

Updated: 7/26/2018

**Curriculum Vitae**  
Lewis A. Wheaton

Associate Professor  
School of Biological Sciences  
Georgia Institute of Technology  
555 14<sup>th</sup> Street, Room 1309E  
Atlanta, GA 30332-0356  
Lewis.wheaton@ap.gatech.edu  
<http://www.biosci.gatech.edu/people/lewis-wheaton>  
<http://thecmlab.com>  
office: (404) 385-2339

Adjunct Associate Professor  
Department of Rehabilitation Medicine  
Emory University School of Medicine  
1441 Clifton Road N.E.  
Atlanta, GA 30322

**Research interests**

- Neurophysiology related to planning and executing complex, cognitive motor tasks
- Higher-order motor disorders, ideomotor apraxia and related apraxias
- Mechanisms of skilled motor control recovery in amputation and CNS injury

**Education**

Post-Doctoral	Baltimore Veterans Affairs Medical Center	2005-2008
Doctoral	Neuroscience and Cognitive Science University of Maryland, College Park & Human Motor Control Section NINDS, NIH	2000-2005
Undergraduate	B.S. Biology, Radford University	1995-1999

**Professional Employment**

Associate Professor	Georgia Institute of Technology School of Biological Sciences	2016 - present
Associate Professor	Georgia Institute of Technology School of Applied Physiology	2014 - 2016
Assistant Professor	Georgia Institute of Technology School of Applied Physiology	2008 - 2014
Member	Children's Ctr. for Neurosciences Research Emory Children's Pediatric Research Ctr.	2011-present
Adjunct Assoc. Professor	Rehabilitation Medicine Emory University School of Medicine	2011-present
Post-Doctoral Fellow	Baltimore Veterans Affairs Medical Center	2005-2008
Research Fellow	NINDS, NIH	2001-2005

**Dissertation**

- Role of Human Parietal and Premotor Cortical Areas in Complex Hand Movements, 2005

Updated: 7/26/2018

## Funding

### Active Research Grants

**National Institutes of Health (NINDS)** PI: \$136,682 (0.5 mo effort) 2017-2019

- Neurobehavior of interlimb transfer in upper limb amputees  
(1 R03 NS103006-01)

**Department of Education – University of Georgia** Co-Director, \$57,800 (1 mo effort) 2017-2018  
- Physiology Laboratory Experiences for Applied Science Education  
(PLEASE)

**National Science Foundation** Co-PI: \$349,352 (.7 mo effort) 2014-2018  
- IBBS: The Interrelated Development of Language and Technology, 1328567

**Center for Advanced Brain Imaging** PI: \$15,000 2016-2018  
-Understanding the interaction of action semantics and internal models through motor control in human augmentation

### Completed Research Grants

• *Homo faber*: the language of technology, Templeton Foundation, \$50, 206, 2014-2016  
Role: co-PI

• Recognizing human gestures by context: seeing the difference, Georgia Tech/Georgia State University Center for Advanced Brain Imaging Seed Grant, \$10,500, 2011-2012  
Role: PI

• Noninvasive assessment of attention state from correlated oscillations in brain and muscle, Army Research Office, \$50,000, 2010-2011  
Role: Co-I

• Pantomiming and Tool-Use; a neuroimaging study, Georgia Tech/Georgia State University Center for Advanced Brain Imaging Seed Grant, \$10,000, 2009-2010  
Role: PI

• Veterans Affairs Research Enhancement Award Program Pilot Grant, “Selective Activation in the Stroke-Injured Brain by Manipulation of Task Complexity”, \$20,000  
Role: PI

• Veterans Affairs Pre-doctoral Dissertation Research Fellowship, “Stroke-Injured Cortical Activity and Adaptation in Lower Extremity Movement”, 2006-2008  
Role: Co-PI

• Sensory Feedback in Movement Training of the Lower Extremity (#A6063W), Department of Veterans Affairs Advanced Career Development Award (CDA-2), \$225,000, 2008  
Role: PI

• Exercise-induced Alteration in Brain Activity During Motor Performance Under Cognitive Stress, Army Research

Updated: 7/26/2018

Office, \$50,000 (5% salary effort) 2012-2013

Role: Co-I

- -EFRI-M3C: Mobility Skill Acquisition and Learning through Alternative and Multimodal Perception for Visually Impaired People, National Science Foundation, \$2,104,671 (5% effort), 2011-2013

Role: Collaborator

#### Completed Conference Grants

- “First International Conference of Ideomotor Apraxia”; 2004 – Office of Rare Diseases, National Institutes of Health Intramural Conference Grant

Role: Co-PI

- “First International Conference of Ideomotor Apraxia”; 2004 – Movement Disorders Society Conference Grant

Role: Co-PI

- “Meeting of the Workgroup on Ideomotor Apraxia”; 2005 – Office of Rare Diseases, National Institutes of Health Intramural Conference Grant

Role: Co-PI

- “Meeting of the Workgroup on Ideomotor Apraxia”; 2005 – National Institute of Neurological Disorders and Stroke, National Institutes of Health Intramural Conference Grant

Role: Co-PI

- Neural Correlates of Object Recognition and Action Workshop; 2009 – National Science Foundation

Role: PI

#### **Awards and Honors**

- Cullen-Peck Fellow, 2016-2017, Georgia Tech College of Sciences
- Emerging Leaders Fellowship Program, 2017-2018, Georgia Tech Office of the Provost

#### **Professional Activities**

##### Academic Service

- Member, Georgia Tech Strategic Planning Steering Committee, 2009-2010
- Member, Center for Behavioral Neuroscience, Undergraduate Education Committee, 2009 - present
- Member, Data Safety Monitoring Board, Neural Systems, Inc., 2009-present
- Member, Center for Advanced Brain Imaging Operations Committee, 2009-present
- Member, Center for Advanced Brain Imaging Director Search Committee, 2011-present
- Member, Dean’s College of Sciences School of Applied Physiology Chair Reappointment Committee, 2012
- Judge, 2012 Georgia Tech Graduate Technical Symposium ([GT<sup>2</sup>])
- Member, Student Activities Committee, Georgia Tech, 2013-2016
  - Chair, 2015-16
- Member, NeuroX/GTNeuro Task Force, Georgia Tech, 2013-present
  - Educational Opportunities subgroup member, 2013-2014
- Member, CoS Neuroscience Major Curriculum Committee, Georgia Tech, 2014-2015
- Member, Neuroscience Undergraduate Curriculum Committee, Georgia Tech, 2014-2015
- Co-PI, Race and Racism in Contemporary Biomedicine Working Group (funded through GT-FIRE), 2014-present
- Member, Technology Fee Advisory Committee, 2016-present
- Chair, College of Science Neuroscience Faculty Search Committee, 2016-2017
- Member, College of Science Neuroscience Academic Professional Search Committee, 2017
- Co-Director, Physiology Laboratory Experiences for Applied Science Education (PLEASE) Program, 2017-2018
- Chair, College of Science and College of Engineering Neuroscience and Neurotechnology PhD Development Committee, 2018-present

