Geoffrey Brookshire
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https://github.com/gbrookshire
Google scholar page

Postdoctoral experience

2018–2021 Postdoctoral Research Fellow
University of Birmingham
PI: Ole Jensen

Education

2018 Ph.D. in Psychology - Integrative Neuroscience
University of Chicago
PI: Daniel Casasanto

2017-18 Visiting student at Cornell University

2013 M.A. in Experimental Psychology
The New School for Social Research
PI: Daniel Casasanto

2009 B.A. with honors in Psychology
University of California – Berkeley
PI: Rich Ivry

Grants and awards

2022 NIH grant 1R44AG080940 ($2.5M award; co-investigator)
NIH grant 1R41AG078039-01A1 ($300k award; co-investigator)
2016 William Orr Dingwall Foundation Neurolinguistics Fellowship
Center for Gesture, Sign and Language Research Grant
2014 Arts, Science, & Culture Graduate Collaboration Grant
2013 Norman H. Anderson Research Fund
New School for Social Research Outstanding M.A. Graduate award
2011–2013 New School for Social Research Dean's Scholarship
2012 National Science Foundation GRFP Honorable Mention

2011	Robert J. Glushko & Pamela Samuelson Foundation Student Travel Grant
2009	Highest distinction in general scholarship, UC Berkeley
2008–2009	Robert & Colleen Haas Scholar
2005	Flinn Foundation Scholarship Finalist

Publications

Brookshire, G. (2022). Putative rhythms in attentional switching can be explained by aperiodic temporal structure. *Nature Human Behaviour,* DOI: 10.1038/s41562-022-01364-0

Brookshire, G., Mangelsdorf, H.H., Sava-Segal, C., Reis, K., Nusbaum, H., Goldin-Meadow, S., Casasanto, D. (2021). Expertise modulates neural stimulus-tracking. *ENeuro 8*(4), 0065-21.2021. DOI: 10.1523/ENEURO.0065-21.2021

Lucero, C., Brookshire, G., Sava-Segal, C., Bottini, R., Goldin-Meadow, S., Vogel, E. K., & Casasanto, D. (2020.) Unconscious number discrimination in the human visual system. *Cerebral Cortex 30*(11), 5821-5829.

Brookshire, G. & Casasanto, D. (2018). Approach motivation in human cerebral cortex. *Philosophical Transactions of the Royal Society B*. DOI: 10.1098/rstb.2017-0141

Brookshire, G., Lu, J., Nusbaum, H. C., Goldin-Meadow, S., & Casasanto, D. (2017). Visual cortex entrains to sign language. *Proceedings of the National Academy of Sciences*, *114*(24), 6352-6357.

Gray, S. J., Brookshire, G., Casasanto, D., & Gallo, D. (2015). Electrically Stimulating Prefrontal Cortex at Retrieval Improves Recollection Accuracy. *Cortex, 73*, 188-194.

Casasanto, D., Brookshire, G., & Ivry, R. (2015). Meaning is not a reflex: Context dependence of motor-meaning congruity effects. *Cognitive Science, 39*(8), 1979-1986.

Casasanto, D., Jasmin, K., Brookshire, G. & Gijssels, T. (2014). The QWERTY Effect: How typing shapes word meanings and baby names. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 296–301). Austin, TX: Cognitive Science Society.

Brookshire, G., Graver, C., & Casasanto, D. (2013). Motor Asymmetries Predict Neural Organization of Emotion. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 245–250). Austin, TX: Cognitive Science Society.

Brookshire, G. & Casasanto, D. (2012). Motivation and Motor Control: Hemispheric Specialization for Approach Motivation Reverses with Handedness. *PLoS ONE 7(4)*: e36036. doi:10.1371/journal.pone.0036036

Brookshire, G. & Casasanto, D. (2011). Motivation and Motor Control: Hemispheric Specialization for Motivation Reverses with Handedness. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 2610-2615).

Austin, TX: Cognitive Science Society.

Brookshire, G., Ivry, R., & Casasanto, D. (2010). Modulation of motor-meaning congruity effects for valenced words. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 1940-1945). Austin, TX: Cognitive Science Society.

Talks

* Invited talks

2022	* Beijing Normal University
2021	* CEA NeuroSpin – INSERM Cognitive Neuroimaging Unit
2020	* Psycholinguistics group meeting, University of Birmingham, UK
2018	* Chang lab, UCSF
	* Meetings on Methodology for MEEG, University of Birmingham, UK
	* Speech and Language Consortium meeting, University of Westminster, UK
2017	89th annual meeting of the Midwestern Psychological Association, Chicago, IL
	Human Development Brown Bag talk, Cornell
2015	Art, Science and Culture Initiative at UChicago
	University of Chicago Neuroscience Annual Retreat
	Humanities Day at UChicago
2014	Cognitive Workshop, University of Chicago
	NEURO chats, University of Chicago
2013	35th annual meeting of the Cognitive Science Society, Berlin, Germany
2011	33rd annual meeting of the Cognitive Science Society, Boston, MA

Posters

Brookshire, G., Wu, Y. C., Quirk, C., Gerrol, S., Merrill, D. A., Caselli, R. J, Lucero, C. (2022). Alzheimer's disease status can be predicted using a novel fractal-based metric computed from resting-state EEG. Poster presented at the 2022 Alzheimer's Association International Conference.

