MARK E. WHEELER

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Academic Training

2002-2004 Postdoctoral Fellow, Washington University School of Medicine
1996–2002 Ph.D., Psychology, Washington University, December 2002
Thesis: Neural Correlates of Remembering
1986–1990 B.A., Psychology, University of Nebraska at Lincoln

Administrative Positions

2018- Chair, School of Psychology, Georgia Institute of Technology
2017-2018 Associate Chair, School of Psychology, Georgia Institute of Technology

Faculty Positions

2018- Professor, Georgia Institute of Technology
2014-2018 Associate Professor, Georgia Institute of Technology
2011-2014 Associate Professor, University of Pittsburgh
2005-2014 Training Faculty, Center for Neuroscience, University of Pittsburgh
2004-2014 Center for the Neural Basis of Cognition, University of Pittsburgh
2004-2014 Research Scientist, Learning Research Development Center, University of Pittsburgh
2004-2011 Assistant Professor, University of Pittsburgh

Professional Service

2017- Graduate Coordinator, School of Psychology
2017- Chair, Graduate Policy Committee
2017- Elected Member, Student Honor Committee (Georgia Tech)
2016-2017 Member, Graduate Policy Committee
2016-2017 Member, Neuroscience search committee (College of Science)
2016-2017 Member, Quantitative search committee
2014 Member, Industrial/Organizational search committee
2011-2012 Program Chair, Cognitive program in psychology
2011-2012 Member, Psychology executive committee
2011-2012 Member, Psychology graduate committee
2011 Member, Cognitive search committee
2011-2012 Chair, Graduate student admissions committee, Cognitive Program
2011 Co-chair, CNBC retreat organizing committee

2008-2013	fMRI Modality Instructor, Multimodal Neuroimaging Training Program (NIH) Six Week Summer Workshop
2008–2009	Pilot Imaging Committee, Magnetic Resonance Research Center
2007	Chair, Slide Session, Society for Neuroscience Annual Meeting
2006–2011	Advisory Committee, Magnetic Resonance Research Center
2006–2008	Colloquium Committee, Department of Psychology
2005–2007	Member, Behavioral Genetics Search Committee
2005–2007	Member, Brain Imaging Research Center Users Committee
2005–2009	Education Committee, Center for the Neural Basis of Cognition
2005–2013	Member, Executive Committee, Center for the Neural Basis of Cognition
2004–2008	Internal Review Board, Scientific Review Committee (Chair, Fall 2006)
2004–2008	Graduate Student Admissions Committee, Cognitive Program

Fellowships

2009	Writing in the Disciplines Fellowship, University of Pittsburgh
2001	Summer Institute in Cognitive Neuroscience Fellowship, Dartmouth College

Reviews

Ad-Hoc Journal Reviewer

Brain & Cognition, Brain Research, Canadian Journal of Experimental Psychology, Cerebral Cortex, Cognitive, Affective, and Behavioral Neuroscience, Consciousness and Cognition, Cortex, European Journal of Cognitive Psychology, Current Directions in Psychological Science, Experimental Brain Research, Human Brain Mapping, Journal of Cognitive Neuroscience, Journal of Experimental Psychology LMC, Journal of Neurophysiology, The Journal of Neuroscience, Neurobiology of Aging, Neurobiology of Learning and Memory, NeuroImage, Neuropsychologia, Neuroscience Letters, Proceedings of the National Academy of Sciences, USA, Psychological Science, Social Neuroscience

Review Panels

National Science Foundation 2015, 2016, 2017

Ad-Hoc Grant Reviewer

Alzheimer's Association 2010, 2011
National Science Foundation 2006-2007, 2010, 2011, 2017
Swiss National Science Foundation 2009

Scientific Symposia and Courses Organized

2009	Symposium on Decision Making, Multimodal Neuroimaging Training Program, Pittsburgh, PA.
2008-2013	Six-week summer workshop, fMRI section. Multimodal Neuroimaging Training Program (NIH-funded), Pittsburgh, PA.

Bibliography (**denotes Wheeler lab student / postdoc)*

Manelis, A., Popov, V., Paynter, C. A., Walsh, M., Wheeler, M. E., Vogt, K. M., and Reder, L. M. (2017). Cortical networks involved in memory for temporal order. *Journal of Cognitive Neuroscience*, 29, 1253-1266. doi:10.1162/jocn_a_01123

Wilckens, K. A.,* Erickson, K. I., and Wheeler, M. E. (2017). Physical activity and cognition: A mediating role of efficient sleep. *Behavioral Sleep Medicine*. DOI: 10.1080/15402002.2016.1253013

Tremel, J. J., Laurent, P. A., Wolk, D. A., Wheeler, M. E., and Fiez, J. A. (2016). Neural signatures of experience-based improvements in deterministic decision-making. *Behavioral Brain Research*, 315, 51-65. DOI: 10.1016/j.bbr.2016.08.023

Gratton, C., Neta, M., Sun, H., Ploran, E. J., Schlaggar, B. L., Wheeler, M. E., Petersen, S. E., and Nelson, S. M. (2016). Distinct stages of moment-to-moment processing in the cinguloopercular and frontoparietal networks. *Cerebral Cortex*, 27, 2403-2417. doi:10.1093/cercor/bhw092

Tremel, J. J.* and Wheeler, M. E. (2015). Content-specific evidence accumulation in inferior temporal cortex during perceptual decision-making. *NeuroImage*, 109, 35-49. http://dx.doi.org/10.1016/j.neuroimage.2014.12.072

Wheeler, M. E., Woo, S. G.*, Ansel, T.*, Collier, A. L.*, Tremel, J. J., Velanova, K., Ploran, E. J.*, and Yang, T. (2015). The strength of gradually accruing probabilistic evidence modulates brain activity during a categorical decision. *Journal of Cognitive Neuroscience*, 27, 705-719. doi:10.1162/jocn_a_00739.

