

# Curriculum Vitae

## Sean K. Meehan, PhD

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### Degrees Received

- June 2008                    **Doctor of Philosophy**, Department of Kinesiology (Behavioral and Cognitive Neuroscience), University of Waterloo, Specialization: Neurophysiology of intermodal selective attention and motor control, Supervisor: W. Richard Staines, PhD
- June 2005                    **Master of Science**, Department of Kinesiology and Health Sciences, York University, Specialization: Psychophysiology of auditory attention, Supervisor: B. Fowler, PhD
- June 2002                    **Bachelor of Science** (Biology), Honors Program, Queen's University
- November 2002            **Bachelor of Arts** (Economics), Queen's University

### Professional Experience

#### *Primary Appointments*

- January 2011 -            **Assistant Professor**, Movement Science, School of Kinesiology, University of Michigan, Ann Arbor, Michigan
- September 2008 –  
December 2010        **Post-Doctoral Fellow**, Brain Behavior Laboratory, Department of Physical Therapy, University of British Columbia, Supervisor: Lara Boyd, PhD
- 2002 - 2008                **Research Assistant**, Perceptual Motor Deficits in Space, Primary Investigator: Barry Fowler, PhD, York University

# Curriculum Vitae

## Additional Affiliations

2012-present                      Rehabilitation Robotics Group, University of Michigan

## Academic Awards and Distinctions

### *Fellowships and Awards*

2009 – 2011                      Canadian Institutes of Health Research Post-Doctoral Fellowship

2009 – 2011                      Michael Smith Foundation for Health Research Post-Doctoral Scholar

2007-2008                      Ontario Graduate Scholarship Recipient  
University of Waterloo President's Graduate Scholarship  
University of Waterloo Senate Graduate Scholarship

2006-2007                      Ontario Graduate Scholarship Recipient  
University of Waterloo President's Graduate Scholarship  
University of Waterloo Senate Graduate Scholarship

2005                                  University of Waterloo Special Graduate Scholarship

2004                                  Kinesiology and Health Science, York University, Nominee for the  
Faculty of Graduate Studies Thesis Prize – 2004

## Association Memberships

2005 – present                      Society for Neuroscience

2009 – present                      Canadian Association for Neuroscience

2011 – present                      Society for the Neural Control of Movement

## Publications (<sup>a</sup>undergraduate, <sup>b</sup>graduate student, <sup>c</sup>postdoctoral associate)

### *Refereed Journals*

#### *In-Press*

<sup>a</sup>Mirdamadi, J.L., <sup>b</sup>Suzuki, L.Y., & **Meehan, S.K.** (revisions under review) Attention modulates specific motor cortical circuits recruited by transcranial magnetic stimulation.  
*Neuroscience*

Broglia S.P., Williams R., Rettamann A.N., Moore B., Eckner J.T. & **Meehan S.** (in press). No seasonal changes in cognitive functioning among high school football athletes:

## Curriculum Vitae

Implementation of a novel electrophysiological measure and standard clinical measures, *Clinical Journal of Sports Medicine*

Robinson, L.E., Palmer, K.K. & **Meehan, S.K.** (in press). Dose-response relationship: The effect of motor skill intervention duration on motor performance. *Journal of Motor Learning and Development*. 10.1123/jmld.2016-0004

### *Published*

Broglio S.P., Williams R., Lapointe, A., Rettmann A.N., Moore B., **Meehan S. K.** and Eckner J.T. (in press). Brain network activation technology does not assist with concussion diagnosis and return to play in football athletes, *Frontiers in Neurology*. 8(252), <https://doi.org/10.3389/fneur.2017.00252>

**Meehan, S.K.**, <sup>a</sup>Mirdamadi, J.L., Martini, D.N. & Broglio, S.P. (2017). Adolescent concussion results in chronic motor cortical excitability and plasticity change. *Frontiers in Human Neuroscience*. 11(5), 10.3389/fnhum.2017.00005

Martini, D.M., Eckner, J.T., **Meehan, S.K.** & Broglio, S.P. (2017). Long-term effects of adolescent, sport concussion across the age spectrum. *The American Journal of Sports Medicine*. 45(6), 1420-1428, 10.1177/0363546516686785

<sup>a</sup>Mirdamadi, J.L., <sup>b</sup>Suzuki, L.Y. & **Meehan, S.K.** (2016). Motor cortical plasticity in extrinsic hand muscles is determined by the resting thresholds of overlapping representations. *Neuroscience*. 333, 132-9.10.1016/j.neuroscience.2016.07.015

