

---

# **JAMES MACQUARIE SHINE**

Curriculum Vitae

August, 2016

Department of Psychology  
Stanford University  
Stanford, CA 94305-2130

Telephone: (830) 822-1979  
Email: [macshine@stanford.edu](mailto:macshine@stanford.edu)  
Website: <http://jmshine.com>

---

## **Current Position**

CJ Martin Fellow, Department of Psychology, Stanford University, 2014-2018.

## **Education**

B.Sc. in Biochemistry and Psychology, The University of Sydney, 2003.

M.B.B.S in Medicine/Surgery, The University of Sydney, 2007.

Medical Resident, Concord General Repatriation Hospital, Sydney, 2008-2009.

Ph.D. in Cognitive Neuroscience, The University of Sydney, 2010-2013.

Postdoctoral Fellow, The University of Sydney, 2013-2014.

## **Honors and Awards**

Scholarship for Cognitive Neuroscience – The University of Sydney. \$25,000/1y, 2011

Parkes Rotary Scholarship. \$50,000/2y, 2012-2013.

Finalist, Rita and John Cornforth Medal – The University of Sydney.

NHMRC CJ Martin Fellowship. \$368,766/4y, 2014-2018.

## **Grants**

Parkinson's New South Wales Seed Grant. \$50,000/1y, 2014

Parkinson's New South Wales Seed Grant. \$50,000/1y, 2015

## Peer Reviewed Publications

Citations – 1133; H-index – 19 (as of 17/9/16)

### 2010-2012

1. Naismith, S. N., **Shine, J. M.** and Lewis, S. J. G. (2010). The specific contributions of set-shifting to freezing of gait in Parkinson's Disease. *Mov Disord*, 25(8):1000-4. \* - cited 58 times since 2010.
2. Naismith, S. L., Terpenning, Z. T., **Shine, J. M.**, and Lewis, S. J. G. (2011) Neuropsychological functioning in Parkinson's disease: Differential relationships with self-reported sleep disturbance. *Mov Disord*, 26(8):1537-41.
3. Naismith, S. N., Pereira, M., **Shine, J. M.** and Lewis, S. J. G. (2011) How well do caregivers detect mild cognitive change in Parkinson's disease? *Mov Disord*, 26(1):161-4.
4. **Shine, J. M.**, Halliday, G. M., Carlos, M., Naismith, S. L. and Lewis, S. J. G. (2012). Investigating visual misperceptions in Parkinson's disease: a novel behavioural paradigm. *Mov Disord*, 27(4):500-5. \* - Nominated by the Faculty of 1000 (April, 2012).
5. **Shine, J. M.**, Halliday, G. H., Naismith, S. L., and Lewis, S. J. G. (2011). Visual misperceptions and hallucinations in Parkinson's disease: dysfunction of attentional control networks? *Mov Disord*, 26(12): 2154-9.
6. **Shine, J. M.**, Moore, S. T., Bolitho, S. J., Dilda, V., Morris, T. R., Naismith, S. L., and Lewis, S. J. G. (2011). Assessing the utility of Freezing of Gait questionnaires in Parkinson's Disease. *Parkinsonism Relat Disord*, 18(1):25-9.
7. **Shine, J. M.**, Naismith, S. L. and Lewis, S. J. G. (2011). The pathophysiological mechanisms underlying freezing of gait in Parkinson's Disease. *J Clin Neurosci*, 18(9):1054-7.
8. **Shine, J. M.**, Naismith, S. L. and Lewis, S. J. G. (2011). Utilising fMRI to identify the neural correlates of the freezing phenomenon in Parkinson's Disease. *J Clin Neurosci*, 18(6):807-10.
9. Handojoseno, A. M., **Shine, J. M.**, Nguyen, T. N., Tran, Y., Lewis, S. J. G. and Nguyen, H. (2012). The detection of freezing of gait in Parkinson's disease patients using EEG signals based on wavelet decomposition. *Conf Proc IEEE Eng Med Biol Soc*, 2012:69-72.
10. Lewis, S. J. G., **Shine, J. M.**, Duffy, S., Halliday, G. M. and Naismith, S. L. (2012). Anterior cingulate integrity: executive and neuropsychiatric features in Parkinson's Disease. *Mov Disord*, 27(10): 1262-7.
11. Morris, T. R., Cho, C., Dilda, V., **Shine, J. M.**, Naismith, S. L., Lewis, S. J. G. and Moore, S. T. (2012). A comparison of clinical and objective measures of freezing of gait in Parkinson's disease. *Parkinsonism Relat Disord*, 18(5): 572-7.