Updated: 7/26/2018

Government Service

- Member, State Rehabilitation Council (SRC), Georgia Vocational Rehabilitation Agency (GVRA), 2013-present  
Member, SRC Executive Board, 2017-2018

Societies

- Society for Neuroscience, 2000-present
- Society for the Neural Control of Movement, 2005-present
- Movement Disorders Society, 2005-2015
- National Rehabilitation Association, 2009-present
- American Society for Neurorehabilitation, 2005-present
  - Member, Program Committee, 2016-present
  - Program Chair, 2018 - 2020
  - Member, Strategic Planning Committee, 2018

Conference Organization

- Co-Director, First International Conference of Ideomotor Apraxia, Rockville, MD; September 20-22, 2004
- Co-Director, Workshop on Ideomotor Apraxia, Washington DC; October 31-November 2, 2005
- Director, Neural Correlates of Object Recognition and Action Workshop, Atlanta, GA; September 28-30, 2009
- Program Committee Member, IEEE/NSF Workshop on Multimodal and Alternative Perception for Visually Impaired People, San Jose, CA, July 15-19, 2013

Teaching

*School of Applied Physiology, Georgia Institute of Technology*

-Directed Courses

- APPH 6237 Fundamentals of Human Neuroimaging
  - Spring, Fall 2010, Fall 2011, Spring 2014, 2015, 2016
- APPH 6239 Movement Disorders
  - Spring 2011, 2012, 2013, 2015, 2017
- APPH 4400/6400 Human Neuroanatomy
  - Fall 2012, 2013, 2014, 2015, 2016, 2017

-Co-Directed Courses

- APPH 4400/6600 History of Neuroscience
  - Fall 2014, Spring 2015, Fall 2015, 2016

-Guest Lectured Courses

- APPH 8000 Seminar in Applied Physiology – Fall 2008 - 2015; *Review cognitive motor control issues*
- APPH 6212 Systems Physiology II – Spring 2009-2011; *Voluntary Motor Control*
- APPH 6216 Rehabilitation Research Seminar – Spring 2009-2011; *Rehabilitation of Cognitive Motor Control*
- APPH 6216 Rehabilitation Research Seminar – Fall 2009; *Neuroimaging methods overview*

*Department of Rehabilitation Medicine, Emory University School of Medicine*

- DPT 810 Adult Neurorehabilitation – 2009-2017; *Apraxia and Rehabilitation*
- PHT 550B and C Clinical Research II and III – Summer 2009 – Spring 2011; Summer 2010 – Spring, 2012; Summer 2015 – Spring 2016 - *Research advisor to physical therapy graduate student projects*

Reviewing Activities for Scientific Publications

- Clinical Focus Journals (Neurology and Neuropsychology)  
*Clinical Neurophysiology; Journal of the International Neuropsychological Society; Cortex; Cognitive Neuropsychology; Journal of Clinical and Experimental Neuropsychology; Brain; Cerebral Cortex; Journal of Neurology, Neurosurgery, and Psychiatry; NeuroImage Clinical*
- Neuroscience Focus Journals



Updated: 7/26/2018

#### Graduate Students

##### *-Direct Doctoral mentorship*

- Victoria Poole, Doctoral Student (Biomedical Engineering, Perdue), 2008-2010  
*-Presently, Scientist, Institute for Aging Research, Hebrew Senior Life, VA Boston Medical System*
- Nikhilesh Natraj , Doctoral student (Applied Physiology), 2009-2015  
*-Presently, Post-doctoral Fellow, University of California, San Francisco*
- William Cusack, Doctoral student (Applied Physiology), 2009-2014  
*-Presently, Principal Scientist, Abbott*
- Rachel Kelly, Doctoral student (Applied Physiology), 2009-2015  
*-Presently, Human Factors Scientist, Exponent*
- John Johnson, Doctoral student (Applied Physiology), 2014-present
- Kristel Bayani, Doctoral student (Applied Physiology), 2014-present
- Regan Lawson, Doctoral student (Applied Physiology), 2014-2018  
*-Presently, Academic Professional, Georgia Tech College of Sciences*
- Bennett Alterman, Doctoral student (Biological Sciences), 2017-present

##### *-Co-mentorship*

- Namrita O'Dea, Doctoral student (Applied Physiology), 2011-2015
- Irrum Niazi, Doctoral student (Applied Physiology), 2011-15
- Matt Wittbrodt, Doctoral student (Applied Physiology), 2014-18
- James Broadway, Doctoral Student (Psychology), 2011-2014
- Ashley Johnson, Doctoral Student (Electrical and Computer Engineering), 2008-2012

##### *-Masters in Prosthetics and Orthotics Capstone Mentorship*

- Nikta Pirouz, MS (Prosthetics and Orthotics) Student, 2008-2010
- Sheryl Nathanson, MS (Prosthetics and Orthotics) Student, 2010-2011
- Mike Cope, MS (Prosthetics and Orthotics) Student, 2010-2011
- Scott Thach, MS (Prosthetics and Orthotics) Student, 2011-2013
- Rebecca Patterson, MS (Prosthetics and Orthotics) Student, 2011-2013
- Delisa Adams, MS (Prosthetics and Orthotics) Student, 2012-2014  
Best Capstone Project Award, 2014
- Dylan Lee, Doctoral student (Applied Physiology), 2012-2014
- Laura Hughey, MS (Prosthetics and Orthotics) Student, 2013-2015  
Best Capstone Project Award, 2015
- Laura Williams, MS (Prosthetics and Orthotics) Student, 2013-2015
- Beth Petrunich, MS (Prosthetics and Orthotics) Student, 2015-2016  
Best Capstone Project Award, 2016
- Malone Gasler, MS (Prosthetics and Orthotics) Student, 2015-2016  
Best Capstone Project Award, 2016
- Lauren Levinson, MS (Prosthetics and Orthotics) Student, 2016-present  
Best Capstone Project Award, 2017
- Sarah Mosley, MS (Prosthetics and Orthotics) Student, 2016-present  
Best Capstone Project Award, 2017
- Shou Wang, MS (Prosthetics and Orthotics) Student, 2017-present
- James Kling MS (Prosthetics and Orthotics) Student, 2017-present

