

# Michael J. Carter

Assistant Professor  
Department of Kinesiology

## Curriculum Vitae

January 2024

📍 McMaster University  
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## Research interests

Sensorimotor control and learning; Decision-making for action; Multi-agent interactions; Feedback; Aging; Metascience; Data literacy; and Methodological reform in kinesiology

## Education and training

Postdoctoral fellow	Queen's University, Centre for Neuroscience Studies	2017
Ph.D.	University of Ottawa, School of Human Kinetics	2016
M.Sc.	Brock University, Department of Kinesiology	2011
B.Ph.Ed (Hons)	Brock University, Department of Kinesiology	2008

## Employment history

2017–Present	<b>Assistant Professor</b> , Department of Kinesiology, McMaster University
2016–17	<b>Teaching Adjunct Professor</b> , School of Kinesiology and Health Studies, Queen's University
2012–16	<b>Part-time Professor</b> , School of Human Kinetics, University of Ottawa

## Visitorships

Jan 2015–April 2015 **Visiting Scholar**, Department of Biokinesiology and Physical Therapy, University of Southern California

## Career interruptions, delays, and/or professional breaks

2022	<b>Parental leave</b> ; On leave May 1, 2022 to December 31, 2022 for second child
2021	<b>Parental leave</b> ; On leave January 31, 2021 to August 28, 2021 for first child
2020–22	<b>COVID-19 Pandemic</b> ; Lab was closed with no in-person data collection from March 2020 to March 2022
2017–18	<b>Lab space issues</b> ; Unable to collect data from July 2017 to September 2018 due to building/facility issues

## Professional organizations

- Society for Transparency, Openness, and Replication in Kinesiology (STORK)
  - **Chair**, 2023–Present
  - **Co-Chair**, 2022–2023
  - **Member**, 2019–Present
- Society for the Neural Control of Movement (NCM)
  - **Member**, 2013–Present
- North American Society for the Psychology of Sport & Physical Activity (NASPSPA)
  - **Member**, 2010–Present
- Canadian Society for Psychomotor Learning & Sport Psychology (SCAPPS)

- **Member, 2009–Present**

## Supervision

†Denotes student won external funding

### Master's

Years	Name	Program	Funding	Status
2023–	Daniel Deletsu†	Kinesiology	Brain Canada, Heart & Stroke, CIHR Black Scholars Award	
2022–	Nour Al Afif	Kinesiology		
2022–	Mikayla Lalli	Kinesiology		
2019–21	Mirette Mounir†	Kinesiology	SSHRC CGS-M	Dentistry school
2019–21	Rajbir Sidhu†	Kinesiology	NSERC CGS-M	Dentistry school

### Doctoral

Years	Name	Program	Funding	Status
2023–	Jiaqiao (Jack) Tang	Kinesiology		
2018–23	Laura St. Germain†	Kinesiology	NSERC PGS-D	Research and Data Specialist at Sheridan College

### Postdoctoral fellows

Years	Name	Program	Funding	Status
2021–23	Dr. Brad McKay	Kinesiology		Senior Strategist of Training Design for the Milwaukee Brewers

### Undergraduates – Honours thesis

\*Denotes student was co-supervised

Years	Name	Program	Course	University
2023–	Lidia Barbera	Life Sciences	4C12	McMaster University
2023–	Ola Schwarzenberg	Life Sciences	4C12	McMaster University
2023–	Hibaa Hasan	Neuroscience	4D09	McMaster University
2023–	Mithun Manivannan	Kinesiology	4RR6	McMaster University
2022–23	Chitrini Tandon	Life Sciences	4C12	McMaster University
2022–23	Alyssa Skouros	Biology	4C12	McMaster University
2022–23	Kiana Masoudi	Biology	4C12	McMaster University
2021–22	Raika Bourmand	Kinesiology	4RR6	McMaster University
2021–22	Armin Sariaslani	Life Sciences	4C12	McMaster University
2021–22	Katharine Douglas	Life Sciences	4C12	McMaster University
2021–22	Thinzar Soe	Life Sciences	4B09	McMaster University

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<b>Years</b>	<b>Name</b>	<b>Program</b>	<b>Course</b>	<b>University</b>
2020-21	Julianna Marfisi	Kinesiology	4RR6	McMaster University
2020-21	Matthew Tobis	Kinesiology	4RR6	McMaster University
2020-21	Andrew Poskus	Kinesiology	4RR6	McMaster University
2019-20	Sherry Feldman	Life Sciences	4C12	McMaster University
2019-20	Olena Leschyshen	Kinesiology	4RR6	McMaster University
2019-20	Noura Balbaa	Kinesiology	4RR6	McMaster University
2016-17	Lauren Smail*	Psychology	501	Queen's University
2016-17	Zachary Yantha*	Human Kinetics	4100	University of Ottawa
2015-16	Michelle Nguyen*	Human Kinetics	4100	University of Ottawa
2014-15	Victoria Smith*	Human Kinetics	4100	University of Ottawa
2014-15	Anna Head*	Human Kinetics	4100	University of Ottawa
2013-14	Bethany Cseke*	Human Kinetics	4100	University of Ottawa
2013-14	Dylan Klawitter*	Human Kinetics	4100	University of Ottawa
2013-14	Codie Primeau*	Human Kinetics	4100	University of Ottawa
2012-13	Helen Chong*	Human Kinetics	4100	University of Ottawa