<sup>b</sup>Nishiyori, R., Bisconti, S., **Meehan, S.K.** & Ulrich B.D. (2016). Changes in Motor Cortex Activity as Infants Develop Functional Motor Skills. *Developmental Psychobiology*. 58(6), 773-83. doi: 10.1002/dev.21418

Demeter, E, <sup>a</sup>Mirdamadi, J.L., **Meehan, S.K.** & Taylor, SF. (2016). Short Theta Burst Stimulation to Left Frontal Cortex during Encoding Enhances Subsequent Recognition Memory. *Cognitive, Affective & Behavioral Neuroscience*. 16(4), 724-35. doi: 10.3758/s13415-016-0426-3

<sup>a</sup>Mirdamadi, J.L., <sup>b</sup>Suzuki, L.Y. & **Meehan, S.K.** (2015). Agonist contraction during intermittent theta burst stimulation enhances motor cortical plasticity of the wrist flexors. *Neuroscience Letters*. 591, 69-74. doi: 10.1016/j.neulet.2015.02.020

Brodie, S.M., **Meehan, S.**, Borich, M.R., & Boyd, L. A. (2014). 5 Hz repetitive transcranial magnetic stimulation over the ipsilesional sensory cortex enhances motor learning after stroke. *Frontiers in Human Neuroscience*. 8, 143. doi: 10.3389/fnhum.2014.00143

Seidler, R.D., & **Meehan, S.K.** (2013). Introduction to the special topic: a multidisciplinary approach to motor learning and sensorimotor adaptation. *Frontiers in Human Neuroscience*. 7, 543. doi: 10.3389/fnhum.2013.00543

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- Edwards, J.D., **Meehan, S.K.**, Lindsell, M.A., Borich, M.R., Anbarani, K., Jones, P. W., . . .  
Boyd, L. A. (2013). Changes in thresholds for intracortical excitability in chronic stroke:  
More than just altered intracortical inhibition. *Restorative Neurology and Neuroscience*.  
31(6), 693-705. doi: 10.3233/RNN-120300
- Meehan, S.K.**, Zabukovec, J.R., Dao, E., Cheung, K.L., Lindsell, M.A., & Boyd, L.A. (2013).  
One hertz repetitive transcranial magnetic stimulation over dorsal premotor cortex  
enhances offline motor memory consolidation for sequence-specific implicit learning.  
*The European journal of neuroscience*. 38(7), 3071-9. doi: 10.1111/ejn.12291
- Meehan, S.K.** (2013). "Functional rTMS": Putting the brain to work to enhance brain  
stimulation post-stroke? *Clinical Neurophysiology*, 124(2), 215-216. doi:  
10.1016/j.clinph.2012.08.016
- Meehan, S.K.**, Dao, E., Lindsell, M.A., & Boyd, L.A. (2011). Continuous theta burst stimulation  
over the contralesional sensory and motor cortex enhances motor learning post-stroke.  
*Neuroscience letters*, 500(1), 26-30. doi: 10.1016/j.neulet.2011.05.237
- Meehan, S.K.**, Lindsell, M.A., Handy, T.C., & Boyd, L.A. (2011). Interhemispheric  
enhancement of somatosensory cortical excitability through contralateral repetitive  
transcranial magnetic stimulation. *Clinical Neurophysiology*. 122(8), 728-733. doi:  
10.1016/j.clinph.2011.01.002
- Edwards, J.D., **Meehan, S.K.**, Levy, A.R., Teal, P.A., Lindsell, M.A., & Boyd, L.A. (2011).  
Changes in intracortical excitability after transient ischemic attack are associated with  
ABCD(2) score. *Stroke*, 42(3), 728-733. doi: 10.1161/STROKEAHA.110.602938
- Legon, W., Dionne, J.K., **Meehan, S.K.**, & Staines, W.R. (2010). Non-dominant hand  
movement facilitates the frontal N30 somatosensory evoked potential. *BMC  
neuroscience*, 11, 112. doi: 10.1186/1471-2202-11-112
- Meehan, S.K.**, Randhawa, B., Wessel, B., & Boyd, L.A. (2011). Implicit sequence-specific  
motor learning after subcortical stroke is associated with increased prefrontal brain  
activations: an fMRI study. *Human brain mapping*, 32(2), 290-303. doi:  
10.1002/hbm.21019
- Vidoni, E.D., Acerra, N.E., Dao, E., **Meehan, S.K.**, & Boyd, L.A. (2010). Role of the primary  
somatosensory cortex in motor learning: An rTMS study. *Neurobiology of learning and  
memory*, 93(4), 532-539. doi: 10.1016/j.nlm.2010.01.011
- Dionne, J.K., **Meehan, S.K.**, Legon, W., & Staines, W.R. (2010). Crossmodal influences in  
somatosensory cortex: Interaction of vision and touch. *Human brain mapping*, 31(1), 14-  
25. doi: 10.1002/hbm.20841
- Meehan, S.K.**, Legon, W., & Staines, W.R. (2009). Spatiotemporal properties modulate  
intermodal influences on early somatosensory processing during sensory-guided