#### Undergraduate Students

##### *-Undergraduate Thesis*

- Kelly Neary, Biomedical Engineering, 2012-2015  
Presidential Undergraduate Research Award (PURA) Trainee
- Lauren Levinson, Biology, 2012-2014
- Sumia Basunia, Biology, 2014-2016  
Presidential Undergraduate Research Award (PURA) Trainee, 2014  
Best Presentation Award at the UROP Spring Symposium, travel award recipient, 2015

Updated: 7/26/2018

Presidential Undergraduate Travel Award, 2015

- Shalini Pandya, Biology, 2014-2015
- Marissa D'Souza, Computing, 2014-2016
- Neel Atawala, 2016-present
- Danielle Temples, 2016-present

*-Lab Mentorship*

•Jason Earnest

Presidential Undergraduate Research Award (PURA) Trainee, 2009

- Teresa Tang, Biology (Wake Forest University)  
BRAIN Award Trainee, 2009
- Yvonne Pella, Biomedical Engineering, 2011-2014
- Bianca Whitten, Business Management, 2010-2011
- Rhett Morrisette, Biomedical Engineering, 2010-2012
- Briana Shay, Biomedical Engineering, 2011-2012
- Alexis Oparah, Neuroscience (Duke University),  
BRAIN Award Trainee, 2011
- Jackie Gilberto, Biology/Psychology, 2011-2012
- Gabriella Spinola-Khazami, Biomedical Engineering, 2012
- Rachel Isaac, Biomedical Engineering, 2012
- Fredrik Kamps, Macalaster College  
BRAIN Award Trainee, 2012
- Daniel DeWitz, Viterbo University  
BRAIN Award Trainee, 2012
- Sarah Mosely, Biology, 2012-2015
- Fulterius King, 2013-2014
- Bennett Alterman, Biology, 2014-2015  
Presidential Undergraduate Research Award (PURA) Trainee
- Da Hee Lee, Biology, 2014-2015
- Annie Swanson, Biology, 2015-2016
- Madison Kukura, 2015-2016
- Meghan Dietrich, 2015-present
- Tatyana Medina, 2015-present  
First Place Student Poster, 2017 STEM Innovators Conference
- Jordan Gayle, 2017-present  
Summer Undergraduate Research in Engineering/Sciences (SURE) program trainee
- Ifrah Walis, 2017-present
- Sienna Tentali, 2017-present
- Katrina Binkely, 2018-present
- Hanna Hunde, 2018  
Summer Undergraduate Research in Engineering/Sciences (SURE) program trainee

High School Students

- Mary Kate Gayle, 2018  
Presently, undergraduate student at Georgia Tech in Neuroscience
- Max Sandberg, 2015  
Presently, undergraduate at Union College
- Daniel Saunders, 2014

Community Service

- Coordinator – Neuroscience Scholars Program, Patrick Henry High School, Roanoke, VA, 2008-2012
- Nickajack Elementary School Council, 2008-2012
- Nickajack Elementary School Foundation, 2015-present  
Teacher Grant coordinator
- Chair, Campbell Middle School Council, 2008-2012

## Book Chapters

- **Wheaton, L.A.** Neuroplasticity in apraxia rehabilitation. In: Tracy J., Hampstead B., Sathian, K. (eds.) *“Plasticity of Cognition in Neurologic Disorders”*. Oxford University Press, 2014

## Published Manuscripts

### Peer Reviewed Research Articles

- Nolte, G., Bai, O., **Wheaton, L.**, Mari, Z., Vorbach, S., & Hallett, M. Identifying true brain interaction from EEG data using the imaginary part of coherency. *Clin Neurophysiol* 2004; 115: 2292-307.
- **Wheaton, L.A.**, Shibasaki, H., & Hallett, M. Temporal activation of parietal and premotor areas related to praxis hand movements. *Clin Neurophysiol* 2005; 116: 1201-1212.
- **Wheaton, L.A.**, Nolte, G., Bohlhalter, S., Fridman, E., & Hallett, M. Synchronization of parietal and premotor areas during the preparation and execution of praxis hand movements. *Clin Neurophysiol* 2005; 116: 1382-1390.
- **Wheaton, L.A.**, Yakota, S. & Hallett, M. Posterior parietal negativity preceding self-paced praxis movements. *Exp Brain Res* 2005; 163: 535-539.
- Fridman, E., Immisch, I., Hanakawa, T., Bohlhalter, S., Waldvogel, D., Kansaku, K., **Wheaton, L.**, Wu, T., & Hallett, M. Functional specialization of the dorsal stream for gesture production. *NeuroImage* 2006; 29: 417-428.
- **Wheaton, L.A.**, Mizelle, C., Forrester, L., Bai, O., Shibasaki, H. & Macko R.F. How does the brain respond to unimodal and bimodal sensory demand in movement of the lower extremity? *Exp Brain Res* 2007; 180: 345-354.
- **Wheaton L.A.**, Carpenter, M., Mizelle, J.C. & Forrester, L. Preparatory band specific premotor cortical activity differentiates upper and lower extremity movement. *Exp Brain Res*; 2008; 184: 121-126.
- **Wheaton, L.A.**, Bohlhalter, S., Nolte, G., Shibasaki, H., Hattori, N., Fridman, E., Vorbach, S., Grafman, J. & Hallett, M. Cortico-cortical networks in patients with ideomotor apraxia as revealed by EEG coherence analysis. *Neurosci Lett*; 2008: 87-92.
- Bohlhalter, S., Hattori, N., **Wheaton, L.A.**, Fridman, E., Shamim, E.A., Garraux, G., and Hallett, M. Gesture-subtype dependent left lateralization of praxis planning: an event-related functional fMRI study. *Cerebral Cortex*; 2009; 19: 1256-62.
- **Wheaton, L.A.**, Villagra, F., Hanley, D.F., Macko, RF and Forrester L.W. Reliability of TMS motor evoked potentials in quadriceps of subjects with chronic hemiparesis after stroke. *J Neurol Sci*; 2009; 276: 115-117.
- Hattori, N., Shibasaki, H., **Wheaton, L.A.**, Wu, T., Matsushashi, M., & Hallett, M. Discrete parieto-frontal connectivity related to grasping objects. *J Neurophysiol*; 2009; 101: 1267-82.
- **Wheaton, L.A.**, Bohlhalter, S, Fridman, E., Vorbach, S., & Hallett, M. Left parietal cortex activation related to planning, executing, and suppressing praxis hand movements. *Clin Neurophysiol*; 2009; 120: 980–986.
- Fridman, E., Crespo, M., Gomez Arguello, S, Villarreal, M, Bohlhalter, S., **Wheaton, L.** & Hallett, M. Kinematic improvement following Botulinum Toxin-A injection in upper limb spasticity due to stroke. *J Neurol Neurosurg Psychiatry* 2010; 81: 423-427.
- Mizelle, J.C., Hallett, M., Forrester, L & **Wheaton, L.A.** Electroencephalographic reactivity to unimodal and bimodal visual and proprioceptive demands in sensorimotor integration. *Exp Brain Res*; 2010; 203(4): 659-70.

