

**Kevin Michael Trewartha**

[kmtrewar@mtu.edu](mailto:kmtrewar@mtu.edu)

<https://sites.google.com/a/mtu.edu/aginglab/>

**Director, Aging, Cognition, and Action Lab**

**Assistant Professor, Department of Cognitive and Learning Sciences**

**Assistant Professor, Department of Kinesiology and Integrative Physiology**

**Michigan Technological University**

**Meese Center, room 207**

**Houghton, MI 49931**

**Phone: 906-457-3206**

**Fax: 906-457-2468**

### **Education**

- |      |   |
|------|---|
| 2012 | <b>PhD</b> Concordia University—Psychology                      |
| 2007 | <b>MA</b> Concordia University—Psychology                       |
| 2004 | <b>BA (Honors)</b> Western University—Psychology and Philosophy |

### **Academic Positions**

- |                     |  |
|---------------------|--|
| August 2015-Present | <b>Assistant Professor</b> —Michigan Technological University<br>Department of Cognitive and Learning Sciences and Department<br>of Kinesiology and Integrative Physiology |
|---------------------|--|

### **Research Positions**

- |               |  |
|---------------|--|
| 2012-2015     | <b>Postdoctoral Fellow</b> , Centre for Neuroscience Studies, Queen's<br>University  |
| 3/2010-6/2010 | <b>Visiting Researcher</b> , Sensory-Motor Neuroscience Laboratory,<br>University of Birmingham, UK  |
| 2009-Present  | <b>Research Collaboration</b> , Psychology Department, Concordia<br>University   |
| 2005-2010     | <b>Research Trainee</b> , CIHR Strategic Training Program in<br>Communication and Social Interaction in Healthy Aging,<br>University of Toronto, Mississauga |
| 2005-2011     | <b>Student Research Fellow</b> , Center for Research in Human<br>Development, Concordia University   |
| 2005-2011     | <b>Graduate Student Researcher</b> , Psychology Department<br>Concordia University   |

2004-2005                    **Research Assistant**, Psychology Department  
University of Western Ontario

## Teaching

2015-Present                **Full-time Faculty**, Department of Cognitive and Learning  
Sciences and Department of Kinesiology and Integrative  
Physiology  
Motor Learning and Control—Fourth year undergraduate course  
Advanced Topics in Motor Behavior—Third year undergraduate  
course  
Physiological Psychology—Third year undergraduate course  
Aging Brain and Cognition—Fourth year undergraduate course

2010-2011                    **Part-time Faculty**, Psychology Department, Trent University  
Aging and Cognition—Third year undergraduate course

2010-2011                    **Part-time Faculty**, Psychology Department, Trent University  
Introduction to Cognitive Psychology—Introductory  
undergraduate course

2008-2009                    **Teaching Assistant**, Psychology Department, Concordia  
University  
Planned and delivered seminar/laboratory sessions to teach  
fundamentals of statistical analyses using SPSS

2007-2008                    **Teaching Assistant**, Psychology Department, Concordia  
University  
Planned and delivered seminar/laboratory sessions in  
fundamentals of research methods in psychology

2006-2007                    **Teaching Assistant**, Psychology Department, Concordia  
University  
Planned and delivered seminar/laboratory sessions in  
fundamentals of research methods in psychology

2005-2006                    **Teaching Assistant**, Psychology Department, Concordia  
University  
Planned and delivered seminar/laboratory sessions in  
fundamentals of research methods in psychology

## Professional Experience

### Research Advisor

Graduate Students at Michigan Technological University  
Shawn Emig, DPT student (Fall 2019—Present)  
Alex Grodzicki, DPT student (Fall 2019—Present)  
Andrea Serrano (Fall 2019—Present)

Alexandra Watral (Spring 2019—Present)  
 Isaac Flint (Fall 2017—Present)  
 Lavanya Rajesh Kumar (Fall 2016—Present)  
 Bridget Durocher (Spring 2019—Spring 2020)  
 Carley Maanika, DPT student (Fall 2016—Spring 2019)