Wilckens, K. A. *, Woo, S. G.*, Kirk, A., Erickson, K. I., and Wheeler, M. E. (2014). The role of sleep continuity and total sleep time in executive function across the adult lifespan. *Psychology and Aging*, 29(3), 658-665. doi.org/10.1037/a0037234

Dunovan, K. E. *, Tremel, J. J.*, and Wheeler, M. E. (2014). Prior probability and feature predictability interactively bias perceptual decisions. *Neuropsychologia*, 61, 210-221. doi:10.1016/j.neuropsychologia.2014.06.024

Wilckens, K. A. *, Woo, S. G.*, Erickson, K. I., and Wheeler, M. E. (2014). Sleep continuity and total sleep time are associated with task-switching and preparation in young and older adults. *Journal of Sleep Research*, 23, 508-516. doi: 10.1111/jsr.12148

Gallo, D. A. and Wheeler, M. E. (2013). Episodic Memory. In D. Reisberg (Ed.), *Oxford Handbook of Cognitive Psychology.* Oxford University Press, New York.

Criss, A. H., Wheeler, M. E., and McClelland, J. L. (2013). A differentiation account of recognition memory: Evidence from fMRI. *Journal of Cognitive Neuroscience*, 25, 421-435. doi: 10.1162/jocn_a_00292.

Manelis, A., Paynter, C. A., Wheeler, M. E., and Reder, L. M. (2013). Repetition related changes in activation and functional connectivity in hippocampus predict subsequent memory. *Hippocampus*, 23(1), 53-65. doi: 10.1002/hipo.22053

Wilckens, K. A.*, Erickson, K. I., and Wheeler, M. E. (2012). Age-related decline in controlled retrieval: the role of the PFC and sleep. *Neural Plasticity,* 2012, 15 pages. Article ID 624795. doi: 10.1155/2012/624795

Vanyukov, P., Warren, T., Wheeler, M. E., and Reichle, E. (2012). The emergence of frequency effects in eye movements. *Cognition*, 123, 185-189. doi: 10.1016/j.cognition.2011.12.011

Ploran, E. J.*, Tremel, J. J.*, Nelson, S. M., and Wheeler, M. E. (2011). High quality but limited quantity perceptual evidence produces neural accumulation in frontal and parietal cortex. *Cerebral Cortex*, 21, 2650-2662. doi: 10.1093/cercor/bhr055

Wilckens, K. A.*, Signoff, E. D., Tremel, J. J., Wolk, D. A., and Wheeler, M. E. (2011). Effects of task-set adoption on ERP correlates of controlled and automatic recognition memory. *NeuroImage*, 55, 1384-1392. Epub doi: 10.1016/j.neuroimage.2010.12.059

Manelis, A., Wheeler, M. E., Paynter, C., Storey, L., and Reder, L. M. (2011). Opposing patterns of neural priming in same-exemplar vs. different-exemplar repetition predict subsequent memory. *NeuroImage*, 55, 763-772. doi: 10.1016/j.neuroimage.2010.12.034

Nelson, S. M., Cohen, A. L., Power, J. D., Wig, G. S., Miezin, F. M., Wheeler, M. E., Velanova, K., Donaldson, D. I., Phillips, J. S., Schlaggar, B. L., & Petersen, S. E. (2010). A parcellation scheme for human left lateral parietal cortex. *Neuron*, 67, 156-170. doi: 10.1016/j.neuron.2010.05.025.

Wheeler, M. E. and Gallo, D. A. (2010). Episodic Memory. In I. Weiner & E. Craighead (Eds.), *Corsini's Encyclopedia of Psychology (4th Edition)*. Wiley.

Donaldson, D. I., Wheeler, M. E. and Petersen, S. E. (2010). Remember the source: Dissociating frontal and parietal contributions to episodic memory. *Journal of Cognitive Neuroscience*, 22, 377-391. doi:10.1162/jocn.2009.21242

Nelson, S. M., Dosenbach, N. U., Cohen, A. L., Wheeler, M. E., Schlaggar, B. L., and Petersen, S. E. (2010). Role of the anterior insula in task-level control and focal attention. *Brain Structure and Function*, 214, 669-680. doi:10.1007/s00429-010-0260-2

Velanova, K., Wheeler, M.E., and Luna, B. (2009). The maturation of task-set related activity supports late developmental improvements in inhibitory control. *The Journal of Neuroscience*, 29, 12558-12567. doi:10.1523/JNEUROSCI.1579-09.2009

Wheeler, M. E. and Ploran, E. J.* (2009). Episodic Memory. In P. R. Hof and C. V. Mobbs (Eds.) *Handbook of the Neuroscience of Aging*. Academic Press, London.

