

## KELSEY LEIGH CANADA

Institute of Gerontology  
Wayne State University  
87 East Ferry Street  
Detroit, MI. 48202  
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### EDUCATION AND TRAINING

- 2020 - CURRENT    **Postdoctoral Fellow** – Wayne State University (Detroit, MI)  
Institute of Gerontology  
Advisors: Noa Ofen, Ph.D. & Ana Daugherty, Ph.D.
- 2020                **Doctor of Philosophy, Cognitive and Neural Systems, Psychology with certificate in Neuroscience and Cognitive Science**  
University of Maryland, College Park, MD  
Dissertation: *Examining the co-development of episodic memory ability and hippocampal subfields – A longitudinal study*  
Committee: Drs. Tracy Riggins (chair), Michael R. Dougherty, Gregory R. Hancock, L. Robert Slevc, J. Carson Smith
- 2017                **Master of Science, Cognitive and Neural Systems, Psychology**  
University of Maryland, College Park, MD  
Thesis: *Impact of age and experience on pattern separation*  
Advisor: Tracy Riggins, Ph.D.
- 2014                **Bachelor of Science, Psychology and Communication Studies**  
Grand Valley State University, Allendale, MI  
Magna Cum Laude  
Honors thesis: *Impact of paternal and maternal postpartum depression on infant language development: A meta-analysis*  
Advisor: Josita Maouene, Ph.D.
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### PEER-REVIEWED PUBLICATIONS

- Canada, K.L., Hancock, G.R., & Riggins, T. (2021). Modeling longitudinal changes in hippocampal subfields and relations with memory from early- to mid-childhood. *Developmental Cognitive Neuroscience*, 48, 100947. <https://doi.org/10.1016/j.dcn.2021.100947>
- Callow, D.D., Canada, K. L., & Riggins, T. (2020). Microstructural integrity of the hippocampus during childhood: Relations with age and source memory. *Frontiers in Psychology*, 11, 2352. <https://doi.org/10.3389/fpsyg.2020.568953>
- Canada, K. L., Botdorf, M., & Riggins, T. (2020). Longitudinal development of hippocampal subregions from early- to mid-childhood. *Hippocampus*, 30(10), 1098–1111. <https://doi.org/10.1002/HIPO.23218>

Canada, K. L., Pathman, T., & Riggins, T. (2020). Longitudinal development of memory for temporal order during early to middle childhood [Special issue]. *The Journal of Genetic Psychology*, 181(4), 237–254. <https://doi.org/10.1080/00221325.2020.1741504>

Riggins, T., Canada, K. L., & Botdorf, M. (2020). Empirical evidence supporting neural contributions to episodic memory development in early childhood: Implications for childhood amnesia. *Child Development Perspectives*, 14(1), 41–48. <https://doi.org/10.1111/cdep.12353>

Canada, K. L., Geng, F., & Riggins, T. (2019). Age- and performance-related differences in source memory retrieval during early childhood: Insights from event-related potentials. *Developmental Psychobiology*, 62(6), 723–736. <https://doi.org/10.1002/dev.21946>

Canada, K. L., Ngo, C. T., Newcombe, N. S., Geng, F., & Riggins, T. (2018). It's all in the details: Relations between young children's developing pattern separation abilities and hippocampal subfield volumes. *Cerebral Cortex*, 29(8), 3427–3433. <https://doi.org/10.1093/cercor/bhy211>

Riggins, T., Geng, F., Botdorf, M., Canada, K., Cox, L., & Hancock, G. R. (2018). Protracted hippocampal development is associated with age-related improvements in memory during early childhood. *NeuroImage*, 174, 127–137. <https://doi.org/10.1016/j.neuroimage.2018.03.009>

Geng, F., Canada, K., & Riggins, T. (2017). Age- and performance-related differences in encoding during early childhood: Insights from event-related potentials. *Memory*, 26(4) 1–11. <https://doi.org/10.1080/09658211.2017.1366526>.

#### MANUSCRIPTS UNDER REVIEW OR IN PREPARATION

Tang, L., Yu, Q., Homayouni, R., Canada, K.L., Damoiseaux, J.S., Qin, Y., Ofen, N. (under review). Reliability of Subsequent Memory Effects in Children and Adults: The Good, the Bad, and the Hopeful.

Canada, K.L., Hancock, G.R., & Riggins, T. (submitted). Developmental changes in episodic memory across early- to mid-childhood: Insights from a latent longitudinal approach.

Botdorf, M., Canada, K. L., & Riggins, T. (submitted). A meta-analysis of the relation between episodic memory and hippocampal volume in typically developing children and adolescents.

