

CURRICULUM VITAE

University of Florida

PERSONAL INFORMATION:

Name: Adam J. Woods, PhD
Citizenship: USA

RANK/TITLE: Assistant Professor

Assistant Director, Center for Cognitive Aging & Memory (CAM)
Director, CAM Neurophysiology & Neuromodulation Core
Director, Brain and Aging Lab

Departments: Aging & Geriatric Research (Primary), Neuroscience, Psychology

Institute: Institute on Aging

Address: University of Florida
Clinical Translational Research Building
2004 Mowry Road, Office 3118
Gainesville, FL 32611

E-mail: ajwoods@ufl.edu

Office: (352) 294-5842

Fax: (352) 294-5836

EDUCATION:

<u>Institution</u>	<u>Major/Focus</u>	<u>Degree/Position</u>	<u>Years</u>
University of Pennsylvania, Philadelphia, PA	Cognitive Neuroscience	Post-Doctoral Fellow	2010- 2013
George Washington University, Washington, DC	Cognitive Neuroscience	Doctor of Philosophy	2005- 2010
University of Alabama at Birmingham, Birmingham, AL	Psychology	Bachelor of Science	1999- 2003

RESEARCH INTERESTS & METHODS:

Cognitive aging, brain arousal systems, attention, cognitive frailty, neural plasticity

RESEARCH METHODS:

Structural and functional magnetic resonance imaging, proton and phosphorous magnetic resonance spectroscopy, human electrophysiology, event-related potentials, non-invasive brain stimulation, transcranial direct current stimulation (tDCS)

RESEARCH SYNOPSES:

Cognitive Aging: Cognitive function declines as we age. As our thinking and memory skills decline, the rate of functional dependence, mortality, and acute illness requiring hospitalization increases. A variety of methods have been proposed to counteract cognitive aging (e.g., cognitive training). Unfortunately, these techniques have limited degrees of success and transfer to everyday life. My work demonstrates that combining treatments like cognitive training with non-invasive brain stimulation (tDCS, tPCS) facilitates neural plastic response, improves cognitive abilities, and leads to long-term improvement. In combination with modern multimodal neuroimaging and electrophysiology recording, this work not only identifies mechanisms underlying improvement, but also provides information important for further optimizing treatment effectiveness.

Mechanisms of Cognitive Frailty: Cognitive frailty refers to transient episodes of significant cognitive impairment. Its prevalence is significantly higher in older adults. At present, factors modulating cognitive frailty in the elderly are poorly understood. This line of research investigates the roles of bacterial infection, blood-brain barrier integrity, neuroinflammation, and premorbid cognitive dysfunction in susceptibility to frailty states. This work also uses a combination of neuroimaging and serum-based measures to identify biomarkers of cognitive frailty.

ONGOING RESEARCH SUPPORT

CTSI KL2 (Woods; PI)	03/15/14-03/15/16	9.00 calendar
Clinical Translational Science Institute KL2 Career Award		\$200,234

Neuromodulation of working memory function in older adults.

The goal of this funding is to provide investigators with further training in clinical translational science. The funded project will involve a randomized clinical trial pairing transcranial direct current stimulation with cognitive training to enhance working memory function in older adults.
Role: PI

NIAAA P01AA019072 (Monti; PI); Renewal	0.60 calendar
NIH	\$7,499,996

Alcohol and HIV: Biobehavioral Interactions and Intervention

The goal of this study focuses on the interactive effects of HIV and alcohol use on metabolic-vascular disturbances underlying brain dysfunction.

Role: Co-I

1U54 EB020403 (Thompson, PI)	09/29/14-09/30/18	0.60 calendar
NIH		\$180,000

ENIGMA Center for Worldwide Medicine, Imaging, and Genomics

The goal of this study is to utilize a worldwide research consortium to facilitate big data computing of medical, neuroimaging, and genome data to further our understanding of disease states in the human brain.

Role: Co-I

2 P30 AG028740-06 (Pahor; PI)	04/15/12-03/31/17	0.12 calendar
NIH		\$63,150

Claude D. Pepper Older Americans Independence Center (OAIC) Pilot Project:

A pilot study to evaluate the role of brain integrity on post-hospital sarcopenia (Pilot PI: Manini)
The goal of this funding is to provide pilot data on the role of brain white matter integrity in post-hospital physical decline.