**Undergraduate Students and Michigan Technological University**

Via Ouellette Ballas (Summer 2019—Present)  
 Kelly Livingston (Fall 2018—Spring 2019)  
 Michelle Burge (Fall 2018—Summer 2019)  
 Allison Waara (Fall 2017—Summer 2019)  
 Kenny Ritz (Fall 2017—Summer 2018)  
 Madelyn Morely (Fall 2016—Summer 2018)  
 Brittany Turner (Fall 2015—Summer 2017)  
 Zhongyu Tian (Summer 2016)  
 Olivia Ingram (Fall 2015—Summer 2016)  
 Tessa Sprague (Fall 2015—Summer 2016)

**Research Co-Advisor**

Graduate Students at Queen's University  
 Ashley Bramwell (Fall 2014—Fall 2015)  
 Yana Korotkevich (Fall 2010—Spring 2012)

Undergraduate Students at Queen's University  
 Paige Williams (Fall 2014—Summer 2015)  
 Stefan Case (Fall 2013—Summer 2014)  
 Heather Shepherd (Fall 2013—Summer 2014)  
 Michael Spilka (Fall 2010—Fall 2011)  
 Cristina McHenry (Fall 2010—Fall 2011)  
 Gohar Tajik (Fall 2008—Summer 2009)  
 Erika May-Passmore (Fall 2006—Summer 2007)

**Committee Membership**

Internal Advisory Board Member for the Pavlis Honors College (2018—Present)  
 Applied Cognitive Science and Human Factors Graduate Program Committee  
 (2015—Present)  
 Departmental Diversity Liaison at Michigan Technological University  
 (2016—Present)  
 Human Factors Faculty Search Committee (2018—Present)  
 College of Science and Arts Dean Search Committee (2017—2018)  
 Biomechanics Faculty Search Committee (2017—2018)  
 Psychology Lecturer Search Committee, Chair (2017—2018)

**Peer Reviewer (2007—Present)**

**Journal Articles**

Journal of Gerontology: Psychological Science; NeuroImage; Aging, Neuropsychology, and Cognition; Frontiers in Neuroscience, Experimental Brain Research, PLOS ONE, Australian Journal of Psychology; Journal of Motor Behavior; The Clinical Neuropsychologist; Journal of Experimental Psychology: General; Medicine and Science in Sports and Exercise; Human Movement Science; Scientific Reports; Psychology and Aging

**Grant Reviews (2015—Present)**

Deutsche Forschungsgemeinschaft (DFG)  
Alzheimer's Association  
National Science Foundation

**Michigan Technological University Faculty Senator (Fall 2019—Present)**

**Director, Applied Cognitive Science and Human Factors Colloquia  
(Fall 2016—Present)**

**Councilor at Large, Michigan Society for Neuroscience (2017—Present)**

**Guest Lecturer (Spring 2009)**, Society for Neuroscience: Brain Awareness  
Delivered guest lecture to elementary school students on the functioning of the brain

**Junior Scientific Committee Member (Spring 2008)**, International Conference on Low Vision: Vision 2008

**Conference Organizing Committee Member (Fall 2007—Summer 2008)**, Canadian Institutes of Health Research: Institute of Aging  
Member of the planning committee for the 2008 annual Summer Program in Aging

**Research Interests**

Cognitive Aging and Sensorimotor Control in Health Aging and Dementia; Motor Learning; Attention; Memory; Cognitive Neuroscience; Event-Related Potentials; Executive Control; Exercise Interventions for Cognitive Improvement in Aging

**Research Grants**

**Funded**

**Trewartha, K.M. (PI)** and Mueller, S. (Co-Investigator). *“Motor Learning as a Sensitive Behavioral Marker of Mild Cognitive Impairment and Early Alzheimer’s Disease.”* NIH R15 AREA Grant. Awarded June 2018. \$300,000 (Direct), \$455,883 (Total).