Phillips, J. S.*, Velanova, K., Wolk, D. A., and Wheeler, M. E. (2009). Left posterior parietal cortex participates in both task preparation and episodic retrieval. *NeuroImage*, 46, 1209-1221. doi:10.1016/j.neuroimage.2009.02.044

Wheeler, M. E., Petersen, S. E., Velanova, K., Nelson, S. M., and Ploran, E. J.* (2008). Dissociating early and late error signals in perceptual recognition. *Journal of Cognitive Neuroscience*, 12, 2211-2225. doi:10.1162/jocn.2008.20155

Velanova, K., Wheeler, M. E., and Luna, B. (2008). Maturational changes in anterior cingulate and frontoparietal recruitment support the development of error processing and inhibitory control. *Cerebral Cortex*, 18, 2505-2522. doi:10.1093/cercor/bhn012

Barth, A. L. and Wheeler, M. E. (2008). The barista on the bus: Cellular and synaptic mechanisms for visual recognition memory. *Neuron*, 58, 159-161. doi:10.1016/j.neuron.2008.04.006

Wheeler, M. E. and Ploran, E. J.* (2008). Episodic memory. In L. R. Squire, Editor-in-Chief, *Encyclopedia of Neuroscience*. Academic Press, Oxford.

Ploran, E. J.*, Nelson, S. M., Velanova, K., Donaldson, D. I., Petersen, S. E., and Wheeler, M. E. (2007). Evidence accumulation and the moment of recognition: dissociating perceptual recognition processes using fMRI. *The Journal of Neuroscience*, 27(44), 11912-11924. doi:10.1523/JNEUROSCI.3522-07.2007

Wheeler, M. E., Shulman, G. L., Buckner, R. L., Miezin, F. M., Velanova, K., and Petersen, S. E. (2006). Evidence for separate perceptual reactivation and search processes during remembering. *Cerebral Cortex*, 16, 949-959. doi:10.1093/cercor/bhj037

Wheeler, M. E. and Buckner, R. L. (2004). Functional-anatomic correlates of remembering and knowing. *NeuroImage*, 21, 1337-1349. doi:10.1016/j.neuroimage.2003.11.001

Velanova, K., Jacoby, L. L., Wheeler, M. E., McAvoy, M. P., Petersen, S. E., and Buckner, R. L. (2003). Functional-anatomic correlates of sustained and transient components of controlled processing engaged during episodic retrieval. *The Journal of Neuroscience*, 23, 8460-8470.

Wheeler, M. E. and Buckner, R. L. (2003). Functional dissociation among components of remembering: control, perceived oldness, and content. *The Journal of Neuroscience*, 23, 3869-3880.

Buckner, R. L., Wheeler, M. E., and Sheridan, M. (2001) Encoding processes during retrieval tasks. *Journal of Cognitive Neuroscience*, 13, 406-415. doi:10.1162/08989290151137430

Almli, C. R., Ball, R. H., and Wheeler, M. E. (2001). Human fetal and neonatal movement patterns: Gender differences and fetal-to-neonatal continuity. *Developmental Psychobiology*, 38, 252-273. doi:10.1002/dev.1019

Buckner, R.L. and Wheeler, M.E. (2001). The cognitive neuroscience of remembering. *Nature Reviews Neuroscience*, 2, 624-634. doi:35090048

Buckner, R. L., Logan, J., Donaldson, D. I., and Wheeler, M. E. (2000). Cognitive neuroscience of episodic memory encoding. *Acta Psychologica*, 105, 127-139. doi:10.1016/S0001-6918(00)00057-3

Wheeler, M. E., Petersen, S. E., and Buckner, R. L. (2000). Memory's echo: Vivid remembering reactivates sensory-specific cortex. *Proceedings of the National Academy of Sciences USA*, 97, 11125-11129.

Konishi, S., Wheeler, M. E., Donaldson, D. I., and Buckner, R. L. (2000). Neural correlates of episodic retrieval success. *NeuroImage*, 12, 276-286. doi:10.1006/nimg.2000.0614

Dugan, L. L., Turetsky, D. M., Du, C., Lobner, D., Wheeler, M., Almli, C. R., Shen, C. K.-F., Luh, T.-Y., Choi, D. W., and Lin, T.-S. (1997). Carboxyfullerenes as neuroprotective agents. *Proceedings of the National Academy of Sciences USA*, 94, 9434-9439.

Articles in Preparation or Submitted

Dunovan, K. E.* and Wheeler, M. E. (resubmitted). Computational and neural signatures of pre- and post-sensory expectation bias in inferior temporal cortex.

Braunlich, K.* and Wheeler, M. E. (in prep). Neural markers of evidence accumulation are sensitive to prior probabilities.

Wheeler, M. E. and Braunlich, K.* (in prep). Age-related changes in perceptual decision-making.

External Invited Talks

Tracking evidence during perceptual decisions using fMRI (2017). Undergraduate Neuroscience Society Spring Seminar, University of Alabama at Birmingham.