Quirk, C., Brookshire, G., Wu, Y.C., Lucero, C. (2022). Building an EEG-based Alzheimer's Diagnostic: What is the Optimal Cross-Validation Method? Poster presented at the 2022 Alzheimer's Association International Conference.

Wu, Y. C., Quirk, C., Brookshire, G., Gerrol, S., Merrill, D. A., Caselli, R. J, Lucero, C. (2022). A novel machine learning technique using resting-state EEG to assess and monitor cognitive impairment. Poster presented at the 2022 Alzheimer's Association International Conference.

Brookshire, G., Mangelsdorf, H.H., Sava-Segal, C., Reis, K., Nusbaum, H., Goldin-Meadow, S.,

Casasanto, D. (2021). Expertise modulates neural tracking of dance and sign language. Poster presented at the 2021 meeting of the Cognitive Science Society.

Brookshire, G., Mangelsdorf, H.H., Sava-Segal, C., Reis, K., Nusbaum, H., Goldin-Meadow, S., Casasanto, D. (2020). Cortical stimulus-tracking depends on expertise. Poster presented at the 2020 meeting of the Society for the Neurobiology of Language.

Brookshire, G., Landau, A., & Jensen, O. (2019). Investigating rhythmic attentional sampling using rapid frequency-tagging in MEG. Poster presented at the MEG UK Conference in Cardiff, UK.

Brookshire, G. & Casasanto, D. (2018). Cortex can entrain to predictable sequences even in the absense of periodicity. Poster presented at the 25th annual meeting of the Cognitive Neuroscience Society in Boston, MA.

Lucero, C., Brookshire, G., Quirk, C., Goldin-Meadow, S., Vogel, E., & Casasanto, D. (2018). Unconscious number discrimination in the human visual system. Poster presented at the 25th annual meeting of the Cognitive Neuroscience Society, Boston, MA.

Brookshire, G. & Casasanto, D. (2018). Cortical phase-locking to predictable temporal sequences in the absence of periodicity. Poster presented at the 31st annual CUNY Sentence Processing Conference, Davis, CA.

Yap, D. F., Brookshire, G., & Casasanto, D. (2018). Beat gestures encode spatial semantics. Poster presented at the 31st annual CUNY Sentence Processing Conference, Davis, CA.

Brookshire, G. & Casasanto, D. (2017). Cortical entrainment depends on temporal predictability, not periodicity. Poster presented at the 9th annual meeting of the Society for the Neurobiology of Language, Baltimore, MD. (Selected for presentation as a poster slam.)

Brookshire, G., Lu, J., Nusbaum, H., Goldin-Meadow, S., & Casasanto, D. (2017). Visual cortex entrains to low-frequency amplitude variability in sign language. Poster presented at the 24th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Brookshire, G., Turk-Browne, N.B., & Casasanto, D. (2016). Top-down predictions in statistical learning carried by alpha oscillations. Poster presented at the 8th annual meeting for the Society for the Neurobiology of Language, London.

Brookshire, G. & Casasanto, D. (2016). Top-down predictions in statistical learning are carried by alpha oscillations. Poster presented at the 28th annual convention of the Association for Psychological Science, Chicago, IL.

Brookshire, G. & Casasanto, D. (2015). Associative networks learn grammatical categories from sequential order alone. Poster presented at the 56th annual meeting of the Psychonomic Society, Chicago, IL.

Brookshire, G. & Casasanto, D. (2015). Associative networks learn abstract grammatical categories. Poster presented at the 7th annual meeting of the Society for the Neurobiology of Language, Chicago, IL.

Brookshire, G. & Casasanto, D. (2013). Manual motor asymmetries predict hemispheric lateralization of

emotion. Poster presented at the 3rd annual meeting of the Society for Social Neuroscience (S4SN), San Diego, CA.

Brookshire, G. & Casasanto, D. (2013). Brief Motor Experience Reverses Visual Hemifield Effects for Emotional Faces. Poster presented at the 25th annual convention of the Association for Psychological Science, Washington, DC.

Brookshire, G. & Casasanto, D. (2013). Manual motor asymmetries predict neural organization of emotion. Poster presented at the 20th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Brookshire, G. & Casasanto, D. (2011). Brief motor experience reverses visual hemifield effects. Poster presented at the 18th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Brookshire, G. & Casasanto, D. (2010). Motor Fluency Predicts Space-Valence Associations. Poster presented at The Embodied Mind: Perspectives & Limitations, Nijmegen, Netherlands.

Brookshire, G., Ivry, R., & Casasanto, D. (2010). Modulation of motor-meaning congruity effects for valenced words. Poster presented at the FENS Forum of European Neuroscience, Amsterdam, Netherlands.

