

Matt J. N. Brown, PhD

California State University, Sacramento - Department of Kinesiology
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CURRENT POSITION

Assistant Professor (Tenure-Track)

2017-Present

Department of Kinesiology

California State University, Sacramento

- Leading the re-design of lecture and laboratory curriculum for KINS 158: Motor Learning and Control for undergraduate students;
- Developing curriculum for KINS 258: Research in Motor Learning (and Control) for graduate students;
- Instructing and assessing course content in KINS 158 and KINS 258 using a modern and diverse teaching philosophy and pedagogical approach;
- Advising and facilitating student education and engagement through theses, directed studies and mentoring;
- Serving on departmental curricular, budget, graduate program, and exercise science program committees with a leadership role as departmental Budget Committee Chair;
- Serving as a member on Faculty Consensus Group for the CSU Program for Education & Research in Biotechnology (CSUBERP);
- Coordinating, supervising and managing research program as Director for Sensorimotor Adaptations and Control Neurophysiology (S.A.C. Neurophys) laboratory focused on understanding movement in healthy, athletic and clinical populations.

EDUCATION AND RESEARCH TRAINING EXPERIENCE

Faculty Professional Development (Online)

2018

California State University Sacramento

- Participated in a 25-session course in "Effective Teaching Principles" provided by the Association for Colleges and University Educators (ACUE) facilitated by CSUS Centre for Teaching and Learning;
- The course was designed to educate on evidence-based teaching strategies, implementation of new techniques, and reflection about personal teaching practices in a collaborative and multi-disciplinary teaching environment;
- Received *ACUE Certificate in Effective College Instruction*.

Postdoctoral Fellow (PDF)

2015-2017

Krembil Brain Institute, Toronto Western Hospital, University Health Network

Principal Investigator: Dr. Robert Chen

Research Topic: Neurophysiology of sensorimotor control in health and neurological diseases

Primary Research Projects:

- Sensorimotor control in individuals with PD evaluated using MEG and resting-state fMRI;
- Investigating cortical-cortical interactions using dual-site TMS;
- Measuring neural plasticity changes using EEG and TMS-EEG after a novel paired-associative stimulation plasticity protocol.

Doctor of Philosophy – Kinesiology Specializing in Neuroscience

2011-2015

University of Waterloo

Concentration: Movement and Sensory Neuroscience

Thesis: Premotor and prefrontal contributions to modulating upper limb somatosensory input into non-primary motor areas.

Principal Investigator: Dr. W. Richard Staines

Completion Date: May 2015

Master of Science - Kinesiology and Physical Education
Wilfrid Laurier University

2008-2010

Concentration: Motor Control in Movement Disorders

Thesis: The influence of dopamine replacement on movement impairments during bimanual coordination in Parkinson's disease (PD).

Principal Investigator: Dr. Quincy J. Almeida

Completion Date: November 2010

Bachelor of Science (Hons.) - Kinesiology and Physical Education
Wilfrid Laurier University

2004-2008

Concentrations: Motor Control, Physiology, Chemistry and Psychology

Thesis: Sensory contributions to upper limb coordination in Parkinson's disease.

Principal Investigator: Dr. Quincy J. Almeida

Completion Date: April 2008

RESEARCH AWARDS, GRANTS AND PRIVATE DONATIONS

Probationary Faculty Development Grant

2019 - Present

- Secured 3 WTUs of release time (valued at ~\$7500.00) to support the *Chevo Memorial Exercise Rehabilitation Program* research project (see below).

Chevo Foundation Private Donation

2018 - Present

- Secured \$19,307.25 private donation from the Chevo Foundation;
- Funding awarded to support development of the *Chevo Memorial Exercise Rehabilitation Program* that will serve as a free community exercise program and research project;
- Research project goal is to advance our understanding of the effects of exercise on people living with Parkinson's disease and Parkinsonian-related disorders.

Sacramento State Faculty Senate's Research and Creative Activity (RCA) Award

2018 - 2019

- Competitive internal university award valued at \$7491.00 to complete high-merit research project evaluating effects of exercise on brain and cardiovascular function in collaboration with Dr. Daryl Parker and Dr. Roberto Quintana.

Canadian Institutes of Health Research Postdoctoral Fellowship (CIHR-PDF)

2015-2017

- Competitive award valued at \$135,000.00 over three years from Canadian federal tri-council granting agency but terminated early (after 2 ½ years) due to professorship employment;
- Award granted for excellence in research potential, research abilities and academic excellence.