### 2013

12. Gilat, M., **Shine, J. M.**, Bolitho, S. J., Matar, E., Kamsma, Y. P, Naismith, S. L., and Lewis, S. J. G. (2013). Variability of stepping during a virtual reality paradigm in Parkinson's disease patients with and without freezing of gait. *PLoS One*, 8(6):e66718.
13. **Shine, J. M.**, Matar, E., Bolitho, S. J., Dilda, V., Morris, T. R., Naismith, S. L., Moore, S. T. and Lewis, S. J. G. (2012). Modeling freezing of gait in Parkinson's disease using a virtual reality paradigm. *Gait and Posture*, 38(1): 104-8.
14. Handojoseno, A. M., **Shine, J. M.**, Nguyen, T. N., Tran, Y., Lewis, S. J. G. and Nguyen, H. (2013). Using EEG spatial correlation, cross frequency energy, and wavelet coefficients for the prediction of Freezing of Gait in Parkinson's disease patients. *Conf Proc IEEE Eng Med Biol Soc*, 2013:4263-4266.

15. Matar, E., **Shine, J. M.**, Naismith, S. L., and Lewis, S. J. G. (2013). Using virtual reality to explore the role of conflict resolution and environmental salience in freezing of gait in Parkinson's disease. *Parkinsonism Relat Disord*, 19(11):937-942.
16. Moore, S. T., Yungher, D. A., Morris, T. R., Dilda, V., Macdougall, H. G., **Shine, J. M.**, Naismith, S. L., Lewis, S. J. (2013). Autonomous identification of freezing of gait in Parkinson's disease from lower-body segmental accelerometry. *J NeuroEng Rehab*, 10:19.
17. Morris, T. R., Cho, C., Dilda, V., **Shine, J. M.**, Naismith, S. L., Lewis, S. J. G., Moore, S. T. (2013). Clinical assessment of freezing of gait in Parkinson's disease from computer-generated animation. *Gait Posture*, 38(2):326-9.
18. O'Callaghan, C., Naismith, S. L., **Shine, J. M.**, Lewis, S. J. G., Hornberger, M. (2013). A novel bedside task to tap inhibitory dysfunction and fronto-striatal atrophy in Parkinson's disease. *Parkinsonism Relat Disord*, 19(9):827-830.
19. **Shine, J. M.**, Matar, E., Ward, P. B., Frank, M. J., Moustafa, A. A., Pearson, M., Naismith, S. L. and Lewis, S. J. G. (2013). Freezing of gait in Parkinson's disease is associated with functional decoupling between the cognitive control network and the basal ganglia. *Brain*, 136(12):3671-3681.
20. **Shine, J. M.**, Ward, P.B., Matar, E., Bolitho, S. J., Pearson, M., Naismith, S. L. and Lewis, S. J. G. (2013). Exploring the cortical and subcortical fMRI changes associated with freezing in Parkinson's disease. *Brain*, 136(4): 1204-15. \* - Nominated by the Faculty of 1000 (April, 2013) and MDLinx.com (March, 2013) and cited 18 times since 2013.
21. **Shine, J. M.**, Moustafa, A. A., Matar, E., Frank, M. J., and Lewis, S. J. G. (2013). The role of frontostriatal impairment in freezing of gait in Parkinson's disease. *Frontiers in Systems Neuroscience*, 7:61.
22. **Shine, J. M.**, Handojoseno, A. M., Nguyen, T. N., Tran, Y., Naismith, S. L., Nguyen, H., and Lewis, S. J. G. (2013). Abnormal patterns of theta frequency oscillations during the temporal evolution of freezing of gait in Parkinson's disease. *Clinical Neurophysiology*, 125(3):569-575.
23. **Shine, J. M.**, Bolitho, S. J., Gilat, M., Matar, E., Halliday, G. M., Naismith, S. L. and Lewis, S. J. G. (2013). The role of dysfunctional attentional control networks in visual misperceptions in Parkinson's Disease. *Human Brain Mapping*, 35(5):2206-19.
24. **Shine, J. M.**, Ward, P.B., Matar, E., Bolitho, S. J., Pearson, M., Naismith, S. L. and Lewis, S. J. G. (2013). Differential neural activation patterns in patients with Parkinson's disease and freezing of gait in response to concurrent cognitive and motor load. *PLoS ONE*, 8(1): e52602.
25. **Shine, J. M.**, Naismith, S. L. and Lewis, S. J. G. (2013). The differential contributions of motor, cognitive and affective disturbance to freezing of gait in Parkinson's Disease. *Clin Neurol Neurosurg*, 115(5): 542-5. \* Nominated by MDLinx.com (April, 2013).
26. **Shine, J. M.**, Moore, S. T., Naismith, S. L., Palavra, N.C., Dilda, V., Morris, T. R., Lewis, S. J. G. (2013). Attentional set-shifting deficits correlate with the severity of freezing of gait in Parkinson's disease. *Parkinsonism Relat Disord*, 19(3): 388-90.
27. O'Callaghan, C., Moustafa, A. A., de Wit, S., **Shine, J. M.**, Robbins, T. W., Lewis, S. J. G. and Hornberger, M. (2013). Fronto-striatal gray matter contributions to discrimination learning in Parkinson's disease. *Frontiers in Computational Neuroscience*, 7, 180.

