Curriculum Vitae

1. NAME: Lauren Elisabeth Sergio

2. DEGREES:

B.Sc. McGill University, Department of Physiology, 1988
M.Sc. McGill University, Department of Psychology, 1990
Ph.D. McGill University, Department of Psychology, 1994

3. EMPLOYMENT HISTORY:

Present position

2016-	Professor, School of Kinesiology and Health Science Member, Centre for Vision Research, York University Cross appointment with Graduate Psychology, York University Member, Faculty of Graduate Studies, York University Member, York University Sport Medicine Team Research Affiliate, Southlake Regional Health Centre, Newmarket ON

Previous positions

2005-2016	Associate Professor, School of Kinesiology and Health Science
April 2011 -2016	Research Scientist, Southlake Regional Health Centre, Newmarket ON
2000-2005	Assistant Professor, School of Kinesiology and Health Science, York University, Toronto
1994 -1999	Post-doctoral fellow, Centre de Recherche en Sciences Neurologiques Université de Montréal, Supervisor: John Kalaska
1988-1994	Occupational biomechanics and ergonomics consultant Human Factors North, Inc. 118 Baldwin Street, Toronto, ON

4. SERVICE

A. UNIVERSITY SERVICE

Senate Representative, York University Board of Governors (July 2016 -)
Member, York University Senate Executive (Board rep, July 2016 -)
Chair, VISTA (CFREF) Research Coordination Committee (Sept. 2016 -)
Member, York University Senate (Faculty of Health), (Jan. 2014 -)
CIHR York University Delegate (appointed by VPRI, Dec 2012 -)
Affirmative Action representative, Kinesiology & Health Science (July 2010 -)
Member, Academic Executive, Sch. Kinesiology & Health Science (July 2017-)
Coordinator, Neuroscience Graduate Diploma Program (July 2014 – June 2017)
Member, York University Senate Executive (Grad.Studies rep,Sept.2014-June2016)
Member, Univ. Honours & Awards comm., Sch. Kine. & Health Sci.(Sept/14-June/16)
Member, Sch. Kinesiology & Health Sci. Graduate Executive comm. (July/15-June/16)
Chair, Gross Anatomy/Athletic Therapy search committee (August 2014 –May 2015)
Member, tenure file adjudication committee, P. Ritvo (March 2012 – April 2014)
(Sabbatical leave, July 2013-December 2013)

Chair, FGS APPC (July 2011-June 2013)
Chair, FGS council (July 2011-June 2013)
Coordinator, Neuroscience Graduate Diploma Program (July2010- June 2013)
Chair, FoH Academic Honesty panel (Sept 2012 – June 2013)
Member, tenure file preparation committee, P. Ritvo (March 2012 – June 2013)
Chair, FoH CEAS (Sept 2010-Sept 2012)
Standing member, academic honesty hearing panels, FoH (2010-2012)
Chair, Anatomy search committee, Sch. Kinesiology & Health Science (2011-2012)
Member, FGS Decanal/AVP-graduate search committee (Sept. 2011- Feb 2012)
Member, Vivaria space-planning committee (vPRI, May 2011- Sept. 2012)
Member, Sport and Recreation facility planning committee (Sept. 2011- August 2012)
Member, Academic Executive Committee, Kin. & Health Sci (July2010-June 2012)
Member, YU Concussion Care Centre development committee
Chair, T&P File preparation committee, M. Fallah (March 2010-July 2011)
T&P File preparation committee, D. Crawford (Jan2010-April 2011)
T&P File adjudication committee, D. Crawford (May 2011)
Steward, YUFA, Kinesiology and Health Science (2008-2011)
Member, NHP committee (ACC subcommittee, 2006-2012)
Member, FoH Neuroscience Diploma Program Steering Committee (2007-2010)
Chair, Animal Care Committee (VPRi/SCoR subcommittee, 2008-June2010)
Member/AA rep, CRC Tier I Neuroscience search (March 2010-June2010)
Member, York Neuroscience Strategic Task Force (Dec 2009-April 2010)
Member, FoH CEAS (July 2009-Aug 2010)
Member/AA rep, fMRI faculty search (FSE) (Dec 2009-April 2010)
T&P File preparation & Adjudicating committee W.Gage (Oct/09-March 2010)
T&P Adjudicating committee, F. Flint (November 2009)
T&P Adjudicating committee, P. Safai (December 2009)
Member, FGS APPC (July 2008-June2011)
Member, KAHS Core T&P committee (2008-2009)
Member, KAHS Comm. Undergraduate Studies (July 2008-June 2009)
Member, Motor/Rehab/Biomechanics Search Committee (2008)
(sabbatical leave, July 2007-June 2008)
Member, Faculty of Health Petitions Committee (January 2007–July 2007)
Member, Faculty of Arts Petitions Committee (June 2005–July 2007)
Vice-chair, Animal Care Committee, SCoR (2002- July 2007)
Co-chair, Kinesiology and Health Sci. Strategic Task Force (Jan.2006 – May 2007)
Chair, Motor/Rehab/Biomechanics Search Committee (Winter 2007)
Member, KAHS School Chair search committee (Winter 2007)
Member, KAHS, Nominations Committee (July 2005 – 2006)
Member, Neuroscience Search Committee (Kinesiology, 2005, 2006)
Chair, Academic council, School of Kinesiology and Health Science (2002-2004)
Faculty Advisor, KAHS Student Organization (2001-2004)
Chair, Faculty of Graduate Studies (FGS) Admissions committee (2000-2002)
Member, FGS council, FGS Nominating committee (2000-2002)
Member, KAHS Committee of Undergraduate Studies (2000-2002)
Chair, ad-hoc committee for Ph.D. curriculum development, KAHS (2000-2001)
CST programme review forum participant (Nov. 2002)
Adjudication committees: Kirschner Award (psychology), NSERC ranking (psychology), CGS ranking (FGS)

Bethune College: Curriculum planning committee (2004)
Bethune College: Science in Society Symposium planning committee (2003)
Fellow, Bethune College
Affirmative Action Monitor, Physiology Search Committee (Kinesiology, 2002, 2006)
Member, Clinical Biomechanics Search Committee (Kinesiology, 2000)
Member, Motor control/Neuroscience Search Committee (Kinesiology, 2001)
Chair, Neuroscience Search Committee (Kinesiology, 2004)
Member, Faculty of Arts Merit Review Committee (2003)

B. PROFESSIONAL SERVICE

Associate Editor, Journal of Alzheimer's disease, IOS press, Amsterdam.
Member, Ice hockey subgroup, Standards Development Committee, Canadian Standards Association (CSA) Group (April 2016 -)
Consultant, National Hockey League Central Scouting (provided annual eye-hand coordination testing for draft prospect combine, 2003-2014)
Grants and awards review panels
CIHR review panel: panel member, MOV panel (Spring 2006; Spring 2009), Catalyst Award- mTBI (Winter 2013); member
CIHR College of Reviewers (March 2016-)
College of Ontario Univ.(COU),Ont. Women's Health Scholars award (March2015-)
Manuscript reviewer: Journal of Neurophysiology; Science; Experimental Brain Research; Medicine and Science in Sports and Exercise; Trends in Neuroscience; Perception and Psychophysics; Aviation, Space and Environmental Medicine; Neuroimage, Journal of Motor Behavior, Cerebral Cortex; Brain research; Public Library of Science (PLoSONE); Vision Research; Journal of Neuroscience; Cognitive Processing; Visual Communication; Experimental Gerontology; Journal of Neuroscience Methods;Ergonomics; Experimental Neurology; Trends in Neuroscience; f1000 research, Journal of Neurotrauma, Journal of Alzheimer's disease, others
Grant reviewer: CIHR(internal/external reviewer), NSERC (external reviewer), Alzheimer's Association (USA), NSF (USA); CFI; MaRS; OGS; Veni program (Netherlands)
Abstract reviewer: Graphics Interface 2003 conference proceedings