Hoffman, L. J., Ngo, C.T., Canada, K.L., Pasternak, O., Zhang, F., Riggins, T., & Olson, I.R. (submitted). The fornix supports episodic memory during childhood.

Allard, T., Canada, K. L., & Riggins, T. (in preparation, analyses). Children's binding ability: differential changes in hits and false alarms.

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#### SCHOLARLY PRESENTATIONS

##### INVITED TALKS

Canada, K. L. (February 2020). The co-development of episodic memory and hippocampal subfields during early childhood. Talk presented at Temple University, Philadelphia, Pennsylvania.

**Canada, K. L.** (November 2019). Longitudinal development of hippocampal structure and episodic memory during early childhood. Talk presented at the Institute of Gerontology, Wayne State University, Detroit, Michigan.

**Canada, K.** (March 2017). Understanding Electroencephalogram (EEG). Talk presented at the Smart Talk Panel for the Arena Stage at the Mead Center for American Theater, Washington, DC.

**Canada, K.** (November 2016). The Development of Brain and Memory: Early Childhood. Talk presented at meeting for NeuroTechX DC, College Park, Maryland.

**Canada, K., Witherspoon, T., and Woods, K.** (November 2013). Body parts in verbs and in grammatical sentence development. Talk presented at the Grand Rounds at the Hope Network Center for Autism, Grand Rapids, Michigan.

### **CONFERENCE PRESENTATIONS**

\* indicates undergraduate Mentee

**Canada, K.L.,** Tang, L., Lee, C., Homayouni, R., Wairagu, J., & Ofen, N. (August 2021). Examining prefrontal contributions to successful memory formation in 5- to 7-year-old children. Poster to be presented at the Annual Meeting of Flux: The Society for Developmental Cognitive Neuroscience, Virtual.

Ji, A., **Canada, K. L.,** Munshell, P., Coley, K., Dunstan, J., & Riggins, T. (April 2021). Exploring the effects of napping on mnemonic discrimination during early childhood. Poster presented at the Society for Research in Child Development, Minneapolis, MN, Virtual.

Homayouni, R., Yu, Q., **Canada, K. L.,** Daugherty, A. M., & Ofen, N. (March 2021). Distal Cues, Proximal Cues, or Both? Young Children's Accurate Recall in a Virtual Morris Water Maze. Poster presented at the Cognitive Neuroscience Society Virtual Meeting.

Hoffman, L. J., Ngo, C. T., **Canada, K.L.,** Pasternak, O., Zhang, F., Riggins, T., & Olson, I. R. (March 2021). The role of the fornix in episodic memory development. Poster presented at the Cognitive Neuroscience Society Virtual Meeting.

**Canada, K.L.,** Botdorf, M., Riggins, T. (September 2020). Hippocampal subfields in a developmental population: Assessing the reliability of fully-automated segmentation. Poster presented at the Flux Virtual Congress.

**Canada, K.L.,** Geng, F., & Riggins, T. (October 2019). Longitudinal changes in hippocampal subfield volume predict improvements in memory ability during early to mid-childhood. Paper presented at the Society for Neuroscience (SfN), Annual Meeting, Chicago, Illinois.

Riggins, T. & **Canada, K.L.** (October 2019). Longitudinal examination of associations between young children's pattern separation abilities and hippocampal subfield volumes. Paper presented at the Society for Neuroscience (SfN), Annual Meeting, Chicago, Illinois.

