

Joshua J. Foster

Postdoctoral Fellow

Department of Psychological and Brain Sciences | Center for Systems Neuroscience

Boston University

joshuafoster@uchicago.edu

[Google Scholar](#) | [GitHub](#) | [Open Science Framework](#)

Education

PhD	University of Chicago Psychology Adviser: Edward Awh	2019
MS	University of Oregon Psychology Adviser: Edward Awh	2015
MSc	Victoria University of Wellington Cognitive and Behavioural Neuroscience Adviser: Gina Grimshaw	2013
BSc	Victoria University of Wellington Mathematics and Psychology	2011

Publications

* denotes that authors contributed equally to the work

Sutterer DW, **Foster JJ**, Serences JT, Vogel EK, Awh E (2019). Alpha-band oscillations track the retrieval of precise spatial representations from long-term memory. *Journal of Neurophysiology*.

Sutterer DW*, **Foster JJ***, Adam KCS, Vogel EK, Awh E (2019). Item-specific delay activity demonstrates concurrent storage of multiple active neural representations in working memory. *PLOS Biology*, 17:e3000239.

Foster JJ, Awh E (2019). The role of alpha oscillations in spatial attention: limited evidence for a suppression account. *Current Opinion in Psychology*, 29: 34-40.

van Moorselaar D, **Foster JJ**, Sutterer DW, Theeuwes J, Olivers CNL, Awh E (2018). Spatially selective alpha oscillations reveal moment-by-moment trade-offs between working memory and attention. *Journal of Cognitive Neuroscience*, 30: 256-266.

Sprague TC, Adam KCS, **Foster JJ**, Rahmati M, Sutterer DW, Vo VA (2018). Inverted encoding models assay population-level stimulus representations, not single-unit neural tuning. *eNeuro*.

Foster JJ, Bsales EM, Jaffe RJ, Awh E (2017). Alpha-band activity reveals spontaneous representations of spatial position in visual working memory. *Current Biology*, 27: 3216-3223.

Foster JJ, Sutterer DW, Serences JT, Vogel EK, Awh E (2017). Alpha-band oscillations enable spatially and temporally resolved tracking of covert spatial attention. *Psychological Science*, 28: 929-941.

Foster JJ, Sutterer DW, Serences JT, Vogel EK, Awh E (2016). The topography of alpha-band activity tracks the content of spatial working memory. *Journal of Neurophysiology*, 115: 167-177.

Foster JJ*, Adam KCS* (2014). Is feature-based attention always spatially global during visual search? *Journal of Neuroscience*, 34: 8662-8664.

Grimshaw GM, **Foster JJ**, Corballis PM (2014). Frontal and parietal EEG asymmetries interact to predict attentional biases to threat. *Brain & Cognition*, 90: 76-86.

Invited Talks

Oscillatory alpha-band activity tracks spatial selective attention and spatial working memory. Vision Division Brownbag, Department of Psychology, University of Illinois at Urbana-Champaign, November 2015.

Conference Proceedings: Talks

Foster JJ, Bsales EM, Awh E (2018, May). The N2pc does not reflect a shift of covert spatial attention. Vision Sciences Society Annual Meeting, St. Pete Beach, FL.

Awh E, **Foster JJ**, Serences JT, Vogel EK (2015, November). Time-resolved tracking of covert spatial attention using rhythmic brain activity. The Psychonomic Society Annual Meeting, Chicago, IL.

Foster JJ, Serences JT, Vogel EK, Awh E (2015, May). EEG alpha rhythms track the deployment of spatial attention. Vision Sciences Society Annual Meeting, St. Pete Beach, FL.

Foster JJ, Awh E (2014, August). Distinguishing between true guessing and low-precision representations in visual working memory. Cognitive Science Association for Interdisciplinary Learning Annual Meeting, Hood River, OR.

Foster JJ, Corballis PM, Hunkin LM, Grimshaw GM (2012, April). Relating EEG asymmetries to emotional biases in attention. Kiwi Cognition and Memory Annual Meeting, Wellington, New Zealand.

Conference Proceedings: Recent Poster Presentations

Full list available upon request.

Foster JJ, Awh E (2019, May). Characterizing the influence of spatial attention on stimulus-evoked cortical representations. Vision Sciences Society Annual Meeting, St. Pete Beach, FL.

Foster JJ, Bsales EM, Awh E (2018, November). Covert spatial attention speeds target individuation. Society for Neuroscience Annual Meeting, San Diego, CA.

Foster JJ*, Sutterer DW*, Adam KCS, Vogel EK, Awh E (2017, November). Alpha-band activity reveals concurrent storage of independent locations in spatial working memory. Society for Neuroscience Annual Meeting, Washington, DC.

Awards and Fellowships

Center for Systems Neuroscience Fellowship, Boston University	2019-present
Social Sciences Fellowship, University of Chicago	2015-2019
Graduate Research Fellowship, University of Oregon	2013-2015
Fulbright Sciences and Innovation Graduate Award	2013

Freemasons Postgraduate Scholarship	2012
Victoria University of Wellington Master's (by thesis) Scholarship	2012
Victoria University of Wellington Graduate Award	2011
Victoria University of Wellington Summer Research Scholarship	2010
Freemasons University Scholarship	2010
Studylink Bonded Merit Scholarship	2009

Teaching Experience

Teaching Assistantships (responsible for teaching lab/discussion sections and grading)

Attention and Working Memory in the Mind and Brain, University of Chicago	2019
Cognitive Psychology, University of Chicago	2018
Sensation and Perception, University of Chicago	2016
Cognitive Development, University of Chicago	2016
Behaviour Analysis, Victoria University of Wellington	2013
Research Methods, Victoria University of Wellington	2013
Cognitive Psychology, Victoria University of Wellington	2012, 2013

Professional Membership

Society for Neuroscience
Vision Sciences Society

Ad-Hoc Reviewing

Cortex
Current Biology
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, and Cognition
NeuroImage
Psychological Science
Psychophysiology
Scientific Reports