Young Investigators Training Program (YITP) Award Recipient

2016

- Competition offered through FENS forum to award an all-expenses paid 10-day visit (valued at ~ \$2500.00) to a laboratory for training and networking;
- Visited internationally renowned lab of Dr. Hartwig Siebner at Hvidovre Hospital in Copenhagen, Denmark that specializes in neurophysiology and neurological disorders.

FENS Forum Travel Award

2016

- Competitive international award in the amount of \$2500.00 granted through the Society of Neuroscience to attend and present at FENS forum in Copenhagen, Denmark.

University of Waterloo Senate Graduate Scholarship

2014

- Internal university scholarship awarded for \$750.00 granted for academic excellence, research potential and

research abilities.

Natural Sciences and Engineering Research Council of Canada **2011-2013**
Postgraduate Graduate Scholarship (NSERC PGS-D)

- Competitive scholarship awarded for \$63,000.00 over three years from Canadian federal tri-council granting agency;
- Award granted based on academic excellence, research potential and communication skills.

University of Waterloo President's Graduate Scholarship **2011-2013**

- Internal university award valued at \$30,000.00 over three years granted for academic excellence and for securing external funding.

Ontario Graduate Scholarship (OGS) **2011 (Declined)**

- Competitive award granted by provincial government valued at \$15,000;
- Award granted based on academic excellence, research potential and communication skills.

Ontario Graduate Scholarship (OGS) **2009 (Declined)**

- Competitive award granted by provincial government valued at \$15,000;
- Award granted based on academic excellence, research potential and communication skills.

North American Society for Psychology of Sport and **2009-2010**
Physical Activity (NASPSPA) Graduate Student Award

- Competitive award granted by academic society valued at \$1,500.00;
- Awarded granted based on high-quality research proposal and research potential.

Natural Sciences and Engineering Research Council of Canada **2009-2010**
Alexander Graham Bell Canadian Graduate Scholarship (NSERC CGS-M)

- Competitive award from Canadian tri-council granting agency valued at \$17,500.00;
- Awarded for academic excellence, research potential and communication skills.

Wilfrid Laurier Graduate Scholarship **2009-2010**

- Internal university award granted for academic excellence valued at \$20,000.00 over two years.

Natural Sciences and Engineering Research Council of Canada **2008**
Undergraduate Student Research Award (NSERC-USRA)

- Competitive award granted by Canadian tri-council granting agency valued at \$4,500.00;
- Award granted based on high-quality summer research project proposal.

PEER-REVIEWED PUBLICATIONS (PUBLISHED/ACCEPTED)

Beudel, M., Macerollo, A., **Brown, M.J.N.**, and Chen, R. (2019). Editorial: The Role of the Basal Ganglia in Somatosensory-Motor Interactions: Evidence from Neurophysiology and Behavior. *Frontiers in Human Neuroscience*, 13(461), 1-3.
2018 SCOPUS CiteScore = 2.96

Brown, M.J.N., Goldenkoff, E.R., Chen, R., Gunraj, C., and Vesia, M. (2019). Using dual-site transcranial magnetic stimulation to probe connectivity between the dorsolateral prefrontal cortex and ipsilateral primary motor cortex in humans. *Brain Sciences*, 9(8), E177-190.
2018 SCOPUS CiteScore = 2.85

Brown, M.J.N., * Weissbach, A. *, Pauly, M., Vesia, M., Gunraj, C., Baarbé, J., Münchau, A., Bäumer, T., and Chen, R. (2019). Somatosensory-motor cortex interactions measured using dual-site transcranial magnetic stimulation. *Brain Stimulation*, 12(5), 1229-1243. *co-first authors

2018 SCOPUS CiteScore = 4.69

Macerollo, A*, **Brown, M.J.N.***, Kilner, JM, and Chen, R. (2018). Neurophysiological changes measured with Somatosensory Evoked Potentials. *Trends in Neurosciences*, 41(5), 294-310. *co-first authors

2018 SCOPUS CiteScore = 10.30

Macerollo, A. and **Brown, M.J.N.** (2018). Beta oscillations and indirect pathway spiny neurons: a mechanism linked to Parkinson's disease? *Movement Disorders*, 33(5), 760.

2018 SCOPUS CiteScore = 5.46

Lefaivre, S.C., **Brown, M.J.N.**, and Almeida, Q.J. (2018). Does cerebellar over-activity contribute to gait and balance deficits in PD? *Movement Disorders*, 33(6), 1022-23.