Carter, J.R. (PI), Durocher, J.J. (Co-PI), Cooke, W. (Co-PI), **Trewartha, K.M. (Co-PI)**. *“Infrastructure Enhancement to Sustain Sleep Disorders Research at Michigan Tech.”* Portage Health Foundation and Michigan Technological University Research Excellence Fund Seed Grant. Awarded June 2018. \$50,000 (Total).

**Trewartha, K.M.** “*Brain awareness events in the underserved communities of Michigan’s Upper Peninsula.*” Society for Neuroscience Chapter Outreach Awards. Awarded February 2018/ \$2,000 (Total).

### Pending

**Trewartha, K.M. (PI)**, Steelman, K. (Co-PI), and Backs, R.W. (Co-Investigator). “*The sensitivity of measures of corrective driving performance to levels of cognitive decline in aging, mild cognitive impairment, and Alzheimer’s disease.*” NIH R01 Grant. Submitted October 2019. \$766,307 (Direct), \$1,017,358 (Total).

### Not Funded

**Trewartha, K.M. (PI)**, Mueller, S. (Co-Investigator), and Ranganathan, R. “*Motor Learning as a Sensitive Behavioral Marker of Mild Cognitive Impairment and Early Alzheimer’s Disease.*” NIH R15 AREA Grant. Administratively withdrawn June 2018 due to previous overlapping submission being funded. \$304,819 (Direct), \$466,373 (Total).

Yoon, T., Shan, Z., **Trewartha, K.M. (Co-Investigator)**. “*Stress-Induced Brain Activation and Supraspinal Fatigue in Men and Women Across the Lifespan.*” NIH R15 Grant submitted October 2017. \$309,249 (Direct), \$467,824 (Total).

**Trewartha, K. M. (PI)**, West, R. L. (Co-Investigator), Elmer, S. J. (Co-Investigator), and Mueller, S. (Co-Investigator). “*Aging and the Neurocognitive Mechanisms of Rapid Corrective Actions.*” NIH R15 Grant submitted October 2017. \$305,031 (Direct), \$514,931 (Total).

**Trewartha, K. M. (PI)** and Jeon, M. (Co-Investigator). “*Motor Learning as a Sensitive Marker of Early Alzheimer’s Disease.*” Alzheimer’s Association Research Grant (AARG) submitted April 2017. \$136,335 (Direct), \$149,968 (Total).

**Trewartha, K. M. (PI)** and Jeon, M. (Co-Investigator). “*Aging and the Neurocognitive Mechanisms Underlying Online Corrective Movements for Obstacle Avoidance in Dynamic Environments.*” NIH R15 Grant submitted February 2017. \$299,993 (Direct), \$464,990 (Total).

**Trewartha, K. M. (PI)**. “*The Effects of Aging on the Neurocognitive Mechanisms Underlying Online Corrective Movements for Avoiding Obstacles in the Environment.*” American Federation for Aging Research (AFAR) Research Grant for Junior Faculty. Letter of Intent, December, 2016. \$100,000 (Total).

**Trewartha, K. M. (PI)**, Jeon, M. (Co-Investigator), and Mueller, S. (Co-Investigator). “*The Impact of Mild Cognitive Impairment and Alzheimer’s Disease on Short and Long-term Memory Processes Underlying Motor Learning.*” NIH R15 Grant submitted October 2016. \$300,000 (Direct), \$432,146 (Total).

**Trewartha, K. M. (PI)**, “Monitoring cortisol levels to optimize exercise interventions aimed at improving cognitive function in aging.” 3M Non-Tenured Faculty Awards Program, submitted September 2016. Up to \$45,000 (total).

Flanagan, J. R. (PI) and **Trewartha, K. M. (Co-PI)**. “Impact of Alzheimer’s Disease on Memory Processes underlying Motor Learning.” Alzheimer’s Society of Canada, 2015. \$120,000 (Total).

Flanagan, J. R. (PI) and **Trewartha, K. M. (Co-PI)**. “Sensorimotor Control of Object Manipulation in Alzheimer’s Disease.” Alzheimer’s Society of Canada, 2014. \$120,000 (Total).

