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Pronouns: he/him/his

Contact information
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Education

2014 - present	PhD in Computational Neuroscience, The University of Chicago Committee: David J. Freedman (adviser), Stephanie E. Palmer (chair), John H.R. Maunsell, and Edward Awh
2010 - 2014	BS in Computer Science and Cognitive Psychology with a minor in Mathematics, Northeastern University

Research positions

2015 - present	Graduate student, Freedman Lab, The University of Chicago
2014	Summer intern, Allen Institute for Brain Science
2010 - 2014	Research assistant, Saxe Lab, Massachusetts Institute of Technology
2013 - 2014	Research assistant, Interdisciplinary Affective Science Lab, Northeastern University
2011, 2013	Research assistant, Redwood Center for Theoretical Neuroscience, UC Berkeley
2012 - 2013	Research assistant, Relational Agents Group, Northeastern University

Awards, honors, and fellowships

2018 - 2020	NIH Kirschstein National Research Service Award Individual Predoctoral Fellowship
2019	Brien O'Brien and Mary Hasten Scholarship to attend Methods in Computational Neuroscience at the Marine Biological Laboratory
2016	BSD Recruitment Travel Award, The University of Chicago
2016	Gordon Research Seminar Neurobiology of Cognition Travel Award
2015 - 2016	Pritzker Fellowship, The University of Chicago
2014	University Honors, Northeastern University
2014	Class Marshall, Northeastern University
2014	Summa Cum Laude, Northeastern University
2010 - 2014	Dean's List, Northeastern University
2010 - 2014	Dean's Scholarship, Northeastern University
2012	Undergraduate Life and Physical Sciences award, RISE 2012, Northeastern University

Advanced coursework

2019	Methods in Computational Neuroscience, Marine Biological Laboratory
2018	Janelia Junior Scientist Workshop on Theoretical Neuroscience

Teaching and service experience

2018 - present	Co-organizer, Computational Neuroscience Journal Club
2018	Co-organizer, Undergraduate Systems Neuroscience Journal Club

2018	Teaching assistant, Quantitative Biology Bootcamp 4, Marine Biological Laboratory
2017	Member, UChicago Neuroscience Retreat Planning Committee
2016, 2017	Teaching assistant, Brains! Outreach Program
2016	Teaching assistant, Theoretical Neuroscience III: Statistics and Information Theory, Prof. Stephanie E. Palmer
2016	Co-organizer, Python for Neuroscientists Workshop
2015	Teaching assistant, Theoretical Neuroscience I: Single Neuron Dynamics and Computation, Prof. Nicolas Brunel
2012	Tutor and grader, Fundamentals of Computer Science I
2012	Tutor, Bootstrap Program, Orchard Gardens K-8 School, Boston, MA

Publications

Johnston WJ, Freedman DJ (in preparation) Solutions to the assignment problem balance tradeoffs between local and catastrophic errors.

Johnston WJ, Palmer SE, Freedman DJ (2020) Nonlinear mixed selectivity produces noise-tolerant neural representations. PLOS Computational Biology, https://doi.org/10.1371/journal.pcbi.1007544.

Open Science Collaboration (2015) Estimating the reproducibility of psychological science. Science

Open Science Collaboration (2012) An open, large-scale, collaborative effort to estimate the reproducibility of psychological science. Perspectives on Psychological Science

Talks and presentations

Johnston WJ, Freedman DJ. Solutions to the assignment problem balance tradeoffs between local and catastrophic errors. Poster presented at: COSYNE 2020; February 27-March 1; Denver, CO, USA

Johnston WJ, Freedman DJ. Two tradeoffs between local accuracy and catastrophic errors in a solution to the representation assignment problem. Poster presented at: Neuroscience 2019; October 19-23; Chicago, IL, USA

Peysakhovich B, Zhu O, Ibos G, Johnston WJ, Freedman DJ. Dissociating cognitive and sensory representations in posterior parietal cortex. Poster presented at: Neuroscience 2019; October 19-23; Chicago, IL, USA