**Undergraduates – Research practicum/project**

<b>Year(s)</b>	<b>Name</b>	<b>Program</b>	<b>Course</b>	<b>University</b>
Winter 2024	Michael Croteau	Neuroscience	3DD3	McMaster University
Winter 2024	Francesca Caputo	Biology	3IR3	McMaster University
Winter 2024	Jil Soni	Life Sciences	3RP3	McMaster University
Winter 2024	Navishka Brahmabhatt	Life Sciences	4A03	McMaster University
Winter 2024	Aditya Trivedi	Life Sciences	3RP3	McMaster University
2023-	Abby Girouard	Neuroscience	3DD6	McMaster University
2023-	Jacqueline Zhang	Neuroscience	3DD6	McMaster University
Fall 2023	Enuri Dissanayake	Life Sciences	3RP3	McMaster University
2022-23	Jeswende Seedu	Health Sciences	3H06	McMaster University
Winter 2022	Vivian Li	Mechatronics & Biomedical Engineering	3H03	McMaster University
Winter 2022	Caroline Jarvi	Life Sciences	3RP3	McMaster University
Fall 2021	Gurlal Gill	Kinesiology	3RP3	McMaster University
Fall 2021	Anita Chaseendran	Life Sciences	3RP3	McMaster University
Fall 2021	Gianna Jeyarajan	Life Sciences	3RP3	McMaster University
Winter 2021	Kenzie Bell	Kinesiology	3RP3	McMaster University
Winter 2021	Ashton Yuen	Kinesiology	3RP3	McMaster University
Winter 2021	Charlie Violin	Kinesiology	3RP3	McMaster University
Winter 2020	Ammaar Jan	Kinesiology	3RP3	McMaster University
Winter 2020	Faran Chaudhry	Health Sciences	4D03	McMaster University
Winter 2020	Yu (Sarah) Fu	Health Sciences	3H03	McMaster University
Winter 2019	Maya El-Zahed	Kinesiology	3RP3	McMaster University
Winter 2019	Grant Yang	Kinesiology	3RP3	McMaster University
Fall 2019	Andrew Poskus	Kinesiology	3RP3	McMaster University

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<b>Year(s)</b>	<b>Name</b>	<b>Program</b>	<b>Course</b>	<b>University</b>
Fall 2019	Olena Leshchyshen	Kinesiology	3RP3	McMaster University
Winter 2018	Rita Waseem	Life Sciences	3RP3	McMaster University
Fall 2018	Christian Kleiser	Kinesiology	3RP3	McMaster University
Fall 2018	Christopher Li	Kinesiology	3RP3	McMaster University
Spring 2018	Faryal Zahir	Biology	3RP3	McMaster University

**Undergraduates – Research Assistants**

<b>Year(s)</b>	<b>Name</b>	<b>Program</b>	<b>Type</b>	<b>University</b>
2022–	Vida Sussma	Psychology	Volunteer	McMaster University
2022–23	Lidia Barbera	Life Sciences	Volunteer	McMaster University
2022–23	Hibaa Hasan	Life Sciences	Volunteer	McMaster University
2022	Faith Adams	Neuroscience	Volunteer	McMaster University
2021–	Celeste De Faveri	Biomedical Science	Volunteer	McGill University
2021–22	Chitrini Tandon	Life Sciences	Volunteer	McMaster University
2021–22	Kristen Arnold	Life Sciences	Volunteer	McMaster University
2020–23	Elizabeth Mitchell	Integrated Biomedical Engineering & Health Sciences	Co-op / Volunteer	McMaster University
2018–20	Allison Williams	Kinesiology	Volunteer / NSERC USRA	McMaster University
2019	Andrew Poskus	Kinesiology	NSERC USRA	McMaster University
2019	Sherry Feldman	Life Sciences	Volunteer	McMaster University
2019	Kevin Gilotra	Kinesiology	Volunteer	McMaster University
2019	Ashton Yuen	Kinesiology	Volunteer	McMaster University
2019–21	Kenzie Bell	Kinesiology	Volunteer	McMaster University
2018–19	Olena Leshchyshen	Kinesiology	Volunteer	McMaster University
2018–19	Yu (Sarah) Fu	Health Sciences	Volunteer	McMaster University

**Advisory committees**

<b>Years</b>	<b>Name</b>	<b>Degree</b>	<b>Program</b>	<b>University</b>
2021–	Seth Sullivan	Ph.D.	Biomedical Engineering	University of Delaware
2021–23	Mary-Anne Vinh	M.Sc.	Human Kinetics	University of Ottawa
2020–	Adam Roth	Ph.D.	Mechanical Engineering	University of Delaware
2020–22	Karishma Ramdeo	M.Sc.	Kinesiology	McMaster University
2019–	Stephen Toepp	Ph.D.	Kinesiology	McMaster University
2019–21	Kristen DeMelo	M.Sc.	Kinesiology	McMaster University
2019–21	Noah Erskine	M.Sc.	Kinesiology	McMaster University
2018–	Chantal Carillo	Ph.D.	Psychology	McMaster University
2018–	Claire Tuckey	Ph.D.	Kinesiology	McMaster University
2018–21	Patrick Dans	M.Sc.	Kinesiology	McMaster University
2018–20	Ashley Flemington	M.Sc.	Kinesiology	McMaster University

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Years	Name	Degree	Program	University
2018–20	Jacqueline Brillantes	M.Sc.	Kinesiology	McMaster University
2017–19	Mitchell Locke	M.Sc.	Kinesiology	McMaster University
2017–19	Stephen Toepp	M.Sc.	Kinesiology	McMaster University
2017–19	Stevie Foglia	M.Sc.	Kinesiology	McMaster University
2017–19	Kumara Somasundram	M.Sc.	Kinesiology	McMaster University
2017–19	Jessica Cappelletto	Ph.D	Kinesiology	McMaster University

**Thesis examiner**

Years	Name	Degree	Program	University	Role
2023	Mary-Anne Vinh	M.Sc.	Human Kinetics	University of Ottawa	External
2018	Stephaie Reischel	M.Sc.	Kinesiology	Brock University	External
2018	Denver Brown	Ph.D	Kinesiology	McMaster University	Internal
2018	Jenin El-Sayes	M.Sc.	Kinesiology	McMaster University	External
2018	Lana Pfaff	M.Sc.	Kinesiology	Laurier University	External
2017	Claire Tuckey	M.Sc.	Kinesiology	Brock University	External
2017	Hunter Fassett	M.Sc.	Kinesiology	McMaster University	External

**Comprehensive examinations**

Years	Name	Degree	Program	University
2020	Chantal Carrillo	Ph.D	Psychology	McMaster University
2019	Claudia Turco	Ph.D	Kinesiology	McMaster University

**Research funding****Current**

2. 2018–2025, Carter MJ. **Decision-making and assignment policies in sensorimotor neuroscience**. Natural Sciences & Engineering Research Council of Canada Discovery Grant, \$203,000.
1. 2017–Present, Carter MJ. **Research Startup**. McMaster University, \$100,000.