### Journal Articles (Peer Reviewed)

Rajeshkumar, L. and **Trewartha, K. M.** (2019). Advanced spatial knowledge of target location eliminates age-related differences in early sensorimotor learning. *Experimental Brain Research*, 237, 1781-1791.

**Trewartha, K. M.** and Flanagan, J. R. (2017). Linking actions and objects: Context-specific learning of novel weight priors. *Cognition*, 163, 121-127.

**Trewartha, K. M.** and Flanagan, J. R. (2016). Distinct contributions of explicit and implicit memory processes to weight prediction when lifting objects and judging their weights: an aging study. *Journal of Neurophysiology*, 116, 1128-1136.

Korotkevich, Y., **Trewartha, K. M.**, Penhune, V. B., and Li, K. Z. H. (2015). Effects of age and cognitive load on response reprogramming. *Experimental Brain Research*, 233, 937-946.

**Trewartha, K. M.**, Case, S., and Flanagan, J. R. (2015). Integrating actions into object location memory: A benefit for active versus passive learning. *Behavioral Brain Research*, 259, 234-239.

**Trewartha, K. M.**, Garcia, A., Wolpert, D. M., and Flanagan, J. R. (2014). Fast but Fleeting: Adaptive Motor Learning Processes Associated with Aging and Cognitive Decline. *Journal of Neuroscience*, 34, 13411-13421.

**Trewartha, K. M.** and Phillips, N. A. (2013). Detection of errors during self-produced speech: An ERP investigation. *Frontiers of Human Neuroscience*, 7, 763.

**Trewartha, K. M.**, Spilka, M., Penhune, V. B., Li, K. Z. H., and Phillips, N. A. (2013). Context updating processes facilitate response reprogramming in younger but not older adults. *Psychology and Aging*, 28, 701-713.

McHenry, C. M., **Trewartha, K. M.**, and Phillips, N. A. (2011). Error-related ERP components during speech production: Attenuation of the ERN in older adults. *Psychophysiology*, 48, S75-S75.

**Trewartha, K. M.**, Penhune, V. B., and Li, K. Z. H. (2011). Movement kinematics of pre-potent response suppression in aging during conflict adaptation. *Journal of Gerontology: Psychological Sciences*, *66B*, 185-194. doi:10.1093/geronb/gbq090.

**Trewartha, K. M.**, Endo, A., Li, K. Z. H., and Penhune, V.B. (2009). Examining pre-potent response suppression in aging: A kinematic analysis. *Psychology and Aging*, *24*, 450-461.

### Works in Progress:

Flint, I., Waara, A., and **Trewartha, K.M.** *Aging and the Neurocognitive Mechanisms Underlying Corrective Movements for Obstacle Collision Avoidance*. In preparation.

Rajeshkumar, L. and **Trewartha, K.M.** (2019). *Reduced susceptibility to interference in motor learning in healthy older adults after a three-month exercise intervention: a preliminary study*. In preparation.

### Conference Presentations

Durocher, B., Watral, A., Rajeshkumar, L., and **Trewartha, K.M.** (2019). *Acquisition, Short-term, and Long-term Retention of Sensorimotor Adaptation in Healthy Aging and Early Alzheimer's Disease*. Poster presented at the annual Society for Neuroscience Conference, Chicago, IL, U.S.A.

Flint, I.R., Waara, A., and **Trewartha, K.M.** (2019). *Neuro-physiological and neuro-cognitive correlates of obstacle avoidance of older adults*. Poster presented at the annual Society for Neuroscience Conference, Chicago, IL, U.S.A.

Rajeshkumar, L., Maanika, C.B., Durocher, J.J., Elmer, S.J., and **Trewartha, K.M.** (2019). *The effect of low-intensity eccentric exercise on motor learning and emotional processing in aging: A preliminary study*. Poster presented at the annual Society for Neuroscience Conference, Chicago, IL U.S.A.

Flint, I.R., Waara, A., and **Trewartha, K.M.** (2019). *Age differences in the neurocognitive mechanisms underlying obstacle avoidance: An EEG study*. Poster presented at the annual American Psychological Association Convention, Chicago, IL, U.S.A.