- Canada, K.L.**, Botdorf, M., Riggins, T. (October 2019). Developmental trajectories of temporal memory and hippocampal subregions. Poster presented at the 52nd Annual Meeting of the International Society for Developmental Psychobiology (ISDP), Chicago, Illinois.
- Canada, K.L.**, Botdorf, M., Riggins, T. (August 2019). Longitudinal development of hippocampal subregions during early-childhood. Poster presented at the Annual Meeting of Flux: The Society for Developmental Cognitive Neuroscience, New York, New York.
- Canada, K.L.**, Hancock, G.R., & Riggins, T. (May 2019). Longitudinal changes in hippocampal subfield volume predict improvements in memory ability during early to mid-childhood. Paper presented at The Spring Hippocampal Research Conference, Taormina, Sicily.
- \*Rather, L., **Canada, K.**, Riggins, T. (April 2019). The role of experience on attention and memory: Potential implications for cross-race misidentification. Poster presented at the UMD Psychology Undergraduate Research Fair and annual UMD Undergraduate Research Day, College Park, Maryland.
- \*Gordon, A., **Canada, K.**, Riggins, T. (April 2019). Age-related neural differences in memory: An ERP study. Poster presented at the UMD Psychology Undergraduate Research Fair, College Park, Maryland.
- Allard, T., **Canada, K.**, Riggins, T. (March 2019). Associations between item-location binding and hippocampal subregions in 4 to 8-year-old children. Poster presented at the biennial meeting of the Society for Research in Child Development, Baltimore, Maryland.
- \*Tse, A., **Canada, K.**, & Riggins, T. (March 2019). Examining Gender Correlates of Pattern Separation Ability in Adults and Children. Poster presented at the 2nd World Congress on Undergraduate Research, Oldenburg, Germany.
- Canada, K.**, Geng, F., Hancock, G.R., Riggins, T. (August 2018). Longitudinal development of hippocampal subfields during early to mid-childhood. Poster presented at the Annual Meeting of Flux: The Society for Developmental Cognitive Neuroscience, Berlin, Germany.
- Canada, K.L.** & Riggins, T. (April 2018). Exploring the impact of age and experience on pattern separation. Paper presented at The International Conference Learning and Memory, Huntington Beach, CA.
- Canada, K.**, Geng, F., Riggins, T. (November 2017). Relations between pattern separation ability and hippocampal subfield volume in childhood. Poster presented at the 58th annual meeting of the Psychonomic Society, Vancouver, OR, CA.
- Canada, K.**, Geng, F., Riggins, T. (September 2017). Relations between pattern separation ability and hippocampal subfield volume in childhood. Poster presented at the Annual Meeting of Flux: The Society for Developmental Cognitive Neuroscience, Portland, OR.
- Campanella, C., **Canada, K.**, Clark, M.D., Mulligan, E.M., Geng, F., Spencer, R.M.C., Riggins, T. (April 2017). Preliminary support for maturational links between memory, sleep and hippocampal development in early to middle childhood. Poster presented at the biennial meeting of the

Society for Research in Child Development, Austin, Texas.

**Canada, K.**, Geng, F., Riggins, T. (September 2016). Electrophysiological correlates of intentional source memory retrieval in early childhood. Poster presented at the Annual Meeting of Flux: The Society for Developmental Cognitive Neuroscience, St Louis, MO.

**Canada, K.**, Witherspoon, T., Woods, K., & Maouene, J. (April 2014). Body Parts and Verbs in Telugu, Hindi, Urdu, EnglishL2 and EnglishL1: A cross-linguistic comparison of their associative structure. Paper presented at the 6th Annual Midwest Undergraduate Cognitive Science Conference, Indiana University, Bloomington, Indiana.

**Canada, K.**, & Maouene, J. (April 2014). Adapting a meta-analysis methodology at the undergraduate level. Poster presented at Student Scholars Day at Grand Valley State University, Allendale, Michigan.

Maouene, M., Maouene, J., **Canada, K.** (June 2013). Letting clusters and paths emerge from early semantic hypernetwork of features and their nouns. Poster presented at the Workshop on Infant Language Development at the Basque Center on Cognition, Brain, and Language, Donostia, Spain.

Maganti, M.L., Maouene, J., **Canada, K.**, Witherspoon, T., Collinge, A., Notter, R., Nesheim, M. (June 2013). Contingencies between verbs, body parts and argument structures in maternal and child speech: A corpus study in Telugu. Poster presented at the Workshop on Infant Language Development at the Basque Center on Cognition, Brain, and Language, Donostia, Spain.

**Canada, K.**, Collinge, A., & Maouene, J. (April 2013). Data mining a hypernetwork of features of early-learned nouns to find nested and overlapping categories. Comparison with the binary network and the clique percolation method. Poster presented at Student Scholars Day at Grand Valley State University, Allendale, Michigan.

**Canada, K.**, Gascho, J., & Letherby, E. (April 2012). Reacting to Distractions: Visual distractors and choice reaction time. Poster presented at Student Scholars Day at Grand Valley State University, Allendale, Michigan.

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#### GRANTS AND FELLOWSHIPS

2020	Janet W. Johnson Research Fellowship, Department of Psychology, University of Maryland
2019	Jacob K. Goldhaber Travel Grant, College of Behavioral and Social Sciences, University of Maryland
2018	Dean's Research Initiative (DRI) Graduate Travel Grant, College of Behavioral and Social Sciences, University of Maryland
2017	Jacob K. Goldhaber Travel Grant, College of Behavioral and Social Sciences, University of Maryland
2015-2019	Dean's Fellowship, University of Maryland
2013	Grand Finish Grant, Grand Valley State University