Neural representations of evidence in memory and perception (2015). Southeastern Workers in Memory meeting, Hilton Head, North Carolina.

The tipping point: fMRI reveals temporal neural dynamics of perceptual decision-making (2013). School of Psychology, Georgia Institute of Technology.

Temporal neural dynamics of perceptual decision-making (2013). Center for Innovation and Creativity Seminar, University of Colorado, Boulder.

Retrieval preparation and retrieval success (2013). Molecular, Cellular, and Integrative Neurosciences Seminar, Colorado State University.

The tipping point: fMRI reveals temporal neural dynamics of perceptual decision-making (2013). Molecular, Cellular, and Integrative Neurosciences Seminar, Colorado State University.

Using fMRI to reveal temporal components of perceptual decision-making (2010). Functional Magnetic Resonance Imaging Research and Methods Group, Case Western Reserve University.

Retrieval preparation and retrieval success (2010). Context and Episodic Memory Symposium, University of Pennsylvania.

Functional MRI reveals components of perceptual decision making (2010). Meeting of the Section on Integrative Neuroimaging, National Institute of Mental Health.

Functional MRI reveals temporal components of perceptual decision making (2008). Psychology Department, Carnegie Mellon University.

Early accumulation and late feedback error signals in perceptual recognition decisions (2007). Society for Neuroscience Annual Meeting, San Diego, California.

Functionally distinct regions in left parietal cortex: Evidence from studies of memory (2004). Memory Disorders Research Society, New York.

Investigating components of remembering with fMRI (2004). Department of Psychology, University of Illinois at Urbana-Champaign.

Components of remembering (March, 2004). Department of Psychology, University of Pittsburgh.

Identifying components of remembering using fMRI (2004). Department of Psychological and Brain Sciences, Dartmouth University.

Triple dissociation among brain regions supporting retrieval effort, success, and content (2001). Society for Neuroscience Annual Meeting, San Diego.

Presentations and colloquia

Neural representations of evidence in perceptual decision making (2017). School of Psychology Cognitive Brain Sciences brown bag, Georgia Institute of Technology.

Neural signals of evidence in memory and perception (2016). College of Science seminar, Georgia Institute of Technology.

Perceiving and Remembering (2015). North Georgia Region Annual Memory Meeting.

Temporal properties of BOLD fMRI (2014). School of Psychology Cognitive Brain Sciences brown bag, Georgia Institute of Technology.

The tipping point: which brain signals inform decision-making? (2012). Laboratory of Neurocognitive Development, University of Pittsburgh.

Brain signals underlying perceptual decision-making (2011). Center for Neuroscience. University of Pittsburgh.

Temporal properties of fMRI: Considerations in studies of cognition (2011). Center for the Neural Basis of Cognition. University of Pittsburgh.

Properties of the BOLD fMRI (2010). Laboratory of Neurocognitive Development, University of Pittsburgh.

Component processes in memory retrieval: deciding and succeeding (2009). Department of Psychology Colloquium, University of Pittsburgh.

Functional MRI reveals neural components of perceptual decision making (2009). Multimodal Neuroimaging Training Program Symposium on Decision Making, University of Pittsburgh and Carnegie Mellon University.

Perceptual memory: Recalling and recognizing objects (2009). Scientific Presentation at the Learning Research and Development Center, University of Pittsburgh.

Properties of the BOLD response: Considerations for cognitive research (2009). Laboratory of Neurocognitive Development, University of Pittsburgh.

Error signals and decision boundaries in perceptual decision making (2009). Department of Psychology Cognitive Brown Bag, University of Pittsburgh.

Functional MRI reveals temporal components of perceptual decision making (2008). Department of Psychology Cognitive Brown Bag, University of Pittsburgh.

Neural mechanisms of episodic retrieval: how are memories represented and identified during retrieval (2008)*?* Department of Communication Science and Disorders, Research Round Table, University of Pittsburgh.

The Process of Decision Making: Investigating Where and What with fMRI (2007). Center for the Neural Basis of Cognition, University of Pittsburgh.

Investigating neural bases of episodic memory with fMRI (2006). Center for the Neural Basis of Cognition, University of Pittsburgh.

Where does the brain 'store' memories? (2005) The 'Memory Speaks!' Lecture Series, Department of Theatre Arts, University of Pittsburgh.

Memory signals in the posterior parietal lobe (2005)*?* Center for Neural Basis of Cognition Annual Retreat, University of Pittsburgh.

Exploring vivid perceptual memory using fMRI (2001). Brain, Behavior & Cognition Colloquium, Department of Psychology, Washington University.

Presentations (abstracts)

Wheeler, M. E. and Peterson, E. J.* (2015). The diversity of distributed decisions. *Society for Neuroscience Annual Meeting*, Chicago, IL.

Wheeler, M., Dunovan, K.*, and Tremel, J.* (2014). Prior expectations modulate hemodynamic activity before and during perceptual decisions: Evidence from diffusion modeling and fMRI. *Society for Neuroscience Annual Meeting,* Washington DC.

Tremel, J., Laurent, P., Wolk, D., Wheeler, M., and Fiez, J. (2014). Modulation of declarative memory efficacy affects neither learning rate nor the role of reinforcement learning systems in deterministic, feedback-based decision-making. *Society for Neuroscience Annual Meeting,* Washington DC.