**Previous**

5. 2018–23, Carter MJ. **Establishment of the Memory, Action, & Cognition laboratory for the study of human sensorimotor neuroscience**. Ontario Research Fund–Research Infrastructure, \$127,514.
4. 2018–23, Carter MJ. **Establishment of the Memory, Action, & Cognition laboratory for the study of human sensorimotor neuroscience**. Canadian Foundation for Innovation John R. Evans Leaders Fund, \$127,514.
3. 2022, Carter MJ. **Life Events Support Program**. McMaster University Faculty of Science, \$47,673.
2. 2021, Carter MJ. **Life Events Support Program**. McMaster University Faculty of Science, \$36,687.

1. 2019–20, Carter MJ. **Decision-making and assignment policies in sensorimotor neuroscience**. Natural Sciences & Engineering Research Council of Canada Discovery Launch Supplement Early Career Researcher, \$12,500.

## Publications

†Denotes trainee, ‡Denotes co-senior authorship

### Submitted

1. McKay B<sup>†</sup>, Corson AE, Seedu J<sup>†</sup>, De Faveri CS<sup>†</sup>, Hasan H<sup>†</sup>, Arnold K<sup>†</sup>, Adams FC<sup>†</sup>, & **Carter MJ**. Reporting bias, not external focus: A robust Bayesian meta-analysis of the focus of attention literature. *Psychological Bulletin*. Manuscript submission ID: BUL-2023-1221. [Revisions submitted]

### Current preprints

3. McKay B<sup>†</sup>, Corson AE, Seedu J<sup>†</sup>, De Faveri CS<sup>†</sup>, Hasan H<sup>†</sup>, Arnold K<sup>†</sup>, Adams FC<sup>†</sup>, & **Carter MJ**. Reporting bias, not external focus: A robust Bayesian meta-analysis of the focus of attention literature. *SportRxiv*. <https://doi.org/10.51224/SRXIV.304>
2. St. Germain L<sup>†</sup>, McKay B<sup>†</sup>, Tandon C<sup>†</sup>, Seedu J<sup>†</sup>, Barbera L<sup>†</sup>, Carrillo C<sup>†</sup>, Brown DMY, & **Carter MJ**. Autonomy-supportive language does not enhance skill acquisition compared to controlling language. *SportRxiv*. <https://doi.org/10.51224/SRXIV.298>
  - A version of this paper won Laura St. Germain the 2023 SCAPPS Franklin Henry Young Scientist Award in Motor Control and Learning
1. de Brouwer AJ, **Carter MJ**, Smail LC<sup>†</sup>, Wolpert DM, Gallivan JP, & Flanagan JR. Gaze behaviour reveals flexible encoding of competing reach goals under conditions of target uncertainty. *bioRxiv*. <https://doi.org/10.31234/osf.io/s34fg>

### Peer-reviewed journal articles

33. Roth AM, Lokesh R, Tang J<sup>†</sup>, Buggeln JH, Smith C, Calalo JA, Sullivan SR, Ngo T, St. Germain L<sup>†</sup>, **Carter MJ**<sup>‡</sup>, & Cashaback JGA<sup>‡</sup>. (2024). Punishment leads to greater sensorimotor learning but less movement variability compared to reward. *Neuroscience*, 540(5), 12–26. <https://doi.org/10.1016/j.neuroscience.2024.01.004>
32. McKay B<sup>†</sup>, Bacelar MFB, Parma JO, Miller MW, & **Carter MJ**. (2023). The combination of reporting bias and underpowered study designs has substantially exaggerated the motor learning benefits of self-controlled practice and enhanced expectancies: A meta-analysis. *International Review of Sport & Exercise Psychology*, 1–21. <https://doi.org/10.1080/1750984X.2023.2207255>
31. Roth AM, Calalo JA, Lokesh R, Sullivan SR, Grill S, Jeka JJ, van der Kooij K, **Carter MJ**<sup>‡</sup>, & Cashaback JGA<sup>‡</sup>. Reinforcement-based processes actively regulate motor exploration along redundant solution manifolds. (2023). *Proceedings of the Royal Society B: Biological Sciences*. 290, Article 20231475, 1–12. <https://doi.org/10.1098/rspb.2023.1475>
30. McKay B<sup>†</sup> & **Carter MJ**. (2023). A critical re-analysis of six implicit learning papers. *Meta-Psychology*, 7, Article MP.2021.2938, 1–32. <https://doi.org/10.15626/MP.2021.2938>
29. McKay B<sup>†</sup>, Bacelar MFB, & **Carter MJ**. (2023). On the reproducibility of power analyses in motor behavior research. *Journal of Motor Learning & Development*, 11(1), 29–44. <https://doi.org/10.1123/jmld.2022-0061>