Role: Co-PI

2 P30 AG028740-06 (Pahor; PI)	04/15/12-03/31/17	0.12 calendar
NIH		\$47,532

Claude D. Pepper Older Americans Independence Center (OAIC) RC1 Development Project:
Development of Clinical Methods to Evaluate Neural Function in Aging (Project PI: Buford)

The goal of this development project is to provide support for the enhancement of the methodological skills of Pepper Center investigators to include modern methods of diffusion tensor imaging analysis.

Role: Co-I

NIA K99AG048762 (Fazeli; PI)	0.00 calendar
NIH	\$1,712,409

A novel neurorehabilitation approach for cognitive aging with HIV

January 24, 2015

Woods AJ/ CV

The goal of this study is to investigate the efficacy of cognitive training paired with tDCS on remediation of cognitive deficits in HIV positive older adults. Dr. Fazeli will receive training in aging and tDCS research methods.

Role: Co-mentor

McKnight Brain Research Foundation (Cohen; PI) 10/15/13-10/15/16 0.12 calendar
McKnight Brain Research Foundation \$179,414

CAM-CTRP Pilot Study Pilot Study: The ACTIVE Brain Study

The goal of this funding is to provide neuroimaging biomarkers of successful aging.

Role: Co-I

McKnight Brain Research Foundation (Woods; PI) 11/1/14-11/1/16 0.60 calendar
McKnight Brain Research Foundation \$73,164

CAM-CTRP Pilot Study: Brain Arousal Mechanisms in Aging

The goal of this funding is to investigate the role of brain arousal mechanisms in cognitive and physical decline associated with advanced age.

Role: PI

McKnight Brain Research Foundation (Cohen; PI) 1/1/14-1/1/16 0.12 calendar
McKnight Brain Research Foundation \$95,176

CAM-CTRP Pilot Study: Visual assessment of aging processes in the human brain.

The goal of this funding is to investigate aging related changes in visual processing and assessment in the human brain.

Role: Co-I

McKnight Brain Research Foundation (Cohen; PI) 1/1/14-1/1/16 0.12 calendar
McKnight Brain Research Foundation \$101,164

CAM-CTRP Pilot Study: Differential declination in attentional processes in advanced age

The goal of this funding is to identify differential change in the four major components of attentional processing using functional magnetic resonance imaging.

Role: Co-PI

McKnight Brain Research Foundation (Woods; PI) 7/1/14-7/1/16 0.60 calendar
McKnight Brain Research Foundation \$114,164

CAM-CTRP Pilot Study: Neuromodulation using transcranial direct current stimulation to improve working memory function in healthy aging

The goal of this funding is to use transcranial direct current stimulation to improve functional neuroimaging biomarkers of cognitive and metabolic decline in healthy aging.

Role: PI

Fund to Cure Stroke (Mennemeier; PI) 5/15/14-5/15/16 0.00 calendar
Fund to Cure Stroke \$35,593

Jump-starting motor function after stroke using tDCS

The goal of this study will be to determine the efficacy of tDCS at facilitating motor recovery after stroke using transcranial direct current stimulation paired with GaitRite motor training.

Role: Consultant

COMPLETED RESEARCH SUPPORT (Total past funding: \$414,454)

McKnight Brain Institute Woods (PI) 11/19/13 \$80,000

Acquisition of a whole brain 31P-1H magnetic resonance spectroscopy coil in the University of Florida AMRIS 3T MRI Scanner.

This fund provided for the acquisition of new equipment in the McKnight Brain Institute.