Rajeshkumar, L., Maanika, C.B., Durocher, J.J., Elmer, S.J., and **Trewartha, K.M.** (2019). *Factors influencing exercise-induced improvements in cognitive and physical function in older adults*. Poster presented at the annual American Psychological Association Convention, Chicago, IL, U.S.A.

Poliskey, J., LewAllen, S.E., Maanika, C.B., Elmer, S.J., Rajeshkumar, L., **Trewartha, K.M.**, and Durocher, J.J. (2019). *Effect of Dynamic Eccentric Leg Exercise Training on Strength, Mobility, and Arterial Stiffness in Older Adults*. Poster presented at the annual meeting of the Michigan Physiological Society, Mount Pleasant, MI, U.S.A.

Rajeshkumar, L. and **Trewartha, K.M.** (2019). *Effect of Eccentric Exercise on Motor Learning and Emotional Intelligence in Older Adults*. Poster presented at the annual Michigan Society for Neuroscience Conference, Kalamazoo, MI, U.S.A.

- Waara, A., Flint, I.R., and **Trewartha, K.M.** (March, 2019). *The Impact of Aging and Executive Control on the Ability to Make Corrective Actions for Obstacle Collision Avoidance*. Poster presented at the annual Michigan Society for Neuroscience Conference, Kalamazoo, MI, U.S.A.
- Watrall, A., Durocher, B., Rajeshkumar, L., and **Trewartha, K.M.** (2019). *Motor Learning as a Sensitive Behavioral Marker of Early Alzheimer's Disease*. Poster presented at the annual Michigan Society for Neuroscience Conference, Kalamazoo, MI, U.S.A.
- Durocher, J.J., LewAllen, S.E., Maanika, C.B., Elmer, S.J., Rajeshkumar, L., and **Trewartha, K.M.** (2019). *Effect of Dynamic Eccentric Leg Exercise on Functional Fitness and Arterial Stiffness in Older Adults*. Poster presented at the annual Experimental Biology Conference, Orlando, FL, U.S.A.
- Waara, A., Flint, I.R., and **Trewartha, K.M.** (March, 2019). *The Effects of Aging on the Ability to Make Optimal Corrective Actions During Reaching Movements*. Poster presented at the annual Undergraduate Research Expo at Michigan Technological University, Houghton, MI, U.S.A.
- Burge, M., Durocher, B., Watral, A., and **Trewartha, K.M.**, (March, 2019). *Motor Learning as a Sensitive Behavioral Marker of Early Alzheimer's Disease*. Poster presented at the annual Undergraduate Research Expo at Michigan Technological University, Houghton, MI, U.S.A.
- Flint, I.R., Waara, A., and **Trewartha, K.M.** (2018). *Aging and the Neurocognitive Mechanisms Underlying Corrective Movements for Obstacle Collision Avoidance*. Poster presented at the annual Society for Neuroscience Conference, San Diego, CA, U.S.A.
- Maanika, C., Rajeshkumar, L., Elmer, S.J., Durocher, J.J., and **Trewartha, K.M.** (2018). *Associations between Physical Fitness, Cognitive Functioning, and Motor Learning in Older Adults: A preliminary Study*. Poster presented at the Annual Meeting of the Michigan Physiological Society, Houghton, MI, U.S.A.
- Morley, M. and **Trewartha, K.M.** (March, 2018). *Age differences in the neurophysiological correlates of memory processes involved in motor learning in healthy aging*. Poster presented at the annual Undergraduate Research Expo at Michigan Technological University, Houghton, MI, U.S.A.
- Waara, A., and **Trewartha, K.M.** (March, 2018). *Aging and the Neurocognitive Mechanisms Underlying Corrective Actions for Obstacle Collision Avoidance*. Poster presented at the annual Undergraduate Research Expo at Michigan Technological University, Houghton, MI, U.S.A.
- Rajeshkumar, L. and **Trewartha, K.M.** (2017). *An experimental investigation of the role of spatial working memory in age-related declines in motor learning*. Poster presented at the annual Society for Neuroscience Conference, Washington, D.C., U.S.A.