2018 SCOPUS CiteScore = 5.46

Macerollo, A., and **Brown, M.J.N.** (2017). EEG oscillations: how are they modulated during different phases of repetitive movements? *Journal of Neurophysiology*, 118(1), 4-6.

2018 SCOPUS CiteScore = 2.66

Brown, M.J.N., Macerollo, A., Kilner, J.M., and Chen, R. (2016). Is closed-loop, time-locked primary motor cortex stimulation an ideal target for improving movements in neurological disorders? *Movement Disorders*, 31(9), 1341.

2018 SCOPUS CiteScore = 5.46

Brown, M.J.N., and Staines, W.R. (2016). Differential effects of continuous theta burst stimulation (cTBS) over the left premotor (PMC) and right prefrontal cortex (PFC) on modulating upper limb somatosensory input. *NeuroImage*, 127, 97-109.

2018 SCOPUS CiteScore = 6.13

Lefaivre, S.C., **Brown, M.J.N.**, and Almeida, Q.J. (2016). Cerebellar involvement in Parkinson's disease resting tremor. *Cerebellum and Ataxias*, 3(13), 1-7.

2017 SCOPUS CiteScore = 1.0

Brown, M.J.N., and Staines, W.R. (2015). Somatosensory input to non-primary motor areas is enhanced during preparation of cued contralateral finger sequence movements. *Behavioural Brain Research*, 286, 166-74.

2018 SCOPUS CiteScore = 3.16

Brown, M.J.N., and Staines, W.R. (2015). Modulatory effects of movement sequence preparation and covert spatial attention on early somatosensory input in non-primary motor areas. *Experimental Brain Research*, 233(2), 503-517.

2018 SCOPUS CiteScore = 1.95

Brown, M.J.N., Almeida, Q.J, and Rahimi, F. (2015). The dopaminergic system in upper limb motor blocks (ULMB) investigated during bimanual coordination in Parkinson's disease (PD). *Journal of Neurology*, 262(1), 41-53.

2018 SCOPUS CiteScore = 3.21

Almeida, Q.J., and **Brown, M.J.N.** (2013). Is dopa-responsive hypokinesia responsible for coordination deficits in Parkinson's disease? *Frontiers in Neurology*, 4(89), 1-17.

2018 SCOPUS CiteScore = 2.99

Brown, M.J.N., and Almeida, Q.J. (2011). Evaluating dopaminergic system contributions to cued pattern switching during bimanual coordination. *European Journal of Neuroscience*, 34(4), 632-640.

2018 SCOPUS CiteScore = 2.69

PEER-REVIEWED MANUSCRIPTS (SUBMITTED/IN PREPARATION)

Baarbé, J., Vesia, M., **Brown M.J.N.**, Lizarraga, K.J., Gunraj, C., Jegatheeswaran, G., Weissbach, A., Drummond, N.M., Saravanamuttu, J., Rinchon, C., Kunaratnam, N., and Chen, R. Right posterior parietal cortex stimulation inhibits left motor cortical facilitation. *In preparation.*

Baarbé, J., **Brown, M.J.N.**, Saha, U., Lizarraga, K., Weissbach, A., Drummond, N., Rinchon, C., Kapoor, K., Saravanamuttu, J., and Chen, R. A cortical neural signature of motor interruption in patients with Parkinson's disease and freezing of gait. *In preparation.*

Cash, R.F.H., Zeng, K., Dominguez, L.G., Wennberg, R., Cheyne, D., **Brown, M.J.N.**, and Chen, R. Elevated thalamocortical synchronization in parkinson's disease assessed using magnetoencephalography. *In preparation.*

Steinmeier, A., Weissbach, A., **Brown, M.J.N.**, Münchau, A., and Bäumer, T. Longitudinal dopaminergic effects on sensorimotoric networks in patients with GCH1 mutation and dopa-responsive dystonia. *In preparation.*

CONFERENCE ABSTRACTS/PRESENTATIONS

Cash, R.F.H., Zeng, K., Dominguez, L.G., Wennberg, R., Cheyne, D., **Brown, M.J.N.**, and Chen, R. Elevated thalamocortical synchronization in parkinson's disease assessed using magnetoencephalography. In Society for Neuroscience (SFN) abstracts, November 2019, Chicago, United States (Poster Presentation/Abstract)