Role: PI

January 24, 2015 Woods AJ/ CV
 T32NS007413 Robinson (PI) 09/01/08-08/31/13 \$123,867
 Training Grant in Intellectual and Neurodevelopmental Disabilities
 The goal of this study is to provide support for neuroscience research training in neurodevelopmental disorders.
 Role: Post-Doctoral Trainee

NSF GRFP Woods (PI) 09/01/06-09/01/09 \$120,000
 National Science Foundation Graduate Research Fellowship: to develop an independent line of research investigating brain arousal systems in human behavior.
 Role: PI

RC1NS068910 Mark (PI) 10/01/09-10/01/2011 \$90,587
 Validating the NIH Toolbox in the Neurorehabilitation Setting
 The goal of this study was to provide validation of the NIH Toolbox screening in rehabilitation inpatients.
 Role: Statistical Consultant

PENDING

NIA R01 (Woods, PI) \$3,423,199
 NIH 4.80 calendar
 Stimulating Cognition in Older Adults
 The goal of this study will be to investigate optimization of CT effectiveness in older adults through adjunctive application of transcranial direct current stimulation (tDCS).
 Role: Site PI (UF)

NIA K01AG050707 (Woods, PD/PI) \$876,768
 NIH 9.0 calendar
 Neuromodulation of Cognition in Older Adults
 The goal of this study will be to investigate the ability of transcranial direct current stimulation to enhance the effectiveness of cognitive training targeting attention, speed of processing, and working memory function in older adults.
 Role: PD/PI

NIA R01 (Cohen/Marsiske, PIs) \$14,074,943
 NIH 2.40 calendar
 Augmenting Cognitive Training in Older Adults (ACT)
 The goal of this study will be to perform the definitive multi-site RCT establishing methods for optimized CT effectiveness in older adults through mindfulness meditation stress reduction and transcranial direct current stimulation (tDCS).
 Role: Site PI (UF)

NHLBI R01 (Williamson, PI) \$2,469,912
 NIH 1.2 calendar
 The effects of heart failure and cardiac resynchronization on the brain and cognition
 The goal of this study is to determine the influence of increased blood flow through cardiac resynchronization on the brain and cognition.
 Role: Co-I

UF Opportunity Research Fund (Clark, PI) \$100,000
 University of Florida 0.6 calendar
 Treating older adults with frontal cerebral gait deficits using non-invasive brain stimulation
 The goal of this study will be to investigate the adjunctive effects of a complex walking intervention with transcranial direct current stimulation to facilitate mobility in mobility restricted older adults.

January 24, 2015
Role: Co-I

Woods AJ/ CV

Sharon S. Keller Chronic Pain Research Grant (Cruz-Almeida, PI) \$35,000
American Pain Society 0.6 calendar
Assessing the Efficacy of Transcranial Direct Current Stimulation (tDCS) in Older Adults with Widespread Pain
The goal of this study will be to investigate the analgesic efficacy of tDCS in widespread pain common to older adults. This study will investigate the underlying neural mechanisms of tDCS effects, as well as predictors of treatment efficacy.
Role: Co-I

NIAAA F31AA024060 (Bryant, PI) \$109,474
NIH 0.0 calendar
Working memory: a critical factor underlying alcohol reduction intervention response
The goal of this project is to evaluate the role of working memory function in response to an effective alcohol reduction intervention (Motivational Interviewing) in HIV and non-HIV older adults. The student will receive training in functional and structural magnetic resonance imaging methods.
Role: Co-Mentor

ACADEMIC AWARDS & HONORS:

2015	Young Investigator Award in Neuromodulation, NYC Neuromodulation 2015, New York, NY, USA
2014	Clinical Translational Science Institute KL2 Research Fellow, University of Florida
2014	Elected as Junior Fellow to the World Academy of Art and Science
2010-2013	National Institute of Health (NIH) T32 Post-doctoral Fellowship, Intellectual and Developmental Disabilities Research Center, Children's Hospital of Philadelphia, University of Pennsylvania
2009-2010	Thelma Hunt Research Fellowship, George Washington University
2009-2010	Graduate Research Fellowship, The George Washington University
2008	Research Enhancement Grant, George Washington University
2006-2009	National Science Foundation (NSF) Graduate Research Fellowship (Cognitive Neuroscience Division)
2005	Academic Fellowship, Columbian College of Arts and Sciences, George Washington University
2003	Graduated Honors in Psychology, University of Alabama at Birmingham
2003	Graduated Cum Laude, University of Alabama at Birmingham
2003	1 st Place John P. Ost Undergraduate Psychology Research Competition
2003	Golden Key National Honor Society
2003	Phi Kappa Phi National Honor Society
2003	Gamma Sigma Alpha Honor Society
2003	Dean's List, University of Alabama at Birmingham
2002-2003	National Dean's List
2001	Psi Chi Honor Society
2000	Presidential Honors, University of Alabama at Birmingham
2000	Alpha Lambda Delta Honor Society
2000	National Society of Collegiate Scholars
1999	Dean's List, University of Alabama at Birmingham