C. COMMUNITY SERVICE

Concussion baseline testing and follow-up management, youth athletic leagues, 2011-
Concussion information session, Toronto Soccer Association annual coach training (approx.. 350 Toronto area soccer coaches, mandatory training). April 2015.
Public lecture:Thinking, Acting, Aging…all at the same time, Thrive health Expo, Jan/16
Public lecture:How tennis can save your brain, North Hatley Club, Quebec July 2015
Ontario Science Centre "SciFri", outreach for teenagers "Games & the Brain",Apr.2013
Co-speaker (w/ A. Macpherson): "The epidemiology and neuroscience of concussion",MastercardCentre, Etobicoke Dolphins youth hockey league, Dec. 2012
Speaker, Donald Sanderson Memorial symposium on sport concussion management, September 26, 2011, York University
Careers in Science Day, Middlefield Collegiate, Scarborough, ON. March 2002/3.
Science Fair Judge, Toronto high schools April 2002

D. Media

Interview, CBC Television/Radio, Toronto, ON. "Brain training to help prevent problems with dementia"

Interviewed by Lauren Pelley, air date September 21, 2017.
http://www.cbc.ca/player/play/1052164675895 (at 26:00min)

Interview, CTV Toronto, Toronto, ON. “Concussion can have long-lasting symptoms“. Interviewed by Pauline Chan, air date September 28, 2016.
http://www.ctvnews.ca/video?binId=1.811527

Interview, Global news Toronto, Toronto, ON, “Standardized testing for concussed athletes is missing the mark”. Interviewed by Angie Seth, air date September 27, 2016.
http://globalnews.ca/video/2967852/standardized-testing-for-concussed-athletes-is-missing-the-mark-on-putting-players-back-in-the-game

Interview, VIBE 105.5 Radio, Toronto, ON. “Concussions and elite performance”. Interviewed by Michael Assifo, air date September 30, 2016.

Interview, CBC Radio Kitchener, Ontario, Topic: longer concussion recovery times in youth, interviewed by host Craig Norris, air date May 26, 2016.

Interview, The Pulse AM980 radio, London Ontario. Topic: Children and concussion, interviewed by Devon Peacock, air date May 19, 2016.

Discovery Channel, “The Daily Planet”, was the consulting scientist on a segment exploring walking while texting with Jay Ingram. Air date: January 27, 2016.

Global TV Toronto news, air date Monday November 2, 2015, interviewed by Christina Stevens; http://globalnews.ca/news/2307799/an-innovative-new-facility-teams-up-with-an-innovative-researcher-to-help-those-with-alzheimers/

Interview, CBC Radio Canada International, “Simple test that may indicate very early signs of alzheimers risk“, interviewed by Marc Montgomery, air date Tuesday April 6, 2015.; http://www.rcinet.ca/en/2015/04/06/simple-test-that-may-indicate-very-early-signs-of-alzheimers-risk/

Interview, www.betterbrainbetterlife.com, “Simple Test Scary News for Adult Children of Alzheimer's Patients”, interviewed by Paddy Kamen, published Nov. 5, 2014.

Radio interview: radioislam1450 (Chicago IL, USA) Topic: Study- Recognize Alzheimer’s Earlier, Host: Janaan Hashim, Air date: September 25, 2014
https://soundcloud.com/radioislam1450/2014-09-25-alzheimers

Scientific American. “Brain changing games”, Lydia Denworth. January/February 2013

CBC news Toronto interview (CBC television, CBC radio). Concussion baseline testing, interviewed by Jeff Semple, Air date Friday September 6, 2013

Discovery Channel, “The Daily Planet”, was featured on a segment exploring movement-related brain games with Dan Riskin. Air date: January 16, 2013.

CTV news with Sandie Rinaldo– interview on Derek Boogard and CTE, Air date December 6 2011.

Interviewed for “Selling the Dream” (book), by Ken Campbell, Viking Canada, 2013, ISBN # 0670065730

The Hockey News, “Bourque mystery concussion a troubling sign” Ken Campbell, 2013-02-26

Sweat Magazine (Humber College), “Music that will really move you”, Kayona Lewis. Print date: April 11, 2012

Excaliber September 19 2013, http://www.excal.on.ca/scitech/york-program-helps-athletes-recover-through-video-games/

Hartley, M. Print date: September 23, 2008 “Prospects keep hand on the stick, eye on the screen.” Globe and Mail, http://www.theglobeandmail.com/sports/prospects-keep-hand-on-stick-eyes-on-the-screen/article659956/

5. TEACHING

A.Graduate Supervisions (Total to date: 7 PhD, 18 Masters):

Diana Gorbet, Ph.D. student (graduated fall 2006)
Billijohn Tippet, Ph.D. student (graduated fall 2006)
Michael Vesia, Ph.D. student (co-sup.w/ JD Crawford, graduated summer 2010)
Xiaomu Ma, M.Sc. student (graduated winter 2007)
Kim McCullough, M.Sc. student (graduated fall 2007)
Mera Barr, M.Sc. student (graduated fall 2005)
Seana Rossi, M.Sc. student (graduated fall 2005)
Michael Vesia, M.Sc. student (graduated winter 2004)
Joshua Granek, M.Sc. student (graduated fall 2008)
Yashar Salek, M. Sc. student (graduated fall 2008)
Patricia Sayegh, M.Sc. student (graduated fall 2009)
KaraHawkins, M.Sc. student (graduated fall 2010)
Farah Islam, M.Sc. student (graduated fall 2010)
Jeffrey Brown, M.Sc. student (graduated summer 2012)
Joshua Granek, Ph.D. student (graduated fall 2013)
Patricia Sayegh, Ph.D. student (defended spring 2014)
KaraHawkins, Ph.D. student (defence: May 2015)
David Albines, M.Sc. student (defended summer 2014)
Mani Kang, M.Sc. student (defended August 2016)
Johanna Hurtubise, Ph.D. student
Alanna Peirias, MSc student
Andrea Cavaliere, MSc student
Alica Rogojin, MSc student
Holly Echlin, MSc student
Lina Deker, MA student (co-supervise, interdisciplinary studies programme)

B. Postdoctoral supervisions (Total to date: 3):

Bogdan Neagu (Sept. 2006 – Dec. 2008)
(Currently: Pharmaceutical industry)
Marc Dalecki (April 2014 – May 2016)
(Currently:Assistant Professor, Louisiana State University)
Casper de Boer (May 2016 -

Thesis supervisory committees: 29 (15 M.Sc., 14 Ph.D.)
Thesis defence committee: 82 (60 M.Sc., 22 Ph.D., 4 external – Queen’s University(2), University of British Columbia Okanagan, University of Toronto)
PhD comprehensive committees: 11

C. Undergraduate independent study supervision (Total to date: 31)

Helena Vander, 2002, 'EMG activity during isometric force vs limb movement'
Diana Frasca, 2004, 'Kinetic vs kinematic motor planning:a psychophysical study
Joshua Granek, 2005,'NHL prospect eye-hand coordination'
Annabelle Boon, 2006, 'Assessing ataxia in adults with migraine: methods development'
Erika Robinson, 2008/9, 'Eye-hand coordination in elite athletes'
Morteza Sadeh, Fall 2009, 'Parietal cortex and eye-hand coordination: control study'
Tea Lulic, ,Winter 2010, 'Visuomotor adaptation in MCI: methods development'
Keisuke Ohsaka, Winter 2011,'Bimanual coordination: normative data for young adults'
Christina Rubino, Fall/Winter 2011-12, 'Cogitive motor integration in healthy older in-patient populations' (Biology honours thesis)
Zaid Faiz, Winter 2012,'Eye-hand coordination development in youth hockey goalies'
Tonima Khan, Fall/Winter2012-13, "Functional assessment post-concussion using BrainFX software program"
Melissa Ruinsky, Fall 2012, "Use of CAM method to predict delirium following cardiac surgery" (Southlake/YorkU collaboration)
Zahra Moghei, Winter 2013, "Glycemic control prior to cardiac surgery" (Southlake/YorkU)
Fatemah Gholami, Summer 2013, "Assessing the child disruptive behaviours program" (Southlake/YorkU)
Mani Kang, Summer 2013, "Effect of group format on shoulder rehabilitation" (Southlake/YorkU)
Yehyah Hamadi, Summer 2013, "Cognitive-motor integration in elite young athletes"
Alissa Moody, Fall/Winter 2013/14, "The relationship between physiological activity, intent, placebo effect, and alterations in the bioelectromagnetic spectrum."
Karen Ng, Fall/Winter 2013/14, "Youth concussion recovery" (w. Michael Cusimano, St. Michaels Hospital, Toronto)
Danial Dimitri, Summer 2014, "Motor learning in elite vs. non-elite athletes"
Midila Anton, Fall 2014, "Youth concussion research (w. Michael Cusimano, St. Michael's hospital, Toronto
Danial Dimitri, Fall/Winter 2014/15, "Motor learning in elite vs. non-elite athletes"
Amelia Perri, Fall 2014, "Concussion history and bimanual coordination in young athletes"
Muhammad Abbas, Fall/Winter 2014/15,"Frailty reduction and assisted exercise on medically complex in-patients" (Southlake/YorkU)
Shawna Funnell, Fall 2014, "Palmar surgery vs Xiaflex for Dupuytren's Contracture" (Southlake/YorkU)
Maneet Dhuggee, Fall/Winter 2014, "Augmented physiotherapy following shoulder surgery" (Southlake/YorkU)
Ahmed Qaderi, Fall/Winter 2014, "Effect of augmented exercise on total knee replacement recovery" (Southlake/YorkU)
Alice van Wijngaarden, Winter 2015, "Comparing cognitive-motor integration decline in post-concussion versus dementia risk"
Alice van Wijngaarden, Summer 2015, "Dementia-related functional decline prevention brain trainer: Pilot study"
Andrea Cavalieri, Fall/Winter 2015/16, "Cognitive-motor integration performance in middle-aged recreational female athletes"
Maria Tyumkin, Fall/Winter 2015/16, "Augmented physiotherapy following shoulder surgery" (Southlake/YorkU)
Margaret Bates, Fall/Winter 2016/17, "Factors affecting mTBI symptomology"
Nirshan Guruparan, Fall/Winter 2016/17, "Elite skill learning and concussion"
Eviatar Fields, Fall/Winter 2016/17, "Aging, Music Training, and the Brain"