Nielsen, A. N.*, Tremel, J. J.*, and Wheeler, M. E. (2013). Functional connectivity reveals age-related reorganization of functional networks. *Society for Neuroscience Annual Meeting*, San Diego, CA.

Wheeler, M. E., Woo, S.*, Tremel, J.*, Vijayan, T.*, Collier, A.*, Ploran, E.*, and Yang, T. (2013). The strength of gradually accumulating choice probabilities modulates brain activity prior to a categorical decision. *Society for Neuroscience Annual Meeting*, San Diego, CA.

Woo, S.*, Marek, S.*, and Wheeler, M. (2013). Brain activity modulations track rate of evidence during probabilistic reasoning. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

Wilckens, K.*, Erickson, K. I., and Wheeler, M. E. (2013). High quality sleep is associated with preparation and task-set adoption in young and older adults. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

Lim, S-J, Fiez, J. A., Wheeler, M. E., and Holt, L. L. (2013). Investigating the neural basis of video-game-based category learning. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

Nielsen, A.*, Wheeler, M. (2012). Age-related differences in resting-state functional connectivity networks. *Society for Neuroscience Annual Meeting,* New Orleans, LA.

Nelson, S. M., Wheeler, M. E., Ploran, E. J.*, Tremel, J. J.*, and Petersen, S. E. (2012). Dissociating the roles of lateral and medial prefrontal cortex in decision-making tasks: Implications for stages of processing. *Society for Neuroscience Annual Meeting,* New Orleans, LA.

Dunovan, K. E.*, Tremel, J. J.*, and Wheeler, M. E. (2012). Transient prior probabilities affect choice bias during temporally extended perceptual decision making. *Society for Neuroscience Annual Meeting,* New Orleans, LA.

Tremel, J. J.* and Wheeler, M. E. (2012). Neural accumulation during face/house discrimination in stimulus-specific regions. *Society for Neuroscience Annual Meeting,* New Orleans, LA.

Wheeler, M. E., Woo, S., Tremel, J.*, Vijayan, T.*, Collier, A.*, Ploran, E.*, and Yang, T. (2012). Evolving brain activity prior to a categorical decision reflects the strength of gradually accumulating choice probabilities. *Cognitive Neuroscience Society Annual Meeting*, Chicago, IL.

Vanyukov, P., Warren, T., Wheeler, M. E., and Reichle, E. (2011). Emergence of Frequency Effects in Eye Movements. *European Conference on Eye Movements, Marseille, France.*

Criss, A. H., Wheeler, M. E., and McClelland, J. L. (2011). A differentiation account of recognition memory: Evidence from fMRI. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

Wilckens, K.A.*, Wolk, D.A., and Wheeler, M.E. (2010). ERP evidence for a "late correction" memory retrieval strategy in older adults. *Society for Neuroscience Annual Meeting*.

Nelson, S. M., Wheeler, M. E., Schlaggar, B. L., and Petersen, S. E. (2010). Dissociating memory-retrieval related processes in networks defined from regions in human left lateral parietal cortex using an extended retrieval paradigm. *Society for Neuroscience Annual Meeting*.

Wilckens, K. A.*, Signoff, E. D., Wolk, D. A., and Wheeler, M. E. (2010). Evidence for a 'late correction' memory retrieval strategy in older adults. *Cognitive Neuroscience Society Annual Meeting*, Montreal, Canada.

Ploran, E. J.*, Tremel, J. J.*, and Wheeler, M. E. (2010). BOLD fMRI accumulation signals modulate based on the consistency of evidence during perceptual decisions. *Cognitive Neuroscience Society Annual Meeting*, Montreal, Canada.

Wilckens, K. A.*, Signoff, E. D., Wolk, D. A., and Wheeler, M. E. (2009). The impact of aging on electrophysiological measures of switching between memory tasks. *Society for Neuroscience Annual Meeting*, Chicago, IL.

Ploran, E. J.*, Tremel, J. J.*, and Wheeler, M. E. (2009). High quality, but limited quantity perceptual evidence produces an accumulating BOLD signal during object identification. *Society for Neuroscience Annual Meeting*, Chicago, IL.

Wilckens, K. A.*, Signoff, E. D., Abraham, A. J.*, Wolk, D. A., and Wheeler, M. E. (2009). Electrophysiological and behavioral measures of switching between memory tasks. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

MacLeod, C. A., Wheeler, M. E., and Donaldson, D. I. (2009). Examining recognition memory processes using a slow-reveal paradigm: a response-locked event-related potential study. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.

Nelson, S.M., Cohen, A.L., Power, J.D., Miezin, F.M., Wheeler, M.E., Velanova, K., Donaldson, D.I., Buckner, R.L., Schlaggar, B.L., and Petersen, S.E. (2008). Defining memory retrieval-related putative

areas in parietal cortex using a combined fMRI and functional connectivity MRI approach. *Society for Neuroscience Annual Meeting*, Washington, DC.

Phillips, J.S.*, Wolk, D.A., and Wheeler, M.E. (2008). Task switching affects preparation for episodic and semantic retrieval. C*ognitive Neuroscience Society Annual Meeting,* San Francisco, CA.

