

PAUL L. GRIBBLE, Ph.D.

Curriculum Vitae

22 June 2022

Brain and Mind Institute, Dept. Psychology
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EDUCATION

1999 Ph.D. McGill University Psychology
1995 M.Sc. McGill University Psychology
1993 B.Sc. (Hon.) Queen's University Cognitive Science

ACADEMIC POSITIONS

2012— Senior Scientist Haskins Laboratories, New Haven CT USA
2011— Professor Western University*, London ON Canada
2006–11 Associate Professor Western University*, London ON Canada
2000–6 Assistant Professor Western University*, London ON Canada

** joint appointed in Dept. Psychology and in Dept. Physiology & Pharmacology, Schulich School of Medicine & Dentistry*

RESEARCH FELLOWSHIPS

1999 CIHR/MRC Postdoctoral Fellow, Dept. Anatomy & Cell Biology, Queen's University.
Supervisor: Stephen Scott
1994 France–Québec Researcher, Institute de la Communication Parlée, Grenoble, France.
Supervisors: Pascal Perrier & Rafael Laboissière
1993 Research Engineer, ATR Human Information Processing Laboratories, Japan.
Supervisor: Eric Vatikiotis-Bateson

AWARDS

2015 Faculty Scholar Award (Western University)
2003 Ontario Premier's Research Excellence Award
2002 CIHR New Investigator Award
1999 MRC / CIHR Postdoctoral Fellowship
1998 NSERC PGS-B Postgraduate Scholarship

PROFESSIONAL CONTRIBUTIONS

Reviewer Nature, Neuron, Current Biology, Proceedings of the National Academy of Sciences, PLoS Computational Biology, Journal of Neuroscience, Journal of Neurophysiology, Experimental Brain Research, Journal of Neuroscience Methods, Trends in Cognitive Sciences, Neural Computation, PLoS ONE, Biology Letters, Current Opinion in Physiology, eLife

Program Committee	Annual Translational and Computational Motor Control Meeting
CIHR Peer Review	Chair, CIHR Behavioural Sciences-C, 2021, 2022 Scientific Officer, CIHR Behavioural Sciences-C, 2010–2015; 2019, 2020, 2021 Committee Member, CIHR Behavioural Sciences-C, 2007–2015, 2018 Member, College of Reviewers, 2017–present
Editorial Board	Academic Editor, PLoS ONE, 2008–15
Grant Reviews	CIHR (Canada), NSERC (Canada), National Science Foundation (USA), Biotechnology and Biological Sciences Research Council (BBSRC), UK
Memberships	Society for Neuroscience (1994), Society for the Neural Control of Movement (1994)

RESEARCH FUNDING

Active Grants as Principal Investigator

NSERC Discovery Grant, 2018-23
Somatosensory Basis of Human Motor Learning
\$ 275,000

NSERC Discovery Accelerator Supplement Award, 2018-21
Somatosensory Basis of Human Motor Learning
\$ 120,000

CIHR PJT-389243 Project Grant, 2018-23
Sensory Motor Neuroplasticity and Motor Learning by Observing
\$ 694,240

Active Grants Held as Co-Applicant

NIH/NIDCD R01DC017439, 2019–24
Sensory Basis for Speech Motor Learning, D. Ostry (PI)
\$ 1,726,655 USD

Grants Previously Held as Principal Investigator

CIHR PJT-153447 Project Grant, 2017–18
Sensory Motor Neuroplasticity and Motor Learning by Observing
\$ 100,000

NSERC RGPIN 238338 Discovery Grant, 2013–18
Control of human arm movement
\$ 200,000

Western University Internal Award, 2016–17
Sensorimotor Neuroplasticity and Motor Learning by Observing
\$ 25,000

Western University, 2015–17
Faculty scholar's award
\$ 14,000

CIHR Open Operating Grant, 2010–15
Motor learning and sensory systems
\$ 547,280

Western ADF Internal Grant, 2013–14
Brain networks for observational motor learning
\$ 8,400

NSERC Discovery Grant, 2012–13
Control of human arm movements
\$ 31,000

NSERC Research Tools & Infrastructure Grant, 2010–11
Robotic exoskeleton and integrated eye tracker
\$ 146,236

NSERC Discovery Grant, 2007–12
Cognitive and sensory basis of motor learning
\$ 155,300

NSERC Discovery Grant Accelerator Award, 2007–10
Cognitive and sensory basis of motor learning
\$ 120,000

CIHR Open Operating Grant, 2005–10
Computational mechanisms of motor learning
\$ 338,670