D. Courses:

annually	KAHS 6155 3.0 Fundamentals of Neuroscience I (team teach)
annually	KINE 4500 3.0 Neural control of movement
annually	KINE 4505 3.0 Neurophysiology of movement in health and disease
annually	KINE 4455 3.0 Biomechanics and Motor Control Laboratory(team teach)
annually	KINE 3020 3.0 Skilled performance and motor learning (half course)
annually	KINE 4060 6.0 Independent Studies (31 students to date)
biannually	KAHS 6150 3.0 The Cortical Control of Movement in Health and Disease *(cross-listed as PSYC 6235/BIOL 5137)*
2000-2002	KAHS 3.0 Graduate Seminar

E. Other Activities: CST workshop, "Engaging students in large enrolment courses"

F. Guest lecturer: BIOL 5126 (March 2003, March 2004), PSYC 6253 3.0 (annually)

6. RESEARCH FUNDING:

A. EXTERNAL

Institutional Research Grant - co-investigator (core team member)
Sept 2016-Aug 2023 $33,338,000 Canada First Research Excellence Fund
Title: "Vision:Science to Applications"

Commercialization/Operating Grant
April 2016-March 2017 $100,000 Federal Development Fund
Program: "Health ecosphere: an innovation pipeline for commercial health solutions"
Title: BrDIFlight: Early/At-risk dementia functional decline prevention training application: commercialization and testing

Commercialization/Operating Grant
April 2016-March 2017 $100,000 Federal Development Fund
Program: "Health ecosphere: an innovation pipeline for commercial health solutions"
Title: BrDI: Brain health tracking application commercialization and testing

Operating Grant - principal investigator; 2016-05336
Apr 2016-Mar 2021 $155,000 Natural Sciences & Engineering Research Council Discovery
Title:"Eye-hand coordination: Effects of age, sex, and experience on brain and behaviour"

Operating Grant - principal investigator (Dr. Frank Bunn, Industry liaison)
November 2015-May 2016 $9,125 Natural Sciences & Engineering Research Council Engage Plus Grant. Title: "Technology development finalization -Detecting concussion related mobility loss in athletes using the mobility assessment tool (MAT)"

Operating Grant - principal investigator (Dr. Frank Bunn, Industry liaison)
June 2014-November 2014 $21,828 Natural Sciences & Engineering Research Council Engage Grant. Title: "Validation of an objective computerized video Mobility Assessment Tool"

Student internship Grant - principal supervisor
April 2013 $10,000 Mitacs Accelerate internship, with Aim2Walk rehabilitation clinic; Awarded to David Albines (MSc1),Title: "Neuroanatomical changes following chronic post-stroke therapy using novel assistive devices"

Operating Grant - principal investigator (Alison Macpherson – Co-investigator)
April 2013 - March 2018 $472,549 Canadian Institutes of Health Research; #125915
Title: "Assessing functional ability following mild brain insult using cognitive-motor integration"

Operating Grant - principal investigator (Tracy Milner, OT, Industry liaison)
October 2012- August 2013 $30,120 Ontario Centres for Excellence Technical Problem Solving Industry/Academia collaboration, Title: "BrainFx 360 Assessment: Clinical Validation"

Outreach Grant – principal investigator
September 2012-April 2013, $3000 CIHR Café Scientifique, "Can your cellphone save the healthcare system" (with Paul Ritvo, Gord Flett, and Southlake Regional Health Centre)

Operating Grant - principal investigator

Apr 2011-Mar 2016 $155,000 Natural Sciences & Engineering Research Council Discovery
Title:“Brain mechanisms for eye-hand coordination: Experience- and sex-related differences”
Student internship Grant - principal supervisor
May 2011 $7,000 Ontario Neurotrauma Foundation Summer Internship Research Program in Injury Prevention “Effect of concussion on visuomotor coordination in sport:Reinjury potential assessment tool development”
Equipment Grant – co-investigator (PI Wolfgang Steurzlinger)
May 2011 $86,694 Natural Sciences & Engineering Research Council RTI – Category I
Title: “3D Haptic Workstation for Research into 3D Manipulation and Sensorimotor Integration”
Equipment Grant – co-investigator (PI J. Douglas Crawford)
May 2011 $96,305 Natural Sciences & Engineering Research Council RTI – Category I
Title: “fMRI-guided navigation system for TMS”
Operating Grant - principal investigator
May 2005 - April 2010 $546,900 Canadian Institutes of Health Research
Title: “Stages of visuomotor transformation in human- and non-human primates”
Operating Grant - principal investigator
Jan 2004 – Dec 2008 $43,063 CFI Infrastructure Operating Fund
Title: “Operating funds for visuomotor integration laboratory”
Operating Grant - principal investigator
Apr 2004-Mar 2005 $10,000 Natural Sciences & Engineering Research Council
Title: “Brain mechanisms for the integration of movement dynamics in humans using multiple sensory modalities”
Operating Grant - principal investigator
Apr 2000-Mar 2004 $40,000 Natural Sciences & Engineering Research Council
Title: “Motor parameter representation in the cerebral cortex during reaching movements in humans”
Operating Grant - principal investigator
May 2001 - April 2004 $308,350 Canadian Institutes of Health Research
Title: “Stages of visuomotor transformation in human- and non-human primates”
Equipment Grant - principal investigator
May 2001 $86,245 Canadian Institutes of Health Research
Title: “Neurophysiology laboratory to study visuomotor integration”
Infrastructure Grant - principal investigator
November 2001. $159,492 Canada Foundation for Innovation New Opportunities Award
January 2002. $159,492 Ontario Innovation Trust Matching Funds
Title: “Brain mechanisms of visuomotor integration in human and non-human primates”
Major Facilities Access Grant - co-investigator
May 2001 - April 2004 $408,000 Natural Sciences & Engineering Research Council
Title: “Personnel support for York’s Centre for Vision Research”
CIHR Strategic Training Program in Vision Health Research - co-investigator
May 2003 - April 2009 $1,440,000

TOTALS, As Primary Investigator: $2,216,856; as Co-investigator: $35,368,999

B. INTERNAL

Research Award

Dec. 2010 Faculty of Health Research Catalyst Award (teaching release)
April 2011 Southlake/FoH/VPRI Research Scientist support: $10,000

Equipment Grant

2000 York University Faculty of Arts: $51,000

Operating Grant

2000 York University Faculty of Arts: $2500
2009 York Faculty of Health Minor Research Award: $3000

2010 York Faculty of Health Catalyst Award (course buyout)
2011 York University / Southlake Regional Health Centre: $10000
2012 York Faculty of Health Minor Research Award: $3000

Travel awards

2000 York University Faculty of Arts: $1500
2002 York University Faculty of Arts: $2000
2003 York University Faculty of Arts: $2000
2014 York University Faculty of Health: $1000
2015 York University Faculty of Health: $1000

7. PUBLICATIONS:

(a) Summary

book chapters	2	
papers in refereed journals		49
major invited contributions	1	
abstracts and/or papers read	99	
submitted to refereed journals	3	
H index / i10 index	27/38	
Total citations (as of July 2017)	2498	

(b) Detailed listing

Papers in refereed journals (trainees underlines)**:**

Sayegh P, Hawkins KL, Gorbet DJ, Hoffman K, Sergio LE (2017) Spike-field coherency between premotor and parietal cortices is affected by decoupling eye-hand coordination *J Cogn Neurosci.* Jul;29(7):1194-1211.

