**Joshua J. Foster**

Postdoctoral Fellow

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[Google Scholar](https://scholar.google.com/citations?user=Bs2GiY8AAAAJ&hl=en) | [GitHub](https://github.com/joshuajfoster) | [Open Science Framework](https://osf.io/u89ta/)

**Education**

PhD **University of Chicago**  2019

Psychology

Adviser: Edward Awh

MS **University of Oregon** 2015

Psychology

Adviser: Edward Awh

MSc **Victoria University of Wellington** 2013

Cognitive and Behavioural Neuroscience

Adviser: Gina Grimshaw

BSc **Victoria University of Wellington** 2011

Mathematics and Psychology

**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