PROFESSIONAL SOCIETIES:

Cognitive Neuroscience Society
Society for Neuroscience

EDITOR:

Frontiers in Human Neuroscience – Special Topic: Causality Perception

AD HOC REVIEWER:

Cognitive and Clinical Neuroscience

Brain Stimulation
Journal of Cognitive Neuroscience
Journal of Neuroscience Methods
Journal of Clinical and Experimental Neuropsychology
Neurocase
PLoS ONE
Neuropsychologia

Aging

Neurobiology of Aging
Experimental Gerontology

Psychology

Psychonomic Bulletin & Review
Journal of Experimental Psychology: Human Perception & Performance
Journal of Experimental Psychology: Learning, Memory, & Cognition
Frontiers in Perception Science
Journal of Experimental Child Psychology
Rehabilitation Psychology
Behavioral Research Methods

Medicine

Yale Journal of Biology and Medicine
PM&R
International Journal of Clinical Practice

OTHER SKILLS AND QUALIFICATIONS:

Statistical expertise: Multivariate, univariate, and multivariable data analysis, non-parametric statistical techniques, basic & advanced statistical modeling using SAS and SPSS
Electroencephalography (EEG) and event-related potential (ERP) methods
Structural and functional magnetic resonance imaging (MRI/fMRI)
Statistical Parametric Mapping (SPM)
Voxel-Based Lesion-Symptom Mapping (VLSM)
Voxel-Based Morphometry (VBM)
Programming: Matlab with the Psychtoolbox, Presentation experimentation software
Transcranial Magnetic Stimulation (TMS) techniques
Transcranial Direct Current Stimulation (tDCS) techniques
High-definition MRI-derived computational modeling of tDCS current density

MANUSCRIPTS:

Published peer-reviewed papers (26 papers, 12 first author, Avg. impact: 3.5, 318 citations)

Woods, A.J., Bryant, V., Sacchetti, D., Gervits, F., Hamilton, R. (2015). Effects of electrode drift on transcranial direct current stimulation. *Brain Stimulation*. Accepted December 2014, in press. Impact Factor: 5.43, Citations: 0