Hurtubise J, Hamandi Y, Hughes C, Macpherson AK, Sergio LE (2016) Cognitive-motor integration in elite athletes with a history of concussion*. Concussion,Vol.1(3),DOI 10.2217/cnc-2016-0006*

Albines D, Granek JA, Gorbet DJ, Sergio LE (2016) Experience-, and sex-related differences in bimanual coordination development. *J. Motor Learning and Development* Dec. 2016, Vol.4(2),pp.274-286 doi: 10.1123/jmld.2015-0038

Hawkins KM, Sergio LE (2016) Changes in resting-state functional connectivity associated with cognitive-motor impairment in older adults at increased Alzheimer's disease risk. *J. Alz. Dis*.; *Jun 18;53(3):1161-72. DOI: 10.3233/JAD-151137*)

Dalecki M, Hughes C, Macphersion AK, Sergio LE (2016) Prolonged cognitive-motor impairments in children and adolescents with a history of concussion.*Concussion Vol.1(3)DOI:* 10.2217/cnc-2016-0001*)*

Black A, Sergio LE, Macpherson AK (2017) The Epidemiology of Concussions: Number and nature of concussions and time to recovery among female and male Canadian varsity athletes 2008-2011. *Clin J Sport Med Jan;27(1):52-56*

Gorbet DJ, Sergio LE (2016) Don't watch where you're going:The neural correlates of decoupling eye and arm movements. *Behav Brain Res.* 298b: 229-240, doi: 10.1016/ j.bbr.2015.11.012

Brown J, Dalecki MS, Hughes C, Macpherson AK, Sergio LE (2015) Cognitive-motor integration deficits in young adult athletes following concussion. *BMC Sports Science, Medicine, and Rehabilitation 2015 Oct 19;7:25:1-12. doi: 10.1186/s13102-015-0019-4.*

Granek JA, Sergio LE (2015) Different brain pathways for strategic control versus sensorimotor recalibration: Evidence from a dual task reach paradigm. *J. Neurophysiol*. Aug;114(2):1298-309

Perry CJ, Sergio LE, Crawford JD, Fallah M (2015) Hand placement near the visual stimulus improves orientation selectivity in V2 neurons. *J. Neurophysiol*. 113(7):2859-2870.

Hawkins KL, Goyal A, Sergio LE (2015) Diffusion tensor imaging correlates of cognitive-motor decline in normal aging and increased Alzheimer's disease risk. *J. Alz. Dis.* 44(3):867-878.

Hawkins KL, Sergio LE (2014) Visuomotor impairments in older adults at increased Alzheimer's disease risk. *Journal of Alzheimer's Disease.* 42(2):607-621.

Sayegh P, Hawkins KL, Neagu B, Crawford JD, Hoffman K, Sergio LE. (2014) Decoupling the actions of the eyes from the hand alters beta and gamma synchrony within SPL. *J.Neurophysiol.*June Vol. 111(2):2210-2221

Granek JA, Pisella L, Vighetto A, Stemburger J, Rossetti Y, Sergio LE. (2013) Decoupled visually-guided reaching in optic ataxia: differences in motor control between canonical and non-canonical orientations in space. *PLoS ONE* 8(12): e86138.

Sayegh P, Hawkins KL, Hoffman KL, Sergio LE (2013) Differences in spectral profiles between rostral and caudal premotor cortex when hand-eye actions are decoupled. *J. Neurophysiol.* Aug:110(2):952-963.

Hawkins KM, Sayegh P, Yan X, Crawford JD, Sergio LE (2013) Neural activity in superior parietal cortex during rule-based visual-motor transformations*. J.Cogn.Neurosci*. Mar;25(3):436-54.

Tippett WJ, Alexander LD, Rizkalla MN, Sergio LE, Black SE. (2013) True functional ability of chronic stroke patients.*J Neuroeng Rehabil*. Feb 13;10(1):20.

Granek JA, Pisella L, Blangero A, Rossetti Y, Sergio LE. (2012) The role of the superior parietal lobule in updating hand location in peripheral vision: further evidence from optic ataxia.*PLoSOne,* Oct*;7(10):e46619.*

Tippett WJ ,Sergio LE ,Black SE (2012) Compromised visually guided motor control in individuals with Alzheimer's disease: can reliable distinctions be observed?*J.Clin.Neurosci*. 19(5):655-660.

Salek Y, Anderson N, Sergio LE (2011) Mild cognitive impairment is associated with impaired visual-motor planning when visual stimuli and actions are incongruent. *Eur. Neurol.* 66(5):283-293.

Vesia M, Prime S, Yan X, Sergio LE, Crawford JD (2010) Specificity of human parietal saccade and reach regions during transcranial magnetic stimulation. *J. Neurosc.* Oct. 30: 13053-13065.

Granek J, Gorbet DJ, Sergio LE (2010) Extensive video game experience alters the cortical networks for complex visually-guided reaching. *Cortex* Oct. 46(9): 1165-1177.

Pisella L, Sergio LE, Blangero A, Torchin H, Vighetto A, Rossetti Y (2009) Optic Ataxia and the functions of the dorsal stream: When does the dorsal stream contribute to perception and action. *Neuropsychologia*, Dec; 47(14): 3033-44.

Gorbet DJ, Sergio LE (2009) The behavioral consequences of dissociating the spatial directions of eye and arm movements I: The effects of anti-pointing. *Brain Research*, Aug 11;1284:77-88.

Ting JA, D'Souza A, Yamamoto K, Yoshioka T, Hoffman D, Kakei S, Sergio LE, Kalaska JF, Kawato M, Strick P, Schaal S. (2008) Using variational Bayesian least squares for EMG data prediction from M1 and premotor cortex neural firing. *Neural Networks* Oct;21(8):1112-31.

Vesia M, Yan X, Henriques DY, Sergio LE, Crawford JD (2008) Transcranial magnetic stimulation over posterior parietal cortex disrupts the integration of initial hand position information into the reach plan. *J. Neurophysiol.* Oct; 100:2005-2014.

Ajemian R**,** Green A**,** Bullock D**,** Sergio L**,** Kalaska J**,** Grossberg S**.** (2008) Assessing the function of motor cortex: single-neuron models of how neural response is modulated by limb biomechanics. *Neuron*. May 8;58(3):414-28.

Gorbet DJ, Sergio LE (2007) Preliminary sex differences in human cortical BOLD fMRI activity during the preparation of increasingly complex visually guided movements *Eur. J. Neurosci*. Feb;25:1228-1239.

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Vesia M, Vander H, Yan X, and Sergio, LE. (2005) The time course for kinetic versus kinematic planning of goal-directed human motor behavior. *Exp Brain Res*. Jan;160(3):290-301.

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Sergio LE, Kalaska JF (1997) Systematic changes in directional tuning of motor cortex cell activity with hand location in the workspace during generation of static isometric forces in constant spatial directions. *J. Neurophysiol.* **78**: 1170-1174.

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Sergio LE, Ostry DJ (1994) Coordination of mono- and bi-articular muscles in multi-degree of freedom elbow movements. *Exp. Br. Res.* **97**: 551-555.

Sergio LE, Ostry DJ (1993) Three-dimensional kinematic analysis of frog hindlimb movement in reflex wiping. *Exp. Br. Res.* **94**: 53-64.

Ostry DJ, Flanagan JR, Sergio LE (1992) Coordinate transformation in orofacial movements. *Beh. Br. Sci.* **15**: 348-349.