- Rajeshkumar, L. and **Trewartha, K.M.** (2017). *An experimental investigation of the role of spatial working memory in age-related declines in motor learning*. Poster presented at the annual Michigan Society for Neuroscience Conference, Ann Arbor, MI, U.S.A.
- Trewartha, K.M.** (2017). *The role of implicit memory processes in motor learning*. Poster presented at the annual Michigan Society for Neuroscience Conference, Ann Arbor, MI, U.S.A.
- Trewartha, K.M.**, Gallivan, J.P., and Flanagan, J.R. (2015). *The role of dorsolateral prefrontal cortex in motor learning during force-field adaptation: A continuous theta-burst stimulation study*. Poster presented at the annual Society for Neuroscience Conference, Chicago, IL, U.S.A.
- Trewartha, K.M.** and Flanagan, J.R. (2015). *Linking actions and objects: context-specific learning of novel weight priors*. Poster presented at the annual Neural Control of Movement Conference, Charleston, SC, U.S.A.
- Trewartha, K.M.**, Garcia, A., Wolpert, D.M., and Flanagan, J.R. (2014). *The effects of aging and cognitive decline on adaptive processes for motor learning*. Poster presented at the annual Society for Neuroscience Conference, Washington, D.C., U.S.A.
- Trewartha, K.M.**, Garcia, A., Wolpert, D.M., and Flanagan, J.R. (2014). *Modelling Altered Adaptive Processes for Motor Learning in Aging*. Poster presented at the annual Canadian Association for Neuroscience conference, Montreal, QC, CA.
- Trewartha, K.M.**, Case, S., and Flanagan, J.R. (2013). *Integrating actions into object location memory: A benefit for active versus passive learning*. Poster presented at the annual Society for Neuroscience Conference, San Diego, CA, U.S.A.
- Trewartha, K.M.**, Garcia, A., Wolpert, D.M., and Flanagan, J.R. (2013). *Age-related changes in motor learning due to altered adaptive processes in the elderly*. Poster presented at the annual Progress in Motor Control conference, Montreal, QC, CA.
- Trewartha, K.M.**, Penhune, V.B., Phillips, N.A., and Li, K.Z.H. (2012). *Conflict monitoring and pre-potent response suppression in aging: A combined kinematic and event-related potential investigation*. Poster presented at the annual conference on the Canadian Society for Brain, Behavior, and Cognitive Science, Kingston, ON, CA.
- Trewartha, K.M.**, Penhune, V.B., Phillips, N.A., and Li, K.Z.H. (2012). *Conflict monitoring and pre-potent response suppression in aging: A combined kinematic and event-related potential investigation*. Poster presented at the International Cognitive Aging Conference, Atlanta, GA, U.S.A.
- Trewartha, K.M.**, Penhune, V.B., Phillips, N.A., and Li, K.Z.H. (2012). *The effects of context on conflict monitoring and cognitive control in aging: Concurrent event-related potential and motion capture recordings*. Poster presented at the International Cognitive Aging Conference, Atlanta, GA, U.S.A.