28. McKay B<sup>†</sup>, Corson A, Vinh MA, Jeyarajan<sup>†</sup> G, Tandon C<sup>†</sup>, Brooks H, Hubley J, & **Carter MJ**. (2023). Low prevalence of a priori power analyses in motor behavior research. *Journal of Motor Learning & Development*, 11(1), 15–28. <https://doi.org/10.1123/jmld.2022-0042>
27. St. Germain L<sup>†</sup>, McKay B<sup>†</sup>, Williams A<sup>†</sup>, Feldman S<sup>†</sup>, Leshchyshen O<sup>†</sup>, Poskus A<sup>†</sup>, Cashaback JGA, & **Carter MJ**. (2023). Exercising choice over feedback schedules during practice is not advantageous for motor learning. *Psychonomic Bulletin & Review*, 30(2), 621–633. <https://doi.org/10.3758/s13423-022-02170-5>
26. Lokesh R, Sullivan SR, St. Germain L<sup>†</sup>, Roth AM, Calalo JA, Buggeln J, Ngo T, Marchhart VRF, **Carter MJ**<sup>‡</sup>, & Cashaback JGA<sup>‡</sup>. (2023). Visual accuracy dominates over haptic speed for state estimation of a partner during collaborative sensorimotor interactions. *Journal of Neurophysiology*, 130(1), 23–42. <https://doi.org/10.1152/jn.00053.2023>
25. Lokesh R, Sullivan S, Calalo JA, Roth A, Swanik B, **Carter MJ**<sup>‡</sup>, & Cashaback JGA<sup>‡</sup>. (2022). Humans utilize sensory evidence of others' intended action to make online decisions. *Scientific Reports*, 12, Article 8806, 1–17. <https://doi.org/10.1038/s41598-022-12662-y>
24. St. Germain L<sup>†</sup>, Williams A<sup>†</sup>, Balbaa N<sup>†</sup>, Poskus A<sup>†</sup>, Leshchyshen O<sup>†</sup>, Lohse KR, & **Carter MJ**. (2022). Increased perceptions of autonomy through choice fail to enhance motor skill retention. *Journal of Experimental Psychology: Human Perception and Performance*, 48(4), 370–379. <https://doi.org/10.1037/xhp0000992>
  - A version of this paper won Laura St. Germain the 2021 NASPSPA Outstanding Student Paper Award in Motor Control and Learning
23. McKay B, Yantha ZD, Hussien J, **Carter MJ**, & Ste-Marie DM. (2022). Meta-analytic findings in the self-controlled motor learning literature: Underpowered, biased, and lacking evidential value. *Meta-Psychology*, 6, Article MP.2021.2803, 1–32. <https://doi.org/10.15626/MP.2021.2803>
22. McKay B<sup>†</sup>, Hussien J, **Carter MJ**, Yantha Z, & Ste-Marie DM. (2021). Expecting to teach a novel golf putting task did not enhance retention performance: A replication attempt of Daou and colleagues. *Communications in Kinesiology*, 1(2), 1–21. <https://doi.org/10.51224/cik.v1i2.39>
21. Barros JAC, Yantha ZD<sup>†</sup>, **Carter MJ**, Hussein J, & Ste-Marie DM. (2019). Examining the impact of error estimation on the effects of self-controlled feedback. *Human Movement Science*, 63, 182–198. <https://doi.org/10.1016/j.humov.2018.12.002>
20. **Carter MJ**, Smith V<sup>†</sup>, Carlsen AN, & Ste-Marie DM. (2018). Anodal transcranial direct current stimulation over the primary motor cortex does not enhance the learning benefits of self-controlled feedback schedules. *Psychological Research*, 82(3), 496–506. <https://doi.org/10.1007/s00426-017-0846-x>
19. **Carter MJ** & Ste-Marie DM. (2017). Not all choices are created equal: Task-relevant choices enhance motor learning compared to task-irrelevant choices. *Psychonomic Bulletin & Review*, 24(6), 1879–1888. <https://doi.org/10.3758/s13423-017-1250-7>
18. Maslovat D, **Carter MJ**, & Carlsen AN. (2017). Response preparation and execution during intentional bimanual pattern switching. *Journal of Neurophysiology*, 118(3), 1720–1731. <https://doi.org/10.1152/jn.00323.2017>



17. **Carter MJ**, & Ste-Marie DM. (2017). An interpolated activity during the knowledge-of-results delay interval eliminates the learning advantages of self-controlled feedback schedules. *Psychological Research*, 81(2), 399–406. <https://doi.org/10.1007/s00426-016-0757-2>
16. **Carter MJ**, Maslovat D, & Carlsen AN. (2017). Intentional switches between coordination patterns are faster following anodal-tDCS applied over the supplementary motor area. *Brain Stimulation*, 10, 162–164. <https://doi.org/10.1016/j.brs.2016.11.002>
15. Ste-Marie DM, **Carter MJ**, Law B, Vertes K, & Smith V<sup>†</sup>. (2016). Self-controlled learning benefits: Exploring contributions of self-efficacy and intrinsic motivation via path analysis. *Journal of Sport Sciences*, 34(17), 1650–1656. <https://doi.org/10.1080/02640414.2015.1130236>
14. **Carter MJ**, Rathwell S, & Ste-Marie DM. (2016). Motor skill retention is modulated by strategy choice during self-controlled knowledge of results schedules. *Journal of Motor Learning & Development*, 4(1), 100–115. <https://doi.org/10.1123/jmld.2015-0023>
13. Patterson JT, Hart A, Hansen S, **Carter MJ**, & Ditor D. (2016). Measuring investment in learning: Can electrocardiogram provide an indication of cognitive effort during learning?. *Perceptual & Motor Skills*, 122(2), 375–394. <https://doi.org/10.1177%2F0031512516633348>
12. **Carter MJ**, Smith V<sup>†</sup>, & Ste-Marie DM. (2016). Judgments of learning are significantly higher following feedback on relatively good versus relatively poor trials despite no actual learning differences. *Human Movement Science*, 45, 63–70. <https://doi.org/10.1016/j.humov.2015.11.006>
11. Martini R, **Carter MJ**, Yoxon E, Cumming J, & Ste-Marie DM. (2016). Development and validation of the Movement Imagery Questionnaire for Children (MIQ-C). *Psychology of Sport & Exercise*, 22, 190–201. <https://doi.org/10.1016/j.psychsport.2015.08.008>
10. Maslovat D, Drummond NM, **Carter MJ**, & Carlsen AN. (2015). Startle activation is additive with voluntary cortical activation irrespective of stimulus modality. *Neuroscience Letters*, 606, 151–155. <https://doi.org/10.1016/j.neulet.2015.08.053>
9. Maslovat D, Drummond NM, **Carter MJ**, & Carlsen AN. (2015). Reduced motor preparation during dual-task performance: Evidence from startle. *Experimental Brain Research*, 233(9), 2673–2683. <https://doi.org/10.1007/s00221-015-4340-7>
8. **Carter MJ**, Maslovat D, & Carlsen AN. (2015). Anodal transcranial direct current stimulation applied over the supplementary motor area delays spontaneous antiphase-to-in-phase transitions. *Journal of Neurophysiology*, 133(3), 780–785. <https://doi.org/10.1152/jn.00662.2014>
7. **Carter MJ**, Carlsen AN, & Ste-Marie DM. (2014). Self-controlled feedback is effective if it is based on the learner's performance: A replication and extension of Chiviacowsky and Wulf (2005). *Frontiers in Psychology*, 5, Article 1325, 1–10. <https://doi.org/10.3389/fpsyg.2014.01325>
  - A version of this paper won the 2014 SCAPPS Young Scientist Award in Motor Control and Learning
6. Maslovat D, **Carter MJ**, Kennefick M, & Carlsen AN. (2014). Startle neural activity is additive with normal cortical initiation-related activation. *Neuroscience Letters*, 558, 164–168. <https://doi.org/10.1016/j.neulet.2013.11.009>



