

2016 - 2022

Assistant Professor (tenure-track), Departments of Psychology and

Jason P. Gallivan: Curriculum Vitae

2012-2014	Banting Postdoctoral Fellowship (NSERC) <i>Decoding action intentions and sensorimotor predictions from human brain activity</i>	\$140,000
2011-2013	Ontario MRI Postdoctoral Fellowship Decline for year 2013-2013	\$50,000
2012	CIHR Brain Star award	\$1,500
2009-2011	NSERC, Graduate Scholarship <i>Multi-voxel pattern approaches to decoding movement</i>	\$63,000
2011	CIHR Brain Star award	\$1,500
2009	CIHR Brain Star award	\$1,500

1. Gallivan, J.P. & Murray, C. (pending). Connectivity-based multi-modal normative model. Vox-003US01. Date of File: August 17, 2022.

* indicates equal contributions
Underlined indicates trainees

1. Rowchan, K., Gale, D.J., Nick, Q., GALLIVAN, J.P. & Wammes, J.D. (submitted). Visual statistical learning is associated with changes in cortical manifold structure.
2. Areshenkoff, C.N., De Brouwer, A., Gale, D.J., Nashed, J.Y., Smallwood, J., Flanagan, J.R. & GALLIVAN, J.P. (submitted). The structural-functional neural architectures of implicit and explicit motor learning.

65. Zhu, T., GALLIVAN, J.P., Wolpert, D.M. & Flanagan, J.R. (accepted). Interaction between decision-making and motor learning when selecting reach targets in the presence of bias and noise. *Plos Computational Biology*
64. Nick, Q., Gale, D.J., Areshenkoff, C.N., De Brouwer, A.J., Nashed, J.Y., Wammes, J., Flanagan, J.R., Smallwood, J & GALLIVAN, J.P. (accepted). Reconfigurations of cortical manifold structure during reward-based motor learning. *eLIFE*
63. Rens, G., Figley, T.D., GALLIVAN, J.P., Liu, Y. & Culham, J.C. (2023). Grasping with a twist: Dissociating action goals from motor actions in human frontoparietal circuits. *Journal of Neuroscience*. 43 (32): 5831-5847.

- behavioral scores in a non-human primate model. *Scientific Reports*. 7(1): 6701. DOI: 10.1038/s41598-017-07175-y.
37. Lowe, M. X., Rasjic, J., GALLIVAN, J.P., Ferber, S. & Cant, J.S (2017) Neural representation of geometry and surface properties in object and scene perception. *Neuroimage*. 157: 586-597.
 36. De Brouwer, A.J., Jarvis, T., GALLIVAN, J.P., & Flanagan, J.R. (2017) Parallel specification of visuomotor feedback gains during bimanual reaching to independent goals. *eNeuro*. 4(2) e0026-17.2017 1-12.
 35. GALLIVAN, J.P. Stewart, B.* , Baugh, L.A., Wolpert, D.M. & Flanagan, J.R. (2017) Rapid automatic motor encoding of competing reach options. *Cell Reports* 18: 1619-1626.
 34. GALLIVAN, J.P., Bowman, N., Chapman, C.S., Wolpert, D.M. & Flanagan, J.R. (2016) The sequential encoding of competing action goals involves dynamic restructuring of motor plans in working memory. *The Journal of Neurophysiology*. 115(6): 3113-22.
 33. GALLIVAN, J.P., Logan, L., Wolpert, D.M. & Flanagan, J.R. (2016) Parallel specification of competing sensorimotor control policies for alternative action options. *Nature Neuroscience* 19(2): 320-6.
 32. GALLIVAN, J.P., Johnsrude, I.S. & Flanagan, J.R. (2016) Planning ahead: Object-directed sequential actions decoded from human frontoparietal and occipitotemporal networks. *Cerebral Cortex*. 26(2): 708-30.
 31. Lowe, M.X., GALLIVAN, J.P., Ferber, S., and Cant, J.S. (2016) Feature diagnosticity and task context shape activity in human scene-selective cortex. *Neuroimage*. 125: 681-692.
 30. GALLIVAN, J.P., Barton, K., Chapman, C.S., Wolpert, D.M., & Flanagan, J.R. (2015) Action plan co-optimization reveals the parallel encoding of competing reach movements. *Nature Communications*. 6: 7428. doi: 10.1038/ncomms8428.
 29. Hutchison, R.M., Culham, J.C., Flanagan, J.R., Everling, S., & GALLIVAN, J.P. (2015) Functional subdivisions of medial parieto-occipital cortex in humans and nonhuman primates using resting state fMRI. *Neuroimage*. 116: 10-29.
 28. Chapman, C.S., GALLIVAN, J.P., Wong, J.W., Wispinski, N.J. & Enns, J. (2015) The snooze of lose: Rapid reaching reveals that losses are processed more slowly than gains. *Journal of Experimental Psychology: General*.
 27. GALLIVAN, J.P. & Culham, J.C. (2015) Neural coding within human brain areas involved in actions. *Current Opinion in Neurobiology*. 33:141-149 [Invited Review]
 26. Chapman, C.S., GALLIVAN, J.P., & Enns, J.T. (2015) Separating value from selection frequency in rapid reaching biases to visual targets. *Visual Cognition*. DOI:10.1080/13506285.2014.976604.
 25. Stewart, B.* , GALLIVAN, J.P. , Baugh, L., & Flanagan, J.R. (2014) Motor, not visual, encoding of potential reach targets. *Current Biology*. 24(19): R953-R954.