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movement. *Clinical Neurophysiology*, 120(7), 1371-1380. doi: 10.1016/j.clinph.2009.05.005

**Meehan, S.K.**, & Staines, W.R. (2009). Task-relevance and temporal synchrony between tactile and visual stimuli modulates cortical activity and motor performance during sensory-guided movement. *Human brain mapping*, 30(2), 484-496. doi: 10.1002/hbm.20520

Fowler, B., **Meehan, S.**, & Singhal, A. (2008). Perceptual-motor performance and associated kinematics in space. *Human Factors*, 50(6), 879-892. doi: 10.1518/001872008X374965

**Meehan, S.K.**, Legon, W., & Staines, W.R. (2008). Paired-pulse transcranial magnetic stimulation of primary somatosensory cortex differentially modulates perception and sensorimotor transformations. *Neuroscience*, 157(2), 424-431. doi: 10.1016/j.neuroscience.2008.09.008

Legon, W., **Meehan, S.K.**, & Staines, W.R. (2008). The relationship between frontal somatosensory-evoked potentials and motor planning. *Neuroreport*, 19(1), 87-91. doi: 10.1097/WNR.0b013e3282f36f5f

**Meehan, S.K.**, & Staines, W.R. (2007). The effect of task-relevance on primary somatosensory cortex during continuous sensory-guided movement in the presence of bimodal competition. *Brain research*, 1138, 148-158. doi: 10.1016/j.brainres.2006.12.067

**Meehan, S.**, Singhal, A., & Fowler, B. (2005). The late Nd reflects a memory trace containing amodal spatial information. *Psychophysiology*, 42(5), 531-539. doi: 10.1111/j.1469-8986.2005.00309.x

### *Textbook Chapters*

Broglio, S.P., **Meehan S.** and Carender, W., Dizziness, imbalance, and Vestibular dysfunction, in *Textbook of Traumatic Brain Injury*, 3rd edition, Silver JM, McAllister TW, and Arciniegas DB (Eds), American Psychiatric Publishing, Inc, New York (in press).

# Curriculum Vitae

## Refereed Conference Proceedings

### *Symposia Presentations*

<sup>a</sup>Khammash, D., Simmonite, M., Polk, T.A., Taylor, S.F. and Meehan, S.K. (2017). Probing GABAergic function in the visual cortex with transcranial magnetic stimulation. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington DC, 46

Maxwell, J., Escobar, C., Perdu, L., ChulHong, M., and **Meehan, S.K.** (2014). Brain wave monitoring of driver fatigue. *SAE World Congress*, Detroit.

**Meehan, S.K.**, Randhawa, B., Wessel, B., and Boyd, L.A. (2009). Implicit sequence-specific motor learning after stroke: an fMRI study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Chicago, 39

Edwards, J., Boyd, L., Stinear, C., Teal, P., **Meehan, S.**, and Levy, A. (2009) Is Transcranial Magnetic Stimulation a Useful Clinical Adjunct for Predicting Stroke Risk following Transient Ischemic Attack? A Prospective Cohort Study. *International Congress of Clinical Neurology and Epidemiology (Neuroepidemiology)*, Munich, Germany

### *Poster Presentations*

<sup>a</sup>Harris, M., <sup>a</sup>Baur, K., <sup>b</sup>Nishiyori, R. & **Meehan, S.K.** (2017). Cortical activity patterns in infants with Down Syndrome during performance of functional motor skills. *North American Society for the Psychology of Sport and Physical Activity 50<sup>th</sup> Annual Meeting*. San Diego CA

**Meehan, S.K.**, <sup>b</sup>Suzuki, L.Y., <sup>a</sup>Khammash, D. & <sup>a</sup>Koch, A. (2017). Intracortical biomarkers for promoting neural plasticity post-stroke. *Claude D. Pepper Older Americans Independence Center Annual Meeting*. Washington DC

**Meehan, S.K.**, <sup>b</sup>Suzuki, L.Y. & <sup>a</sup>Mirdamadi, J.L. (2016). Motor cortical substrates of declarative influence over the procedural system: A short-latency afferent inhibition study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego CA, 45