Updated: 7/26/2018

- Mizelle, J.C., Hallett, M., Forrester, L & **Wheaton, L.A.** Theta frequency band activity and attentional mechanisms in visual and proprioceptive demand. *Exp Brain Res*; 2010; 204(2): 189-97.
- Mizelle, J.C. & **Wheaton, L.A.** Neural Activation for Conceptual Identification of Correct Versus Incorrect Tool-Object Pairs. *Brain Research*; 2010; 1354: 100-112.
- Johnson, A; **Wheaton, L.A.**, Shinohara, M. Attenuation of Corticomuscular Coherence with Additional Motor or Non-motor Task. *Clin Neurophysiol*; 2011; 122: 356-63.
- Mizelle, J.C. & **Wheaton, L.A.** Testing perceptual limits of functional units: are there "automatic" tendencies to associate tools and objects? *Neurosci Lett*; 2011; 488: 92-96.
- Mizelle, J.C. & **Wheaton, L.A.** Why is that hammer in my coffee: A multimodal imaging investigation of contextually-based tool understanding. *Front. Hum. Neurosci*; 2011; **4**:233. doi: 10.3389/fnhum.2010.00233
- Mizelle, J.C., Tang, T., Pirouz, N. & **Wheaton, L.A.** Forming tool-use representations: a neurophysiological investigation into tool exposure. *Journal of Cognitive Neuroscience*, 2011; 23:10, pp. 2920–2934.
- Borghi, A.M., Flumini, A., Natraj, N., **Wheaton, L.A.** One hand two objects: emergence of affordance in context. *Brain and Cognition*; 2012; 10: 64-73.
- Cusack, W.F., Cope, M., Nathanson, S., Pirouz, N., Kistenberg, R., **Wheaton, L.A.** Neural activation differences in amputees during imitation of intact versus amputee movements. *Frontiers in Human Neuroscience*, 2012; 6: 182. doi: 10.3389/fnhum.2012.00182
- Natraj N., Poole V., Mizelle JC, Flumini A., Borghi A, **Wheaton L.A.** Context and Hand Posture Modulate the Neural Dynamics of Tool-Object Perception. *Neuropsychologia*, 2013, 51: 506-519.
- Mizelle J.C., Kelly R & **Wheaton L.A.** Ventral encoding of functional affordances: a neural pathway for identifying errors in action. *Brain and Cognition*, 2013, 82: 274–282.
- Inouchi M, Matsumoto R, Taki J, Kikuchi T, Mitsueda-ono T, Mikuni N, **Wheaton LA**, Hallett M, Kukuyama H, Shibasaki H, Takahashi R, Ikeda A. Role of posterior parietal cortex in reaching movements in humans: clinical implications for optic ataxia. *Clin Neurophysiol*, 2013, 124(11):2230-41.
- Kelly R & **Wheaton L.A** Differential mechanisms of action understanding in left and right handed subjects: the role of perspective and handedness. *Frontiers in Cognition*, 2013, 4:957. doi:10.3389/fpsyg.2013.00957
- Cusack W, Patterson R, Thach S, Kistenberg, RS, **Wheaton LA**. Motor performance benefits of matched limb imitation in prosthesis users. *Experimental Brain Research*, 2014, 232:2143-54.
- Scorolli C, Miatton M, **Wheaton LA**, Borghi A. I give you a cup, I get a cup: a kinematic study of social interaction. *Neuropsychologia*, 2014, 57: 196-204.
- Kumar N, **Wheaton LA**, Snow TK, Millard-Stafford M. Exercise and caffeine improve sustained attention following fatigue independent of fitness status. *Fatigue: Biomedicine, Health and Behavior*, 2015, 3: 104-121.
- Kelly R, Mizelle JC, **Wheaton LA**. Distinctive laterality of neural networks supporting action understanding in left- and right-handed individuals: an EEG coherence study. *Neuropsychologia*, 2015, 75:20-29. 10.1016/j.neuropsychologia.2015.05.016
- Natraj N, Pella YM, Borghi AM, **Wheaton LA**. Visual encoding of tool-object affordances. *Neuroscience*, 2015, 310: 512-527.