Premier's Research Excellence Award (Ontario), 2003–07
Neural and cognitive mechanisms of motor learning
\$ 150,000

CIHR New Investigator Salary Award, 2002–05
Computational mechanisms of motor learning
\$ 250,000

CIHR Open Operating Grant, 2002–05
Computational mechanisms of motor learning
\$ 216,000

NSERC Discovery Grant, 2001–06
Multi-joint limb movement and motor learning
\$ 97,500

Canada Foundation for Innovation & Ontario Innovation Trust, 2001–03
Multidisciplinary approaches to cognitive neuroscience
\$ 659,293

Western ARA Internal Grant, 2001–02
Motor learning pilot project
\$ 3,000

NSERC Research Tools & Infrastructure Grant, 2001–02
Equipment to support motor learning studies
\$ 48,968

Grants Previously Held as Co-Applicant

NIH/NICHD R01HD075740, 2012–17
Training-induced plasticity in human motor and sensory systems, D. Ostry (PI)
\$ 1,880,455 USD

NSERC Research Tools & Infrastructure Grant, 2015–16
A portable system for integrated measurement of human actions, B. Corneil (PI)
\$ 139,655

NSERC Research Tools & Infrastructure Grant, 2010–11
Transcranial magnetic stimulation for research in cognitive neuroscience, M. Goodale (PI)
\$ 98,178

NIH/NICHD R01HD048924, 2005–10
Motor control of human arm stiffness, D. Ostry (PI)
\$ 1,053,000 USD

CIHR Open Operating Grant, 2007–10
Cerebellar control of overarm throwing, J. Hore (PI)
\$ 268,575

CIHR Group Grant, 2004–09
Neural transformations for perception and action, M. Goodale (PI)
\$ 2,272,200

CIHR Open Operating Grant, 2001–06
Cerebellar control of throwing, J. Hore (PI)
\$ 610,438

PUBLICATIONS (* indicates trainee under my supervision)

Google Scholar profile: <https://scholar.google.com/citations?user=kACnRf8AAAAJ>

Submitted Papers

1. *Codol O, Kashefi M, *Forgaard CJ, Galea JM, Pruszynski JA, Gribble PL. Sensorimotor feedback loops are selectively sensitive to reward. Submitted

Refereed Journal Articles

90. *Codol O, Gribble PL, Gurney KN. (2022) Differential dopamine receptor-dependent sensitivity improves the switch between hard and soft selection in a model of the basal ganglia. *Neural Computation* 34:1588-1615
89. *Popp NJ, Hernandez-Castillo CR, Gribble PL, Diedrichsen J. (2022) The role of feedback in the production of skilled finger sequences. *J. Neurophysiol.* 127: 829–839
88. *Coltman SK, van Beers RJ, Medendorp WP, Gribble PL. (2021) Sensitivity to error during visuomotor adaptation is similarly modulated by abrupt, gradual, and random perturbation schedules. *J Neurophysiol.* 126(3):934-945
87. *Palidis DJ, *McGregor HR, Vo A, MacDonald PA, Gribble PL. (2021) Null effects of levodopa on reward- and error-based motor adaptation, savings, and anterograde interference. *J. Neurophysiol.* 126(1):47-67
86. *Weiler J, Gribble PL, Pruszynski JA. (2021) Spinal stretch reflexes support efficient control of reaching. *J. Neurophysiol.* 125:1339-47
85. *Forgaard CJ, Reschektko S, Gribble PL, Pruszynski JA. (2021) Skin and muscle receptors shape coordinated fast feedback responses in the upper limb. *Current Opinion in Physiology* 20:198-205
84. *Popp NJ, Yokoi A, Gribble PL, Diedrichsen J. (2020) The effect of instruction on motor skill learning. *J. Neurophysiol.* 124:1449-57
83. *Palidis DJ, Gribble PL. (2020) EEG correlates of physical effort and reward processing during reinforcement learning. *J. Neurophysiol.* 124:610-22
82. *Coltman SK, Gribble PL. (2020) Time course of changes in the long latency feedback response parallels the fast process of short term motor adaptation. *J. Neurophysiol.* 124:388-399
81. *Maeda RS, Gribble PL, Pruszynski JA. (2020) Learning new feedforward motor commands based on feedback responses. *Current Biology* 30, 1-8
80. *Maeda RS, Zdybal JM, Gribble PL, Pruszynski JA. (2020) Generalizing movement patterns following shoulder fixation. *J. Neurophysiol.* 123(3):1193-1205
79. Ohashi H, Gribble PL, Ostry DJ (2019) Somatosensory cortical excitability changes precede those in motor cortex during human motor learning. *J. Neurophysiol.* 122(4):1397-1405