<sup>b</sup>Suzuki, L.Y. & **Meehan, S.K.** (2016). Neural correlates of focus of attention during golf putting. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego CA, 45

<sup>b</sup>Nishiyori, R., **Meehan, S.** & Ulrich, B. (2016). Cortical activity patterns emerge as infants acquire functional motor skills. *The Society for functional Near Infrared Spectroscopy Biennial Meeting*. Paris, France

<sup>b</sup>Martini, D.N., **Meehan, S.K.**, Eckner, J.T. & Broglio, S.P. (2016). Long-Term Effects of Adolescent Concussion History on Neurocognition. *American College of Sports Medicine Annual Meeting*. Boston MA

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- <sup>b</sup>Martini, D.N., Goulet, G.C., Gates, D., **Meehan, S.K.** & Broglio, S.P. (2015). A Preliminary Investigation: Long-term Effects Of Concussion On Obstacle Crossing. *American College of Sports Medicine Annual Meeting*. San Diego CA
- <sup>b</sup>Suzuki, L.Y. & **Meehan, S.K.** (2015). Focus of attention has differential effects upon short-latency afferent inhibition across practice. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Chicago IL, 44
- <sup>a</sup>Mirdamadi, J.L., <sup>b</sup>Suzuki, L.Y., <sup>a</sup>Erickson, T.R., <sup>a</sup>Feingold, A.S. & **Meehan, S.K.** (2015). Short-latency afferent inhibition differentially suppresses motor cortical networks depending upon visual attention load. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Chicago IL, 44
- <sup>b</sup>Suzuki, L.Y., <sup>a</sup>Mirdamadi, J.L., <sup>a</sup>Sierant, M. & **Meehan, S.K.** (2014). Short-term memory requirements decrease potential for plasticity in motor cortex. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington DC, 43
- <sup>a</sup>Mirdamadi, J.L., <sup>b</sup>Suzuki, L.Y. & **Meehan, S.K.** (2014). Frontal and cerebellar networks interact to determine potential for motor cortex plasticity. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington DC, 43
- Ferris, J.K., Brown, K.E., Mang, C.S., Wadden, K.P., Borich, M.R., **Meehan, S.K.** & Boyd, L.A. (2014). Cerebral metabolic changes in chronic stroke, assessed by Magnetic Resonance Spectroscopy. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington DC, 43
- Brown, K.E., Mang, C.S., Wadden, K.P., Neva, J.L., Borich, M.R., **Meehan, S.K.** & Boyd, L.A. (2014). Influence of continuous theta burst stimulation (cTBS) and short-term training on cortical excitability in learners and non-learners with chronic stroke. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington DC, 43
- Neva, J.L., Brown, K.E., Wadden, K.P., Mang, C.S., Snow, M.J., **Meehan, S.K.**, Boyd, L.A. (2014). Transcallosal inhibition is associated with improved paretic arm function after continuous theta burst stimulation over contralesional motor cortex and skill learning following stroke. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington DC, 43
- <sup>b</sup>Nishiyori, R., Bisonti, S., **Meehan, S.** & Ulrich, B. (2014). Changes in motor cortex activity of infant's reaching and stepping patterns. *Society for Functional Near Infrared Spectroscopy Abstracts*. Montreal
- Neva, J.L., Brown, K.E., Wadden, K.P., Mang, C.S., Lahkani, B., Borich, M.R., **Meehan, S.K.**, Boyd, L.A. (2014). Continuous theta burst stimulation over contralesional motor cortex enhances paretic arm function associated with motor skill learning after stroke. *Stroke*. Vancouver, 45(12), E293-E293