- McHenry, C., **Trewartha, K.M.**, Kousaie, S., and Phillips, N.A. (2012). *Attenuation of the error-related negativity in the elderly during speech production errors*. Poster presented at the International Cognitive Aging Conference, Atlanta, GA, U.S.A.
- McHenry, C., **Trewartha, K.M.**, Kousaie, S., and Phillips, N.A. (2011). *Error-related ERP components during speech production: Attenuation of the ERN in older adults*. Poster presented at the annual meeting of the Society for Psychophysiological Research, Boston, MA, U.S.A.
- Trewartha, K.M.** and Phillips, N.A. (June). *Error-related ERP components during speech production*. Poster presented at the annual Human Brain Mapping conference, Barcelona, Spain.
- Trewartha, K.M.**, Penhune, V.B., and Li, K.Z.H. (July). *Age-equivalent reaction time, but age differences in kinematic signatures of multi-finger sequence performance of young and older adults*. Poster presented at the International Society of Motor Control's annual Progress in Motor Control Conference, Marseilles, France.
- Trewartha, K.M.**, Endo, A., Li, K.Z.H., and Penhune, V.B. (April). *Pre-potent motor sequences: Aging, executive control and movement kinematics*. Poster presented at the International Cognitive Aging Conference, Atlanta, GA, U.S.A.
- Trewartha, K.M.**, Endo, A., Li, K.Z.H., and Penhune, V.B. (April). *Age-related differences in kinematic signatures of inhibitory responses in a multi-finger movement task*. Poster presented at the International Neural Control of Movement Conference, Seville, Spain.
- Trewartha, K.M.**, Li, K.Z.H., Penhune, V.B. (March). *Age-related changes in implicit learning of a multi-finger movement task*. Poster presented at the Centre for Research in Human Development annual conference, Concordia University, Montreal, QC, CA.
- Singh, G., Ben-David, B., **Trewartha, K.M.**, Legacé-Nadon, S., Dubox, S., Konar, Y., and Spadafora, P. (February). *The Media and Aging: Do Canadian Newspapers Reflect the UN Principles of Older Persons?* Poster presented at the annual meeting of the CIHR strategic training program in Communication and Social Interaction in Healthy Aging, Banff, AB, CA.
- Trewartha, K.M.**, Li, K.Z.H., and Penhune, V.B. (April). *Age differences in implicit learning of a multi-finger movement task*. Poster presented at the International Cognitive Aging Conference, Atlanta, GA, U.S.A.
- Trewartha, K.M.**, Dickie, E., Ganel, T., and Köhler, S. (March). *The role of recall and recognition in memory for changes in object features*. Poster presented at the Centre for Research in Human Development annual conference, Concordia University, Montreal, QC, CA.
- Trewartha, K.M.**, Dickie, E., Ganel, T., and Köhler, S. (July). *Change detection with and without recollection*. Poster presented at the annual national conference of the Canadian Society for Brain, Behavior, and Cognitive Science, Montreal, QC, CA.

## Oral Conference Presentations

- Trewartha, K.M.,** Penhune, V.B., and Li, K.Z.H. (2009). *Pre-potent response suppression in aging: Conflict awareness and frequency*. Presentation at the annual meeting of the CIHR strategic training program in Communication and Social Interaction in Healthy Aging, Banff, AB, CA.
- Trewartha, K.M.,** Endo, A., Li, K.Z.H., and Penhune, V.B. (2008). *Pre-potent motor responses: Aging, executive control and movement kinematics*. Presentation at the annual meeting of the CIHR strategic training program in Communication and Social Interaction in Healthy Aging, Banff, AB, CA.
- Trewartha, K.M.,** Li, K.Z.H., and Penhune, V.B. (2007). *Motor sequencing: An analysis of aging effects, inhibitory control, and kinematic signatures*. Presentation at the annual meeting of the CIHR strategic training program in Communication and Social Interaction in Healthy Aging, Magog, QC, CA.
- Trewartha, K.M.,** Li, K.Z.H., and Penhune, V.B. (2006). *Age differences in error correction and motor learning in a multi-finger movement task*. Presentation at the annual meeting of the CIHR strategic training program in Communication and Social Interaction in Healthy Aging, Banff, AB, CA.

## Invited Speaker

- Trewartha, K.M.,** Gallivan, J.P., and Flanagan, J.R. (2015). *The role of memory and dorsolateral prefrontal cortex in sensorimotor adaptation*. Invited speaker for the Department of Kinesiology and Integrative Physiology Seminar Series at Michigan Technological University, Houghton, MI, U.S.A.
- Trewartha, K.M.** (2015). *Cognition in action from an aging perspective*. Invited speaker for the Applied Cognitive Science and Human Factors Research Forum in the Department of Cognitive and Learning Sciences at Michigan Technological University, Houghton, MI, U.S.A.
- Trewartha, K.M.,** Endo, A., Li, K.Z.H., and Penhune, V.B. (2007). *Age-related differences in kinematic signatures of executive control of pre-potent motor responses*. Presented for the Center for Research in Human Development Seminar Series, Montreal, QC, CA.
- Trewartha, K.M.,** Li, K.Z.H., and Penhune, V.B. (2007). *Executive control and movement kinematics in older and younger adults' motor performance*. Presented for the Concordia University, Department of Psychology, Cognitive Seminar Series, Montreal, QC, CA.