24. GALLIVAN, J.P. & Chapman, C.S. (2014) Three-dimensional reach trajectories as a probe of real-time decision-making between multiple competing targets. *Frontiers in Neuroscience*. 8(215): 1-19.
23. GALLIVAN, J.P., Cant, J., Goodale, M.A. & Flanagan, J.R. (2014) Representation of object weight in human ventral visual cortex. *Current Biology* 24(16): 1866-73.
- Featured in the 'Dispatch' section of *Current Biology* by Kentrledge (2014).
22. Hutchison, R.M., Culham, J.C., Everling, S., Flanagan, J.R., & GALLIVAN, J.P. (2014) Distinct and distributed functional connectivity patterns across cortex reflect the domain-specific constraints of object, face, scene, body, and tool category-selective modules in the ventral visual pathway. *Neuroimage* 96:216-236.
21. Chapman, C.S. , GALLIVAN, J.P. , Wood, D.K., Milne, J.L., Ansari, D., Culham, J.C., & Goodale, M.A. (2014) Counting on the motor system: Rapid action planning reveals the format- and magnitude-dependent extraction of numerical quantity. *Journal of Vision*. 14(3): 1-19.
20. GALLIVAN, J.P. (2014) A motor-oriented organization of human ventral visual cortex? *Journal of Neuroscience* 34(9): 3119-3121. [Commentary]
19. Stewart, B. M., Baugh, L.A., GALLIVAN, J.P. & Flanagan, J.R. (2013) Simultaneous encoding of the direction and orientation of potential targets during reach planning: evidence of multiple competing reach plans. *Journal of Neurophysiology* 110 (4): 807-816.
18. Milne, J.L., Chapman, C.S., GALLIVAN, J.P., Wood, D.K., Culham, J.C., & Goodale, M.A. (2013) Connecting the Dots: Object connectedness deceives perception but not movement planning. *Psychological Science* 24 (8): 1456-1465.
17. GALLIVAN, J.P., Chapman, C.S., McLean, D.A., Flanagan, J.R., & Culham, J.C. (2013) Activity patterns in category-selective occipitotemporal cortex predict upcoming motor actions. *European Journal of Neuroscience* 38 (3): 2408-2424.
16. GALLIVAN, J.P., McLean, D.A., Valyear, K.F., & Culham, J.C. (2013) Decoding the neural mechanisms of human tool use. *eLife* 2: e00425.
- Featured in the 'Insight' section of *eLife* by Mahon (2013).
15. GALLIVAN, J.P., McLean, D.A., Flanagan, J.R., & Culham, J.C. (2013) Where one hand meets the other: Limb-specific and action-dependent movement plans decoded from preparatory signals in single human frontoparietal brain areas. *Journal of Neuroscience* 33 (5): 1991-2008.
14. Hutchison, R.M., GALLIVAN, J.P., Culham, J.C., Gati, J.S., Menon, R.S., & Everling, S. (2012) Functional connectivity of the frontal eye fields in humans and macaque monkeys investigated with resting state fMRI. *Journal of Neurophysiology* 107 (9): 2463-2474.
13. Valyear, K.F., GALLIVAN, J.P., McLean, D.A., & Culham, J.C. (2012) fMRI repetition suppression for familiar but not arbitrary actions with tools. *Journal of Neuroscience* 32 (12): 4247-4259.

2. GALLIVAN, J.P. & Goodale, M.A. (2018). The dorsal 'action' pathway. In G. Vallar & H. B. Coslett (Eds.), *The Parietal lobes. Neurological and neuropsychological deficits. Handbook of clinical neurology, 3rd series.* New York: Elsevier.
 1. Culham, J. C., GALLIVAN, J.P., Cavina-Pratesi, C., & Quinlan, D. J. (2008). fMRI investigations of reaching and ego space in human superior parieto-occipital cortex. In R. L. Klatzky, M. Behrmann, & B. MacWhinney (Eds.), *Embodiment, Ego-space and Action.* New York: Psychology Press. pp. 247-274.
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25. Standage, D., Hori, Y., Menon, R., Everling, S. & GALLIVAN, J.P. (2020) Differential modular dynamics in marmoset cortex during conscious and unconscious states. Neuromatch 3.0 conference.
 24. Areshenkoff, C., Standage, D., Nashed, J.,