5. Bajema MC, MacKinnon CD, **Carter MJ**, Kennefick M, Perlmutter S, & Carlsen AN. (2013). Pause time alters the preparation of two-component movements. *Experimental Brain Research*, 231(1), 85–96. <https://doi.org/10.1007/s00221-013-3670-6>
4. Patterson JT, **Carter MJ**, & Hansen S. (2013). Self-controlled KR schedules: Does repetition order matter? *Human Movement Science*, 32(4), 1459–1472. <https://doi.org/10.1016/j.humov.2013.03.005>
3. **Carter MJ** & Patterson JT. (2012). Self-controlled knowledge of results: Age-related differences in motor learning, strategies, and error detection. *Human Movement Science*, 31(6), 1459–1472. <https://doi.org/10.1016/j.humov.2012.07.008>
2. Patterson JT, **Carter MJ**, & Sanli E. (2011). Decreasing the proportion of self-control trials during the acquisition period does not compromise the learning advantages in a self-controlled context. *Research Quarterly for Exercise & Sport*, 82(4), 624–633. <https://doi.org/10.1080/02701367.2011.10599799>
1. Patterson JT & **Carter MJ**. (2010). Learner regulated knowledge of results during the acquisition of multiple timing goals. *Human Movement Science*, 29(2), 214–227. <https://doi.org/10.1016/j.humov.2009.12.003>

### Book chapters

1. Ste-Marie DM, **Carter MJ**, & Yantha ZD<sup>†</sup>. (2019). Self-controlled learning: Current findings, theoretical perspectives, and future directions. In N Hodges & AM Williams (eds.) *Skill acquisition in sport: Research, theory, and practice*, 3rd ed., 119–140. <https://doi.org/10.4324/9781351189750>

### Talks

7. Open and reproducible research in a productivity demanding academic world. Motor Learning and Control Online Research Seminar Series, *North American Society for Psychology of Sport & Physical Activity*. Invited team talk with Drs. Diane Ste-Marie, Keith Lohse, and Matthew Miller; November 2020.
6. Embracing uncertainty and learning to learn. Neuroscience Tutorial, *McMaster University*. Invited talk; January 2019.
5. Self-controlled feedback and error estimation. Symposium on “Errors make you better: Behavioural, theoretical, and neurophysiological determinates of error processing in motor learning”, *Canadian Society for Psychomotor Learning & Sport Psychology*. Invited talk; October 2018.
4. Decision-making for action control and learning. Kinesiology Seminar Series, *McMaster University*. Invited talk; September 2017.
3. Cognition and motor skill learning: Insights from learner-controlled protocols. Centre for Neuroscience Studies Seminar Series, *Queen’s University*. Invited talk; May 2016.
2. Self-controlled feedback and motor learning. Franklin Henry Young Scientist Award Presentation, *Canadian Society for Psychomotor Learning & Sport Psychology*. Invited talk; October 2014.

1. Cognitive processes underlying the learning advantages of self-controlled feedback schedules. Biokinesiology and Physical Therapy Seminar Series, *University of Southern California*. Invited talk; March 2015.

## Conference presentations

Presenting author(s), <sup>†</sup>Denotes trainee, <sup>‡</sup>Denotes co-senior authorship

61. Calalo J, Ngo T, Sullivan S, Roth A, Lokesh R, Buggeln JH, Strand K, Marchhart V, **Carter MJ<sup>‡</sup>**, Kurtzer I<sup>‡</sup>, & Cashaback JGA<sup>‡</sup>. (2023). Reaching movements reflect ongoing deliberation prior to a decision. Poster presentation at the Annual Meeting of the *Society for Neuroscience*; Washington, USA.
60. Roth A, Buggeln J, Calalo J, Lokesh R, Sullivan S, Ngo TT, Jeka J, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2023). The roles and interplay of reinforcement-based and error-based processes on exploratory behaviour in neurologically intact and Parkinson's disease. Poster presentation at the Annual Meeting of the *Society for Neuroscience*; Washington, USA.
59. Sullivan S, Lokesh R, Peters CS, Calalo J, Roth AR, Buggeln JH, Ngo TT, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2023). Humans are excessively indecisive under time constraints. Poster presentation at the Annual Meeting of the *Society for Neuroscience*; Washington, USA.
58. Afif N<sup>†</sup>, McKay B<sup>†</sup>, Bacelar MFB, Cashaback JGA, & textbfCarter MJ. Current accuracy is not always the best predictor of future accuracy: The consequences of dissociable bias and precision components. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kingston ON, Canada.
57. Lalli M<sup>†</sup>, Germain L<sup>†</sup>, McKay B<sup>†</sup>, & textbfCarter MJ. (2023). The relationship between perceived competence and intrinsic motivation and motor skill retention: An exploratory analysis. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kingston ON, Canada.
56. Calalo J, Ngo T, Sullivan S, Roth A, Lokesh R, Buggeln JH, Strand K, Marchhart V, **Carter MJ<sup>‡</sup>**, Kurtzer I<sup>‡</sup>, & Cashaback JGA<sup>‡</sup>. (2023). Reaching reflects ongoing deliberation prior to a decision. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kingston ON, Canada.
55. Roth A, Buggeln J, Calalo J, Lokesh R, Sullivan S, Ngo TT, Jeka J, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2023). The roles and interplay of reinforcement-based and error-based processes on exploratory behaviour in Parkinson's disease and neurologically intact populations. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kingston ON, Canada.
54. Sullivan S, Lokesh R, Peters CS, Calalo J, Roth AR, Buggeln JH, Ngo TT, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2023). Humans make an excessive number of indecisions under time constraints. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kingston ON, Canada.
53. Roth A, Buggeln J, Calalo J, Lokesh R, Sullivan S, Ngo TT, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2023). The role of reinforcement-based and error-based processes on exploratory motor behaviour in neurologically intact and Parkinson's Disease. Verbal presentation at the

*NSF-DARE Conference on Computational Modeling for Neurorehabilitation*; Los Angeles CA, United States.