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- Ferris, J.K., Brown, K.E., Mang, C.S., Wadden, K.P., Borich, M.R., **Meehan, S.K.** & Boyd, L.A. (2014). Alterations to paired pulse excitability of the motor cortex in chronic stroke and type-2 Diabetes Mellitus: preliminary analysis. *Stroke*. Vancouver, 45(12), E270-E270
- Peters, S., Brodie, S., Wadden, K., Brown, K., Mang, C., Borich, M., **Meehan, S.K.** & Boyd, L.A. (2014). What is the functional significance of theta band activity during paretic limb motor performance after stroke? *Stroke*. Vancouver, 45(12), E294-E294
- <sup>b</sup>Martini, D.N., **Meehan, S.K.** & Broglio, S.P. (2014). A preliminary investigation: Effects of concussion history on visuomotor performance. *Medicine and Science in Sports and Exercise*. Orlando, 46(5), 17-17
- <sup>b</sup>Martini, D.N., <sup>a</sup>Mirdamadi, J.L., **Meehan, S.K.** & Broglio, S.P. (2014). The Effects of TMS on Neural Plasticity in Young Adults with a Concussion History. *The Sports Concussion Conference*. Chicago
- <sup>b</sup>Suzuki, L.Y., <sup>a</sup>Mirdamadi, J.L. and **Meehan, S.K.** (2013). Continuous visuomotor implicit sequence learning is driven by motor not perceptual factors. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 42
- Borich, M.R., Dao, E. Edwards, J.D., **Meehan, S.K.** and Boyd L.A. (2013). Evaluating the relationships between hand function with measures of brain structure and function in chronic stroke. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 42
- Cheung, K.L., **Meehan, S.K.**, and Boyd, L.A. (2013). 1 Hz repetitive transcranial magnetic stimulation over dorsal premotor cortex enhances offline motor memory consolidation for sequence-specific implicit learning. *Canadian Association for Neuroscience Annual Meeting*. Toronto.
- Brown, K., Mang, C.S., Jones, P.W., Borich, M.R., **Meehan, S.K.**, and Boyd, L.A. (2013). Short-term changes in motor cortical excitability following cTBS and motor training in individuals with stroke. *Canadian Association for Neuroscience Annual Meeting*. Toronto.
- <sup>a</sup>Mirdamadi, J.L., <sup>b</sup>Suzuki, L.Y. and **Meehan, S.K.** (2012). State-dependency and stability of intermittent theta burst stimulation in agonist-antagonist forearm muscles. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, New Orleans, 41
- Brodie, S.M., **Meehan, S.K.**, Cheung, K.L. and Boyd, L.A. (2012). Repetitive transcranial magnetic stimulation over the ipsilesional sensory cortex improves motor learning and fine motor function post-stroke. *Stroke*, 43(11), E143-E143
- Jones, P. W., **Meehan, S. K.**, Edwards, J. D., Dao, E., & Boyd, L. A. (2012). Promoting brain reorganization after stroke: An rTMS study. *Stroke*, 43(11), E147-E147.



## Curriculum Vitae

- Edwards, J.D., **Meehan, S.K.**, Lindsell, M.A. and Boyd, L.A. (2011). Intracortical Excitability in Clinical Populations: A Comparison of Paired-Pulse Transcranial Magnetic Stimulation Methodologies in Healthy Elderly Adults and Individuals with Stroke. *European Congress on Clinical Neurophysiology*, Rome, Italy
- Meehan, S.K.**, Dao, E. Lindsell, M.A., Edwards, J.E. and Boyd, L.A. (2010). Contralesional continuous theta burst stimulation paired with practice enhances performance post-stroke. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 40
- Randhawa, B.K., Zabukovec, J.R., **Meehan, S.K.**, Dao, E. and Boyd, L.A. (2010). The role of the dorsal premotor cortex in motor skill consolidation: An rTMS study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 40
- Boyd, L.A., **Meehan, S.K.**, Randhawa, B., Dao, E., Edwards, J. and Lindsell, M. (2010). Dorsal premotor cortex supports motor learning after stroke: An rTMS study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 40
- Lindsell, M.A., **Meehan, S.K.** and Boyd, L.A. (2010). Does inhibition of contralesional primary motor cortex increase function of the hemiparetic upper extremity in individuals with stroke? *1<sup>st</sup> Canadian Stroke Congress - Canada Stroke Network*. Quebec City, Canada.
- Boyd, L.A., Dao, E., **Meehan, S.K.**, Randhawa, B.K., Lindsell, M.A., Edwards, J.D. and Cheng, E. (2010). The impact of excitatory repetitive TMS over dorsal premotor cortex after chronic stroke. *1<sup>st</sup> Canadian Stroke Congress - Canada Stroke Network*. Quebec City, Canada.
- Edwards, J., **Meehan, S.**, Teal, P., Lindsell, M., Levy, A. and Boyd, L. (2010). Asymmetries in intracortical excitability persist after transient ischemic attack and correlate with clinical predictors of stroke risk. *1<sup>st</sup> Canadian Stroke Congress - Canada Stroke Network*. Quebec City, Canada.
- Acerra, N., Vidoni, E., Dao, E., **Meehan, S.**, and Boyd, L. (2010). Sensation is central to motor learning: Experiment 2 – a study of rTMS-induced virtual lesions. *American Physical Therapy Association – Combined Sections Meeting*.
- Lindsell, M.A., **Meehan, S.K.** and Boyd, L.A. (2009). Effects of primary somatosensory continuous theta burst and repetitive transcranial magnetic stimulation on contralateral somatosensory cortex. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Chicago, 39
- Edwards, J., Levy, A., Teal, P., **Meehan, S.**, and Boyd, L. (2009). Does altered intracortical inhibition predict stroke occurrence following transient ischemic attack? A prospective cohort study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Chicago, 39.