Baarbé, J., Vesia, M., Gunraj, C., Jegatheeswaran, G, **Brown, M.J.N.**, Lizarraga, K.J., Weissbach, A., Drummond, N., Saravanamuttu, J Rinchon, C., and Chen, R. Transcranial magnetic stimulation of the right posterior parietal cortex inhibits left motor short-interval intracortical facilitation and parietal-motor connectivity. In Society for Neuroscience (SFN) abstracts, November 2019, Chicago, United States (Nanosymposium/Abstract)

Baarbé, J., **Brown, M.J.N.**, Saha, U., Lizarraga, K., Weissbach, A., Drummond, N., Rinchon, C., Kapoor, K., Saravanamuttu, J., and Chen, R. A cortical neural signature of motor interruption in patients with Parkinson's disease and freezing of gait. International Congress of Parkinson's Disease and Movement Disorders, October 2018, Wan Chai, Hong Kong (Dynamic Poster Presentation/Abstract)

Baarbé, J., Vesia, M., Gunraj, C., Jegatheeswaran, G, Weissbach, A, **Brown, M.J.N.**, Drummond, N., Saravanamuttu, J., Kunaratnam, N., Rinchon, C., and Chen, R. Interactions between right and left posterior parietal cortices in the left motor cortex. In International Congress on Clinical Neurophysiology (ICCN) abstracts, May 2018, Washington DC, United States (Poster Presentation/Abstract)

Brown, M.J.N., Weissbach, A., Vesia, M., Gunraj, C., Baarbé, J., Münchau, A., Bäumer, T., and Chen, R. Primary somatosensory-motor cortex interactions measured using dual-site transcranial magnetic stimulation. In SFN abstracts, November 2017, Washington, DC, United States (Verbal Presentation in Nanosymposium/Abstract)

Brown, M.J.N., Vesia, M., Gunraj, C., and Chen, R. Examining the influence of dorsolateral prefrontal cortex activity on ipsilateral primary motor cortex excitability with dual-site TMS. In SFN abstracts, November 2016, San Diego, California, United States. (Poster Presentation/Abstract)

Brown, M.J.N., Vesia, M., Gunraj, C., and Chen, R. Using transcranial magnetic stimulation to probe connectivity between the dorsolateral prefrontal cortex and primary motor cortex. In FENS Forum abstracts, July 2016, Copenhagen, Denmark. (Poster Presentation/Abstract)

Brown, M.J.N., and Staines, W.R. Differential effects of continuous theta burst stimulation (cTBS) over left premotor cortex (PMC) and right prefrontal cortex (PFC) on modulating upper limb somatosensory input. In SFN abstracts, November 2015, Chicago, Illinois, United States. (Poster Presentation/Abstract)

Brown, M.J.N., Neva, J.L., Singh, A.M., and Staines, W.R. Evaluating the role of the premotor cortex in early somatosensory processing using somatosensory evoked potentials (SEPs) and continuous theta burst stimulation (cTBS). Society for Neuroscience (SFN) Annual Conference. In SFN abstracts, November 2014. Washington, DC, United States. (Poster Presentation/Abstract)

Brown, M.J.N., and Staines, W.R. The effects of movement preparation, movement execution and attention on early somatosensory processing in frontal motor areas. Society for Neuroscience (SFN) Annual Conference. In SFN abstracts, November 2013. San Diego, California, United States. (Poster Presentation/Abstract)

Brown, M.J.N., and Staines, W.R. The role of attention on early somatosensory processing in frontal areas involved in movement planning and preparation. Society for Neuroscience (SFN) Annual Conference. In SFN abstracts, October 2012. New Orleans, Louisiana, United States. (Poster Presentation/Abstract)

Brown, M.J.N., and Almeida, Q.J. The relationship between motor severity and coordination in a novel upper limb coordination task in individuals with Parkinson's disease. North American Society for the Psychology of Sport and Physical Activity (NASPSPA), Annual Conference. In Journal of Sport & Exercise Psychology. June 2012. Honolulu, Hawaii, United States. (Poster Presentation/Abstract)

Brown, M.J.N., Almeida, Q.J., and Rahimi, F. Objectively identifying upper limb freezing (ULF) in individuals with Parkinson's disease (PD) during bimanual coordination. The Movement Disorders Society, 15th International Congress of Parkinson's Disease and Movement Disorders, Annual Conference. In Movement Disorders, June 2011. Toronto, Ontario, Canada. (Poster Presentation/Abstract)