## 2014

28. Dunn, C. J., Duffy, S. L., Hickie, I. B., Lagopoulos, J., Lewis, S. J., Naismith, S. L. and **Shine, J. M.** (2014). Deficits in episodic memory retrieval reveal impaired default mode network connectivity in amnesic mild cognitive impairment. *Neuroimage Clinical*, 4: 473-480.

29. Hall, J. M., **Shine, J. M.**, Walton, C. C., Gilat, M., Kamsma, Y. P., Naismith, S. L. and Lewis, S. J. G. (2014). Early phenotypic differences between Parkinson's disease patients with and without freezing of gait. *Parkinsonism Relat Disord*, 20(6):604-7.
30. Matar, E., **Shine, J. M.**, Naismith, S. L. and Lewis, S. J. G. (2014). Virtual reality walking and dopamine: Opening new doorways to understanding freezing of gait in Parkinson's disease. *J Neurol Sci*, 344(1-2):182-5.
31. Muller, A. J., **Shine, J. M.**, Halliday, G. M., and Lewis, S. J. G. (2014). Visual hallucinations in Parkinson's disease: competing models. *Mov Disord*, 29(13):1591-8.
32. O'Callaghan, C., Muller, A. and **Shine, J. M.** (2014). Clarifying the role of neural networks in complex hallucinatory phenomena. *J Neurosci*, 34(36):11865-7.
33. **Shine, J. M.** and Shine, R. (2014). Delegation to automaticity: the driving force behind human cognitive evolution? *Frontiers in Neuroscience*, 8: 90.
34. **Shine, J. M.**, O'Callaghan, C., Halliday, G. M., and Lewis, S. J. G. (2014). Tricks of the mind: visual hallucinations as disorders of attention. *Progress in Neurobiology*, 116:58-65.
35. Vercruyse, S., Gilat, M., **Shine, J. M.**, Heremans, E., Lewis, S. J. G. and Nieuwboer, A. (2014). Freezing beyond gait in Parkinson's disease: a review of current neurobehavioral evidence. *Neuroscience and Biobehavioural Reviews*, 43:213-27.
36. Walton, C. C., **Shine, J. M.**, Mowszowski, L., Naismith, S. L., and Lewis, S. J. G. (2014). Freezing of gait in Parkinson's disease: Current treatments and the potential role for cognitive training. *Restorative Neurology and Neuroscience*, 32(3):411-22.
37. Yungheer, D., Morris, T. R., Dilda, V., Shine, J. M., Naismith, S. L., Lewis, S. J. G., and Moore, S. T. (2014). Temporal characteristics of high-frequency lower-limb oscillation during freezing of gait in Parkinson's disease. *Parkinson's disease*, 2014, 606427.
38. O'Callaghan, C., **Shine, J. M.**, Lewis, S. J. G. and Hornberger, M. (2014). Neuropsychiatric symptoms in Parkinson's disease: fronto-striatal atrophy contributions. *Parkinsonism and Related Disorders*, 20(8), 867-72.