Refereed papers under revision/submitted :

Gorbet DJ, Sergio LE (2016) Video games and visuomotor-related brain activity in women. (under revision, Brain and Behaviour)

Kang M, de Boer C, Sergio LE (2017) Cognitive-motor integration training improves kinematic measures in dementia: A Feasibility Study (submitted, Journal of Alzheimer's Disease)

Van Wijngaarden A, Dalecki M, Hawkins KM, Macpherson AK, Sergio LE (2017) Comparison of Cognitive Motor Integration Deficits Associated with Concussion and Alzheimer's Disease Risk. (submitted, Clinical Neurology)

Hurtubise J, Hughes C, Sergio LE, Macpherson AK (2017) A comparison of baseline and post-concussion SCAT3 scores and symptoms in varsity athletes: An investigation into differences by sex and history of concussion (Submitted, Br. J. Sp. Med)

Papers in preparation:

Sergio LE, Taylor C, Miles DM, Gledhill N, Jamnik V (2017) Use of eye-hand coordination measures in the assessment of elite hockey players (in prep, Journal of strength and conditioning research).

Dalecki M, Sergio LE (2017) Cognitive-motor integration development in children and adolescents (in preparation, Journal of Motor Learning and Development)

Dalecki M, Hurtubise J, Brown JA, Macpherson AK (2017) Factors affecting functional recovery from concussion in children. (In preparation, Br. J. Sp. Med)

Ma X, Gorbet DJ, Sergio LE (in prep) The behavioral consequences of dissociating the spatial directions of eye and arm movements II: The effects of central fixation and anti-saccades.

Matveev, R, Sergio LE, Macpherson AK (2017) Identifying differences in assessed variables across scat2, scat3 and scat3-child in a population of youth athletes. (In preparation, Can. J. Sp. Med.)

Invited article:

Kalaska JF, Scott SH, Cisek P, Sergio LE (1997) Cortical control of reaching movements. *Current Opinions in Neurobiology.* **7(6)**:459-469. (if: 8.486; c:313)

Book Chapters:

Sergio LE, Gorbet DJ, Tippett WJ, Yan X, Neagu B (2009) When what you see isn't where you get: cortical mechanisms of vision for complex action. In: *Cortical Mechanisms of Vision.* London: Cambridge University Press.

Kalaska JF, Sergio LE, Cisek P (1998) Cortical control of whole-arm motor tasks. In: *Sensory Guidance of Movement,* Vol. 218, Novartis Foundation Symposium. New York: John Wiley & Sons, pp. 176-200.

Abstracts:

Guruparan N, Hurtubise J, Gorbet DJ, Sergio LE (2017) The effect of concussion on the learning of a novel visuomotor task in elite athletes. Society for Neuroscience annual meeting,Washington DC, USA

Pierias A, Hurtubise J, Hughes C, Macpherson AK, Sergio LE (2017) Cognitive-motor integration assessment detects impairment in varsity athletes cleared for return to play and up to three months post-concussion. Society for Neuroscience annual meeting,Washington DC, USA

Gorbet DJ, Sergio LE (2017) Decoupling the eyes and arm: The neural correlates of looking and reaching in different spatial planes. Society for Neuroscience annual meeting,Washington DC, USA

Dalecki M, Gorbet DJ, Sergio LE (2017) Don't watch where you are going: Cognitive-motor integration development in children and adolescents. Soc.for Neuroscience annual meeting,Washington DC, USA

De Boer C, Balteretu B, Rogojin A, Echlin H, Sergio LE (2017) A 16-week visuomotor exercise program improves overall cognition and functional abilities in older adults with cognitive impairment. Soc.for Neuroscience annual meeting,Washington DC, USA

Pierias A, Hurtubise J, Hughes C, Macpherson AK, Sergio LE (2017) Cognitive-motor integration assessment detects impairment in varsity athletes cleared for return to play. May, Neural Control of Movement society annual meeting, Dublin, Ireland.

De Boer C., Sergio LE. (2017) Visuomotor training in early-stage dementia patients can improve cognition and functional abilities: a preliminary report. May, Neural Control of Movement society annual meeting, Dublin, Ireland.

Pierias A, Hurtubise J, Hughes C, Macpherson AK, Sergio LE (2017) Tracking functional recovery following concussion using cognitive-motor integration. 5th Annual Symposium: Research on the Concussion Spectrum of Disorders, Toronto, ON, January 2017.

Sergio L, Dalecki M, Hurtubise J, Brown J, Gorbet DJ, Hughes C, Macpherson A (2016) Measuring cognitive-motor integration to detect prolonged performance declines post-concussion. 5th

International Consensus Conference on Concussion in Sport, Berlin, Germany, October 2016. Published in *Br J Sports Med* 2017;**51:**A41.

Hurtubise J, Gorbet DJ, Hughes C, Macpherson A, Sergio LE (2016) White matter integrity and its relationship to cognitive-motor integration in females with post-concussion syndrome. 5th International Consensus Conference on Concussion in Sport, Berlin, Germany, October 2016. Published in *Br J Sports Med* 2017;51:A37.

Dalecki M, Gorbet DJ, Macpherson AK, Sergio LE (2016) Factors affecting cognitive-motor integration impairment and recovery in children post-concussion. Soc. For Neuroscience annual meeting, San Diego, CA.

Hurtubise J, Gorbet DJ, Hughes C, Macpherson A, Sergio LE (2016) White matter integrity and its relationship to cognitive-motor integration in females with post-concussion syndrome. Soc. For Neuroscience annual meeting, San Diego, CA.

Kang M, Sergio LE (2016) Effects of cognitive-motor integration training in a clinical Alzheimer's disease population. Canadian Association for Neuroscience annual meeting, Toronto, ON, May 2016

Hurtubise JM, Gorbet DJ, Sergio LE. (2016) The relationship between cognitive-motor integration and cerebellum volume in females with post-concussion syndrome. UHN-TRI Traumatic Brain Injury conference, Toronto, January 2016.

Dalecki M, Macpherson AK, Sergio LE. (2016) Prolonged cognitive-motor integration deficits in children with a concussion history. UHN-TRI Traumatic Brain Injury conference, Toronto, January 2016.

Gorbet DJ, Sergio LE (2015) Video games and visuomotor-related brain activity in women. October. Soc. For Neuroscience annual meeting, #251.27. Chicago, IL.

Dalecki M, Abines D, Macpherson AK, Sergio LE (2015) Children show cognitive-motor integration deficits nearly two years after concussion.October. Soc. For Neuroscience annual meeting,Chicago, IL.

Hurtubise J, Gorbet DJ, Sergio LE (2015) Cognitive-motor integration performance, symptoms, and cerebellum volume in females with post-concussion syndrome. October. Soc. For Neuroscience annual meeting, Chicago, IL.

Van Wijngaarden A, Dalecki M, Hawkins KM, Sergio LE (2015) Comparison of Cognitive Motor Integration Deficits Associated with Concussion and Alzheimer's Disease Risk. October. Soc. For Neuroscience annual meeting, Chicago, IL.

Hawkins KL, Sergio LE (2015) Structural and functional neural correlates of cognitive-motor impairments in normal aging and increased Alzheimer's disease risk. 25th Annual Rotman Research Conference, March 2015, Toronto, ON

Dalecki MS, Sergio LE (2015) Prolonged cognitive-motor impairments in children with a history of concussion. 9th annual meeting of the Canadian Association for Neuroscience, May 2015, Vancouver, BC.

Hamandi Y, Hurtubise J, Hughes C, Macpherson AK, Sergio LE (2014) Cognitive-motor integration in young elite athletes with a history of concussion. #72.11, Soc. Neurosci. Annual meeting, November, Washington D.C.

Gorbet D, Sergio LE (2014) The neural correlates of dissociating the spatial directions of eye and arm movements. #251.27, Soc. Neurosci. Annual meeting, November, Washington D.C.

Hawkins KL, Sergio LE (2014) Neural correlates of changes in visuomotor control associated with normal aging and increased Alzheimer's disease risk. April, Neural Control of Movement society annual meeting, Amsterdam, NL, poster #B28.

Albines D, Granek JA, Sergio LE (2013) Age-, sex-, and experience-related differences in bimanual coordination using whole-hand versus precision grasping. #651.10, Soc. Neurosci. annual meeting, San Diego, CA.

Hawkins KL, Sergio LE (2013) Assessing cognitive-motor integration in preclinical Alzheimer's disease: A discriminant analysis and investigation of neural correlates. #563.20, Soc. Neurosci. annual meeting, San Diego, CA.