Moya, L.H.*, Fiez, J.A., and Wheeler, M.E. (2007). Phonological maintenance of heard versus seen words: modality matters. S*ociety for Neuroscience Annual Meeting*, San Diego, CA.

Guediche, S.A., MacGregor, L., Wheeler, M.E., Phillips, J.S., * and Fiez, J.A. (2007). Investigating the echoic store. *Society for Neuroscience Annual Meeting*, San Diego, CA.

Phillips, J.S.*, Velanova, K., and Wheeler, M.E. (2007). Episodic task cues evoke activity in both task-general and task-selective brain areas. *Society for Neuroscience Annual Meeting*, San Diego, CA.

Ploran, E.J.*, Nelson, S.M, Donaldson, D.I., Petersen, S.E., and Wheeler, M.E. (2007). An exploration of decision processes using prolonged recognition tasks. *Cognitive Neuroscience Society Annual Meeting*.

Ploran, E.J.*, Nelson, S.M.M., Donaldson, D.I., Petersen, S.E., and Wheeler, M.E. (2006). Evidence accumulation and the moment of recognition: an exploration of decision processes using fMRI. *Society for Neuroscience Annual Meeting*, Atlanta, GA.

Fiez, J.A., Singer, A., Morales, F.*, Worek, A.*, and Wheeler, M.E. (2006). Activation of auditory, speech, and motor areas during word presentation: Effects of presentation modality and task demands. *Society for Neuroscience Annual Meeting*, Atlanta, GA.

Tricomi, E., Wheeler, M. E., and Fiez, J. A. (2005). BOLD responses to reward-related choices and outcomes: impact of slow versus fast event-related designs. *Society for Neuroscience Annual Meeting*, Washington, DC.

Wheeler, M.E., Shulman, G.L., Buckner, R.L., Miezin, F.M., Velanova, K., and Petersen, S.E. (2004). Examining attention cueing effects during memory retrieval using fMRI. *Society for Neuroscience Annual Meeting*, Washington, DC.

Wheeler, M.E., Shulman, G.L., Buckner, R.L., Miezin, F.M., Velanova, K., and Petersen, S.E. (2004). Dissociating top-down signals during retrieval of visual information using fMRI. *Cognitive Neuroscience Society Annual Meeting.*

Wheeler, M.E. and Buckner, R.L. (2003). Neural correlates of the subjective experience of remembering. *Cognitive Neuroscience Society Annual Meeting.*

Wheeler, M.E. and Buckner, R.L. (2002). Dissociation among brain regions supporting different components of remembering. *Cognitive Neuroscience Society Annual Meeting.*

Buckner, R.L., Wheeler, M.E., Maccotta, L., Kerr, D., and Cohen, N.J. (2001) Code-specific repetition priming in frontal and posterior cortex. *International Conference on Functional Mapping of the Human Brain.*

Wheeler, M.E., Donaldson, D.I., and Buckner, R.L. (2001) Common networks that reflect successful retrieval of sound and picture information from long-term memory. *Cognitive Neuroscience Society Eighth Annual Meeting.*

Wheeler, M.E., Petersen, S.E., and Buckner, R.L. (2000) Vivid remembering reactivates late sensory-specific cortex. *Society for Neuroscience Annual Meeting*.

Sanders, A., Wheeler, M.E., and Buckner, R.L. (2000) Episodic recognition modulates frontal and parietal cortex activity. *Cognitive Neuroscience Society Annual Meeting.*

Buckner, R.L. and Wheeler, M. (2000) Episodic encoding processes occur during retrieval tasks. *Cognitive Neuroscience Society Annual Meeting*.

Ball, R.H., Mohr, N.M., Wheeler, M.E., Buchmeier, S.E., and Almli, C.R. (1997). Neurobehavioral development in the normal fetus/neonate; gestational age and gender differences. *Society for Gynecologic Investigation.*

Almli, C.R., Ball, R., Mohr, N.M., and Wheeler, M.E. (1996). Human fetal-neonatal movement patterns: Age and gender differences. *International Society for Developmental Psychobiology.*

Dugan, L.L., Turetsky, D.M., Du, C., Lin, T.T., Lobner, D., Almli, R., and Wheeler, M. (1996). Carboxy-buckminsterfullerenes: novel antioxidants with neuroprotective efficacy in vitro and in a mouse model of ALS. *Society for Neuroscience Annual Meeting*.

Funding

Current Support

Neural mechanisms of age-related changes in perceptual and memory decisions
National Science Foundation 1460682
3/15/2015 – 3/14/2018, $571,099
This project will use fMRI combined with modeling approaches to investigate age-related differences in neural signals underlying perceptual and memory decisions.
Role: Principal Investigator, 25% effort

Completed Support

Functional imaging of perceptual decision making and evidence accumulation
NIH R01 MH086492
5/14/2010 – 1/31/2015, $1,386,508
The goal of this project is to identify neural signals the support and predict perceptual decision making, and determine how changes in healthy aging affect behavioral choice.
Role: Principal Investigator, 25% effort

Neural mechanisms of perceptual memory decisions in mild cognitive impairment
Alzheimer's Association NIRG-10-171425
2/1/2011 – 1/31/2013, $80,000
This project will investigate perceptual memory abilities in older adults with and without mild cognitive impairment.
Role: Principal Investigator, 8% effort

Dorsomedial striatum, reinforcement learning, and declarative knowledge acquisition.
Pittsburgh Science of Learning Center (Fiez)
9/1/2008 – 8/31/2010
The aim of this project is to investigate the relationship between reinforcement learning and declarative knowledge in learning.
Role: Consultant, 3% effort

Exploring mechanisms of attentional control in memory and aging
University of Pittsburgh Institute on Aging
5/1/2008 – 4/30/2010, $25,000
The primary goal of this project is to study neural mechanisms of selective attention to remembered events in younger and older adults.