Brown, M.J.N., Almeida, Q.J., and Rahimi, F. Evaluating the effects of dopaminergic treatment on upper limb freezing (ULF) in individuals with Parkinson's disease (PD). The Movement Disorders Society, 15th International Congress of Parkinson's Disease and Movement Disorders, Annual Conference. In Movement Disorders, June 2011. Toronto, Ontario, Canada. (Poster Presentation/Abstract)

Brown, M.J.N., Almeida, Q.J., and Rahimi, F. Sensory and dopaminergic contributions to upper limb freezing during bimanual coordination in Parkinson's disease. North American Society for the Psychology of Sport and Physical Activity (NASPSPA), Annual Conference. In Journal of Sport & Exercise Psychology. June 2010. Tucson, Arizona, United States. (Verbal Presentation/Abstract)

Brown, M.J.N., Almeida, Q.J., Buckolz, E., and Fitzgeorge, L.A. (2009). Is the basal ganglia responsible for a lack of unconscious processing? A direct comparison of conscious and unconscious processing in individuals with Parkinson's disease. XVIII World Federation of Neurology (WFN) World Congress on Parkinson's Disease and Related Disorders. December 2009. Miami Beach, Florida, United States. (Poster Presentation/Abstract)

Brown, M.J.N., and Almeida, Q.J. (2009). Hypometric deficits in the non-affected limb during continuous bimanual coordination in Parkinson's disease (PD). Canadian Society for Psychomotor Learning and Sport Psychology, Annual Conference. In Canadian Society for Psychomotor Learning and Sport Psychology (SCAPPS), 41st Annual Conference. November 2009. Toronto, Ontario, Canada. (Verbal Presentation/ Abstract)

Brown, M.J.N., Almeida, Q.J., Buckolz, E., and Fitzgeorge, L.A. (2009). Dopaminergic contributions to spatial negative priming: Do persons with Parkinson's demonstrate typical inhibitory processing during movement? North American Society for the Psychology of Sport and Physical Activity (NASPSPA), Annual Conference. In Journal of Sport & Exercise Psychology. June 2009. Austin, Texas, United States. (Poster Presentation/Abstract)

Brown, M.J.N., Almeida, Q.J., Buckolz, E., and Fitzgeorge, L.A. (2009). Spatial negative priming in Parkinson's disease under dopaminergic manipulation: comparing masking and non-masking. Southern Ontario Motor Behaviour Symposium (SOMBS). May 2009. Waterloo, Ontario, Canada. (Verbal Presentation)

Brown, M.J.N., Almeida, Q.J., and Lee, T.D. Processing limitations during inter-limb coordination in Parkinson's disease. In Canadian Society for Psychomotor Learning and Sport Psychology (SCAPPS), 40th Annual Conference. October 2008. Canmore, Alberta, Canada (Poster Presentation/Abstract)

Brown, M.J.N., and Almeida, Q.J. (2008). Upper limb coordination in Parkinson's disease. Southern Ontario Neuropsychology Group (SONG), Annual Symposium. June 2008. Waterloo, Ontario, Canada. (Verbal Presentation)

Brown, M.J.N., and Almeida, Q.J. (2008). Breaking down hypokinesia during inter-limb coordination in Parkinson's disease: the influence of dopaminergic medication on the integration of sensory feedback. Southern Ontario Motor Behaviour Symposium (SOMBS), Annual Symposium. May 2008. Toronto, Ontario, Canada. (Verbal Presentation)

UNIVERSITY TEACHING EXPERIENCE

Supervisor for Kinesiology (KINS) 500 – Culminating Experience *Fall 2018-Present*
California State University Sacramento (CSUS)

- Supervising a graduate student on designing, experimentation, data processing, and writing thesis study on the effects of acute hypoxia on human sensorimotor neurophysiology.

Instructor for Kinesiology (KINS) 158 – Motor Learning *Fall 2019*
California State University Sacramento (CSUS)

- Modified, instructed and graded content on motor learning and control for two lecture sections (totaling 80 undergraduate students = 4 WTUs) and four laboratory sections (totaling 80 undergraduate students = 8 WTUs).

Supervisor for Kinesiology (KINS) 299 – Directed Individual Study *Fall 2019*
California State University Sacramento (CSUS)

- Supervised a graduate student on gathering research and writing a review on the neurophysiological changes that can be measured with transcranial magnetic stimulation (TMS) with different exercise interventions related to fatigue and plasticity.