Hawkins KL, Sergio LE (2013) Assessing cognitive-motor integration in preclinical Alzheimer's disease: A discriminant analysis and investigation of neural correlates. Presented at the 42nd Annual Scientific and Educational Meeting of the Canadian Association on Gerontology, Halifax NS Oct. 17-19, 2013.

Albines D, Sergio LE (2013) Development Of Bimanual Coordination In Young Athletes: Sex- And Experience-Related Effects. Presented at the 7th annual Canadian Neuroscience Meeting, Toronto, Ontario, May 21–24, 2013

James D. Carson, MD,Mae Cantos, MD,Alisha Garel, BSc,Paula B.Libfeld, BA,Christopher Meaney, MSc,Stefanie E. Moser, CAT(C),Sarah T. Rabinovitch, CAT(C),Michelle Keightley, PhD,Marian Boer,PhD,Sari A. Kraft, MD,Julie Macdonald, CAT(C),Alison Macpherson,PhD,Lauren Sergio, PhD,and Rahim Moineddin, PhD (2013) Academic Accommodation After Sport-Related Concussion:Educators Workshop and Focus Groups. Canadian Academy of Sport and Exercise Medicine Sport and Exercise Medicine Annual Meeting, April 2013, Whistler BC. Clin J Sport Med Volume 23, Number 2, March 2013

Hawkins KH, Sergio LE (2013) Measuring cognitive-motor integration in preclinical Alzheimer's disease: A discriminant analysis and investigation of neural correlates. April, Neural Control of Movement Society annual meeting, San Juan Puerto Rico.

Sayegh P, Hawkins KL, Sergio LE (2013) Rostral-caudal distinction within the dorsal premotor cortex during complex visuomotor control. April, Neural Control of Movement Society annual meeting, San Juan Puerto Rico.

Albines D, Sergio LE. (2013) Sex- and experience-, and age-related differences in bimanual visuomotor tasks. April, Neural Control of Movement Society annual meeting, San Juan Puerto Rico.

Granek JA, Sergio LE (2012) Interrupting explicit strategic control but not implicit sensorimotor recalibration in eye-hand coordination. October, Soc. Neurosci. annual meeting, Session #176.18, New Orleans, LA.

Granek JA, Sergio LE (2012) Different brain pathways for strategic control versus sensorimotor recalibration: Evidence from a dual task reach paradigm. April, Neural Control of Movement Society annual meeting, Venice, Italy.

Sayegh P, Hawkins KL, Hoffman K, Sergio LE (2012) Separating standard and non-standard reaches: Topographical differences within PMd. April, Neural Control of Movement Society annual meeting, Venice, Italy.

Hawkins KM, Thayaparan J, Bida A, Sergio LE (2012) Clinical assessment tool development: Measuring cognitive-motor integration in healthy aging and early Alzheimer's disease. April, Neural Control of Movement Society annual meeting, Venice, Italy.

Black A, Sergio LE, Macpherson AK (2012) Number of Concussions and Time to Recovery Among Female and Male Varsity Athletes 2008-2011. Canadian Academy of Sport and Exercise Medicine annual meeting, June, Kelowna BC.

Hawkins KM, Thayaparan J, Bida A, Sergio LE (2011) - Clinical assessment tool development: Measuring visuomotor integration for early Alzheimer's disease detection. November, Soc. Neurosci. annual meeting, Session #698.05, Washington, DC.

Brown JA, Hughes C, Sergio LE (2011) The detrimental effects of concussion on cognitive-motor integration.November, Soc. Neurosci. annual meeting, Session #698.19, Washington, DC.

Hawkins KM, Thayaparan J, Sergio LE (2011) - Clinical assessment tool development: Measuring visuomotor integration for early Alzheimer's disease detection. October, 4th Pan-American Congress, International Association of Gerontology and Geriatrics, Abstract #0139, Ottawa, ON.

Black A, Sergio LE, Macpherson AK (2011) Descriptive epidemiology of concussions in varsity athletes and the importance of baseline neurocognitive testing: Monitoring symptoms is not enough. Canadian Injury Prevention and Safety Promotion Conference, November, Vancouver, BC.

Granek JA, Pisella L, Rossetti Y, Sergio LE.(2011) The role of the superior parietal lobule in explicit versus implicit control of decoupled visually-guided reaching. April, Neural Control of Movement Society annual meeting, San Juan, Puerto Rico.

Sayegh P, Hawkins KM, Sergio LE. (2011)Changes in LFP activity within PMd and SPL during decoupled visually-guided reach movements. April, Neural Control of Movement Society annual meeting, San Juan, Puerto Rico.

Granek JA, Pisella L, Rossetti Y, Sergio LE (2010) Strategic control versus sensorimotor recalibration in optic ataxia. November. Soc. Neurosci. annual meeting, Session #893.21, San Diego, CA.

Sayegh P, Hawkins KM, Sergio LE. (2010) Local field potentials during decoupled visually-guided reach movements in the superior parietal lobule. November. Soc. Neurosci. annual meeting, Session #75, San Diego, CA.

Hawkins KM, Sayegh P, Sergio LE. (2010) Cell discharge rates in parietal areas MIP/V6A and PEc during standard versus non-standard visuomotor transformations. November. Soc. Neurosci. annual meeting, Session #75, San Diego, CA.

Sayegh P, Hawkins KM, Sergio LE. (2010) LFP activity in monkey parietal cortex during a dissociated reaching task. International conference on Parietal lobe function. September, Amsterdam, NL.

Granek JA, Pisella L, Rossetti Y, Sergio LE (2010) International conference on Parietal lobe function. September, Amsterdam, NL.

Granek JA, Blangero A, Pisella L, Rossetti Y, Sergio LE (2009) Patients with optic ataxia cannot decouple eye and hand movements when performing complex visuomotor tasks.October, Soc. Neurosci. annual meeting, Session #35420, Chicago, IL.

Sayegh P, Hawkins KL, Bartlett AM, Hoffman K, Sergio LE (2009) LFP-spike coherence in monkey dorsal premotor cortex during a dissociated reaching task. October, Soc. Neurosci. Annual meeting, Session 455.10, Chicago, IL.

Hawkins KL, Sayegh P, Sergio LE (2009) Single cell activity in the posterior parietal cortex during visuomotor transformations with direct versus indirect visual feedback. October, Soc. Neurosci. Annual meeting, Session #455.11, Chicago, IL.

Islam F, Sergio LE (2009) Reaching with neural load : a dual task study of frontoparietal network involvement in visuomotor integration October, Soc. Neurosci. Annual meeting, Session 354.17, Chicago, IL.

Vesia M, Prime SL, Yan X, Sergio LE, Crawford JD (2009) Mapping saccade and reach topography in human posterior parietal cortex using rTMS. October, Soc. Neurosci. Abstr. #307.8

Tippett WJ, Sergio LE, Black SE (2009) Examing visually guided ability in Alzheimer's disease. October, Soc. Neurosci. Abstr. #628.10, Chicago, IL.

Granek JA, Pisella L, Blangero A, Rossetti Y, Sergio LE (2009) Strategies for performing complex visuomotor tasks in patients with optic ataxia. May, CAN annual meeting, Vancouver, BC.

Sayegh P, Hoffman K, Yan X, Crawford JD, Sergio LE (2009) Oscillatory activity in different monkey premotor areas during a dissociated reaching task. May, CAN annual meeting, Vancouver, BC.