Updated: 7/26/2018

- Mizelle JC, Oparah A., **Wheaton LA**. Reliability of Visual and Somatosensory Feedback in Skilled Movement: the Role of the Cerebellum. *Brain Topography*, 2016, 29: 27-41.
- Cusack W, Thatch S, Patterson D, Acker R, Kistenberg R, **Wheaton LA**. Enhanced neurobehavioral outcomes of action observation prosthesis training. *Neurorehabilitation and Neural Repair*, 2016, 30(6):573-82.
- Kumar N, **Wheaton LA**, Snow TK, Millard-Stafford M. Carbohydrate ingestion but not mouth rinse maintains sustained attention when fasted. *Physiology & Behavior*, 2016, 53: 33-39.
- Hughey, L & **Wheaton, LA**. Incidental learning and explicit recall in upper extremity prosthesis use: insights into functional rehabilitation challenges. *Journal of Motor Behavior*, 2016, Nov-Dec;48(6):519-526.
- Borich MR, **Wheaton LA**, Brodle SM, Lakani B, Boyd LA. Evaluation of interhemispheric effective connectivity in chronic stroke using TMS-EEG. *Neuroscience Letters*, 2016, 618:25-30.
- Lawson D, Cusack W, Lawson R, Hardy A, Kistenberg R, **Wheaton LA**. Influence of perspective of action observation training on residual limb control in naïve prosthesis usage. *Journal of Motor Behavior*, 2016, 48: 446-454.
- Williams L, Pirouz N, Mizelle JC, Cusack W, Kistenberg R, **Wheaton LA**. Remodeling of cortical activity for motor control following upper limb loss. *Clinical Neurophysiology*, 2016, 127: 3128-3134.2
- Lawson R, Gayle J, **Wheaton LA**. Novel behavioral indicator of explicit awareness reveals temporal course of frontoparietal neural network facilitation during motor learning. *PLoS One*, 2017 Apr 14;12(4):e0175176. doi: 10.1371/journal.pone.0175176
- Wittbrodt MT, Sawka MN, Mizelle JC, **Wheaton LA**, Millard-Stafford ML. Exercise-heat stress with and without water replacement alters brain structures and impairs visuomotor performance. *Physiological Reports*, 2018, in press.

#### Peer Reviewed Review Articles

- **Wheaton, L.A.** Parietal representations for hand-object interactions. *J. Neurosci* 2007; 27: 969-970.
- **Wheaton, L.A.** and Hallett, M. Ideomotor apraxia: a review. *J Neurol Sci* 2007; 260: 1-10.
- Buxbaum LJ, Haaland KY, Hallett M, **Wheaton L**, Heilman KM, Rodriguez A, Gonzales-Rothi L. Treatment of limb apraxia: moving forward to improved action. *Am J Phys Med Rehabil* 2008; 87(2): 149-161.
- Forrester L.W., **Wheaton, L.A.**, Luft A. Exercise-mediated locomotor recovery and lower extremity neuroplasticity after stroke. *J Rehabil Res Dev* 2008; 45 (2): 205-220.
- Mizelle, J.C. & **Wheaton, L.A.** The Neuroscience of Storing and Molding Tool Action Concepts: how “plastic” is grounded cognition? *Front. Psychology* 2010; doi: 10.3389/fpsyg.2010.00195
- Mizelle, J.C. & **Wheaton, L.A.** How can we improve our understanding of skillful motor control and apraxia? Insights from theories of “affordances”. *Front Human Neuroscience* 2014; doi: 10.3389/fnhum.2014.00612
- **Wheaton, L.A.** Neurorehabilitation in upper limb amputation: understanding how neurophysiological changes can affect functional rehabilitation. *Journal of Neuroengineering and Rehabilitation* 2017; 14:41: 1-12.
- **Wheaton, L.A.** Rehabilitating Rehabilitation: How a Renewed Focus on Environment and Therapy May Influence Our Perspective Brain Function Neurorehabilitation. *Within: How do Black Lives Matter in Teaching, Lab Practices, and Research?* Pollock A, and Roy D (eds.) *Catalyst* 2017.

Updated: 7/26/2018

## Invited Talks

### 2003

- National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, Maryland
- University of Maryland, College Park, 2003

### 2004

- Physical Therapy and Rehabilitation Sciences, University of Maryland, Baltimore
- Psychology, University of Maryland, College Park
- Neuroscience and Cognitive Sciences, University of Maryland, College Park
- Department of Neurology, Columbia University Medical Center, New York City, New York
- Department of Neurology, University of Maryland School of Medicine, Baltimore
- Kinesiology, University of Maryland, College Park
- First International Conference on Ideomotor Apraxia, Rockville, Maryland, 2004

### 2005

- NINDS Grand Rounds, National Institutes of Health, Bethesda, Maryland
- Georgetown University, Washington DC
- Department of Physical Therapy, University of Maryland, Baltimore

### 2006

- Department of Biological Sciences, Old Dominion University, Norfolk, Virginia
- University of Kansas Medical Center, Kansas City

### 2008

- Department of Physical Therapy, University of Maryland, Baltimore, Maryland
- Department of Kinesiology, Indiana University
- Department of Applied Physiology, Georgia Tech
- Neuroscience of Rehabilitation Seminar Series, University of Maryland School of Medicine
- 38<sup>th</sup> Annual Society for Neuroscience, Mini-symposium, Washington DC

### 2009

- CEU Series, Emory University School of Medicine
- Crawford Research Institute, Shepherd Center
- Neurology Grand Rounds, Emory University School of Medicine
- Department of Psychology, Georgia Institute of Technology
- Neural Correlates of Object Recognition and Action Workshop, Atlanta, Georgia

### 2010

- The Coca-Cola Company, Atlanta
- Atlanta Human Factors and Ergonomics Society Meeting, Atlanta
- Italian Society of Experimental Psychology, Bologna, Italy
- Integrative BioSystems Institute, Georgia Tech, Atlanta
- International Congress of Clinical Neurophysiology, Kobe, Japan

### 2011

- Department of Psychology, Morehouse College, Atlanta
- Shepherd Center, Atlanta
- School of Biomedical Engineering, Georgia Tech, Atlanta
- Spinal Cord Injury Research Program, Shepherd Center, Atlanta

### 2012

- Department of Psychology, Emory University
- Department of Rehabilitation Medicine, Emory University School of Medicine

Updated: 7/26/2018

2013

- Veterans Affairs Medical Center, Atlanta GA
- School of Applied Physiology, Georgia Tech, Atlanta

2014

- Department of Anesthesiology, Emory University School of Medicine (symposium and expert roundtable on “Using the EEG to Link Neuronal Spiking to Human Behavior”)
- University of Georgia, Athens, GA
- Department of Psychology, Georgia Tech

2015

- Neuroscience, Georgia State University

2016

- The University of North Carolina Health Care Trauma Conference
- Kinesiology, East Carolina University
- Workshop on "From Tools and Gestures to the Language-Ready Brain", Atlanta GA
- American Academy for Physical Anthropology

2017

- Neural Control of Movement Symposium, Dublin, Ireland
- GT College of Sciences Advisory Committee Meeting
- American Congress of Rehabilitation Medicine Annual Meeting, Atlanta, GA
- American Society for Neurorehabilitation Annual Meeting, Baltimore, MD  
-invited organizer and discussion leader - Controversies in Neurorehabilitation Session Brain stimulation: does it work?