- Aubertin-Leheudre, M., **Woods, A.J.**, Anton, S., Cohen, R., Pahor, M. Clinical frailty phenotype: a physical and cognitive point of view. *Nestle Nutrition Institute Workshop Series. Accepted June 2014, in press.*
- Yamamoto, N., Philbeck, J.W., **Woods, A.J.**, Gajewski, D., Chichka, D., Potochlochio, S., Caputy, A. Medial temporal lobe roles in human path integration. (2014). *PLoS ONE*, 9(5): e96583, doi: 10.1371/journal.pone.0096583, *Impact Factor: 3.53, Citations: 0*
- Woods, A.J.**, Hamilton, R.H., Kranjec, A., Bikson, M., Minhas, P., Yu, J., Chatterjee, A. (2014). Space, time, and causality in the human brain. *Neuroimage*. 92: 285-97. doi: 10.1016/j.neuroimage.2014.02.015, *Impact Factor: 6.13, Citations: 1*
- Woods, A.J.**, Cohen, R.A., Pahor, M. (2013). Cognitive frailty: frontiers and challenges. *Journal of Nutrition, Health, and Aging*. 17, 741-743. doi: 10.1007/s12603-013-0398-8, *Impact Factor: 2.65, Citations: 5*
- Kessler, S., Minhas, P., **Woods, A.J.**, Rosen, A., Bikson, M. (2013). Dose considerations for transcranial direct current stimulation in children: a computational modeling study. *PLoS ONE*, 8(9): e76112. doi:10.1371/journal.pone.0076112, *Impact Factor: 3.53, Citations: 12*
- Woods, A.J.**, Philbeck, J.W., & Wirtz, P. (2013). Hyper-arousal decreases human visual thresholds. *PLoS ONE*, 8(4): e61415. doi: 10.1371/journal.pone.0061415, *Impact Factor: 3.53, Citations: 4*
- Woods, A.J.**, Goksun, T., Chatterjee, A., Zeloni, S., Mehet, A., Smith, S. (2013). The development of organized visual search. *Acta Psychologica*. 143(2): 191-199. doi: 10.1016/j.actpsy.2013.03.008, *Impact Factor: 2.36, Citations: 5*
- Göksun, T., **Woods, A.J.**, Chatterjee, A., Zeloni, S., Glass, L., Smith, S.E. (2013). Elementary school children's attentional biases in physical and numerical space. *European Journal of Developmental Psychology*, 10(4): 433-448. doi: 10.1080/17405629.2012.692965, *Impact Factor: 1.21, Citations: 2*
- Woods, A.J.**, Lehet, M., Chatterjee, A. (2012). Context modulates the contribution of time and space in causal inference. *Frontiers in Psychology*, 3(371): 1-10. doi: 10.3389/fpsyg.2012.00371, *Impact Factor: 2.84, Citations: 9*
- Minhas, P., Bikson, M., **Woods, A.J.**, Rosen, A., Kessler, S. (2012). Transcranial direct current stimulation in the pediatric versus adult brain: A computational modeling study. *IEEE Xplore: EMBC*, 63: 859-862. doi: 10.1109/EMBC.2012.6346067, *Impact Factor: 2.72, Citations: 9*
- Woods, A. J.**, Mennemeier, M., Garcia-Rill, E., Huitt, T., Chelette, K. C., McCullough, G., Munn, T., Brown, G., Kiser, T. S. (2012). Improvement in arousal, visual neglect, and perception of stimulus intensity following cold pressor stimulation. *Neurocase*, 18: 115-122. *Impact Factor: 1.38, Citations: 7*
- Amorapanth, P., Kranjec, A., Bromberger, B., Lehet, M., Widick, P., **Woods, A. J.**, Kimberg, D. Y., Chatterjee, A. (2012). Language, perception, and the schematic representation of spatial relations. *Brain & Language*, 120: 226-236. *Impact Factor: 3.31, Citations: 10*

- Woods, A. J.**, Philbeck, J. W., Chelette, K., Skinner, R. D., Garcia-Rill, E., Mennemeier, M. (2011). Cold pressor stimulation diminishes P50 amplitude in normal subjects. *Acta Neurobiologiae Experimentalis*, 71: 348-358. *Impact Factor: 2.24, Citations: 6*
- Woods, A.J.**, Mark, V.W., Pitts, A., Mennemeier, M. (2011). Pervasive cognitive impairment in acute rehabilitation patients "without" brain injury. *PM&R*, 3(5): 426-432. *Impact Factor: 1.66, Citations: 4*
- Philbeck, J.W., **Woods, A.J.**, Kontra, C., Zdenkova, P. (2010). A comparison of blind-pulling to blindwalking as a measure of perceived absolute distance. *Behavioral Research Methods*, 42: 148-160. *Impact Factor: 2.45, Citations: 6*
- Woods, A. J.**, Philbeck, J. W., Danoff, J. (2009). The various "perceptions" of distance: an alternative view of how effort affects distance judgments. *Journal of Experimental Psychology: Human Perception & Performance*, 35(4): 1104-1117. *Impact Factor: 3.10, Citations: 62*
- Mennemeier, M., Triggs, W., Chelette, K.C., **Woods, A. J.**, Kimbrell, T., Dornhoffer, J. (2009). Sham transcranial magnetic stimulation using electrical stimulation of the scalp. *Brain Stimulation*, 2(3): 168-173. *Impact Factor: 5.43, Citations: 29*
- Philbeck, J. W., **Woods, A. J.**, Arthur, J., Todd, J. (2008). Progressive locomotor recalibration during blind walking. *Attention, Perception & Psychophysics*, 70(8): 1459-1470. *Impact Factor: 2.15, Citations: 20*
- Woods, A.J.**, Mark, V.W. (2007). Convergent validity of executive organization measures on cancellation. *Journal of Clinical and Experimental Neuropsychology*, 29(7): 719-723. *Impact Factor: 2.15, Citations: 15*
- Mark, V.W., **Woods, A.J.**, Mennemeier, M., Abbas, S., Taub, E. (2006). Cognitive assessment for CI therapy in the outpatient clinic. *Neurorehabilitation*, 21: 139-46. *Impact Factor: 1.73, Citations: 6*
- Woods, A.J.**, Mennemeier, M., Garcia-Rill, E., Meythaler, J., Mark, V.W., Jewell, G.R., Murphy, H. (2006). Bias in magnitude estimation following left hemisphere injury. *Neuropsychologia*, 44: 1406-12. *Impact Factor: 3.45, Citations: 20*
- Taylor-Cooke, P.A., Ricci, R.; Baños, J.H., Zhou, X., **Woods, A.J.**, Mennemeier, M.S. (2006). Perception of motor strength and stimulus magnitude are correlated in stroke patients. *Neurology*, 66: 1444-1446. *Impact Factor: 8.30, Citations: 6*
- Mennemeier, M., Pierce, C., Dowler, R., Chatterjee, A., Anderson, B., Jewell, G., **Woods, A.J.**, Mark, V.W. (2005). Biases in attentional orientation and magnitude estimation explain crossover: neglect is a disorder of both. *Journal of Cognitive Neuroscience*, 17: 1194-1211. *Impact Factor: 4.68, Citations: 41*
- Mark, V.W., Oberhue, A.M., Henderson, C., **Woods, A.J.** (2005). Ballism following stroke responds to simple therapeutic interventions. *Archives of Physical Medicine and Rehabilitation*, 86: 1226-1233. *Impact Factor: 2.44, Citations: 9*
- Mark, V.W., **Woods, A.J.**, Ball, K.K., Roth, D.L., Mennemeier, M. (2004). Disorganized search is not a consequence of neglect. *Neurology*, 63(1): 78-84. *Impact Factor: 8.30, Citations: 30*