78. Ohashi H, Valle-Mena R, Gribble PL, Ostry DJ (2019) Movements following force-field adaptation are aligned with altered perceptual boundaries. *Exp. Brain Res.* 237(5):1303-13
77. *Coltman SK, *Cashaback JGA, Gribble PL (2019) Both Fast and Slow Learning Processes Contribute to Savings Following Sensorimotor Adaptation. *J. Neurophysiol.* 121:1575-83
76. *Palidis DJ, *Cashaback JGA, Gribble PL (2019) Neural Signatures of Reward and Sensory Error Feedback Processing in Motor Learning. *J. Neurophysiol.* 121:1561-74
75. *Cashaback JGA, *Lao C, *Palidis DJ, *Coltman SK, *McGregor HR, Gribble PL (2018) The Gradient of the Reinforcement Landscape Influences Sensorimotor Learning. *PLoS Comput. Biol.* 15, e1006839.
74. *Weiler J, Gribble PL, Pruszynski JA (2019) Spinal stretch reflexes support efficient hand control. *Nat. Neurosci.*, 2019/02/11 DOI:10.1038/s41593-019-0336-0
73. Gu C, Pruszynski JA, Gribble PL, Corneil BD (2019) A rapid visuomotor response on the human upper limb is selectively influenced by implicit, but not explicit, motor learning. *J. Neurophysiol.* 121:85-95
72. *Maeda RS, Cluff T, Gribble PL, Pruszynski JA (2018) Feedforward and feedback control share an internal model of the arm's dynamics. *J. Neurosci.* 38(49):10505-14
71. *McGregor HR, *Cashaback JGA, Gribble PL (2018) Somatosensory Perceptual Training Enhances Motor Learning by Observing. *J. Neurophysiol.* 120: 3017–25
70. *McGregor HR, Vesia M, *Rinchon C, Chen R, Gribble PL (2018) Changes in corticospinal excitability associated with motor learning by observing. *Exp. Brain Res.* 236:2829-38
69. Gu C, Pruszynski JA, Gribble PL, Corneil BD (2018) Done in 100 ms: Path-dependent visuomotor transformation in the human upper limb. *J. Neurophysiol.* 119:1319-28
68. *Weiler J, Gribble PL, Pruszynski JA (2018) Rapid feedback responses are flexibly coordinated across arm muscles to support goal-directed reaching. *J. Neurophysiol.* 119:537-47
67. *Maeda R, Cluff T, Gribble PL, Pruszynski JA (2017) Compensating for intersegmental dynamics across the shoulder, elbow and wrist joints during feedforward and feedback control. *J. Neurophysiol.* 118:1984-97
66. *Cashaback JG, *McGregor HR, *Mohatarem A, Gribble PL (2017) Dissociating Error-Based and Reinforcement-Based Loss Functions During Sensorimotor Learning. *PLoS Comp. Biol.* 13(7):e1005623
65. *McGregor HR, Gribble PL (2017) Functional Connectivity Between Somatosensory and Motor Brain Areas Predicts Individual Differences in Motor Learning by Observing. *J. Neurophysiol.* 118(2):1235-43
64. *Cashaback JG, *McGregor HR, *Pun HCH, Buckingham G, Gribble PL (2017) Does the Sensorimotor System Minimize Prediction Error or Select the Most Likely Prediction During Object Lifting? *J. Neurophysiol.* 117:260-74
63. *Weiler J, *Saravanamuttu J, Gribble PL, Pruszynski JA (2016) Coordinating long-latency stretch responses across the shoulder, elbow and wrist during goal-directed reaching. *J. Neurophysiol.* 116:2236-49
62. Gu C, Wood DK, Gribble PL, Corneil BD (2016) A Trial-by-Trial Window into Sensorimotor Transformations in the Human Motor Periphery. *J. Neurosci.* 36(31):8273-82
61. *McGregor HR, *Cashaback JG, Gribble PL (2016) Functional Plasticity in Somatosensory Cortex Supports Motor Learning by Observing. *Current Biology* 26(7):921-927