Granek JA, Pisella L, Blangero A, Rossetti Y, Sergio LE (2008) Gaze-biased misreaching in optic ataxia does not generalize to other spatial planes. November; Soc. Neurosci. Abstr.#{{1623 Granek, J.A. 2008}}262.17

Sayegh P, Neagu B, Hoffman K, Yan X, Crawford JD, Sergio LE (2008) Oscillatory activity in different monkey premotor areas during a dissociated reaching task. November; Soc. Neurosci. Abstr.#262.4

Granek JA, Gorbet DJ, Sergio LE (2008) Video-game experience alters the cortical networks for increasingly complex visuomotor tasks. May; Can. Assoc. Neurosci. Montreal, PQ

Salek Y, Anderson ND, Sergio LE (2008) Impaired visuomotor integration in adults with mild cognitive impairment. May; Can. Assoc. Neurosci. Montreal, PQ

Granek JA, Gorbet DJ, Sergio LE (2007) The effects of video-game experience on the cortical networks for increasingly complex visuomotor tasks. November; Soc. Neurosci. Abstr. #618.24

Neagu B, Sayegh PF, Sergio LE (2007) Dorsal premotor activity during increasingly complex visuomotor tasks. November; Soc. Neurosci. Abstr. # 818.16

Salek Y, Anderson ND, Sergio LE (2007) Impaired visuomotor integration in adults with mild cognitive impairment. November; Soc. Neurosci. Abstr. # 281.23

J.-A. Ting, A. D'Souza, K. Yamamoto, T. Yoshioka, D. Hoffman, S.Kakei, L. Sergio, J.Kalaska, M. Kawato, P.Strick, S. Schaal. (2007) Using variational Bayesian least squares for EMG data perdiction from M1 and premotor cortex neural firing. November; Soc. Neurosci. Abstr. #511.1.

Vesia M, Yan X, Henriques DY, Sergio LE, Crawford JD (2007) Transcranial magnetic stimulation over posterior parietal cortex disrupts the integration of initial hand position information into the reach plan. November; Soc. Neurosci. Abstr. # 123.2

McCullough KL, Granek JA, Sergio LE (2006) Visuomotor skill performance asymmetries related to sex and athletic experience. October; Soc. Neurosci. Abstr. # 242.2.

McCullough KL, Granek JA, Sergio LE (2006) Visuomotor skill performance asymmetries related to sex and athletic experience. CSEP, Halifax, November 2006.

Vesia M, Monteon J, Sergio LE, Crawford JD. (2006) Hemispheric Asymmetry in Memory-guided Pointing during Single-pulse Transcranial Magnetic Stimulation of Human Parietal Cortex. October; Soc. Neurosci. Abstr. #549.10.

Gorbet DJ, Sergio LE. (2006) The behavioral consequences of spatially dissociating the direction of eye and hand movements I: The effects of anti-pointing. October; Soc. Neurosci. Abstr. #242.15.

Ma X, Gorbet DJ, Sergio LE. (2006) The behavioral consequences of spatially dissociating the direction of eye and hand movements II: The effects of central fixation and anti-saccades. October; Soc. Neurosci. Abstr. #242.16.

Tippett WJ, Krajewski A, Sergio LE (2006) Visuomotor integration is compromised in Alzheimer's disease. October; Soc. Neurosci. Abstr. #549.17.

Tippett WJ, Krajewski A, Sergio LE (2006) Visuomotor integration is impaired in early stage AD individuals. ICAD, Madrid, July 2006.

Vesia, M., Monteon, J.A., Sergio, L.E, and Crawford, J.D. (2006). Transcranial magnetic stimulation of human parietal cortex reveals a hemispheric asymmetry in memory-guided pointing. Southern Ontario Neuroscience Association (SONA) Meeting, Toronto, ON, Canada.

Vesia, M., Monteon, J.A., Sergio, L.E, and Crawford, J.D. (2006). Single-pulse TMS over dorsal posterior parietal cortex disrupts memory-guided pointing in humans. Vision Science Society Conference, Sarasota, FL., USA.

Gorbet DJ, Sergio LE (2005) Sex-related differences in cortical activity patterns during preparation of progressively complex visual-to-motor transformations. Soc. Neurosci. Abstr. Vol. 33, 980.03.

Tippett WJ, Krajewski A, Sergio LE (2005) Motor Performance Under Increasingly Complex Visuomotor Transformations In Elderly Versus Alzheimer's Disease Patient Populations. Soc. Neurosci. Abstr. Vol. 33 289.4.

Krouchev N, Sergio LE, Kalaska JF (2005) Biomechanical Sources Of Nonlinearities In MI Cell Tuning. Soc. Neurosci. Abstr. Vol. 33 868.4.

Ting J, D'Souza A, Yamamoto K, Yoshioka T, Hoffman D, Schaal S, Sergio L, Kalaska J, Kawato M, Strick P, Kakei S (2005) Predicting EMG Data from M1 Neurons with Variational Bayesian Least Squares. *NIPS*, #654.

Vesia, M., Blohm, G., Monteon, J.A., Sergio, L.E, and Crawford, J.D. (2005). Transcranial magnetic stimulation over Dorsal Posterior Parietal Cortex induces contralateral biases in memory-guided pointing before and after reversing prism adapation. Soc. Neurosci. Abstr. Vol. 33, 288.22.

Vesia, M., Vander, H., Yan, X.G., and Sergio, L.E. (2005). Differences in initial force vector directionality when planning a movement versus an isometric force. CVR International Vision Conference, Toronto, ON, Canada.

Vesia, M., Vander, H., Yan, X.G., and Sergio, L.E. (2005). Motor planning during goal-directed reaching movements versus isometric spatial force generation. Southern Ontario Psychomotor Behaviour Meeting, McMaster University, Hamilton, ON. Canada.

Rossi SE, Gorbet DJ, Sergio LE (2004) Human brain activation differences during spatial force execution versus movement. Soc. Neurosci. Abstr 995.3, Vol. 32.

Tippett WJ, Sergio LE (2004) Quantitative assessment of complex visuomotor reaching skills in neurologically healthy young and elderly populations. Soc. Neurosci. Abstr. 995.2,Vol. 32.

Barr MS, Yan, XG, Crawford JD, Sergio LE (2003) Visuomotor transformation under increasingly indirect conditions: primate kinematic analysis. Soc. Neurosci. Abs., 597.3, Volume 31.

Gorbet DJ, Vesia M, Sergio LE (2003) Visuomotor transformation under increasingly indirect conditions: an fMRI study. Soc. Neurosci. Abstr. Vol. 29, 823.18.

Hamel-Pacquet C, Sergio LE, Kalaska JF (2003) Population-vector representation of MI activity in isometric-force and reaching tasks. Soc. Neurosci. Abstr. Vol. 29, 708.13.

Vesia M, Gorbet DJ, Sergio LE (2002) The time-course of kinematic to kinetic transformations in human goal-directed motor behaviour. Soc. Neurosci. Abstr. Vol. 28, 170.1.

Hamel-Pacquet C, Sergio LE, Kalaska JF (2002) Comparison of representation of task in parietal cortex Area 5 and primary motor cortex. Soc. Neurosci. Abstr. Vol. 28, 62.2.

Ajemian R, Sergio LE, Bullock D, Grossberg S, Kalaska JF (2001) Posture-dependent changes in MI cell tuning in an isometric task: comparison of model predictions with neural data. Presented at the 31st annual meeting of the Society for Neuroscience, San Diego, CA.

Krouchev N, Sergio LE, Kalaska JF (2001) Motor cortex activity and motor input/output parameters: neural networks. Presented at the 31st annual meeting of the Society for Neuroscience, San Diego, CA.

Krouchev N, Kalaska JF, Sergio LE (2000) Motor input/output as encoded by primary motor cortex cell activity: System identification. Presented at the 30th annual meeting of the Society for Neuroscience, New Orleans, LA.

Prud'Homme M, Messier J, Brochier T, Sergio L, Kalaska JF, Gosselin-Kessiby N, Bouthillier M (2000) Performance sensorimotrice de sujets contrôles et de sujets pariétolésés [Sensory-motor performance of control and parietal-lesioned subjects]. To be presented at the 35th annual meeting of the Canadian Congress of Neurological Sciences, Ottawa, ON, June, 2000.

Sergio LE, Kalaska JF (1999) Motor output parameters and primary motor cortex cell activity: A temporal regression analysis. Presented at the 29th annual meeting of the Society for Neuroscience, Miami Beach, FL.

Sergio LE, Kalaska JF (1998) Temporal waveform analysis of primary motor cortex cell activity during a directional movement task. Presented at the 28th annual meeting of the Society for Neuroscience, Los Angeles, CA. Soc. Neurosci. Abstr. Vol. 24, 158.10, 1998.

Sergio LE, Kalaska JF (1997) The effect of arm posture on MI cell discharge during isometric force generation in constant spatial directions. Poster presented at the 27th annual meeting of the Society for Neuroscience, New Orleans, LA. Soc. Neurosci. Abstr. Vol. 23, 607.2, 1997.