Manuscripts in review

Woods, A.J., Porges, E.C., Bryant, V., Seider, T., Cohen, R.A. Heavy alcohol consumption exacerbates cognitive aging. *Alcoholism: Clinical and Experimental Research*. Submitted January 2015.

Piedimonte, A., **Woods, A.J.**, Chatterjee, A. Intention and foreknowledge facilitate perception of ambiguous motion. *Quarterly Journal of Experimental Psychology*. Submitted January 2015.

Seider, T., **Woods, A.J.**, Cummings, T., Gongvatana, A., Kahler, C.W., Monti, P.M., Cohen, R.A. Age and HIV interact to produce greater white matter damage. *Brain*. Submitted January 2015.

Kranjec, A., Lehet, M., **Woods, A.J.**, Chatterjee, A. Time is not necessarily more abstract than space. *Cognition*. Submitted January 2015.

Manuscripts in preparation

Knotkova, H., Woods, A.J., Bikson, M., Nitsche, M. Transcranial direct current stimulation (tDCS): What pain practitioners should know.

Woods, A.J., Bikson, M., Stagg, C., Kappenman, E., Fregni, F., Antal, A., Paulus, W., Nitsche, M. A technical guide to tDCS. *Brain Stimulation*.

Porges, E.C., **Woods, A.J.**, Bryant, V., Gongvatana, A., Kahler, C.W., Monti, P.M., Cohen, R.A. HIV and age accelerate neurocognitive deficits from heavy alcohol consumption. *JAIDS*.

Szynkowicz, S.M., McLaren, M.E., Kirton, J.W., O'Shea, A., **Woods, A.J.**, et al. Prefrontal and Cingulate Cortical Thickness in Older Adults with Subthreshold Depression. *JINS*.

Anton, S., Woods, A.J., Pahor, M., Manini, T., Buford, T., Cohen, R., Marsiske, M., Clark, D., Someya, S., et al., The evolution of aging research. *Neurobiology of Aging*.

Tran, C., Klar, M., Lennon, D., Richards, L., Bryant, V., **Woods, A.J.** Cognitive impairment in older adults with urinary tract infection. *Journal of Infectious Disease*.

Woods, A.J., Chatterjee, A. Right parietal injury alters causal inference. *Neuropsychologia*.

Muehlhaus, J., Watson, C., Cardillo, E., **Woods, A.J.**, Chatterjee, A. Neural correlates of nouns and verbs in metaphor processing. *NeuroImage*.