60. *Wong JD, Bobbert MF, van Soest KAJ, Gribble PL, *Kistemaker DA (2016) Optimizing the distribution of leg muscles for vertical jumping. *PLoS ONE* 11(2):e0150019, 2016
59. Ostry DJ, Gribble PL (2016) Sensory plasticity in human motor learning. *Trends Neurosci.* 39(2):114-123
58. Martin CB, Cowell RA, Gribble PL, Wright J, Köhler S (2015) Distributed category-specific recognition memory signals in human perirhinal cortex. *Hippocampus* 26(4):423-36
57. *Weiler J, Gribble PL, Pruszynski JA (2015) Goal-dependent modulation of the long-latency stretch response at the shoulder, elbow and wrist. *J. Neurophysiol.* 114(6):3242-54
56. Wood DK, Gu C, Corneil BD, Gribble PL, Goodale MA (2015) Transient visual responses reset the phase of low-frequency oscillations in the skeletomotor periphery. *Eur. J. Neurosci.* 42:1919-32
55. *McGregor HR, Gribble PL (2015) Changes in Visual and Sensory-Motor Resting-State Functional Connectivity Support Motor Learning by Observing. *J. Neurophysiol.* 114:677-88
54. *Cashaback JGA, *McGregor HR, Gribble PL (2015) The Human Motor System Alters Its Reaching Movement Plan for Task-Irrelevant Positional Forces. *J. Neurophysiol.* 113:2137-49
53. *Kistemaker DA, *Wong J, Gribble PL (2014) The cost of moving optimally: kinematic path selection. *J. Neurophysiol.* 112, 1815-24
52. Buckingham G, *Wong JD, Tang M, Gribble PL, Goodale MA (2014) Observing object lifting errors modulates cortico-spinal excitability and improves object lifting performance. *Cortex* 50, 115-24
51. Ramsay JO, Gribble PL, Kurket S (2014) Analysis of juggling data: Landmark and continuous registration of juggling trajectories. *Electronic Journal of Statistics* 8(2):1835-1841
50. Ramsay JO, Gribble PL, Kurket S (2014) Description and processing of functional data arising from juggling trajectories. *Electronic Journal of Statistics* 8(2):1811-1816
49. *Wong JD, *Wilson ET, *Kistemaker DA, Gribble PL (2014) Bimanual proprioception: are two hands better than one? *J. Neurophysiol.* 111, 1362-8
48. *Kistemaker DA, Van Soest AJ, *Wong JD, Kurtzer I, Gribble PL (2013) Control of position and movement is simplified by combined muscle spindle and Golgi tendon organ feedback. *J. Neurophysiol.* 109, 1126-39
47. *Wong JD, *Kistemaker DA, *Chin A, Gribble PL (2012) Can proprioceptive training improve motor learning? *J. Neurophysiol.* 108, 3313-3321
46. *Williams A, Gribble PL (2012) Observed Effector-Independent Motor Learning by Observing. *J. Neurophysiol.* 107(6), 1564-70
45. Goonetilleke SC, Gribble PL, Mirsattari SM, Doherty TJ, Corneil BD (2011) Neck muscle responses evoked by transcranial magnetic stimulation of the human frontal eye fields. *Eur. J. Neurosci.* 33, 2155-67
44. Hore J, *Debicki DB, Gribble PL, Watts S (2011) Deliberate Utilization of Interaction Torques Brakes Elbow Extension in a Fast Throwing Motion. *Exp. Brain Res.* 211, 63-72
43. *Wong J, *Wilson ET, Gribble PL (2011) Spatially Selective Enhancement of Proprioceptive Acuity Following Motor Learning. *J. Neurophysiol.* 105, 2512-21
42. *Debicki DB, Gribble PL, Watts S, Hore J (2011) Wrist muscle activation, interaction torque and mechanical properties in unskilled throws of different speeds. *Exp. Brain Res.* 208(1), 115-25