## Awards and Distinctions

### Research Awards

- Post-doctoral Research Award/Bourses de Recherche Postdoctorale, Le Fonds, québécois de la recherche sur la nature et les technologies, Effective: 01/01/2012, Ending: 12/31/2013, Motor Control and Aging, \$60,000.

International Internship Aware, Center for Research in Human Development, Canada, Effective: 03/2009, Ending: 06/2010, Research Internship at University of Birmingham, UK, \$2,500.

Stage International, Fonds de recherche sur la société et la culture, Canada, Effective: 03/2009, Ending: 06/2010, Research Internship at University of Birmingham, UK, \$5,500.

Doctoral Research Award/Bourses de Doctorat, Le Fonds, québécois de la recherche sur la nature et les technologies, Canada, Effective: 09/2007, Ending: 08/2010, Aging, cognition and motor control, \$60,000.

Research Fellowship, Center for Research in Human Development, Canada, Effective: 09/2005, Ending: 08/2006, Lifespan Development, \$5,000.

Research Fellowship, CIHR Strategic Training Program in Communication and Social Interaction in Healthy Aging, Canada, Effective: 09/2005, Ending: 09/2010, Multidisciplinary training in aging research, \$37,500.

NSEC Undergraduate Student Research Award, Natural Sciences and Engineering Research Council of Canada, Canada, Effective: 04/2004, Ending: 08/2004, Animal Behavior and Cognition, \$4,500.

### **Distinctions**

Michigan Technological University Institute of Computing and Cybersystems (ICC) achievement award for interdisciplinary and collaborative research at the intersection of technology and human motor movement. Effective 2018-2019.

CIHR Institute of Aging Age+ Prize, Canadian Institutes of Health Research, Canada, Effective: 2010, \$1,000.

Travel Award, Faculty of Arts and Science and Department of Psychology, Canada, Effective: 07/2009, Ending: 08/2009, \$625.

Travel Award: Conference Presentation, CIHR Strategic Training Program in Communication and Social Interaction in Healthy Aging, Canada, Effective: 07/2009, Ending: 08/2009, \$2,400.

Travel Award, Faculty of Arts and Science, Concordia University, Canada, Effective: 2008, Cognitive Aging, \$500.

Travel Award: Conference presentation, CIHR Strategic Training Program in Communication and Social Interaction in Healthy Aging, Canada, Effective: 2007, Neural Control Movement, \$2,400.

Saul Levenson Graduate Scholarship in Psychology, Faculty of Graduate Studies, Concordia University, Canada, Effective: 2006, Psychology, \$2,300.

Travel Award, Faculty of Arts and Science, Concordia University, Canada, Effective: 2006, Cognitive Aging, \$500.

Gold Medal for Psychology and Philosophy, University of Western Ontario, Canada, Effective: 2004, Psychology and Philosophy.

Faculty of Arts Scholarship, University of Western Ontario, Canada, Effective: 2003, Psychology and Philosophy, \$1,000.

In-course Scholarship in Philosophy, University of Western Ontario, Canada, Effective: 2001, Philosophy, \$200.

Entrance Scholarship, University of Western Ontario, Canada, Effective: 2000, \$1,000

### **Technical Skills**

Data Analysis (SPSS, Excel, Matlab), Processing Tool Development (Matlab), ERP Data Processing (Neuroscan, EEG Lab), EEG, ERP data acquisition (Active2: BioSemi), 3-D motion capture (Visualize: Phoenix Technologies: Polhemus Liberty), robotic sensorimotor/cognitive assessment systems (KINARM, B-kin Technologies; vBot, Cambridge University).

### **Languages**

Fluent in English (spoken and written)