family income is associated with cognitive function and volume of anterior not posterior hippocampus. *Nature Communications*, 11(1), 4040. <https://doi.org/10.1038/s41467-020-17854-6>

Decker, A., Finn, A.+, & Duncan, K.+ (2020). Errors lead to transient impairments in memory formation. *Cognition*, 204, 104338. <https://doi.org/10.1016/j.cognition.2020.104338>

Decker, A. L., & Duncan, K. (2020). Acetylcholine and the complex interdependence of memory and attention. *Current Opinion in Behavioral Sciences*, 32, 21–28. <https://doi.org/10.1016/j.cobeha.2020.01.013>

- Medeiros, C. B. de, Moxon-Emre, I., Scantlebury, N., Malkin, D., Ramaswamy, V., **Decker, A.**, Law, N., Kumabe, T., Leonard, J., Rubin, J., Jung, S., Kim, S.-K., Gupta, N., Weiss, W., Faria, C. C., Vibhakar, R., Lafay-Cousin, L., Chan, J., Kros, J. M., ... Mabbott, D. J. (accepted). Medulloblastoma has a global impact on health related quality of life: Findings from an international cohort. *Cancer Medicine*. <https://doi.org/10.1002/cam4.2701>
- Sekeres, M. J., Riggs, L., **Decker, A.**, Medeiros, C. B. de, Bacopulos, A., Skocic, J., ... Frankland, P. W. (2018). Impaired recent, but preserved remote, autobiographical memory in pediatric brain tumor patients. *Journal of Neuroscience*, 1056–18. <https://doi.org/10.1523/JNEUROSCI.1056-18.2018>
- Decker, A. L.**, Szulc, K. U., Bouffet, E., Laughlin, S., Chakravarty, M. M., Skocic, J., ... Mabbott, D. J. (2017). Smaller hippocampal subfield volumes predict verbal associative memory in pediatric brain tumor survivors. *Hippocampus*. <https://doi.org/10.1002/hipo.22758>
- Oyefiade, A. A., Ameis, S., Lerch, J. P., Rockel, C., Szulc, K. U., Scantlebury, N., **Decker, A.**, Jefferson, J., Spichak, S., & Mabbott, D. J. (2018). Development of short-range white matter in healthy children and adolescents. *Human Brain Mapping*, 39(1), 204–217. <https://doi.org/10.1002/hbm.23836>

Manuscripts In Preparation

* denotes equal contribution

- Decker A.L.**, Duncan, K.*, Finn, A.S.*, (In Prep). Sustained attention shapes memory formation more in children than adults.
- Dubois, J.*, **Decker A.L.***, Duncan, K., Finn, A.S., (In Prep). Learning more when attending less: Poor attentional states enhance peripheral learning.

Talks

* denotes equal contribution

- Decker, A.L.**, Duncan, K.*, Finn, A.*, (February 2020) How do attentional fluctuations influence memory encoding?. Developmental Interest Group meeting, University of Toronto, Toronto
- Decker, A.L.**, Duncan, K.*, Finn, A.*, Mabbott, D.J.*, (March 2019) Parental income alters development of anterior, but not posterior hippocampus. Society for Research in Child Development, Baltimore, MD
- Decker, A.L.**, Duncan, K.*, Finn, A.*, Mabbott, D.J.*, (March 2019) Socioeconomic status and the anterior hippocampus. Developmental interest group meeting, University of Toronto, Toronto
- Decker, A.L.**, Finn, A.S.*, Duncan, K.*, (May 2018). Attentional states influence memory encoding. Research presented at the 2018 Annual Toronto Area Memory Group Meeting, Toronto, Canada

Decker, A.L., Szulc, K. U., Bouffet, E., Laughlin, S., Chakravarty, M. M., Skocic, J.,...Mabbott, D. J. (April 2017). The development of hippocampal subfields in healthy children and adolescents. 2017 Annual Neuroimaging round data blitz meeting at the Hospital for Sick Children, Toronto, Canada.

Decker, A.L., Szulc, K. U., de Medeiros, C. B., Skocic, J., Mabbott, D. J., (May 2016). Hippocampal subfield volumes in pediatric brain tumor survivors. Research presented at the Annual Collaborative Program in Neuroscience Research Day, University of Toronto, Canada

Posters

* denotes equal contribution

Decker, A., Finn, S. A.* , Duncan, K.* How we learn from our mistakes: Errors lead to transient impairments and then enhancements in memory formation. Virtual Vision Sciences Society Meeting (June, 2020).

Decker, A., Duncan, K.* , Finn, S. A.* , Attention Matters More: In Kids, Attentional State Predicts Memory Better Than in Adults. Context and Episodic Memory Symposium, Philadelphia, PA (May 2019).