Service and memberships

Ad hoc reviewer: Acta Psychologia; Attention, Perception & Psychophysics; Brain and Language; Cerebral Cortex; Cognition; Cognitive Processing; Cognitive Science; Cognitive Science Society conference proceedings; Emotion; European Journal of Neuroscience; Frontiers in Psychology; Journal of Cognitive Psychology; Journal of Neuroscience; Nature Neuroscience; NeuroImage; Proceedings of the National Academy of Sciences; Psychological Research; Psychological Science

Memberships: Association for Psychological Science, Cognitive Neuroscience Society, Cognitive Science Society, Psychonomic Society, Society for the Neurobiology of Language, Society for Neuroscience

Departmental service: Presented on applying for postdoctoral positions in the "What next?" Workshop on career advice after the PhD (2019); Co-organize cognitive neuroscience workshop between the University of Birmingham and Oxford University (2019); Organized PhD/postdoc symposium for visiting speaker Sabine Kastner (2018); Student mentor for a first-year PhD student (2014–2017); Host visiting prospective students (2014–2017); Committee to select departmental colloquium speakers (2014–2015)

Outreach and community: General-audience presentations at Brain Awareness Week, Birmingham (2019); Judge for the Chicago Area Undergraduate Research Symposium (2016–17); Presentations for the general public at the UChicago Humanities Day (2015) and Art, Science and Culture Initiative (2015); Cognitive science demonstrations for college students with the Think Tank (2015-16,

thinktank.uchicago.edu)

Teaching and supervision

Teaching

2020	Workshop: Introduction to Psychopy for masters students (Birmingham)
2017	Teaching assistant, Cognitive psychology (undergrad), UChicago
	TA, Cognitive diversity (undergrad), UChicago
	Guest lecture for Cognitive Diversity: Bodily relativity of affective motivation
	Guest lectures Experimental Methods in Linguistics: Mixed effects models in R
	Workshop: Cognitive science for American Sign Language interpreters
2016	TA, Biological psychology (undergrad), UChicago
	TA, Sensation and perception (undergrad), UChicago
2012	TA, Body and cognition (graduate), The New School

Supervision

2017-2018	Cornell University: Research supervisor for undergraduates (Rachel Mattessich)
2014–2017	University of Chicago: Research supervisor for masters students (Srishti Goel), undergraduates (Chelsea Rapoport, Amritpal Singh, Jahn Madlangbayan, Clara Sava-Segal, Varun Joshi), and high-schoolers (Ben Grobman, Juliana Berlin).
2011–2013	The New School for Social Research: Research supervisor for undergraduates (Heila Paulino, Rose Hendricks, Tyler Alterman) and masters students (Cleve Graver, Daisy Burr; co-advised with Roberto Bottini & Daniel Casasanto)

Research Experience

2018–2021	The University of Birmingham PI: Ole Jensen
2013–2018	The University of Chicago PI: Daniel Casasanto
2011–2013	The New School for Social Research PI: Daniel Casasanto
2009–2011	Max Planck Institute for Psycholinguistics, Nijmegen, NL Research assistant PIs: Peter Hagoort, Jos van Berkum, and Daniel Casasanto

2007–2009 University of California - Berkeley
Research assistant
PI: Richard Ivry

2006 University of California - Berkeley
Research assistant
PI: Laura Sterponi

Press

NSF.gov, The Rhythms of Sign Language, July 14, 2017. Stanley Dambroski & Madeline Beal, https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=242300&WT.mc_id=USNSF_1

ScienceDaily.com, Human brain tunes into visual rhythms in sign language, June 8, 2017. Tina A. Cormier, https://www.sciencedaily.com/releases/2017/06/170608145521.htm

HuffingtonPost.com, How Left-Handed People Think And Feel Differently, November 30, 2016. Carolyn Gregoire, http://www.huffingtonpost.com/entry/left-handed-personality-psychology_us_58331757e4b058ce7aac163a

ScienceMag.com, *Brain-zapping therapies might be hitting lefties on the wrong side of the head*, February 29, 2016. Nala Rogers, http://www.sciencemag.org/news/2016/02/brain-zapping-therapies-might-be-hitting-lefties-wrong-side-head

PopularScience.com, *The Keyboard's Strange Impact On Your Baby's Name*, September 11, 2014. Kate Gammon, http://www.popsci.com/blog-network/kinderlab/keyboard%E2%80%99s-strange-impact-your-baby%E2%80%99s-name

Time.com, *Study: Keyboards Are Influencing What You Name Your Baby*, May 10, 2014. Katy Steinmetz. http://time.com/94945/keyboards-baby-names/

ScienceDaily.com, *Emotion reversed in left-handers' brains*, May 2, 2012. http://www.sciencedaily.com/releases/2012/05/120502184836.htm

PsychologyToday.com, *Emotion Is Reversed in Left-Handers' Brains*, May 3, 2012. Daniel Casasanto. http://www.psychologytoday.com/blog/malleable-mind/201205/emotion-is-reversed-in-left-handers-brains

Technical skills

Programming languages: Python, R, Matlab, Bash, Supercollider
Designing, running, and analyzing experiments using MEG/EEG and behavioral methods
Linear mixed-effects modeling
Non-parametric statistics
Multivariate decoding analyses
Digital signal processing

Citizenship

USA