2018

- American Society for Neurorehabilitation, San Diego, CA

**Conference Oral Presentations**

- “Neurophysiology of Pantomime”, First International Conference on Ideomotor Apraxia, Rockville, Maryland, 2004
- “Preparatory EEG Activity Related to Improved Performance in the Upper and Lower Extremities”, 38<sup>th</sup> Annual Society for Neuroscience Mini-symposium, 2008
- “Motor Learning and Motor Apraxias”, Neural Correlates of Object Recognition and Action Workshop, Atlanta, Georgia, 2009
- “Neural Activation for Identification of Correct Versus Incorrect Tool-Object Pairs”, Mizelle J.C. & **Wheaton L.A.** 39<sup>th</sup> Annual Meeting of the Society for Neuroscience, 2009
- “Una mano, due oggetti: emergere delle affordances nei contesti” (“One hand, two objects: emergence of affordances in context”), Flumini A., Natraj N., **Wheaton L.A.**, Borghi A. Italian Society of Experimental Psychology, 2010
- “Context and Hand Posture Modulate the Neural Dynamics of Tool-Object Perception.” Natraj N., Poole V., Mizelle JC, Flumini A., Borghi A, **Wheaton L.A.** 40<sup>th</sup> Annual Meeting of the Society for Neuroscience Nanosymposium, 2011
- “When a glass calls: the anatomy of a toast.” Scorolli, C, Miatton, M, **Wheaton, L.A.**, Borghi, A.M. 5<sup>th</sup> International Conference on Spatial Cognition (Rome, Italy), 2012

Updated: 7/26/2018

- “The human cognitive-motor action interface: integration of central and peripheral nervous systems for tool use.” **Wheaton, L.A.** 85<sup>th</sup> Annual meeting of the American Academy for Physical Anthropology, 2016
- “The Changing Face of HIV: toward an intersectional understanding of race and HIV in the south.” Pollock A, Creary M, Gibson R, Platt M, Sewell AA, Singh J, **Wheaton LA.** Politics of Health in the U.S. South, Vanderbilt University, 2016

### Conference Poster Presentations

- **Wheaton, L.A.** & Hallett, M. Cortical mechanisms for the preparation and execution of praxis. *33rd Annual Society for Neuroscience Meeting*, New Orleans, Louisiana, 2003
- **Wheaton, L.A.** & Hallett, M. Location and lateralization of movement related activation during praxis. *Joint Meeting of the American Association for Electrodiagnostic Medicine/International Federation of Clinical Neurophysiology with the American Clinical Neurophysiology Society*, San Francisco, CA  
**-Published in *Muscle and Nerve*, 2003, 28: Supplement 12, S169**
- **Wheaton, L.A.** Nolte, G. and Hallett, M. Functional networks relevant to preparation of praxis hand movements. *First Annual Graduate Student Research Symposium*, Bethesda, Maryland, 2003
- **Wheaton, L.A.**, Nolte, G. and Hallett, M. Functional parietofrontal networks in humans for praxis performance. *34th Annual Society for Neuroscience Meeting*, San Diego, CA, 2004
- **Wheaton, L.A.**, Sato, S., Hallett, M. Human epicortical recording of motor related areas involved in praxis hand movements. *Bioscience Day 2004*, College Park, Maryland
- Bohlhalter, S., Fridman, E., **Wheaton, L.A.**, Hattori, N., Grafman, J., and Hallett, M. Hemispheric lateralization of normal and impaired praxis movements: an event-related functional fMRI study. *9<sup>th</sup> International Congress of Parkinson's Disease and Movement Disorders*, New Orleans, LA  
**-Published in *Movement Disorders*, 2005, 20: Supplement 10, S39**
- **Wheaton, L.A.**, Sato, S., Mari, Z., Hallett, M. Movement related activation of parietal and temporal cortices revealed by epicortical recordings in humans. *Neuroscience and Cognitive Science WinterFest 2005*, College Park, Maryland
- Bohlhalter, S., Fridman, E., **Wheaton, L.A.**, Hattori, N., Grafman, J., and Hallett, M. Hemispheric lateralization of normal and impaired praxis movements: an event-related functional fMRI study. *57<sup>th</sup> Annual Meeting of the American Academy of Neurology*, Miami, FL  
**-Published in *Neurology*, 2005, 64: 6, Supplement 1, A97**
- Mari, Z., Matsushashi, M., **Wheaton, L.A.**, Sato, S., Hallett, M. Human motor cortical oscillatory activation patterns in ipsilateral versus contralateral self-paced movements: an ECOG study. *35th Annual Society for Neuroscience Meeting*, Washington, DC, 2005
- **Wheaton, L.A.**, Hattori, N., Hallett, M. EEG Coherence Analysis of Visuomotor Networks: Distinguishable paths in the brain for varying processing demands. *35th Annual Society for Neuroscience Meeting*, Washington, DC, 2005
- Mari, Z., Matsushashi, M., **Wheaton, L.A.**, Heiss, J., Sato, S., and Hallett, M. Human motor cortex activation patterns in ipsilateral vs. contralateral self-paced movements: an ECOG Study. *58<sup>th</sup> Annual Meeting of the American Academy of Neurology*, San Diego, CA, 2005
- **Wheaton, L.A.**, Mizelle, C. & Macko, R. Knee movement related cortical potentials discriminate task complexity. *10<sup>th</sup> Annual Veterans Affairs Maryland Health Care System Research Day*, Baltimore, MD, 2006