41. *Kistemaker DA, *Wong JD, Gribble PL (2010) The Central Nervous System does not minimize energy cost in arm movements. *J. Neurophysiol.* 104, 2985-94
40. *Brown LE, *Wilson ET, Obhi S, Gribble PL (2010) Effect of Trial Order and Error Magnitude on Motor Learning by Observing. *J. Neurophysiol.* 104(3), 1409-16
39. *Wilson ET, *Wong J, Gribble PL (2010) Mapping Proprioception Across a 2D Horizontal Workspace. *PLoS ONE* 5(7), e11851
38. *Debicki DB, Watts S, Gribble PL, Hore J (2010) A Novel Shoulder-Elbow Mechanism for Increasing Speed in a Multijoint Arm Movement. *Exp. Brain Res.* 203, 601-613
37. Ostry D, Darainy M, Mattar AAG, *Wong J, Gribble PL (2010) Somatosensory Plasticity and Motor Learning. *J. Neurosci.* 30(15), 5384-93
36. *Cothros N, *Wong J, Gribble PL (2009) Visual cues signaling object grasp reduce interference in motor learning. *J. Neurophysiol.* 102(4), 2112-20
35. *Malfait N, *Valyear KF, Culham JC, Anton JL, Gribble PL. (2009) fMRI activation during observation of others' reach errors. *J. Cogn. Neurosci.* 22(7):1493-1503
34. *Wong J, *Wilson ET, *Malfait N, Gribble PL (2009) Limb Stiffness is Modulated with Spatial Accuracy Requirements During Movement in the Absence of Destabilizing Forces. *J. Neurophysiol.* 101(3), 1542-9
33. *Brown LE, *Wilson ET, Gribble PL (2009) Repetitive Transcranial Magnetic Stimulation to the Primary Motor Cortex Interferes with Motor Learning By Observing. *J. Cogn. Neurosci.* 21(5), 1013-22
32. *Wong J, *Wilson ET, *Malfait N, Gribble PL (2009) The Influence of Visual Perturbations on the Neural Control of Limb Stiffness. *J. Neurophysiol.* 101, 246-57
31. *Cothros N, *Wong J, Gribble PL (2008) Distinct Haptic Cues Do Not Reduce Interference When Learning To Reach In Multiple Force Fields. *PLoS ONE* 3(4), e1990
30. *Malfait N, Henriques DY, Gribble PL (2008) Shape Distortion Produced By Isolated Mismatch Between Vision and Proprioception. *J. Neurophysiol.* 99(1), 231-243
29. *Brown LE, *Wilson ET, Goodale MA, Gribble PL (2007) Motor Force Field Learning Influences Visual Processing of Target Acceleration. *J. Neurosci.* 27(37), 9975-83
28. *Cothros N, Köhler S, *Dickie EW, Mirsattari S, Gribble PL (2006) Proactive Interference as a Result of Persisting Neural Representations of Previously Learned Motor Skills in Primary Motor Cortex. *J. Cogn. Neurosci.* 18(12), 2167-76
27. *Cothros N, *Wong JD, Gribble PL (2006) Are There Distinct Neural Representations of Object and Limb Dynamics? *Exp. Brain Res.* 173(4), 689-97
26. *Mattar AAG, Gribble PL (2005) Motor Learning by Observing. *Neuron* 46(1), 153-60
25. Malfait N, Gribble PL, Ostry DJ (2005) Generalization of motor learning based on multiple field exposures and local adaptation. *J. Neurophysiol.* 93, 3327-3338
24. *Debicki DB, Gribble PL (2005) Persistence of inter-joint coupling strategy during single joint elbow flexions after shoulder fixation. *Exp. Brain Res.* 163(2), 252-7
23. Darainy M, Malfait N, Gribble PL, Towhidkhah F, Ostry DJ (2004) Learning to Control Arm Stiffness Under Static Conditions. *J. Neurophysiol.* 92(6), 3344-50