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- Meehan, S.K.**, Legon, W., Dionne, J.K. and Staines, W.R. (2008). Repetitive transcranial magnetic stimulation over temporal parietal cortex disrupts tracking performance during synchronous tactile-visual stimulation. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington, 38.
- Dionne, J.K., Legon, W., **Meehan, S.K.** and Staines, W.R. (2008). Early sensory processing is modulation by visual-tactile integration requirements: an event-related potential study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington, 38.
- Legon, W., **Meehan, S.K.**, Linseman, M.E., Dionne, J.K. and Staines, W.R. (2008). Sensory-motor integration and hand-dominance: an SEP study. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington, 38.
- Meehan, S.K.**, Legon, W. and Staines, W.R. (2007). Differential task-demands modulate cortical excitability of primary somatosensory cortex as revealed by paired-pulse transcranial magnetic stimulation. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 37.
- Dionne, J.K., **Meehan, S.K.** and Staines, W.R. (2007). Visual-tactile integration modulates sensorimotor processing. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 37.
- Legon, W., **Meehan, S.K.** and Staines, W.R. (2007). Supplementary motor cortical activity is dependent upon the planning stage of both contralateral and ipsilateral effectors as evidenced by the frontal N30 SEP. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, San Diego, 37.
- Meehan, S.K.**, Legon, S.K. and Staines, W.R. (2006). Cross-modal competition between tactile and visual stimuli modulates early cortical evoked potentials during sensory-guided movement. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Atlanta, 36.
- Legon, W., **Meehan, S.K.** and Staines, W.R. (2006). Attention and motor complexity modulate somatosensory evoked potentials during sensory-guided movement. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Atlanta, 36.
- Meehan, S.K.**, Legon, W. and Staines, W.R. (2005). Cross-modal conflict between tactile and visual stimuli modulates cortical activity and motor performance during sensory-guided movement. *Society for Neuroscience Abstract Viewer and Itinerary Planner*, Washington, 35.
- Meehan, S.K.** and Staines, W.R. (2005). Task-relevant modulation of primary somatosensory cortex (S1) associated with sensorimotor transformations in the presence of cross modal competition. *Organization for Human Brain Mapping Annual Meeting*, Toronto.

# Curriculum Vitae

## Extramural Grants

### *Current*

NIH R03 (PI) Modulating interaction of motor learning networks in rehabilitation of stroke.  
04/01/2016-03/31/2018, \$100,000 total direct costs

### *Pending*

NIH R01 (PI) Impact of adolescent concussion on motor cortical function across the lifespan.  
09/01/2017-08/31/2022, \$1,205,468 total direct costs

### *Completed*

CIHR (Co-I, L.A. Boyd PI) Interhemispheric contributions to neuroplasticity and motor learning after stroke. 09/2011-04/2014, \$257,115 total costs.

## Extramural Contracts

### *Completed*

Hyundai-Kia America Technical Center Inc. (PI) Brainwave monitoring: Measures of driver alertness. 06/2013-12/2013, \$72,935.97 total costs

## Intramural Grants

### *Current*

University of Michigan Geriatrics Center Research Center Development Core KL2 Scholar.  
Maximizing the effectiveness of motor interventions post-stroke. 07/01/2016-07/30-2017.  
Salary Support – 75% research protected time

University of Michigan MCubed (Co-PI), Probing GABAergic function with transcranial magnetic stimulation. 04/2016-12/2017, \$60,000 total costs

### *Completed*

University of Michigan Geriatrics Center, Pilot Grant (PI), Intracortical biomarkers for promoting neural plasticity post-stroke. 06/01/2015-05/31/2017, \$39,564 total costs

Nicholas Leoni Endowment Fund (PI), Cortical activation patterns in infants with Down syndrome during performance of functional motor skills. 08/01/2015-04/30/2017, \$18,715 total costs

UM Injury Center, Pilot Grant (Co-PI w/ S. Broglio) The effect transcranial magnetic stimulation (TMS) on neural plasticity in young adults with a concussion history. 06/2013-05/2014, \$25,000 total costs.