52. Mitchell B<sup>†</sup> & **Carter MJ**. (2022). A free and open source 2-dimensional error score program. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Montreal QB, Canada.
51. McKay B<sup>†</sup>, Bacelar MFB, & **Carter MJ**. (2022). Low reproducibility of reported *a priori* power analyses in motor behaviour research. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Montreal QB, Canada.
50. St. Germain L<sup>†</sup>, Sidhu R<sup>†</sup>, McKay B<sup>†</sup>, Mounir M<sup>†</sup>, Poskus A<sup>†</sup>, Yuen A<sup>†</sup>, Cashaback JGA<sup>‡</sup>, & **Carter MJ<sup>‡</sup>**. (2022). The impact of combining punishment and reward feedback through transition schedules on performance and learning. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Montreal QB, Canada.
49. Mounir M<sup>†</sup>, McKay B<sup>†</sup>, Sariaslani A<sup>†</sup>, Douglas Katharine<sup>†</sup>, Tobis M<sup>†</sup>, St. Germain L<sup>†</sup>, Cashaback JGA<sup>‡</sup>, & **Carter MJ<sup>‡</sup>**. (2022). A failure to replicate the dissociable effects of punishment and reward on motor learning. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Montreal QB, Canada.
48. McKay B<sup>†</sup>, Corson A, Seedu J<sup>†</sup>, De Faveri CS<sup>†</sup>, Hasan H<sup>†</sup>, Arnold K<sup>†</sup>, Adams FC<sup>†</sup>, & **Carter MJ**. (2022). The benefits of an external focus of attention are negligible after correcting for publication bias: A re-analysis and extension of Chua et al. (2021). Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Waikōloa Village, Hawaii, United States.
47. McKay B<sup>†</sup>, Bacelar MFB, Parma JO, Miller MW<sup>‡</sup>, & **Carter MJ<sup>‡</sup>**. (2022). Publication bias and underpowered study designs in enhanced expectancies and self-controlled learning research: A meta-analysis. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Waikōloa Village, Hawaii, United States.
46. **Carter MJ**, Lohse KR, & Miller MW. (2022). Making strong predictions: Testing casual hypothesis in motor behavior studies. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Waikōloa Village, Hawaii, United States.
45. Roth A, Lokesh R, Calalo J, Sullivan S, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2022). Unique and interacting roles of reinforcement-based and error-based processes on exploratory motor behaviour. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; Dublin, Ireland.
44. St. Germain L<sup>†</sup>, McKay B<sup>†</sup>, Williams A<sup>†</sup>, Leschyshen O<sup>†</sup>, Poskus A<sup>†</sup>, Feldman S<sup>†</sup>, Cashaback JGA, & **Carter MJ**. (2021). Binary feedback prevents a self-controlled learning advantage. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Virtual Conference due to Covid-19.
43. Lokesh R, Calalo J, Roth A, **Carter MJ<sup>‡</sup>**, & Cashaback JGA<sup>‡</sup>. (2021). Rapid decision-making during competitive human-human sensorimotor interactions. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Virtual Conference due to Covid-19.

42. Roth A, Lokesh R, Calalo J, **Carter MJ**<sup>†</sup>, & Cashaback JGA<sup>‡</sup>. (2021). The influence of reward feedback and error feedback on sensorimotor exploration. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Virtual Conference due to Covid-19.
41. Marfisi J<sup>†</sup>, St. Germain L<sup>†</sup>, & **Carter MJ**. (2021). The persistence of inappropriate outcome variables in motor learning experiments: A follow-up to Fischman (2015). Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Virtual Conference due to Covid-19.
40. Hussien J, McKay B, **Carter MJ**, Yantha Z, Brooks H, Hassin J, Turenne M, & Ste-Marie DM. (2021). Failure to demonstrate an “expecting to teach” benefit: A replication and extension experiment. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Virtual Conference due to Covid-19.
39. St. Germain L<sup>†</sup>, Williams A<sup>†</sup>, Poskus A<sup>†</sup>, Balbaa N<sup>†</sup>, Leshchyshen O<sup>†</sup>, Lohse KR, & **Carter MJ**. (2020). Self-controlled learning: Making a yoked group explicitly aware of being denied choice. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Virtual Conference due to Covid-19.
  - Winner of the Outstanding Student Paper Award in Motor Control and Learning
38. St. Germain L<sup>†</sup>, Leshchyshen O<sup>†</sup>, Williams A<sup>†</sup>, & **Carter MJ**. (2019). Manipulating the characteristics of self-controlled feedback schedules. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Vancouver BC, Canada.
37. Williams A<sup>†</sup>, St. Germain L<sup>†</sup>, Leshchyshen O<sup>†</sup>, & **Carter MJ**. (2019). Error estimation abilities and self-controlled feedback schedules. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Vancouver BC, Canada.
36. St. Germain L<sup>†</sup>, Leshchyshen O<sup>†</sup>, & **Carter MJ**. (2019). Assessing the evidential value of incidental choices for motor learning. Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Baltimore MD, United States.
35. Yantha ZD, McKay B, **Carter MJ**, & Ste-Marie DM. (2019). The effects of choice on motor skill learning: A meta-analysis of self-controlled research findings. Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Baltimore MD, United States.
34. Zahir F<sup>†</sup>, St. Germain L<sup>†</sup>, & **Carter MJ**. (2018). Inconvenient findings for the “OPTIMAL” theory of motor learning. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Toronto ON, Canada.
33. Gale D, **Carter MJ**, Wolpert DM, Gallivan JP, & Flanagan JR. (2017). Dynamic motor encoding of targets in multiple target tracking. Poster presentation at the Annual Meeting of the *Society for Neuroscience*; Washington DC, United States.
32. **Carter MJ**, de Brouwer AJ, Smail L<sup>†</sup>, Wolpert DM, Gallivan JP, & Flanagan JR. (2017). Gaze behaviour reveals the specification of competing reach movements under conditions of target uncertainty. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; St. John's NF, Canada.