22. *DeBicki DB, Gribble PL (2004) Inter-joint coupling strategy during adaptation to novel viscous loads in human arm movement. *J. Neurophysiol.* 92(2), 754-65
21. *DeBicki DB, Gribble PL, Watts S, Hore J (2004) Kinematics of wrist joint flexion in overarm throws made by skilled subjects. *Exp. Brain Res.* 154, 382-94
20. Gribble PL, *Mullin LI, *Cothros N, *Mattar A (2003) Role of cocontraction in arm movement accuracy. *J. Neurophysiol.* 89, 2396-2405
19. Graham K, Moore K, Cabel W, Gribble PL, Cisek P, Scott SH (2003) Kinematics and kinetics of multi-joint reaching in non-human primates. *J. Neurophysiol.* 89, 2667-77
18. Gribble PL, Everling S, *Ford K, *Mattar A (2002) Hand-eye coordination for rapid pointing movements: Arm movement direction and distance are specified prior to saccade onset. *Exp. Brain Res.* 145, 372-382
17. Gribble PL, Scott SH (2002) Overlap of internal models for mechanical loads during reaching in motor cortex. *Nature* 417, 938-941
16. Gribble PL, Scott SH (2002) Method for assessing directional tuning characteristics of non-uniformly sampled neural activity. *J. Neurosci. Methods* 113(2), 185-195
15. Scott SH, Gribble PL, Graham KM, Cabel, DW (2001) Dissociation between hand motion and population vectors from neural activity in motor cortex. *Nature* 413, 161-165
14. Suzuki M, Shiller DM, Gribble PL, Ostry DJ (2001) Relationship Between Cocontraction, Movement Kinematics and Phasic Muscle Activity in Single-Joint Arm Movement. *Exp. Brain Res.* 140(2), 171-181
13. Shiller DM, Ostry DJ, Gribble PL, Laboissière R (2001) Compensation for the Effects of Head Acceleration on Jaw Movement in Speech. *J. Neurosci.* 21(16), 6447-6456
12. Gribble PL, Ostry DJ (2000) Compensation For Loads During Arm Movements Using Equilibrium-Point Control. *Exp. Brain Res.* 135(4), 474-482
11. Gribble PL, Ostry DJ (1999) Compensation for Interaction Torques During Single- and Multi-Joint Limb Movement. *J. Neurophysiol.* 82(5), 2310-2326
10. Shiller DM, Ostry DJ, Gribble PL (1999) Effects of Gravitational Load on Jaw Movements in Speech. *J. Neurosci.* 19(20), 9073-9080
9. Gribble PL, Ostry DJ (1998) Independent Coactivation of Shoulder and Elbow Muscles. *Exp. Brain Res.* 123(3), 355-360
8. Feldman AG, Ostry DJ, Levin MF, Gribble PL, Mitnitski, A (1998) Recent Tests of the Equilibrium-Point Hypothesis (λ model). *Motor Control* 2(3), 189-205
7. Gribble PL, Ostry DJ, Sanguineti V, Laboissière R (1998) Are Complex Control Signals Required for Human Arm Movement? *J. Neurophysiol.* 79(3), 1409-1424
6. Ostry DJ, Vatikiotis-Bateson E, Gribble PL (1997) An Examination of the Degrees of Freedom of Human Jaw Motion in Speech and Mastication. *J. Speech Language. Hear. Res.* 40, 1341-1351
5. Ostry DJ, Gribble PL, Levin MF, Feldman AG (1997) Phasic and Tonic Stretch Reflexes in Muscles with Few Muscle Spindles: Human Jaw Opener Muscles. *Exp. Brain Res.* 116(2), 299-308
4. Gribble PL, Ostry DJ (1996) Origins of the Power Law Relation between Movement Velocity and Curvature: Modeling the Effects of Muscle Mechanics and Limb Dynamics. *J. Neurophysiol.* 76(5), 2853-2860

3. Ostry DJ, Gribble PL, Gracco VL (1996) Coarticulation of Jaw Movements in Speech Production: Is Context Sensitivity in Speech Kinematics Centrally Planned? *J. Neurosci.* 16(4), 1570-1579
2. Munhall KG, Gribble P, Sacco L, Ward M (1996) Temporal Constraints on the McGurk Effect. *Percept. Psychophys.* 58(3), 351-362
1. Ostry DJ, Laboissière R, Gribble PL (1995) Command Invariants and the Frame of Reference for Human Movement. *Behav. Brain Sci.* 18(4), 770-772

Book Chapters

*McGregor H, Gribble PL (2016) Observational Motor Learning. In S Obhi & ES Cross (eds.), *Shared representations: Sensorimotor Foundations of Social Life (Social Neuroscience Series)*. 525-540. Cambridge University Press

Gribble PL, Laboissière R, Ostry DJ (1997) Control of Human Arm and Jaw Motion: Issues Related to Musculo-skeletal Geometry. In PG Morasso & V Sanguineti (eds.), *Self-organization, Computational Maps and Motor Control. Advances in Psychology Series, Vol. 119.* Elsevier-North Holland

Conference Presentations & Published Abstracts

Since 1993 I have attended the Society for Neuroscience annual meeting and the Neural Control of Movement annual meeting each year where we have presented posters and talks. Occasionally we present posters and talks at other meetings as well. This is a very long list that is not included here.