Supervisor for Kinesiology (KINS) 199 – Directed Individual Study *Fall 2019*
California State University Sacramento (CSUS)

- Supervised an undergraduate student on gathering research and writing a review on the neurophysiological and cognitive effects of strength training.

Instructor for Kinesiology (KINS) 158 – Motor Learning *Summer 2019*
California State University Sacramento (CSUS)

- Modified, instructed and graded content on motor learning and control for one lecture and two laboratory sections (totaling 29 undergraduate students = 6 WTUs).

Instructor for Kinesiology (KINS) 158 – Motor Learning *Spring 2019*
California State University Sacramento (CSUS)

- Modified, instructed and graded content on motor learning and control for two lecture sections (totaling 80 undergraduate students = 4 WTUs) and three laboratory sections (totaling 60 undergraduate students = 6 WTUs).

Instructor for Kinesiology (KINS) 158 – Motor Learning *Fall 2018*
California State University Sacramento (CSUS)

- Modified, instructed and graded content on motor learning and control for two lecture sections (totaling 80 undergraduate students = 4 WTUs) and two laboratory sections (totaling 40 undergraduate students = 4 WTUs).

Supervisor for Kinesiology (KINS) 299 – Directed Individual Study *Fall 2018*
California State University Sacramento (CSUS)

- Supervised a graduate student on gathering research and writing a review on the neurophysiological differences of balance and postural control in static, dynamic, and balance perturbations.

Instructor for Kinesiology (KINS) 158 – Motor Learning *Summer 2018*
California State University Sacramento (CSUS)

- Modified, instructed and graded content on motor learning and control for one lecture and one laboratory section (totaling 10 undergraduate students = 4 WTUs).

Instructor for Kinesiology (KINS) 258 – Research in Motor Learning *Spring 2018*
California State University Sacramento (CSUS)

- Designed, instructed and graded content on motor learning and control for one lecture section (totaling 11 graduate students = 3 WTUs).

Instructor for Kinesiology (KINS) 158 – Motor Learning *Spring 2018*
California State University Sacramento (CSUS)

- Modified, instructed and graded content on motor learning and control for three lecture sections (totaling 160 undergraduate students = 6 WTUs).

Supervisor for Kinesiology (KINS) 299 – Directed Individual Study *Spring 2018*
California State University Sacramento (CSUS)

- Supervised a graduate student on gathering research and writing a review evaluating the effects of attention on movement.

Co-supervisor for Kinesiology (KINS) 199 – Directed Individual Study *Spring 2018*
California State University Sacramento (CSUS)

- Co-supervised an undergraduate student on gathering research and writing a review evaluating concussions on motor sport athletes.

Instructor for Kinesiology (KINS) 158 – Motor Learning *Fall 2017*
California State University Sacramento (CSUS)

- Designed, instructed and graded content on motor learning and control for two lecture sections (totaling 80 undergraduate students = 4 WTUs) and two laboratory sections (totaling 20 undergraduate students = 4 WTUs).

Guest Lecturer *2016*

University of Waterloo

- Developed and instructed lecture on Parkinson’s disease for Kinesiology 242: Introduction to Movement Disorders.

Course Instructor *2014*

University of Waterloo

- Developed course content and assessments for Kinesiology 470: Seminar in Kinesiology – Kinesiology in Society, Evaluating the Scientific Evidence;
- Graded weekly group or individual oral presentations as well as written critical appraisals;
- Assisted students in understanding various kinesiology-related areas including topics on motor control, biomechanics, nutrition and physiology.

Teaching Assistant *2014*

University of Waterloo

- Responsible for teaching and assisting students in understanding course content for:
 - Kinesiology 330: Research Design; and,
 - Kinesiology 301: Anatomy of the Central Nervous System;
- Administered and graded quizzes and “bell-ringer” lab exams;
- Assisted with hands-on teaching neuroanatomy with human cadavers.

Guest Lecturer *2014*

University of Waterloo

- Instructed and designed lecture material on functional neuroanatomy, neurophysiology and applications to research for Kinesiology 301: Anatomy of the Central Nervous System.

Fundamentals of University Teaching

2011

University of Waterloo - Waterloo, Ontario, Canada

- Participated in development of University teaching skills through teaching modules and microteaching sessions (i.e. effective lesson planning);
- Program developed fundamental teaching skills that could have been used towards a Certificate in University Teaching.