Updated: 7/26/2018

- Hattori, N., Shibasaki, H., **Wheaton, L.A.**, Wu, T., Matsushashi, M., & Hallett, M. Where in the human brain is the representation of grasping movement stored? *14<sup>th</sup> Annual Meeting of the International Society for Magnetic Resonance in Medicine*, Seattle, WA, 2006
- **Wheaton, L.A.**, Mizelle, C. & Macko, M. Late movement related activations differentiate wrist and ankle movements. *28<sup>th</sup> International Congress of Clinical Neurophysiology*, Edinburgh, Scotland  
**-Published in *Clinical Neurophysiology*, 2006, 117: Supplement 1, P04.14, p413**
- **Wheaton, L.A.**, Villagra, F., Patterson, S., Macko, R. & Forrester, L. Neurophysiologic predictors of peak cardiovascular fitness levels after stroke. *28<sup>th</sup> International Congress of Clinical Neurophysiology*, Edinburgh, Scotland  
**-Published in *Clinical Neurophysiology*, 2006, 117: Supplement 1, P37.23, p204-205**
- Judkins, T.N., **Wheaton L.A.**, Mizelle J.C., Krebs, H.I., Macko, R.F. & Forrester, L.W. Sensorimotor adaptations to ankle perturbations. *2007 NorthEast American Society of Biomechanics*, College Park, MD
- Judkins, T.N., **Wheaton L.A.**, Mizelle J.C., Macko, R.F. & Forrester, L.W. Visual and proprioceptive feedback affects adaptation to perturbed ankle movements. *14th Annual Meeting of the Cognitive Neuroscience Society*, New York, NY, 2006
- **Wheaton L.A.**, Judkins, T.N., Mizelle J.C., Macko, R.F. & Forrester, L.W. Behavioral and neurophysiological effects of unexpected perturbations to ankle movements. *14th Annual Meeting of the Cognitive Neuroscience Society*, New York, NY, 2006
- Mizelle, J.C., **Wheaton, L.A.**, Forrester, L. & Macko, R. Sensorimotor complexity differentially affects cortical activity in knee movement. *14th Annual Meeting of the Cognitive Neuroscience Society*, New York, NY, 2006
- Inouchi, M., Taki, J., Kikuchi, T., Mitsueda, T., Matsumoto, R., Mikuni, N., **Wheaton, L.A.**, Hallett, M., Fukuyama, H., Shibasaki, H., Takahashi, R., Ikeda, A. Human parietal reaching region underlying pathophysiology of optic ataxia: An epicortical field potential recording. *60th Annual Meeting of the American Academy of Neurology*, Chicago, IL., 2007
- Mizelle, J.C., Forrester, L. & **Wheaton, L.A.** Movement Related Attentional Demands are Mediated by Prefrontal and Frontal Midline Theta Activity. *38<sup>th</sup> Annual Meeting of the Society for Neuroscience*, Washington D.C, 2008
- Khanna, I., Judkins, T.N., Mizelle J.C., Forrester, L.W., Macko, R.F., Krebs, H.I., Hogan, N. & **Wheaton L.A.** Differences in Prefrontal Theta Activity During Ankle Movement Under Variable Visual and Proprioceptive Feedback. *38<sup>th</sup> Annual Meeting of the Society for Neuroscience*, Washington D.C, 2008
- **Wheaton L.A.** & Mizelle J.C. Cortical Activation in Passively Viewing Tool-Object and Environmental Image Pairs. *39<sup>th</sup> Annual Meeting of the Society for Neuroscience*, Chicago, IL, 2009
- Natraj N, Mizelle JC and **Wheaton L.** Unbiased clustering of true neural components to reveal task specific brain activations. *Conference Abstract: 2010 South East Nerve Net (SENN) and Georgia/South Carolina Neuroscience Consortium (GASCNC) conferences*. doi: 10.3389/conf.fnins.2010.04.00067
- Mizelle JC and **Wheaton L.** Neural Activation for Identification of Correct Versus Incorrect Tool-Object Pairs. *Conference Abstract: 2010 South East Nerve Net (SENN) and Georgia/South Carolina Neuroscience Consortium (GASCNC) conferences*.
- Cusack W., Cope M., Nathanson S., Kistenberg R., **Wheaton L.A.** Activation differences in posterior parietal cortex during movement execution after viewing praxis action performed by a prosthesis user. *41<sup>th</sup> Annual Meeting of the Society for Neuroscience*, Washington D.C., 2011

Updated: 7/26/2018

- Kelly R., Mizelle J.C., **Wheaton L.A.** Neuroimaging analysis of the functional understanding of tools. 41<sup>th</sup> *Annual Meeting of the Society for Neuroscience*, Washington D.C., 2011
- Mizelle JC, Kelly R., **Wheaton, L.A.** Understanding Novel Tool Use Contexts. 41<sup>th</sup> *Annual Meeting of the Society for Neuroscience*, Washington D.C., 2011
- **Wheaton L.A.**, Backus D, Clark B, Hollar M, McKinnon B, Mollohan G, Perry A, Berry A. Neurobehavioral Outcomes of Upper Extremity Visually-Guided, Repeated Movement Training in Individuals with Chronic Tetraplegia. 41<sup>th</sup> *Annual Meeting of the Society for Neuroscience*, Washington D.C., 2011
- Cusack, W.F., Nathanson, S., Cope, M., Pirouz, N., Kistenberg, R., **Wheaton, L.A.** Cortical activation in “fictive” amputees performing complex arm movements. Abstract for poster presentation. American Academy of Orthotists and Prosthetists Annual Meeting, Atlanta, GA, March 2012.
- Cusack, W.F., Cope, M., Nathanson, S., Pirouz, N., Kistenberg, R., **Wheaton, L.A.** Neural activation differences in amputees during imitation of intact versus amputee movements. Abstract for podium presentation. American Academy of Orthotists and Prosthetists Annual Meeting, Atlanta, GA, March 2012.
- **Wheaton L.A.**, DeMott S, Falvey K, Johnson A, Spearman D, Wood C, Riley C, Munoz R, Backus D. Upper limb muscle activation patterns during a gripping task in persons with tetraplegia and able-bodied individuals. 42<sup>nd</sup> *Annual Meeting of the Society for Neuroscience*, New Orleans, LA., 2012
- Kelly R., Gilberto J., **Wheaton LA.** The influence of perspective on handedness in action recognition. 42<sup>nd</sup> *Annual Meeting of the Society for Neuroscience*, New Orleans, LA., 2012
- Natraj N., Borghi AM, Flumini A., Prilutsky B, Pella YM, **Wheaton LA.** Throwing a spotlight on the perception of a human hand-object action via eye tracking. 42<sup>nd</sup> *Annual Meeting of the Society for Neuroscience*, New Orleans, LA., 2012
- Mizelle JC, Oparah A., **Wheaton LA.** Visual and somatosensory reliability in tool-use motor control. 42<sup>nd</sup> *Annual Meeting of the Society for Neuroscience*, New Orleans, LA., 2012
- **Wheaton LA**, DeMott S, Favley K, Johnson A, Spearman D, Wood C, Riley C, Munoz R, Backus D. Upper limb muscle activation patterns during a gripping task in persons with tetraplegia and able-bodied individuals. 42<sup>nd</sup> *Annual Meeting of the Society for Neuroscience*, New Orleans, LA., 2012
- Scorolli C, Miatton M, **Wheaton LA** and Borghi AM. Semantic relations between objects in a social context: a kinematic study on social intention. The Trieste Symposium on Perception and Cognition, University of Trieste (Italy), 2013
- Mizelle JC, Kelly R, **Wheaton LA.** A role for ventral stream brain areas in understanding errors in tool manipulation. 43<sup>rd</sup> *Annual Meeting of the Society for Neuroscience*, San Diego, CA, 2013
- Kelly R, Mizelle JC, **Wheaton, LA.** Handedness and perspective during action recognition: towards a neurophysiological model of action simulation. 43<sup>rd</sup> *Annual Meeting of the Society for Neuroscience*, San Diego, CA, 2013
- Cusack W, Patterson R, Thach S, Kistenberg, RS, **Wheaton LA.** Biomechanics and motor control of a fictive amputee model system. 43<sup>rd</sup> *Annual Meeting of the Society for Neuroscience*, San Diego, CA, 2013
- **Wheaton LA**, Byrd, RT, Cohen, J, Ebron, L, Tomeck D, Lee D, Neary K, Mizelle J, Backus D. Effects of transient unilateral ischemic nerve block on bilateral motor control: a longitudinal study. 43<sup>rd</sup> *Annual Meeting of the Society for Neuroscience*, San Diego, CA, 2013