## 2015

39. Bell, P. T., Gilat, M., O'Callaghan, C., Copland, D. A., Frank, M. J., Lewis, S. J. G. and **Shine, J. M.** (2015). Dopaminergic basis for impairments in functional connectivity across subdivisions of the striatum in Parkinson's disease. *Hum Brain Mapp*, 36(4): 1278-91.
40. Bell, P. T. and **Shine, J. M.** (2015). Estimating large-scale network convergence in the human functional connectome. *Brain Connectivity*, 5(9):565-574.
41. Gilat, M., **Shine, J.M.**, Walton, C.C., O'Callaghan, C., Hall, J.M. and Lewis, S.J.G. (2015). Brain activation underlying turning in Parkinson's disease patients with and without freezing of gait: a virtual reality fMRI study. *Nature Parkinson's Disease*, 15020, 1.
42. Hall, J., Gilat, M., Lewis, S. J. G. and **Shine, J. M.** (2015). Does dominant pedunculopontine nucleus exist? Probably not. *Brain*, 1358(5):e346.
43. Lewis, S. J. G. and **Shine, J. M.** (2016). The Next Step: A Common Neural Mechanism for Freezing of Gait. *The Neuroscientist*, 22(1):72-82.
44. Poldrack, R.A., Laumann, T., **Shine, J. M.**, Mumford, J. (2015). Long-term neural and physiological phenotyping of a single human. *Nature Communications*, 6, 8885.
45. **Shine, J. M.**, Koyejo, O., Bell, P. T., Gorgolewski, K. J. , Gilat M. and Poldrack, R. A. (2015). Estimation of dynamic functional connectivity using Multiplication of Temporal Derivatives. *NeuroImage*, 122:399-407.

46. **Shine, J. M.**, Muller, A. J., O'Callaghan, C., Hornberger, M., Halliday, G. M. and Lewis, S. J. G. (2015). Abnormal connectivity between the default mode and the visual system underlies the manifestation of visual hallucinations in Parkinson's disease: a task-based fMRI study. *Nature Parkinson's Disease*, 15003, 1.
47. Szeto, J.Y.Y., O'Callaghan, C., **Shine, J.M.**, Walton, C.C., Lewis, S.J.G. (2015). The relationships between mild cognitive impairment and phenotype in Parkinson's disease. *Nature Parkinson's Disease*, 15015, 1.
48. Handojoseno, A. M., **Shine, J. M.**, Nguyen, T. N., Tran, Y., Lewis, S. J. G. and Nguyen, H. (2015). Analysis and predication of freezing of gait using EEG brain dynamics. *IEEE Trans Neural Syst Rehabil Eng*, 23(5), 887-95.
49. Walton, C. C., **Shine, J. M.**, Mowszowski, L., Gilat, M., Hall, J. M., O'Callaghan, C., Naismith, S. L., and Lewis, S. J. G. (2015). Impaired cognitive control in Parkinson's disease patients with freezing of gait in response to cognitive load. *Journal of Neural Transmission*, 122(5), 653-60.
50. Lee, J. M., **Shine, J. M.**, and Lewis, S. J. G. (2015). What matters to people with Parkinson's disease living in Australia? *Journal of Clinical Neuroscience*, 22(2), 338-41.
51. Walton, C. C., **Shine, J. M.**, Hall, J. M., O'Callaghan, C., Mowszowski, L., Gilat, M., Szeto, J. Y., Naismith, S. L., and Lewis, S. J. G. (2015). The major impact of freezing of gait on quality of life in Parkinson's disease. *Journal of Neurology*, 262(1): 108-15.
52. **Shine, J. M.**, Keogh, R., O'Callaghan, C., Muller, A. J., Lewis, S. J. G. and Pearson, J. (2015). Imagine that: elevated sensory strength of mental imagery in individuals with Parkinson's disease and visual hallucinations. *Proceedings of the Royal Society B*, 282, 20142047.
53. O'Callaghan, C., **Shine, J. M.**, Lewis, S. J. G., Andrews-Hanna, J. R., and Irish, M. (2015). Shaped by our thoughts – a new task to assess spontaneous cognition and its associated neural correlates in the default network. *Brain and Cognition*, 93, 1-10.
54. Walton, C. C., Szeto, J. Y. Y., **Shine, J. M.**, and Lewis, S. J. G. (2015). The 'Cognitions' index of the Parkinson's disease Questionnaire-39 relates to sleep disturbance and hallucinations. *Parkinsonism and Related Disorders*, 21(3), 349-50.
55. **Shine, J. M.**, Mills, J. M. Z., Qiu, J., O'Callaghan, C., Terpening, Z., Halliday, G. M., Naismith, S. L. and Lewis, S. J. G. (2015). Validation of the Psychosis and Hallucinations Questionnaire in Non-demented patients with Parkinson's disease. *Movement Disorders: Clinical Practice*, 2(2), 175-81.
56. Hall, J.M., **Shine, J.M.**, O'Callaghan, C., Walton CC, Gilat, M., Naismith, S. L., and Lewis SJG (2016). Freezing of Gait and its Associations in the Early and Advanced Clinical Motor Stages of Parkinson's Disease: A Cross-Sectional Study. *Journal of Parkinson's disease*, 5(4), 881-91.
57. Walton, C. C., O'Callaghan, C., Hall, J. M., Gilat, M., Mowszowski, L., Naismith, S. L., Burrell, J. R., **Shine, J. M.**, and Lewis, S. J. G. (2015). Antisaccade errors reveal cognitive control deficits in Parkinson's disease with freezing of gait. *Journal of Neurology*, 262(12), 2745-54.