Center for Research on Learning and Teaching, Faculty Development Fund (Co-I, M. Gross PI) Muscle Function as Thread: Stitching Together the Kinesiology Curriculum Using Shared Digital Resources in Required Core Courses. 05/01/2014-05/31/2015. \$6,000

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## University and Professional Service

- 2017 Faculty Reviewer, Mock Study Section, Research Career Development Core Research Retreat, University of Michigan Pepper Older Americans Independence Center (OAIC)
- 2017 Search committee member, Neuroscience position, School of Kinesiology
- 2015 Search committee member, Infant Motor Development position, School of Kinesiology
- 2014 Search committee member, Motor Development, Disability, and Physical Activity faculty position, School of Kinesiology
- 2014 Rackham-CRLT Preparing Future Faculty Seminar- panel presentation by junior faculty for UM graduate students and post-doctoral researchers
- 2013 Rackham-CRLT Preparing Future Faculty Seminar- panel presentation by junior faculty for UM graduate students and post-doctoral researchers
- 2012 Rackham-CRLT Preparing Future Faculty Seminar- panel presentation by junior faculty for UM graduate students and post-doctoral researchers

## Editorships

- 2012-2014 Guest Associate Editor, *Frontiers in Human Neuroscience* (Special Issue: A Multidisciplinary Approach to Motor Learning and Sensorimotor Adaptation, with Rachael Seidler)

## Reviewer

### *Journals, Ad Hoc*

Archives in Physical Medicine and Rehabilitation	Journal of Athletic Training
Behavioral and Brain Function	Journal of Cognitive Neuroscience
Behavioral Brain Research	Journal of Motor Behavior
Clinical Neurophysiology	Journal of Neuroengineering Rehabilitation
European Journal of Neurology	Journal of Neurologic Physical Therapy
Experimental Brain Research	Journal of Neurophysiology
Frontiers in Human Neuroscience	Journal of Psychiatry
Frontiers in Integrative Neuroscience	Journal of Visualized Experiments
Frontiers in Neuroscience	Neuroscience Letters
Human Factors	PLoS One

### *Grants Reviewer - Extramural*

Ad hoc reviewer, Swiss National Science Foundation Sinergia Programme, 2016 & 2017

## Curriculum Vitae

Ad hoc reviewer, Medical Research Council (United Kingdom), Neurosciences & Mental Health Board, 2016

Ad hoc reviewer, Canadian Foundation for Innovation (CFI) Leaders Opportunity Fund, 2012

Ad hoc reviewer, Florida Department of Health New Investigator Research Grant, 2012

### Teaching Experience

#### *Undergraduate Courses*

MOVESCI 422 Motor Learning (F2016, n=28, F2015, n=21, F2014, n = 11)

MOVESCI 320 Motor Control (W2016, n=74, W2015, n = 74, W2014, n = 81)

MOVESCI 250 Statistics (W2016, n=55, F2014, n = 61, F2013, n=62, F2012, n=77, F2011, n=33, W2011, n=56)

MOVSSCI 402 Teaching Experience (W2016, n=1, W2015, n = 5, W2014, n = 5)

Independent Studies (since 2011): MVS 488 (1), MVS 429 (18), PSYCH 331/332 (1), PSYCH 326 (2), Undergraduate Research Opportunity (UROP – 9), Summer Undergraduate Research Opportunity (SROP - 2)

#### *Graduate Courses*

KINESLGY 522 (formerly KINESLGY 512) – Clinical Neurophysiology and Neuroimaging (W2015, n = 14, W2013, n = 14, 2 sitting in)

### Mentoring Experience

#### *Doctoral Students*

2012 – present	Lorraine Suzuki, Kinesiology, University of Michigan, Chair
2012 – 2016	Ryota Nishiyori, Kinesiology, University of Michigan, Co-Chair
2014 – 2016	Richelle Williams, Kinesiology, University of Michigan, Co-Chair

#### *Doctoral Dissertation Committees*

2017 – present	Andrew Lapointe, Kinesiology, University of Michigan, Member
2016 – present	Kathryn O’Connor, Kinesiology, University of Michigan, Member
2016 – present	Susannah Engdahl, Biomedical Engineering, University of Michigan, Cognate Member
2015 – present	Kara Palmer, Kinesiology, University of Michigan, Member
2015 – present	Steven Peterson, Biomedical Engineering, University of Michigan, Cognate Member
2014 - present	Fatemeh Noohibezanjani, Student Initiated Degree Program, University of Michigan, Member
2014 – 2015	Julia Kline, Biomedical Engineering, University of Michigan, Cognate Member
2013 - 2016	Douglas Martini, Kinesiology, University of Michigan, Member
2013 - present	Grant Hanada, Biomedical Engineering, University of Michigan, Cognate Member
2012 – present	Brian Greeley, Student Initiated Degree Program, University of Michigan, Member