Updated: 7/26/2018

- Natraj N, Pella YM, Borghi AM, **Wheaton LA**. Cognitive control of saccades in the visual perception of complex tool use. *43<sup>rd</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, 2013*
- Cusack W, Patterson R, Thach S, Kistenberg, RS, **Wheaton LA**. Action observation training in prosthesis users. (Abstract #1516) *2014 Annual Meeting and Courses of the American Clinical Neurophysiology Society, Atlanta, GA*
- Kandilakis C, Backus D, Lee D, Sweatman M, Woodworth S, Jarrell J, **Wheaton LA**. Upper limb muscle activation patterns during isometric gripping tasks in able-bodied individuals. *2014 American Congress of Rehabilitation Medicine*
- Woodworth S, Kandilakis C, Sweatman M, **Wheaton LA**, Backus D. Role of somatosensation in upper limb function after cervical spinal cord injury: implications for evaluation. *2014 American Congress of Rehabilitation Medicine*
- Lee D, Kandilakis C, Backus D, Sweatman M, Woodworth S, Jarrell J, **Wheaton LA**. Using EMG to gain insights into upper limb motor control in persons with spinal cord injury. *2014 Society for Neuroscience Annual meeting*
- Kelly R and **Wheaton LA**. Cortico-muscular network dependent on handedness and perspective during action recognition: Towards a neurophysiological model of action simulation. *2014 Society for Neuroscience Annual meeting*
- Cusack W, Thatch S, Patterson D, Acker R, Kistenberg R, **Wheaton LA**. Enhanced neurobehavioral outcomes of action observation prosthesis training. *2014 Society for Neuroscience Annual meeting*
- Natraj N, Pella Y, Borghi AM, **Wheaton LA**. The cognitive control of gaze patterns when decoding the affordances of complex tool use. *2014 Society for Neuroscience Annual meeting*
- Mizelle JC and **Wheaton LA**. Applying “unusual” action contexts to familiar tools: How tools adopt new functions. *2014 Society for Neuroscience Annual meeting*
- Lawson D, Cusack W, Lawson R, Hardy A, Kistenberg R, **Wheaton LA**. Influence of perspective of action observation training on motor outcomes in naïve prosthesis usage. *2015 Neural Control of Movement Society*
- Borich MR, **Wheaton LA**, Brodle SM, Lakani B, Boyd LA. Evaluation of interhemispheric effective connectivity in chronic stroke using TMS-EEG. *2015 Minnesota Neuromodulation Symposium*
- Lawson D, **Wheaton LA**. Individual behavioral marker for identification of explicit awareness during sequential motor learning. *2015 Society for Neuroscience Annual Meeting*
- Regener K, Natraj N, Oh K, Prilutsky B, **Wheaton LA**, Mizelle JC. Proximal and distal coding of sensorimotor parameters in the control of arm movements. *2015 Society for Neuroscience Annual Meeting*
- Borich MR, **Wheaton LA**, Brodle SM, Lakani B, Boyd LA. Increased interhemispheric coherence during transcallosal inhibition assessment in chronic stroke: a preliminary TMS-EEG investigation. *2015 Society for Neuroscience Annual Meeting*
- Natraj N, Basunia S, Mizelle JC, **Wheaton LA**. The role of action context on the neural substrates underlying gesture recognition. *2015 Society for Neuroscience Annual Meeting*
- Lawson D, **Wheaton LA**. Neurobehavioral validation of an individualized behavioral indicator for the presence of incidental explicit awareness in sequential motor learning, *2016 American Society for Neurorehabilitation Annual Meeting*

Updated: 7/26/2018

- Lawson D, Johnson J, **Wheaton LA**. Neurobehavioral validation of an individualized behavioral indicator for the presence of incidental explicit awareness in sequential motor learning, 2016 Society for Neuroscience Annual Meeting
- Johnson J, **Wheaton LA**. Neural and kinematic effects of increased reliance on visual feedback in prosthesis users, 2016 Society for Neuroscience Annual Meeting
- Johnson J, **Wheaton LA**. Neurobehavioral effects of sensory loss and augmented feedback, 2017 Society for Neuroscience Annual Meeting
- Palmer J, **Wheaton LA**, Guruprasad P, Borich MR. Post-stroke interhemispheric cortical connectivity during active motor states of the paretic and nonparetic limb. 2017 Society for Neuroscience Annual Meeting
- Lawson D, Johnson J, **Wheaton LA**. Discovery-based learning affords neural facilitation enhancing generalization to a novel motor task. 2017 Society for Neuroscience Annual Meeting
- **Wheaton LA**, Bayani AY, Natraj N, Khreisheh N, Stout D. The development of action encoding in learning a novel prehistoric task. 2017 Society for Neuroscience Annual Meeting
- Bayani AY & **Wheaton LA**. Visual encoding of context and grasp posture throughout adolescent development. 2017 Society for Neuroscience Annual Meeting
- Natraj N, Basunia S, Alterman B, **Wheaton LA**. The role of saccades and visual information quantity on spatiotemporal patterns of parietofrontal ERPs underlying the perception of complex tool-use affordance. 2017 Society for Neuroscience Annual Meeting