## 2016

58. O'Callaghan, C., Kveraga, K., **Shine, J.M.**, Adams, R.B., Bar, M. (2016). Predictions penetrate perception: Converging insights from brain, behaviour and disorder. *Consciousness and Cognition. In Press*.
59. O'Callaghan, C., Kveraga, K., **Shine, J.M.**, Adams, R.B., Bar, M. (2016). Convergent evidence for top-down effects from the "predictive brain". *Behavioral and Brain Science. Ahead of print*.
60. **Shine, J. M.**, Eisenberg, I. and Poldrack, R. A. (2016). Computational specificity in the human brain. *Behavioral and Brain Sciences*. e131.

61. Alderson-Day, B., Diederer, K., Fernyhough, C., Ford, J., Horga, G., Margulies, D., McCarthy-Jones, S., Northoff, G., **Shine, J.M.**, Turner, J., van de Ven, V., van Lutterveld, R., Waters, F. and Jardri, R. (2016). Auditory hallucinations and the brain's resting-state networks: findings and methodological observations. *Schizophrenia Bulletin*, 42(5):1110-23
62. McKinnon, A.C., Lagopoulos, J., Terpenning, Z., Grunstein, R., Hickie, I. B., Batchelor, J., Lewis, S. J. G., Duffy, S., **Shine, J. M.** and Naismith, S. L. (2016). Sleep disturbance in mild cognitive impairment is associated with alterations in the brain's default mode network. *Behavioral Neuroscience*, 130(3), 305-15.
63. Hall, J.M., O'Callaghan, C., **Shine, J.M.**, Muller AJ, Phillips JR, Walton CC, Lewis SJG & Moustafa AA (2016). Dysfunction in attentional processing in patients with Parkinson's disease and visual hallucinations. *Journal of Neural Transmission*, 123(5):503-7.
64. O'Callaghan, C., Hornberger, M., Balsters, J.H., Halliday, G.M., Lewis, S.J.G., **Shine, J.M.** (2016). Cerebellar atrophy in Parkinson's disease and its implication for network connectivity. *Brain*, 139(3):845-55.
65. O'Callaghan, C., Bertoux, M., Irish, M., **Shine, J.M.**, Wong, S., Spiliopoulos, L., Hodges, J.R., Hornberger, M. (2016). Fair play: social norm compliance failures in behavioural variant frontotemporal dementia. *Brain*, 139(1):204-16.
66. **Shine, J.M.** (2016). Electrophysiological insights into freezing in Parkinson's disease. *Clinical Neuroscience*, 127(6):2334-6.
67. **Shine, J.M.**, Koyejo, O., Poldrack, R.A. (2016). Temporal metastates are associated with differential patterns of time-resolved connectivity, network topology, and attention. *Proceedings of the National Academy of Sciences*, 113(35):9888-91.
68. Bell, P.T. and **Shine, J.M.** (2016). Subcortical Contributions to Large-Scale Network Communication. *Neuroscience and Biobehavioral Reviews. Ahead of Print.*
69. **Shine, J.M.**, Bissett, P.G., Bell, P.T., Koyejo, O., Balsters, J.H., Gorgolewski, K.J., Moodie, C.A. and Poldrack, R.A. (2016). The Dynamics of Functional Brain Networks: Integrated Network States during Cognitive Task Performance. *Neuron. Ahead of Print.*