## Curriculum Vitae

2011 - 2012                      Jessica Bernard, Psychology, University of Michigan, Cognate Member

### *Master's Thesis Committees*

2016 - Present                      Tanu Bhargava, Kinesiology, University of Michigan, Member  
2011 – 2013                      Fatemeh Noohibejanani, Kinesiology, University of Michigan, Member  
2012 – 2013                      Sonia Brodie, Graduate Program in Rehabilitation Sciences, University of British Columbia, Member

### Invited Lectures

#### *Scholarly Groups*

**Meehan, S.K.** The State of Sensorimotor Networks as a Marker of Neuroplastic Potential Post-Stroke. Annual Geriatrics/Biogerontology Research Symposium, May 3<sup>rd</sup>, 2017

**Meehan, S.K.** Motor performance, learning and cortical plasticity across healthy and clinical populations. Center for Exercise Research (CXR) Seminar Series, February 10<sup>th</sup>, 2017

**Meehan, S.K.** Enhancing the effectiveness of motor learning based interventions post-stroke: Insights from non-invasive brain stimulation. UM Pepper Center Research Center Development Core Seminar, January 19<sup>th</sup>, 2017

**Meehan, S.K.** Enhancing motor learning: Physiological and cognitive factors that influence cortical plasticity. Cognition and Cognitive Neuroscience Symposium, March 20<sup>th</sup>, 2015

**Meehan, S.K.** Using Transcranial Magnetic Stimulation to Promote Recovery Post-Stroke, Functional MRI Symposium 2012, University of Michigan, September 29<sup>th</sup>, 2012

**Meehan, S.K.** Parallels between M1 and Stroke Research. UBC MS Preceptorship, Western Pacific endMS Regional Research and Training Centre, University of British Columbia, June 30<sup>th</sup>, 2010

**Meehan, S.K.** Modulation of somatosensory processing during continuous sensory-guided movement. Graduate Programme in Rehabilitation Sciences, University of British Columbia, October 22<sup>nd</sup>, 2008

#### *Provincial Organizations and Community Groups*

**Meehan, S.K.** Recent advances in research: Facilitating recovery after stroke. Young Stroke Survivors Group, Vancouver, British Columbia, September 25<sup>th</sup>, 2009

### Professional Development

Faculty Recruitment Workshop, Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE). University of Michigan, Ann Arbor, MI (October 19<sup>th</sup>, 2016)

## Curriculum Vitae

- Functional Near-Infrared Spectroscopy (fNIRS) Course, MGH/HST Athinoula A. Martinos Center for Biomedical Imaging, Boston, MA (November 16-18<sup>th</sup>, 2016)
- NIH Mock Study Section Retreat, UM Older Americans Independence Center, University of Michigan, Ann Arbor, MI (May 28-29<sup>th</sup>, 2015)
- Intensive Course in Transcranial Magnetic Stimulation (TMS), The Berenson-Allen Center for Noninvasive Brain Stimulation – Harvard, Boston, MA (February 21-23<sup>rd</sup>, 2015)
- Research Grant Proposal Writing Workshop, Advance Program, University of Michigan, Ann Arbor, MI (September 26<sup>th</sup>, 2014)
- Faculty Recruitment Workshop, Strategies and Tactics for Recruiting to Improve Diversity and Excellence (STRIDE). University of Michigan, Ann Arbor, MI (October 9<sup>th</sup>, 2013)
- Write Winning NIH Grant Proposals, David Morrison, Ph.D. – University of Michigan, Ann Arbor, MI (October 30<sup>th</sup>, 2013)
- University of Michigan Health Sciences Teaching Academy, Center for Research on Learning and Teaching (CRLT) – University of Michigan, Ann Arbor, MI (August 25<sup>th</sup>-26<sup>th</sup>, 2011)
- Intensive Workshop on Grant Writing, Preparation, and Submission in Rehabilitation Research, Enhancing Rehabilitation Research in the South (ERRIS) – Charlottesville, VA (January 11<sup>th</sup>-15<sup>th</sup>, 2011)
- Faculty Instructional Skills Workshop, University of British Columbia, Teaching and Academic Group – University of British Columbia (May 2009)
- Brainvoyager QX Beginner/Intermediate fMRI Analysis course (MRI/fMRI) – Toronto, ON (June 17-18<sup>th</sup>, 2005)
- Compumedics Neuroscan School (EEG) – Montréal, QC (April 6-7<sup>th</sup>, 2005)