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#### HONORS AND AWARDS

2020	Jack Bartlett Memorial Award for Best Dissertation Proposal in Psychology, Department of Psychology, University of Maryland
2019	Nancy Anderson Travel Award, Department of Psychology, University of Maryland
2019	Janet Johnson Travel Award, Department of Psychology, University of Maryland
2018	Nancy Anderson Research Award, Department of Psychology, University of Maryland
2018	International Conferences Student Support Award, College of Behavioral and Social Sciences, University of Maryland
2017	Nancy Anderson Travel Award, Department of Psychology, University of Maryland
2017	Janet Johnson Travel Award, Department of Psychology, University of Maryland
All semesters	Dean's List, Grand Valley State University
2012-2014	Member, Psi Chi, the National Honor Society in Psychology
2010-2014	Award for Excellence, Grand Valley State University
2010-2014	Award of Distinction Faculty Scholarship, Grand Valley State University

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#### TEACHING AND MENTORSHIP

April 2021	Guest Lecture, "Learning and Memory Across the Lifespan", (Dr. Qujing Yu), Wayne State University.
April 2021	Guest Lecture, "Learning and Memory Across the Lifespan", (Dr. Lingfei Tang), Wayne State University.
April 2021	Guest Lecture, "Emotional Influences on Learning and Memory", (Dr. Qujing Yu), Wayne State University.
April 2021	Guest Lecture, "Emotional Influences on Learning and Memory", (Dr. Lingfei Tang), Wayne State University.
Feb 2020	Guest Lecture, "Development and implications of the changing adolescent brain", (Dr. Jude Cassidy), University of Maryland.
Aug 2019-Dec 2019	Teaching Assistant (Dr. Jonathan Beier), Developmental Psychology, University of Maryland.
Feb 2019	Guest Lecture, "The Adolescent Brain", (Dr. Jude Cassidy), University of Maryland.
Jan 2019-May 2019	Teaching Assistant (Dr. Tracy Riggins), Developmental Psychology, University of Maryland.
Aug 2018-Dec 2018	Instructor of Record, Developmental Psychology, University of Maryland.
Jan 2018-May 2018	Co-Instructor (with Dr. Tracy Riggins), Developmental Psychology, University of Maryland.
Aug 2017-Dec 2017	Teaching Assistant (Dr. Elizabeth Redcay), Developmental Psychology, University of Maryland.
May 2017-July 2017	McNair Scholars Program Summer Research Institute Co-Mentor with Dr. Tracy Riggins. Mentee: Angle Tse

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#### PROFESSIONAL/INSTITUTIONAL SERVICE

2020	Reviewer, Society for Research in Child Development Biennial Meeting, Panel 1 (Attention, Learning, Memory)
2019	Developmental Area Faculty Search Committee, Student Member, Department of Psychology, University of Maryland

Mar 2019-May 2020	Member, Graduate Student Mental Health Committee
2019	Mentee Reviewer, Society for Research in Child Development Biennial Meeting, Panel 1 (Attention, Learning, Memory)
2017	Neuroscience Area Faculty Search Committee, Student Member, Department of Psychology, University of Maryland

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#### AD-HOC REVIEWER

*Hippocampus, Human Brain Mapping, The Journal of Genetic Psychology, The Journal of Experimental Child Psychology,*

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#### ADDITIONAL TRAINING

June 2015	Maryland Neuroimaging Center Safety Training
June 2015	BioPac Training for EEG and fMRI
July 2015	Maryland Neuroimaging Center Level 2 Safety Training
Dec 2015	Polysomnography Training, University of Massachusetts Amherst
June 2016	Introduction to Bayesian Statistical Modeling Short Course, University of Maryland
Jan 2017	R Programming for Behavioral Sciences Course, University of Maryland
Fall 2017	Exploratory Latent and Composite Variable Methods Class, University of Maryland
Oct 2017	NIH AFNI Bootcamp, Bethesda, MD
Dec 2017	Manual Tracing of Hippocampal Subfields
Jan 2018	Structural Equation Modeling Workshop, University of Maryland, College Park
June 2018	Polysomnography Workshop, University of Maryland
Feb 2019	Modern Longitudinal Data Analysis , University of Maryland

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#### SOFTWARE / PROGRAMMING EXPERIENCE

Analysis of Functional Neuroimages (AFNI)  
 Aura PSG  
 Automated Segmentation of Hippocampal Subfields (ASHS)  
 Brain Electrical Source Analysis (BESA)  
 EEGLab  
 E-Prime  
 Freesurfer  
 ITK-SNAP  
 MATLAB  
 MPlus  
 R  
 Statistical Package for the Social Sciences (SPSS)

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#### PROFESSIONAL SOCIETY MEMBERSHIPS

2016-Present	Flux: The Society for Developmental Cognitive Neuroscience
2016-Present	Society for Research in Child Development
2017-2019	Psychonomic Society
2019-Present	Society for Neuroscience