INVITED TALKS

- 2019 Invited speaker at the Optimal Neuroethology of Movement and Motor Control workshop at The Banff International Research Station, Banff, Alberta, "The gradient of the reinforcement landscape influences sensorimotor learning", May 19-24
- 2011 Invited speaker at 12th International Multisensory Research Forum, Fukuoka, Japan, "Sensory Changes Accompanying Motor Learning", Oct 18
- 2010 Invited speaker at McMaster University, Dept. Psychology, "Motor Learning by Observing", Feb. 3
- 2010 Invited speaker at Université de Montréal, "Motor Learning by Observing", Oct 22
- 2010 Invited speaker at Northeastern Univ., Dept. of Biology, Electrical & Computer Engineering, and Physics, Boston, MA "Sensory Changes Accompanying Motor Learning", June 22
- 2010 Invited speaker at MIT, Laboratory for Biomechanics and Human Rehabilitation, Cambridge, MA, June 21 "Does the Central Nervous System Minimize Energy for Planning Reaching Movements?"
- 2008 Keynote Speaker at the Fourth Computational Motor Control Workshop at Ben-Gurion University of the Negev, Beer-Sheva, Israel, June 11-12 "Motor Learning by Observing"
- 2008 Invited speaker at Centre Neurobiologie Intégrative et Adaptative, Université de Provence / CNRS, Marseille, France, March 26-30 "Motor Learning by Observing"
- 2008 Invited speaker at Centre For Vision Research, York University, Toronto Canada, February 22 "Role of Primary Motor Cortex in Motor Learning and Motor Learning by Observing"

- 2007 Invited speaker at the annual meeting of the North American for Psychology of Sport and Physical Activity, San Diego, CA, June 7-9 “Motor Learning by Observing”
- 2007 Invited speaker at the University of Michigan, Division of Kinesiology Seminar Series, “Studies of Human Motor Learning”, Jan 26
- 2006 Invited speaker at the annual meeting of the Society for Experimental Biology, “Neural Control of Human Limb Movements”, Canterbury, UK, April 2-7
- 2003 Invited speaker on Panel at biennial Progress in Motor Control (IV) meeting, Université de Caen Basse Normandie, “What drives adaptation during motor learning?” Caen, France, August 20-23
- 2003 York University, Toronto Canada, School of Kinesiology and Health Science, “Neural Control of Limb Movement: Internal Models of Dynamics” February 22
- 2000 The University of Western Ontario, London Canada, Depts. of Psychology and Physiology, “Neural Control of Limb Movement: Computational and Empirical Approaches” January
- 2000 Queen’s University, Kingston Canada, Queen’s Neuroscience Seminar Series, “Neural Control of Limb Movement: Computational and Empirical Approaches” January
- 1999 Queen’s University, Kingston Canada, MRC Group in Sensory Motor Neuroscience, “Neural Control of Multi-Joint Limb Dynamics”, December
- 1995 ATR Human Information Processing Laboratories, Kyoto Japan, “Interpreting Movement Kinematics”, October 8

THESES

- Ph.D. Gribble PL (1999) Empirical and modeling studies of multi-joint limb movement. Department of Psychology, McGill University, Montréal, Canada (D. Ostry, supervisor)
- M.Sc. Gribble PL (1995) Musculo-skeletal geometry and the control of single degree of freedom elbow movements. Department of Psychology, McGill University, Montréal, Canada (D. Ostry, supervisor)
- B.Sc. Gribble PL (1993) Effects of an altered visuo-motor feedback relationship on the kinematics of reaching movements performed under remote visual guidance. Department of Psychology, Queen’s University, Kingston, Canada (K. Munhall & S. Lederman, supervisors)

TRAINEES

Postdoctoral Fellows

Olivier Codol, (Ph.D., Univ. Birmingham, UK), 2019–present

Chris Forgaard, (Ph.D., UBC), 2018–2021, Currently Research Officer in the Schulich School of Medicine & Dentistry at Western University, London, Canada

Jeff Weiler, (Ph.D. Western) co-supervised with Andrew Pruszynski, 2014–2020, Currently Coordinator at The Gray Centre for Mobility and Activity at St. Joseph’s Health Care London, Canada

Joshua Cashaback, (Ph.D. McMaster), 2013–17, Currently Assistant Professor, Dept. Biomedical Engineering at University of Delaware, USA

Jeremy Wong, (Ph.D. Western), 2012–13, Currently a Research Associate at University of Calgary, Canada

Dinant Kistemaker, (Ph.D. Vrije Univ. Amsterdam), 2007–11, Currently a Research Scientist at Vrije Univ. Amsterdam, Netherlands

Nicole Malfait, (Ph.D. McGill), 2005–07, Currently Chargée de Recherche CNRS at CNRS / Université de Provence, Marseille, France

Liana Brown, (Ph.D. Penn State), supported by CIHR PDF, 2003–07, Currently Associate Professor, Dept. Psychology, Trent University, Canada