Kalaska JF, Sergio LE (1997) Changes in MI cell activity between isometric and movement tasks. Presented at the 27th annual meeting of the Society for Neuroscience, New Orleans, LA. Soc. Neurosci. Abstr. Vol. 23, 607.3, 1997.

Sergio LE, Kalaska JF (1997) Changes in cell activity in monkey primary motor cortex for similar isometric force trajectories produced with the arm in different postures. Presented at the annual Neural Control of Movement meeting, Cancun, Mexico. April, 1997.

Sergio LE, Scott SH (1996) The role of vision in point-to-point arm movements. Presented at the 26th Annual Meeting of the Society for Neuroscience, Washington, D.C. Soc. Neurosci. Abstr. Vol. 22(1), 169.5, 1995.

Scott SH, Sergio LE, Kalaska JF (1995) Cell activity in monkey dorsal premotor (PMd) and parietal area 5 cortex are altered by changes in arm posture for movements with similar hand trajectories. Presented at the 25th Annual Meeting of the Society for Neuroscience, San Diego, California. Soc. Neurosci. Abstr. Vol. 21(3), 815.3, 1995.

Sergio LE, Ostry DJ (1994) Organization of central control signals associated with multiple degree of freedom arm movements. Presented at the 24th Annual Meeting of the Society for Neuroscience, Miami Beach, Florida. Soc. Neurosci. Abstr. Vol. 20(2), 576.2, 1994.

Sergio LE, Ostry DJ (1994) Coordination of multiple muscles in two degree of freedom arm movements. Presented at the annual Neural Control of Movements meeting, Maui, Hawaii. April, 1994.

Sergio LE, Ostry DJ (1993) Organization of electromyographic activity patterns for multiple degree of freedom arm movements. Presented at the 23rd Annual Meeting of the society for Neuroscience, Washington, D.C. Soc. Neurosci. Abstr. Vol. 19(1), 226.3, 1993.

Invited lectures and workshops

International conference on Vision in the Real World. Centre for Vision Research, Toronto, ON, June 14, 2017. Vision into action when faced with brain dysfunction. Invited by Laurence Harris, conference organizer.

Toronto Rehabilitation Institute, Toronto, ON, May 24, 2017. The Wounded Brain: Assessing function pre-dementia and post-concussion. Invited by Baabak Taati, Research Scientist, TRI

College of Health Sciences, University of Wisconsin Milwaulkee, Milwaukee WI, USA, April 10, 2017. Assessing function pre-dementia and post-concussion. Invited by Wendy Huddleston, Assoc. Professor, UWM.

Royal Canadian Institute of Science, February 26, 2017. Improving return-to-play measures using cognitive-motor integration. Invited by Kristen Vanstone, executive director, RCIScience.

York Circle (York U. Alumni series), February 25, 2017. Maintaining brain health through cognitive-motor integration. Invited by Dean Barbara Crow, Graduate Studies, and the York Alumni Association.

Luminaries of the Visual Establishment annual meeting, Niagara Falls, ON, February 2, 2017. Seeing, thinking, doing…all at the same time. Invited by Michael Baron-Cohen, conference organizing committee.

Neuroscience program, Queen's University, Kingston, ON. January 20, 2016. Using cognitive-motor integration to assess function pre-dementia and post-concussion. Invited by Stephen H. Scott.

Toronto Soccer Association annual coach training, April 25, 2015. The epidemiology and neuroscience of sport-related concussion. Invited by Alan Gould.

International Research Training Grant Program (NSERC), April 28, 2015. Assessing function pre-dementia and post-concussion using cognitive-motor integration. York University,simultaneous webcast to Univ. Western Ontario, Queen's University, Justus-Liebig-Universitat.Giessen (Germany), and Philipps-Universitat Marburg (Germany). Invited by Denise Henriques.

School of Exercise and Health Sciences, University of British Columbia Okanagan, March 13, 2015. Using cognitive-motor integration to assess function pre-dementia and post-concussion. Invited by Paul van Donkalaar.

Canadian Partnership for Stroke Recovery, Sunnybrook Hospital, September 26, 2014. The Wounded Brain: Assessing function using cognitive-motor integration. Invited by Joyce Fung.

Keynote speaker, Nurse Practioner's Association of Ontario annual meeting. November 8, 2013, Toronto, ON, Brilliant Idea to Brilliant Study: Bringing your research ideas to life.

Southlake Nurse Practitioner Research Symposium, workshop on abstract manuscript writing, Sept.20, 2013,Southlake regional health centre. Invited by Jane Harrison, NP.

Southlake Research Health Centre, August 20, 2013 Research Rounds. The Wounded Brain: Assessing function pre-dementia and post-concussion.

Ontario Science Centre ("Games: more important than we realize" SciFri public engagement event), April 5, 2013. Games, gaming, and your brain. Invited by Donna Francis (OSC) on behalf of the OSC youth council.

York Circle (York U. Alumni series), February 23, 2013.The Wounded Brain: Assessing function pre-dementia and post-concussion. Invited by; Prof. Allen Hutchinson, Osgood law school.

Southlake Regional Health Centre, April 10, 2012. Research rounds: Assessing functional ability in pre- and early-dementia using cognitive motor integration.

TEDxYorkU talk, Glendon Campus, York University, March 10, 2012. Impact matters…literally: A new approach to the study of concussion.

Blow-by-Blow2: The Donald Sanderson Memorial Symposium on Sport Concussion, York University, September 26, 2011. The Neuroscience of Concussion: What we know, what we don't, what we're doing. Invited by the symposium organizers.

York Central Hospital, Richmond Hill, ON, June 14, 2011. Thinking, Acting, Aging: Cognitive-motor integration throughout life. Invited by Michelle Cleland, Geriatrics Program, as part of the Seniors Health Month lecture series.

Wilson Surgical Skills Centre, Toronto, ON, April 11, 2011. Brain mechanisms for decoupled eye-hand coordination. Invited by Dr. Heather Carnahan, director.

York Central Hospital, Richmond Hill, ON, July 7, 2009. Impaired visuomotor integration in early-stage Alzheimer's disease patients. Invited by Mary Pastore, Nurse Practitioner, Geriatrics Program

York University, Centre for Vision Research, April 2009. Perceptuomotor Performance: Patient Problems and Premotor Potentials. Invited by Dr. Frances Wilkinson.

Institut de Neurosciences Cognitives de la Méditerranée, Marseille, France, May15, 2008. Cortical mechanisms for dissociated reaching: Clinical and behavioural studies. Invited by Dr. Driss Boussaoud.

University of Rome "la Sapienza", Department of Physiology and Pharmacology, Rome, Italy, April 18, 2008. Cortical mechanisms for dissociated reaching: Clinical and neurophysiological studies. Invited by Dr. Alexandra Battaglia-Meyer

University of Cologne, Department of Physiology and Anatomy, Cologne, Germany, February 22, 2008. Cortical mechanisms for dissociated reaching in healthy adult and neurological patient populations. Invited by Dr. Otmar Bock

Institute de Sante et de la Recherche Medicale (INSERM), U. 864, Bron France, September 9, 2007. Cortical mechanisms for dissociated reaching in healthy adult and neurological patient populations. Invited by Dr. Yves Rossetti.

Centre for Vision Research Conference, June 24, 2007, “Cortical Mechanisms of Vision”. Organized symposium (“Cortical mechanisms of vision for action”, and gave talk: “Cortical mechanisms of vision for complex action” (symposium organizer). Invited by Dr. Laurence Harris.

Dept. Psychology, Baycrest Centre for Geriatric Care. February 16, 2007. When what you see isn't where you get: Visuomotor dissociation in healthy adults and Alzheimer's disease patients. Invited by Dr. Nicole Anderson

KLARU Rounds, Baycrest Centre for Geriatric Care. May 10, 2006. Visuomotor integration is impaired in early-stage Alzheimer’s disease. Invited by Dr. Sandra Black.

York University, Centre for Vision Research, Feb. 6, 2004. Brain versus brawn: Cognition, Biomechanics, and Movement Planning. Invited by Dr. John Tsotsos

University of Western Ontario, Dept. Psychology, Nov. 20, 2003. Where brawn meets brain: Incorporation of cognitive versus biomechanical information during a movement plan. Invited by Dr. Paul Gribble.

York University, Centre for Vision Research, April 2001. Brain mechanisms of visuomotor transformation. Invited by Dr. Laurence Harris.

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