31. **Yantha ZD<sup>†</sup>, Carter MJ**, Hussein J, Cotnam HP, & Ste-Marie DM. (2017). Using error estimation to better understand the advantages of self-controlled practice. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; St. John's NF, Canada.
30. **Carter MJ**, de Brouwer AJ, Smail L<sup>†</sup>, Wolpert DM, Gallivan JP, & Flanagan JR. (2017). Gaze behaviour reveals the specification of competing reach movements. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; Dublin, Ireland.
29. Yantha ZD<sup>†</sup>, **Carter MJ**, & Ste-Marie DM. (2016). Task-relevant and task-irrelevant choices differentially impact error estimation and motor learning. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Waterloo ON, Canada.
28. **Carter MJ**, Elnakouri A, Yantha ZD<sup>†</sup>, & Ste-Marie DM. (2016). Not all choices are created equal: The differential impact of task-relevant and task-irrelevant choices on motor learning. Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Montreal QB, Canada.
27. **Carter MJ**, Maslovat D, & Carlsen AN. (2016). A startling acoustic stimulus suggests advance preparation of intentional bimanual switches. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; Montego Bay, Jamaica.
26. **Ste-Marie DM, Carter MJ**, Law B, Smith V<sup>†</sup>, & Vertes KA. (2015). Self-controlled learning benefits: Exploring contributions of self-efficacy and intrinsic motivation via path analysis. Poster presentation at the Annual Meeting of the *European Congress of Sport Psychology*; Bern, Switzerland.
25. **Carter MJ**, Carlsen AN, Smith V<sup>†</sup>, & Ste-Marie DM. (2015). Anodal transcranial direct current stimulation applied over the primary motor cortex does not enhance the learning benefits of self-controlled KR schedules. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Edmonton AB, Canada.
24. **Carter MJ**, Head CA<sup>†</sup>, Puvendran P, & Ste-Marie DM. (2015). Eliminating the learning benefits of self-controlled knowledge of results (KR) schedules: The importance of information processing activities during the KR-delay interval. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Portland OR, United States.
23. **Carter MJ**, Carlsen AN, & Ste-Marie DM. (2015). Self-controlled feedback is effective if it is based on the learner's performance: A replication and extension of Chiviacowsky & Wulf (2005). Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Portland OR, United States.
  - Presentation as part of the NASPSA-SCAPPS exchange of Award Winners
22. **Carter MJ**, Maslovat D, Nguyen M, & Carlsen AN. (2015). The learning of a 90-degree relative phase bimanual coordination pattern: A transcranial direct current stimulation investigation. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; Charleston SC, United States.
21. **Carter MJ**, Carlsen AN, & Ste-Marie DM. (2014). Self-controlled feedback is effective if it is based on the learner's performance: A replication and extension of Chiviacowsky & Wulf

(2005). Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; London ON, Canada.

- Winner of the Franklin Henry Young Scientist Award in Motor Control and Learning

20. McKay B, **Carter MJ**, Rathwell S, & Ste-Marie DM. (2014). The learning benefits of self-controlled feedback schedules are modulated by strategy choice: A mixed-methods approach. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; London ON, Canada.
19. Drummond NM, Maslovat D, **Carter MJ**, Chiucchi A, & Carlsen, AN. (2014). Startle activation is additive with voluntary cortical activation irrespective of stimulus modality. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; London ON, Canada.
18. **Carter MJ**, Klawitter D<sup>†</sup>, Carlsen AN, & Ste-Marie DM. (2014). The option of receiving knowledge of results following performance leads to increased motor learning. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Minneapolis MN, United States.
17. **Carter MJ**, Smith V<sup>†</sup>, Carlsen AN, & Ste-Marie DM. (2014). Awareness of “good” versus “poor” feedback content does not mitigate illusions of competency. Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Minneapolis MN, United States.
16. McKay B, **Carter MJ**, & Ste-Marie DM. (2014). Self-controlled learning: A meta-analysis. Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Minneapolis MN, United States.
15. **Carter MJ**, Cseke B<sup>†</sup>, Drummond NM, & Carlsen AN. (2014). Intentional phase transitions in bimanual coordination following tDCS. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; Amsterdam, The Netherlands.
14. Drummond NM, Scantland-Lebel I, **Carter MJ**, Maslovat D, & Carlsen AN. (2014). Startle reveals motor preparatory state associated with differential attentional demands. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; Amsterdam, The Netherlands.
13. **Carter MJ**, Drummond NM, & Carlsen AN. (2013). Anodal tDCS decreases mean relative phase error during anti-phase movements. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kelowna BC, Canada.
12. Ste-Marie DM, Law B, **Carter MJ**, Westlund N, Divine A, & Martini R. (2013). Group versus individual administration of Movement Imagery Questionnaire for Children yields different movement imagery scores. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Kelowna BC, Canada.
11. Vertes KA, **Carter MJ**, Smith V<sup>†</sup>, & Ste-Marie DM. (2013). Self-controlled video feedback is effective for learning when children adopt higher viewing frequencies. Verbal presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; New Orleans LA, United States.
10. **Carter MJ**, Yoxon E, Ste-Marie DM, Cumming, & Martini R. (2013). The validation of a movement imagery questionnaire for children (MIQ-C). Poster presentation at the Annual

Meeting of the *North American Society for Psychology of Sport & Physical Activity*; New Orleans LA, United States.

9. **Carter MJ**, Maslovat D, Drummond NM, Kennefick M, & Carlsen AN. (2013). Startle neural activity is additive with normal cortical initiation-related activation. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; San Juan, Puerto Rico.
8. **Drummond NM**, Hayduk-Costa G, **Carter MJ**, & Carlsen AN. (2013). Bi-hemispheric tDCS over motor cortex does not influence free choice. Poster presentation at the Annual Meeting of the *Society for the Neural Control of Movement*; San Juan, Puerto Rico.
7. **Carter MJ**, Drummond NM, Ste-Marie DM, & Carlsen AN. (2012). Providing knowledge of results based on an absolute performance bandwidth results in illusions of competency. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Halifax NS, Canada.
6. Hayduk-Costa G, Drummond NM, **Carter MJ**, & Carlsen AN. (2012). Turbocharging the “go”-horse: Anodal tDCS results in early response initiation in an anticipation timing task. Verbal presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Halifax NS, Canada.
5. **Kennefick M**, **Carter MJ**, Bajema MC, & Carlsen AN. (2012). Dwell time mediates the preparation of single versus multiple component movements. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Halifax NS, Canada.
4. **Carter MJ** & Patterson JT. (2011). Self-controlled practice: Learning differences between younger and older adults. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Winnipeg MB, Canada.
3. **Carter MJ** & Patterson JT. (2010). Self-controlled KR: Does it facilitate an internal representation of a spatial motor task?. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Ottawa ON, Canada.
2. **Carter MJ**, Patterson JT, & Hansen S. (2010). Learner-controlled KR: Does repetition order matter?. Poster presentation at the Annual Meeting of the *North American Society for Psychology of Sport & Physical Activity*; Tuscan AZ, United States.
1. **Carter MJ** & Patterson JT. (2009). Manipulating the structure of a learner-controlled KR practice context: Do the learning advantages persist?. Poster presentation at the Annual Meeting of the *Canadian Society for Psychomotor Learning & Sport Psychology*; Toronto ON, Canada.