Teaching Assistant

2008-2010

Wilfrid Laurier University - Waterloo, Ontario, Canada

- Assisted students with hands-on learning of course material for the following courses:
 - Kinesiology 361: Motor Learning and Control; and,
 - Kinesiology 220: Human Biology – Physiology.
- Administered and graded lab assignments, lab quizzes and exams.

Guest Lecturer

2008-2010

Wilfrid Laurier University - Waterloo, Ontario, Canada

- LECTURED course material in substitute of the professor for Kinesiology 361: Motor Learning and Control on multiple occasions.

DEPARTMENT, COLLEGE AND UNIVERSITY-RELATED SERVICE

Member - Faculty Consensus Group (FCG)

2019-Present

California State University Program for Education & Research in Biotechnology (CSUPERB)

- Contributing to the development of undergraduate and faculty research programs and education on biotechnology-related topics across the whole CSU;
- Served on Nagel (undergraduate research) award selection committee, which evaluates student research award proposals and poster presentations from students across the whole CSU.

Member- Department of Kinesiology Curricular Committee

2019-Present

California State University Sacramento

- Evaluating integrity and providing feedback of departmental curricular changes from faculty.

Representative – College of Health and Human Services (HHS) Faculty Professional Development Committee

2018-Present

California State University Sacramento

- Service on this committee includes evaluation of Outstanding Award proposals for Teaching, Research, University Service, and Community service across HHS;
- Contributing to the organization of the HHS Research Symposium.

Member - Department of Kinesiology Graduate Committee

2018-Present

California State University Sacramento

- Evaluating integrity of curricular content and other related content for graduate program within the Department of Kinesiology.

Representative - Library Liaison

2018-Present

California State University Sacramento

- Work as liaison between Department of Kinesiology and library on information related to library content and policies between faculty and staff.

Chair - Department of Kinesiology Budget Committee

2017-Present

California State University Sacramento

- Evaluating integrity of departmental equipment requests and proposal from faculty members;
- Developed evaluation criteria for budget proposals.

Member - Department of Kinesiology Exercise Science Committee *2017-Present*
California State University Sacramento

- Review of curriculum and research plans of the Exercise Science concentration within the Department of Kinesiology.

Juror - CSUS Spring Student Research Symposium *2019*
California State University Sacramento

- Evaluated quality of research design, data interpretation and verbal presentations for graduate and undergraduate research conference.

Reviewer - Pedagogy Enhancement Award (PEA) Program *2018-2019*
California State University Sacramento

- Reviewed five curricular enhancement proposals submitted by faculty members across the University;
- Provided recommendations for proposals for PEA funding.

Co-Moderator - Faculty Scholarship Community (FSC) *2018-2019*
California State University Sacramento

- Planned, coordinated, and facilitated monthly discussions and events amongst faculty members across University on topic of *Translational Health-Related Research: Connecting Basic Science to Clinical Practice*.

Juror - CSUS Spring Student Research Symposium *2018*
California State University Sacramento

- Evaluated quality of research design, data interpretation and poster presentations for graduate and undergraduate research conference.

NON-UNIVERSITY TEACHING EXPERIENCE

Coach/Instructor *2011-2015*
Sportball (Kitchener/Waterloo Area)

- Developed and administered lesson plans for sport-specific gross motor skills to children aged 16 months to 10 years;
- Encouraged intergenerational learning through movement and sports;
- Established strong communication skills by explaining sport-specific skills and skill progressions to both children and parents.

Instructor - Kinesiology Lab Days *2011-2013*
University of Waterloo

- Taught introduction of psychomotor behaviour concepts to high-school students over two-week periods on three separate occasions in 2011, 2012 and 2013;
- Administered and supervised laboratory activities.

OTHER ACADEMIC-RELATED EXPERIENCE AND SERVICE

Guest Associate Editor *2018-2020*
Frontiers in Human Neuroscience

- Initiated and developed a special research topic entitled “The Role of the Basal Ganglia in Somatosensory-Motor Interactions: Evidence from Neurophysiology and Behavior”;
- Responsible for editing and accepting manuscripts submitted to special topic in collaboration with an international team of co-editors: Dr. Antonella Macerollo (UK/Italy), Dr. Robert Chen (Canada), and Dr. Martin Beudel (UK/Netherlands).

Review Editor

2015-Present

Frontiers in Human Neuroscience

- Responsible for reviewing and providing constructive feedback on the quality of research design, manuscript writing and interpretation of neuroscience-related research findings.