Johnston WJ, Freedman DJ. This or that: How the brain makes sense of multiple representations of the same thing. Talk given for: 2019 UChicago Neuroscience Student Talk series; April 15; Chicago, IL, USA

Johnston WJ, Mohan K, Freedman DJ. What goes where: Using stimulus representations from both visual streams to guide behavior. Poster presented at: Neuroscience 2018; November 3-7; San Diego, CA, USA

Johnston WJ. Channel coding for neuroscientists. Tutorial given at*:* Janelia Junior Scientist Workshop for Theoretical Neuroscience 2018; October 21-26; Ashburn, VA, USA

Johnston WJ, Palmer SE, Freedman DJ. Nonlinear mixed selectivity produces noise-tolerant neural representations. Talk given at*:* Janelia Junior Scientist Workshop for Theoretical Neuroscience 2018; October 21-26; Ashburn, VA, USA

Johnston WJ, Palmer SE, Freedman DJ. Nonlinear mixed selectivity produces noise-tolerant neural representations. Poster presented at*:* Gordon Research Conference, Neurobiology of Cognition 2018; July 22-27; Sunday River, ME, USA

Johnston WJ, Palmer SE, Freedman DJ. Nonlinear mixed selectivity produces noise-tolerant neural representations. Talk given at*:* Gordon Research Seminar, Neurobiology of Cognition 2018; July 21-22; Sunday River, ME, USA

Johnston WJ, Palmer SE, Freedman DJ. Nonlinear mixed selectivity produces noise-tolerant neural representations. Talk given for: 2018 UChicago Neuroscience Student Talk series; April 9; Chicago, IL, USA

Johnston WJ, Palmer SE, Freedman DJ. Nonlinear mixed selectivity produces noise-tolerant neural representations. Poster presented at: COSYNE 2018; March 1-4; Denver, CO, USA

Johnston WJ, Mohan K, Freedman DJ. Looking where we want to look: Relating neuronal and behavioral correlates of image familiarity. Talk given for: 2017 UChicago Neuroscience Student Talk series; April 17; Chicago, IL, USA

Johnston WJ, Mohan K, Freedman DJ. Looking where we want to look: Relating neuronal and behavioral correlates of image familiarity. Poster presented at: Neuroscience 2016; November 12-16; San Diego, CA, USA

Johnston WJ, Mohan K, Freedman DJ. Looking where we want to look: Relating neuronal and behavioral correlates of image familiarity. Talk given at: Gordon Research Seminar, Neurobiology of Cognition 2016; July 23-24; Sunday River, ME, USA

Johnston WJ, Mohan K, Freedman DJ. Looking where we want to look: Relating neuronal and behavioral correlates of image familiarity. Poster presented at: Gordon Research Conference, Neurobiology of Cognition 2016; July 24-29; Sunday River, ME, USA

Johnston WJ, Denman D, Gaudreault NG, Long B, Peng H, Blanche TJ. The path of least resistance: minimizing vascular damage from electrode array insertions. Poster session presented at: Neuroscience 2015; October 17-21; Chicago, IL, USA

Mohan K, Johnston WJ, Freedman DJ. Impact of visual familiarity on neuronal representations in inferotemporal cortex and behavior. Poster session presented at: Neuroscience 2015; October 17-21; Chicago, IL, USA

Johnston WJ, Bruneau E, Saxe R. Mind the gap: bridging the gap in intergroup empathy in arbitrary and real groups. Poster session presented at: Northeastern University Research, Innovation, and Scholarship Expo; 2013, March 22; Boston, MA, USA

Johnston WJ, Koster-Hale J, Yazzolina L, Saxe R, Bedny M. To peek and to peer: “visual” verb meanings are largely unaffected by congenital blindness. Poster session presented at: Northeastern University Research, Innovation, and Scholarship Expo; 2012, March 29; Boston, MA, USA