40. Standage, D., Nashed, J.Y., Areshenkoff, C.N., Flanagan, J.R. & GALLIVAN, J.P. (2017). The evolution of whole-brain community structure during sensorimotor adaptation. Society for Neuroscience, Washington, D.C.
39. Nashed, J.Y., Standage, D., Flanagan, J.R. & GALLIVAN, J.P. (2017). Individual differences in adaptation learning are linked to dynamic changes in functional brain states. Society for Neuroscience, Washington, D.C.
38. Nashed, J.Y., Standage, D., Flanagan, J.R. & GALLIVAN, J.P. (2017). Dynamic changes in brain network organization during visuomotor adaptation learning. Neural Control of Movement, Dublin, Ireland.
37. De Brouwer, A.J., Albaghdadi, M., Flanagan, J.R. & GALLIVAN, J.P. (2017). Extracting the explicit contributions to visuomotor adaptation through gaze patterns. Neural Control of Movement, Dublin, Ireland.
36. Carter, M.J., de Brouwer, A.J., Smail, L., GALLIVAN, J.P. & Flanagan, J.R. (2017). Gaze behaviour reveals the specification of competing reach movements. Neural Control of Movement, Dublin, Ireland.
35. De Brouwer, A.J., Jarvis, T., GALLIVAN, J.P., & Flanagan, J.R. (2016) Rapid visuomotor corrections in reaching are modulated by gaze position. Society for Neuroscience, San Diego, CA.

27. Nashed, J.Y., Wang, J.Z., Hernandez-Castillo, C., GALLIVAN, J.P., Fernandez-Ruiz, J. & Cook, D.J. (2015) Preservation of parietal area 5 is associated with improved motor recovery and functional connectivity following MCA stroke in non-human primates. Society for Neuroscience Annual Meeting. Chicago, IL.
26. Chapman, C.S., GALLIVAN, J.P., Wispinski, N. & Enns, J.T. (2015) Separating value from selection frequency in rapid reaching biases to visual targets. Reinforcement Learning and Decision-making conference, Edmonton, AB.
25. GALLIVAN, J.P., Johnsrude, I.S. & Flanagan, J.R. (2014) Object-directed action sequences decoded from human frontoparietal and occipitotemporal networks. Society for Neuroscience, Washington, DC.
24. Chapman, C.S., GALLIVAN, J.P., & Enns, J.T. (2014) Action success, not reward value, governs trial-by-trial biases during rapid reach planning. Society for Neuroscience, Washington, DC.
23. Gultepe, E., GALLIVAN, J.P., Hutchison, R.M., Everling, S., Johnsrude, I.S. (2014) Supervised parcellation of resting-state fMRI data in macaque monkeys recovers cytoarchitectonic cortical regions. Society for Neuroscience, Washington, DC.

15.

Danielle Bukovsky, Honours Psychology Thesis (2022-present)
Julie McGregor, Honours Life Sciences Thesis (co-supervised; 2022-present)

Postdoctoral Fellows

Josh Nashed (2016-2019; co-supervision)
○ Current Position: MD program at Queen's
Anouk de Brouwer (2017-2018; co-supervision)
○ Current Position: Postdoc at University of British Columbia
Michael Carter (2016-2017; co-supervision)
○ Current Position: Faculty at McMaster University

Graduate Students

Corson Areshenkoff (2017-2023; PhD)
Qasem Niksefat (2021-2023; MSc)
Dan Gale (2016-2018 for MSc and 2018-2022 for PhD)
Michael McGarity-Shiple (2017-2019; MSc)

Staff

Adam McLean, Software Engineer (2016-2017, part-time)

Undergraduate Students

Colleen Pearce, Honours Psychology Thesis (2021-2022)
Jordan Pepper, Honours Life Sciences Thesis (co-supervised; 2021-2022)
Hannah Sly, Honours Life Sciences Thesis (co-supervised; 2021-2022)
Angela Choudhury, Honours Psychology Thesis (2020-2021)
Jesse Fu, Honours Life Sciences Thesis (co-supervised; 2020-2021)
Tiana Wong, Honours Life Sciences Thesis (co-supervised; 2020-2021)
Ian Goodall-Halliwell, Honours Life Sciences Thesis (co-supervised; 2020-2021)
Olivia Scoten, Honours Psychology Thesis (2019-2020)
Rachel Rumas, Honours Psychology Thesis (2018-2019)
Jameson Rokeby, Honours Life Sciences Thesis (2018-2019)
Zoe Frank, Directed Lab Student in Life Science (2018-2019)
Claire Honda, Honours Psychology Thesis (2017-2018)
○ Winner of a Canadian Psychological Association Certificate of Excellence Award for her thesis work.
Gregory Brooks, Honours Life Sciences Thesis (2017-2018)
Mohammed Albaghdadi, Honours Psychology Thesis (2016-2017)

NSERC Summer Students

Jameson Rokeby (3rd year student in Life Science) (2018)

2020-present Instructor/Lecturer

Psychology 801, Statistics & Research Design, Graduate-level

2018-present

Instructor/Lecturer

Psychology 917, fMRI Design and Analysis, Graduate-level

2017-present

Instructor/Lecturer

Psychology 376, Functional Neuroimaging of Human Cognitive Brain Function, Undergraduate-level

2018-2019

Thesis Coordinator, Neuroscience Program

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Co-Lead, Connected Minds Facilities and Infrastructure committee (2023-present)

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