Role: Principal Investigator (8% effort)

Neural accumulation in the parietal cortex in healthy aging and Alzheimer's Disease
ADRC Seed Monies Grant Program (Wheeler, 5% effort)
6/1/2008 – 4/1/2010, $30,000
University of Pittsburgh Alzheimer's Disease Research Center
This project tests whether accumulating neural signals predict perceptual decision outcome in older adults with and without mild cognitive impairment.
Role: Principal Investigator

Central Research Development Fund (Wheeler)
7/1/2007 – 6/30/2009, $15,763
University of Pittsburgh
Behavioral and neural mechanisms of motion detection
The goal is to use fMRI to investigate neural signals underlying decisions about motion.
Role: Principal Investigator

DARPA N00014-05-1-0881 (Schneider)
10/1/2005 - 9/30/2006, $802,435
Mapping Brain Architecture Supporting Experience Based Cognition
The purpose of this project was to map brain structure using DTI and function using fMRI under conditions of dynamic multimodal experience.
Role: Co-Investigator, 8% effort

Teaching Experience

Undergraduate Courses
Biological Psychology, Washington University (Summer 99, 00)
Sensation and Perception (sp06, sp07, sp08, sp09, fl09, sp10, fl10, fl11, sp12, fl12, sp14, sp16, sp17)
Cognition and the Brain (sp08)
Memory and Memorization (fl13)
Cognitive Psychology (fl15)

Graduate Courses
Human Learning & Memory (sp05, fl06, sp09)
Functional Magnetic Resonance Imaging (fl05, sp15, fl16)
Topics Seminar in Cognitive Psychology, Research Presentations (fl08, sp09, fl09)

Students/Trainees
Doctoral Student Mentoring

2017-	Mary Bernhardt, B.A.
2016-	Rachel Boyd, B.A.
2016-	Jennifer Walker, B.A.
2015-	Elyse Carlson, M.A.
2014-2015	Austin Theodore, B.A.
2012-2014	Jonathan Siegel, M.A.
2011-2014	Kyle Dunovan, M.A., Postdoctoral fellow, Carnegie Mellon

2008-2012 Kristine Wilckens, Ph.D., Assistant Professor, University of Pittsburgh
2006-2007 David Halpern, M.A.
2005-2008 Jeffrey Phillips, M.A.
2005-2010 Elisabeth Ploran, Ph.D., Assistant Professor, Hofstra University

Postdoctoral Mentoring
2015-2016 Kurt Braunlich, Ph.D., Postdoctoral fellow, Univ. College London
2012-2013 Erik Peterson, Ph.D., Postdoctoral fellow at UC San Diego

Other Doctoral Student Mentoring
2012-2013 Christopher Paynter, CMU (Reder)- IGERT fellowship co-mentor
2011 Sweyta Lohani, Neuroscience- Rotation
2011 Joanne Park, Univ. Stirling (Donaldson)- Visiting scholar
2006 Lucy McGregor, Univ. Stirling (Donaldson)- Visiting scholar
2006 Linda Moya CMU (Behrmann)- IGERT fellowship co-mentor

Undergraduate Research Training (Directed Research unless otherwise noted, *current position*)
2016-2017 Veronica Rubinsztain, Psychology, Honor's Thesis
2015 Ian Wakeman, Psychology
2015-2016 Rachel Davis, Psychology
2015-2016 Hamid Habib, Bioengineering
2015-2016 Madison Tucker, Biology & Psychology
2015 Mikaka Munch, Computer Science
2014-2016 Matt Nasiatka, Computer Science
2014-2015 Bridget Nabb, Bioengineering
2014 James Plager, Computer Science
2012 Cindy Chen, Psychology
2012 Ashley Senders, Psychology
2011-2013 Ashley Nielsen, BioE, *Doctoral program, Neuroscience, Washington Univ.*
2011-2012 Krupa Patel, Neuroscience
2011-2012 Marina Lukac, Psychology and Neuroscience
2010-2011 Rebecca Taylor, Neuroscience, Psychology
2010 Matthew Sniscak, Psychology
2010-2011 Leslie Denlinger, Psychology
2009-2010 Eric Cyterski, Psychology
2009 John Skicki, Psychology
2009-2010 Sarah Woo, Biology and Psychology
2009-2010 Tobin Vijayan Ansel, Neuroscience, *SUNY College of Optometry*
2009-2011 Kris Budhram, Psychology
2009-2010 Anna Xu, Neuroscience
2009 Carolyn Ellis, Psychology
2008-2009 Krista Yakub, Neuroscience, *M.A., University of South Florida*
2008-2009 Sarah Banducci, Psychology, *Doctoral program, Univ. Illinois Urbana-Champaign*
2008-2009 Ashley Abraham, Psychology
2008-2009 Christopher Stevens, Psychology, Ph.D., Penn State, *Postdoc, Univ. Groningen*
2008 Megan Flaherty, Psychology
2007-2008 Matt McShane, Psychology
2007-2008 Anton Ladden, Neuroscience