Poster Judge at Annual Research Day

2016

Krembil Research Institute

- Evaluated quality of research design, data interpretation and visual presentation at 2016 Annual Research Day for the Krembil Research Institute

Professional Development (PD) Report Marker

2015

University of Waterloo

- Marked end of term professional development work reports for university students;
- Provided critical feedback on student's technical writing skills and critical analysis ability.

Past-President – Kinesiology Graduate Student Association (KGSA)

2014-2015

University of Waterloo

- Responsible for transferring knowledge and responsibilities to the incoming KGSA President;
- Participated in the KGSA as a mentor to the current President and Association members;
- Acted as a direct liaison between other graduate student organizations.
- Assisted in planning, organizing and supervising educational and social events for graduate students in Kinesiology

Applied Health Sciences (AHS) Graduate Student Research Conference Planning Committee Member

2014

University of Waterloo

- Coordinated speakers and events for Annual AHS Graduate Student Research Conference;
- Assisted in the peer-review of abstracts and planning of session topics; and, acted as Session Mediator during conference presentations.

President – Kinesiology Graduate Student Association (KGSA)

2013-2014

University of Waterloo

- Provided leadership to the KGSA in all related matters;
- Coordinated and supervised all executive meetings;
- Planned, organized and supervised events for graduate students; and, created applications for funding to administrative bodies.

Neuroscience Representative – Kinesiology Graduate Student Association (KGSA)

2012-2013

University of Waterloo

- Acted as a direct liaison between KGSA executive and members of the association;
- Assisted all new members to integrate into the Department and the University; and, planned and organized social activities for all graduate students and Department.

Marking Assistant

2010-2011

University of Waterloo

- Marked end of term co-op work reports for kinesiology students
- Provided critical feedback on student's ability to perform a quantitative or qualitative research study as part of their work term placement

**Volunteer Coordinator at Movement Disorders Research and Rehabilitation Centre (MDRC)
Wilfrid Laurier University**

2009-2010

- Managed and coordinated volunteers for 24 weeks of an exercise rehabilitation program;
- Provided hands-on instruction to volunteers for proper exercise intervention; and, developed a comprehensive volunteer coordinators' manual.

**Research Assistant at Movement Disorders Research and Rehabilitation Centre (MDRC)
Wilfrid Laurier University**

2008

- Assisted in pre-testing of functional measures such as Gait Rite, timed up and go (TUG) and grooved pegboard for exercise rehabilitation program in individuals with PD;
- Lead investigator on a collaborative project with two researchers from the University of Western Ontario; and,
- Assisted in creating budget for a grant from the Canadian Fund for Innovation (CFI) worth over \$1,000,000.00.

PROFESSIONAL MEMBERSHIPS

Member, Society for Neuroscience (SFN)	<i>2012-Present</i>
Member, Movement Disorders Society (MDS)	<i>2011, Present</i>
Member, Canadian Society for Psychomotor Learning and Sport Psychology (SCAPPS)	<i>2008-2010, 2016</i>
Member, Canadian Association for Neuroscience (CAN)	<i>2016</i>
Member, North American Society for Psychology of Sport and Physical Activity (NASPSPA)	<i>2008-2012</i>
Member, World Federation of Neurology (WFN)	<i>2009-2010</i>

SKILLS AND PROFESSIONAL INTERESTS

- Programming and data processing experience using MatLab, LabView, Neuroscan, BrainSight and Signal;
 - Comprehensive experience measuring human neurophysiology and movement behaviour using biotechnology techniques such as transcranial magnetic (TMS), electroencephalography (EEG), magnetoencephalography (MEG), magnetic resonance imaging (MRI), electromyography (EMG), accelerometers and potentiometers;
 - Proficient analytical skills with statistical analyses tools including SPSS and Statistica;
 - Experience with assessing Parkinson's disease patients on motor subscale of Unified Parkinson's Disease Rating Scale (UPDRS-III);
 - Provided mentoring and leadership to undergraduate and graduate students;
 - Passion for collaborative research with both local and international researchers including on-going collaborations with groups from England, Germany, Canada, and USA;
 - Advocate for physical, emotional and cognitive benefits of healthy living and physical activity;
 - Experienced in peer-reviewing for international journals including Clinical Neurophysiology, Brain Plasticity, PLOS one, The Canadian Journal of Neurological Sciences, Brain Sciences and Frontiers in Neuroscience.
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