## Book Chapters

1. Lewis, S. J. G., **Shine, J. M.**, Brooks, D. B. and Halliday, G. H., (2014). Hallucinogenic mechanisms: pathological and pharmacological insights. In *The Neuroscience of Visual Hallucinations*.
2. Ehgoetz-Martens, K., Shine, J. M. and Lewis, S. J. G. (2016). Using virtual reality to advance the understanding and rehabilitation of gait impairments in Parkinson's disease. In *Locomotion and Balance in Elderly and PD*.

## Teaching

- Associate Supervisor for three current PhD candidates (Matthew Georgiades, Moran Gilat and Courtney Walton).

## Memberships and Service

- Secretary, Organization for Human Brain Mapping – Postdoc Special Interest Group (2015-2016)

- Invited to Academy of Science: Theo Murphy High Flyers Think Tank (2013)
- Member, Movement Disorders Society (2013 – present)
- Member, Australasian Cognitive Neuroscience Society (2012 – present)
- Member, Organisation for Human Brain Mapping (2011 – present)

## Peer Review

- *Ad hoc reviewer* for Brain, Movement Disorders, Neuroimage, Parkinson's disease, Journal of Parkinson's Disease, Parkinsonism and Related Disorders, Neurobiology of Aging, Journal of Neurology, Journal of Neural Transmission, American Journal of Geriatric Psychiatry, Journal of the Neurological Sciences, Gait & Posture, Brain Topography, Sensors, Cerebral Cortex and others.
- Publons Review profile – <https://publons.com/author/357271/james-m-shine#profile>

## Social Media

- Google Scholar – <https://scholar.google.com/citations?user=Uxvu7CsAAAAJ&hl=en>
- ResearchGate – [https://www.researchgate.net/profile/James\\_Shine](https://www.researchgate.net/profile/James_Shine)
- Academia.edu – <https://stanford.academia.edu/JamesShine>
- Twitter – @jmacshine

## Referees

- Prof Ian B Hickie – Director, Brain and Mind Center
  - [ian.hickie@sydney.edu.au](mailto:ian.hickie@sydney.edu.au)
- A/Prof Simon JG Lewis – Senior Lecturer in Cognitive Neuroscience, University of Sydney
  - [simon.lewis@sydney.edu.au](mailto:simon.lewis@sydney.edu.au)
- Prof Russell A Poldrack – Director, Center for Reproducible Neuroscience, Stanford University
  - [russpold@stanford.edu](mailto:russpold@stanford.edu)
- Prof Glenda M Halliday – NHMRC Senior Principal Research Fellow, University of NSW
  - [glenda.halliday@neura.edu.au](mailto:glenda.halliday@neura.edu.au)
- Prof Josef Parvizi – Director, Behavioral & Cognitive Neuroscience, Stanford University
  - [jparvizi@stanford.edu](mailto:jparvizi@stanford.edu)
- Chris Davis – President of Parkinson's NSW Charity
  - [chris.davis@uts.edu.au](mailto:chris.davis@uts.edu.au)