Decker, A., Duncan, K.* , Finn, S. A.* , Attention Matters More: In Kids, Attentional State Predicts Memory Better Than in Adults. Biennial meeting for Research in Child Development, Baltimore, MD (March 2019).

Decker, A., Finn, S. A.* , Duncan, K.* , How do developmental shifts in attentional control influence memory encoding? Cognitive Neuroscience Society Conference, Boston MA (April 2018).

Decker A., Skocic J, Finn A, Mabbott DJ., Age-related changes in hippocampal subfields and white matter across childhood and adolescence. Annual Meeting of the Organization for Human Brain Mapping, Vancouver, BC. (June 2017).

Decker A., Skocic J, Finn A, Mabbott DJ. Age-related changes in hippocampal subfields and white matter across childhood and adolescence. 11th Annual Canadian Association for Neuroscience Meeting, Montreal, QC. (May 2017).

Decker, A., Szulc, K., Skocic, J., de Medeiros, C., Riggs, L., Bouffet, E., ... Mabbott, D. (2016). Impact of cranial radiation therapy on hippocampal subfield volumes and declarative memory in pediatric brain tumor survivors. *Neuro-Oncology*, 18(suppl_3), iii158–iii158. <https://doi.org/10.1093/neuonc/nw081.58>

Decker A., Szulc K, Skocic J, de Medeiros C, Riggs L, Bouffet E, Dockstader C, Laughlin S, Mabbott D. Hippocampal subfield volume loss in children and adolescent survivors of pediatric brain tumors. Canadian Association for Neuroscience Conference, Toronto, ON (May 2016).

Decker A., Szulc K, Skocic J, de Medeiros C, Riggs L, Bouffet E, Dockstader C, Laughlin S, Mabbott D. Hippocampal subfield volume loss in children and adolescent survivors of pediatric brain tumors. Centre for Brain and Mental Health Day, Toronto, ON (April 2016).

Oyefiade A, Ameis S, Scantlebury N, **Decker A.**, Szulc K, Mabbott DJ. Developmental characterization of sub-cortical white matter tracts. 23rd International Society for Magnetic Resonance Imaging in Medicine, Toronto, ON (June 1, 2015).

Moxon-Emre, I., Scantlebury, N., Taylor, M.D., Bouffet, E., Malkin, D., Laughlin, S., Law, N., Kumabe, T., Leonard, J., Rubin, J., Jung, S., Kim, S., Gupta, N., Weiss, W., Faria, C., Vibhakar, R., Spiegler, B., Janzen, L., Liu, F., **Decker, A.**, Mabbott, D. Long-term outcome in subgroups of medulloblastoma. 16th International Symposium on Pediatric Neuro-Oncology (ISPNO), Singapore. Neuro-Oncology 2014: 16(Suppl 1): i99-i104.

Mentees

2020	Hannah Cho (Psychology), University of Toronto
2019	Enri Boshti (Neuroscience), University of Toronto
2018	Carissa DeMarinis (Psychology), University of Toronto
2017	Arshee Faizullah (Psychology), University of Toronto
2017	Jiin Kim (Psychology), University of Toronto

Work, Volunteer Experience and Academic Service

2020	Founder of the University of Toronto's Psychology Climate Survey
2020	Undergraduate Teaching Assistant, Cognitive Psychology (PSY270), University of Toronto
2020	Vice President of the Psychology Graduate Student Association
2019-20	University of Toronto Graduate Students' Union Census Committee Coordinator
2019-20	Undergraduate Teaching Assistant, Introduction to Psychology (PSY100), University of Toronto
2018-19	Graduate Mentor, University of Toronto Peer Mentorship Program
2018-19	Undergraduate Teaching Assistant, Introduction to Development (PSY210), University of Toronto
2017	International Conference of Cognitive Neuroscience Volunteer
2017	Undergraduate Teaching Assistant & Guest Lecturer, Learning and Plasticity (PSY260), University of Toronto
2017	Undergraduate Teaching Assistant, Psychology and the Law (PSY328), University of Toronto
2016	Undergraduate Teaching Assistant, Human Memory (PSY372), University of Toronto
2015-16	Undergraduate Teaching Assistant & Guest Lecturer, Health Psychology (PSY333), University of Toronto

2013-15	Clinical Research Project Assistant, The Hospital for Sick Children
2013	Customer Service Representative, Toronto Dominion Bank
2012	Research Assistant, Ryerson University
2011	Research Assistant, McGill University

Skills and Knowledge

Skills: Experimental Methodology, Time Series Analysis, Multilevel Modelling, Population - based Statistics, Psychopy Experiment Builder, EyeLink Software (eye tracking and pupillometry)

Programming Languages: R, Python