Graduate Students

Natalia Mangos, MSc candidate (Neuroscience, 2020–present

Heba Hussian, MSc candidate (Neuroscience, 2020–present

Peyman Heidari, MSc candidate (Neuroscience, 2020–present

Susan Coltman, Ph.D. (Neuroscience), 2016–2021

Dimitri Palidis, Ph.D. (Neuroscience), 2016–2021

Nicola Popp, Ph.D. (Neuroscience) co-supervised by Jörn Diedrichsen, 2016–2021

Rodrigo Maeda, Ph.D. (Neuroscience) co-supervised by Andrew Pruszynski, 2015–2021

Heather McGregor, Ph.D. (Neuroscience), supported by NSERC, 2011–2018

Alvin Chin, M.Sc. Neuroscience, 2011–13

Jeremy Wong, Ph.D. Neuroscience, supported by CIHR, 2007–12

Elizabeth Wilson, M.Sc. Neuroscience, supported by NSERC, 2007–09

Derek Debicki, M.D./Ph.D. Neuroscience, supported by CIHR, 2002–09

Nicholas Cothros, Ph.D. Neuroscience, supported by NSERC, 2004–08

Jeremy Wong, M.Sc. Neuroscience, 2005–07

Nicholas Cothros, M.Sc. Neuroscience, 2002–04

Derek Debicki, M.Sc. Neuroscience (co-supervised by J. Hore), 2000–02

Undergraduate Students

Kevin Sun, B.Sc. Physiology Honours Thesis, 2020-21

Harvey Lee, B.Sc. Neuroscience Honours Thesis, 2020-21

Grace Huang, Scholar's Elective, 2020-21

Natalia Mangos, B.Sc. Physiology, 2019–20

Elliot Polster, B.Sc. Physiology Honours Thesis, 2018-19

Avneet Sandhu, B.Sc. Psychology Honours Thesis, 2018-19

Xie, Xin Yue, Work Study, 2017

Chris Lao, B.Sc. Physiology Honours Thesis, 2016–17

Cricia Rinchon, B.Sc. Neuroscience Honours Thesis, 2015–16

Calvin Diep, B.Sc. Physiology Honours Thesis, 2015–16
 Anthony Wong, B.Sc. Physiology Honours Thesis, 2014–15
 Henry Pun, B.Sc. Physiology Honours Thesis, 2014–15
 Ayman Mohatarem, Biology Work Study, 2013–15
 Meghan Bhatia, B.Sc. Physiology Honours Thesis, 2013–14
 Eric Rocca, B.Sc. Physiology Honours Thesis, 2012–13
 Dan Huynh, B.Sc. Physiology Honours Thesis, 2012–13
 Brandon Belbeck, B.Sc. Physiology Honours Thesis, 2011–12
 Stephanie Williams, B.Sc. Physiology Honours Thesis, 2010–11
 Alvin Chin, B.Sc. Physiology Honours Thesis, 2010–11
 Seth Climans, B.Sc. Physiology Honours Thesis, 2009–10
 Alexandra Williams, B.Sc. Physiology Honours Thesis, 2008–09
 Nikolai Whyte, B.Sc. Physiology Honours Thesis, 2008–09
 Jeremy Wong, B.Sc. Physiology Honours Thesis, 2004–05
 Erin Skinner, B.Sc. Physiology Honours Thesis, 2004–05
 Alison Firestone, B.Sc. Physiology Honours Thesis, 2004–05
 Andrew Mattar, B.Sc. Physiology Honours Thesis, 2003–04
 Erin Dickie, B.Sc. Physiology Honours Thesis, 2003–04
 Dorianne Butler, B.Sc. Physiology Honours Thesis, 2002–03
 Lucy Mullin, B.Sc. Physiology Honours Thesis, 2001–02
 Kashta Dolphin, Independent research project, 2001–02

TEACHING

Graduate Courses

Psychology 9040A, Scientific Computing, 2013–present
 Psychology 9041b, Introduction to Statistics using R, 2013–2019
 Neuroscience 9506, Statistics for Neuroscience, 2005–13
 Neuroscience 9519, Scientific Programming & Data Analysis, 2004–13
 Neuroscience 9520, Computational Neuroscience: Neural Models, 2003–13

Undergraduate Courses

Psychology 4260G, Sensorimotor Control, 2022–present
 Psychology 4295G, Special Topics in Behavioural and Cognitive Neuroscience, 2020–21
 Physiology 4980, Seminar & Honours thesis research project supervision, 2001–present

Psychology 4850, Honours thesis project supervision, 2000–present

Psychology 2820E, Research Methods & Statistical Analysis in Psychology, 2008–13

Psychology 380, Psychological Statistics, 2001, 2002

Psychology 223, Introduction to Psychobiology 2000, 2001