## Courses taught

\*Denotes course was co-taught

### Undergraduate

Offered	Course	Department	Code	Enrollment
Fall 2023	Human Robotics	Kinesiology	4TT3	42 students
Fall 2023	Motor Control and Learning	Kinesiology	1E03	236 students
Winter 2022	Human Robotics	Kinesiology	4TT3	31 students



*(continued)*

<b>Offered</b>	<b>Course</b>	<b>Department</b>	<b>Code</b>	<b>Enrollment</b>
Fall 2021	Motor Control and Learning*	Kinesiology	1E03	186 students
Fall 2020	Motor Control and Learning	Kinesiology	1E03	270 students
Fall 2019	Motor Control and Learning	Kinesiology	1E03	212 students
Fall 2018	Motor Control and Learning	Kinesiology	1E03	252 students
Winter 2018	Motor Control and Learning*	Kinesiology	1E03	186 students

**Graduate**

<b>Offered</b>	<b>Course</b>	<b>Department</b>	<b>Code</b>	<b>Enrollment</b>
Winter 2024	Scientific Computing for Sensorimotor Neuroscience	Kinesiology	736	2 students
Fall 2023	Directed Reading	Kinesiology	713	1 student
Fall 2023	Individual Study in Selected Topics	Kinesiology	702	1 student
Winter 2023	Special Topics Evaluation	Psychology	714	1 student
Winter 2023	Statistical Methods in Kinesiology	Kinesiology	701	15 students
Winter 2023	Motor Control	Kinesiology	711	2 students
Fall 2022	Individual Study in Selected Topics	Kinesiology	702	2 students
Fall 2021	Statistical Methods in Kinesiology	Kinesiology	701	9 students
Fall 2020	Motor Control	Kinesiology	711	1 student
Fall 2020	Statistical Methods in Kinesiology	Kinesiology	701	14 students
Winter 2020	Individual Study in Selected Topics	Kinesiology	702	2 students
Fall 2019	Statistical Methods in Kinesiology	Kinesiology	701	12 students
Fall 2019	Motor Control*	Kinesiology	711	4 students
Winter 2019	Directed Reading	Kinesiology	713	1 student
Fall 2018	Statistical Methods in Kinesiology	Kinesiology	701	8 students
Fall 2018	Motor Control*	Kinesiology	711	4 students
Winter 2018	Statistical Methods in Kinesiology	Kinesiology	701	17 students

**Honours and awards**

2016	<b>Dean's award</b> , University of Ottawa; \$3000
2015	<b>Michael Smith Foreign Study Supplement</b> , Natural Sciences & Engineering Research Council of Canada; \$6000
2014	<b>Franklin Henry Young Scientist Award (Motor Control and Learning)</b> , Canadian Society for Psychomotor Learning & Sport Psychology; \$300
2013-15	<b>Alexander Graham Bell Canada Graduate Scholarship - Doctorate</b> , Natural Sciences Engineering Research Council of Canada; \$70,000
2009-10	<b>Frederick Banting and Charles Best Canada Graduate Scholars - Masters</b> , Canadian Institutes of Health Research; \$17,500
2009-10	<b>Ontario Graduate Scholarship</b> (Declined), Ontario Provincial Government; \$15,000
2008	<b>Undergraduate Student Research Award</b> , Brock University; \$3250
2008	<b>Graduated with First-Class Standing</b> , Brock University;

## Administrative responsibilities

2024–Present	<b>Advancing Tomorrow's Science Careers - Career Competency Advisory Group</b> ; Member
2023–24	<b>Department of Kinesiology Executive Council</b> ; Member
2023–24	<b>Department of Kinesiology Comprehensive Examinations</b> ; Chair
2022–Present	<b>Department of Kinesiology Makerspace Committee</b> ; Member
2019–21	<b>Department of Kinesiology Awards Committee</b> ; Member
2018–20	<b>Department of Kinesiology Undergraduate Curriculum &amp; Policy</b> ; Member
2017–22	<b>Department of Kinesiology Graduate Curriculum &amp; Policy</b> ; Member
2012–13	<b>CUPE 2626</b> ; Member (Human Kinetics Union Steward)

## Scholarly and professional activities

### Editorial Boards

2024–Present	<b>Editorial Board</b> ; <i>Journal of Motor Behavior</i>
2022–Present	<b>Managing Board</b> ; <i>Peer Community in Health &amp; Movement Sciences</i>
2022–Present	<b>Section Editor (Sensorimotor Control)</b> ; <i>Communications in Kinesiology</i>

### Grant and Personnel Committees

2019	<b>Reviewer</b> ; Canadian Society for Psychomotor Learning & Sport Psychology Franklin Henry Young Scientist Award (Motor Control & Learning)
2019	<b>Reviewer</b> ; Ontario Women's Health Scholarship
2012–13	<b>Reviewer</b> ; University of Ottawa Faculty of Health Sciences Research Funding

### Executive Positions

2023–Present	<b>Chair</b> ; <i>Society for Transparency, Openness, and Replication in Kinesiology</i> (STORK)
2022–23	<b>Co-Chair</b> ; <i>Society for Transparency, Openness, and Replication in Kinesiology</i> (STORK)

### Ad hoc Journal Referee

Total number of reviews = 61

- Biological Psychology
- Canadian Journal of Experimental Psychology
- Clinical Neurophysiology
- Communications in Kinesiology
- European Journal of Sport Science
- Experimental Brain Research
- Frontiers in Psychology
- Gait & Posture
- Human Movement Science
- International Review of Sport and Exercise Psychology
- Journal of Learning & Instruction
- Journal of Motor Behavior
- Journal of Neurophysiology
- Journal of Motor Learning & Development

- Journal of Sport Sciences
- Perceptual & Motor Skills
- Psychological Research
- Psychology of Sport & Exercise
- Quarterly Journal of Experimental Psychology
- Research Quarterly for Exercise & Sport
- Sport, Exercise, and Performance Psychology

### External Grant Reviews

2022 **NSERC Discovery Grant Program**, Biological Systems and Functions

2021 **NSERC Discovery Grant Program**, Biological Systems and Functions

### Volunteer Positions

2022–Present **Moderator**, *SportRxiv* preprint server

2022–Present **Typesetter**, *Communications in Kinesiology*