2007 Alyse Thomas, Neuroscience, *Doctoral program, University of Pennsylvania*
2007 David Raboy, Psychology
2007-2009 Joshua Tremel, Neuroscience (Honors Thesis), *Doctoral program, Univ. Pittsburgh*
2007-2009 Amanda Collier, Psychology, Brackenridge Fellow
2006-2007 Janani Prabhakar, Ph.D., Rutgers, *Postdoc, Univ. California Davis*
2005 Larry Karcher, Psychology
2005 Amanda Worek, Psychology, *M.S.-SLP, Massachusetts General Hospital*

Summer Internships
2011 Lexi Crommett (Psychology, Texas A&M), Center for Neuroscience Fellow
2011, 2012 Ashley Nielsen (Bioengineering, Pitt), Swanson School of Engineering Fellow

Doctoral Thesis Committees (mentor)
2018 Jessie Martin (Engle)
2017- Jimmy Zhong (Moffat)
2016- Christine Godwin (Schumacher)
2016-2018 Didem Pehlivanoglu (Verhaeghen)
2016-2017 Tyler Harrison, Ph.D. (Engle)
2016-2017 Thomas Gable (Walker)
2016- Eric Stearman (Durso)
2016 Savannah Cookson, Ph.D. (Schumacher)
2013 Christopher Paynter, Ph.D. (Reder, Carnegie Mellon University)
2012 Kristine Wilckens, Ph.D. (Wheeler)
2012-2013 Daniel Simmonds, Ph.D. (Luna)
2011 Kai Hwang, Ph.D., Psychology (Luna)
2011 Elisabeth Ploran, Ph.D., Psychology (Wheeler)
2010 Karin Cox, Ph.D., Psychology (Fiez)
2009 Sara Guediche, Ph.D., Neuroscience (Fiez)
2009 Steven Nelson, Ph.D., Neuroscience (Petersen, Washington University)
2008-2009 Charles Geier, Ph.D., Psychology (Luna)
2007-2009 Patryk Laurent, Ph.D., Neuroscience (Reichle)
2007-2009 Michael Cole, Ph.D., Neuroscience (Schneider)
2007-2009 Jared Danker, Ph.D., Psychology (Anderson, Carnegie Mellon University)
2006-2009 Katie Russell, Ph.D., Psychology (Ricker, Fiez)
2006-2007 Anita Barber, Ph.D., Psychology (Schneider)
2005 Elizabeth Tricomi, Ph.D., Psychology (Fiez)

Masters Thesis Committees
2016- Taylor James (Duarte)
2015 Jonathan Strunk (Duarte)
2014 Jonathan Siegel (Wheeler)
2013 Kyle Dunovan (Wheeler)
2012 Darshana Tuladhar, Psychology (Fiez)
2011 Lindsay Harris, Psychology (Perfetti)
2010 Aarthi Padmanabhan, Psychology (Luna)
2010 Kai Hwang, Psychology (Luna)
2010 Kristine Wilckens, Psychology (Wheeler)
2009 Jeffrey Phillips, Psychology (Wheeler)

2007 Elisabeth Ploran, Psychology (Wheeler)
2006 Charles Geier, Psychology (Luna)
2006 Sara Guediche, Neuroscience (Fiez)
2005 Kyung Hwa Lee, Psychology (Siegle)

Comprehensive/Preliminary Exam Committees

2018 Taylor Curley (Hertzog)
2018 Ursula Saelzler (Moffat)
2017 Jonathan Strunk (Duarte)
2016- Ashley Lawrence-Huizenga (Thomas)
2016 Thomas Gable (Walker)
2015 Jessie Martin (Verhaeghen)
2015 Didem Pehlivanoglu, Psychology (Verhaeghen)
2015 Savannah Cookson, Psychology (Schumacher)
2012 Adrienne Taren, Neuroscience (Creswell, Carnegie Mellon University)
2012 Dani Simmonds, Neuroscience (Luna)
2011 Kai Hwang, Psychology (Luna)
2011 Kristine Wilckens, Psychology (Wheeler)
2008 Kasay Griffin, Psychology (Sayette)
2008 Charles Geier, Psychology (Luna)
2008 Elisabeth Ploran, Psychology (Wheeler)
2008 Karin Cox, Psychology (Fiez)
2006 Sara Guediche, Neuroscience (Fiez)
2006 Michael Cole, Neuroscience (Schneider)
2006 Jessica Nelson, Psychology (Perfetti)

Professional Memberships

2010- Association for Psychological Science
2010- Memory Disorders Research Society
2006– American Association for the Advancement of Science
2001– Society for Neuroscience
1999– Cognitive Neuroscience Society