Dissertation

Woods, A.J. *The consequences of hyper-arousal for human visual perception*. The George Washington University. Defended 03/05/2010, Accepted 03/15/2010, Published 05/12/2010.

ABSTRACTS:

Woods, A.J., Porges, E., O'Shea, A., Bryant, V., Harris, A., Edden, R., Cohen, R. Frontal NAA concentrations predict global cognitive function in older adults. *Cognitive Neuroscience Society*, accepted.

Porges, E., **Woods, A.J.**, Harris, A., Edden, R., Cohen, R. Frontal GABA concentrations predict global cognitive function in older adults. *Cognitive Neuroscience Society*, accepted.

Woods, A.J., Bryant, V., Sacchetti, D., Gervits, F., Hamilton, R. Effects of electrode drift on transcranial direct current stimulation. *International Brain Stimulation*, accepted.

Floyd T, Lairamore C, Garrison K, **Woods, AJ**, Smitherman, S, Young J.A., & Mennemeier M. Using tDCS to Jump Start Gait Training in Chronic Stroke Patients. Poster presented at the Arkansas Biosciences Institute, Fall Research Symposium, 10/7/2014, Arkansas State University, Jonesboro Arkansas.

Mennemeier M, Harrison, M, Settle, M, & **Woods, AJ**. Advantages and shortcomings of using lesion subtraction to associate behavioral deficits with localized brain injury. Poster presented at the Arkansas Biosciences Institute, Fall Research Symposium, 10/7/2014, Arkansas State University, Jonesboro Arkansas.

McLaren, M., Szymkowicz, S., O'Shea, A., **Woods, A.J.**, Manini, T., Anton, S., Dotson, V. Symptom dimensions of depression and frontal brain volume in older adults. *International Neuropsychological Society*, submitted.

Szymkowicz, S., McLaren, M., O'Shea, A., **Woods, A.J.**, Manini, T., Anton, S., Dotson, V. Subthreshold depressive symptoms are associated with age-related structural brain changes. *International Neuropsychological Society*, submitted.

Muhlhaus, J., Habel, U., **Woods, A.J.**, Cardillo, E., Yu, J., Chatterjee, A. Are nouns and verbs neurally separable based on semantic relations? *Human Brain Mapping*, in press.

Woods, A.J., Chatterjee, A., Kranjec, A., Bikson, M., Minhaus, P., Yu, J., Hamilton, R. Exploring Structure-Function Relationships using tDCS and fMRI in Parallel. *Brain Stimulation*, 7 (2), e9.

Kessler, S., **Woods, A.J.**, Minhas, P., Rosen, A., Bikson, M. Safety parameters for transcranial direct current stimulation in children. *Brain Stimulation*, in press.

Woods, A.J., Chatterjee, A., Kranjec, A., Bikson, M., Minhaus, P., Yu, J., Hamilton, R. (2013). Space, time, and causal inference: fMRI-guided tDCS. *Annual meeting of the Cognitive Neuroscience Society*.

Woods, A.J., Chatterjee, A., Kranjec, A., Bikson, M., Minhaus, P., Hamilton, R. (2012). Space, time, and causal inference: a tDCS study. *Annual meeting of the Society for Neuroscience*.

Kessler, S., **Woods, A.J.**, Minhas, P., Rosen, A., Bikson, M. Dose response relationships and safety parameters for transcranial direct current stimulation in children. *Annual Meeting of the Child Neurology Society*.

Woods, A.J., Lehet, M., Chatterjee, A. (2012). The role of the right parietal cortex in causal perception. *Annual meeting of the Cognitive Neuroscience Society*.

Mark, V.W., **Woods, A.J.**, Philbeck, J.W. (2011). The NIH Toolbox's sensitivity to cognitive illness in acute brain rehabilitation. *Journal of the International Neuropsychological Society*, 17(S1): 233.

Woods, A.J., Lehet, M., Hillebrandt, A., Chatterjee, A. (2011). The timing of space and time in perceptual causality. *Annual meeting of the Cognitive Neuroscience Society*.

Woods, A.J., Philbeck, J.W. (2010). When does cortical arousal influence performance on visual perception tasks? *Journal of Vision*, 10(7): 84.

Woods, A.J., Philbeck, J.W., Chelette, K., Skinner R., Garcia-Rill, E., Chichka, D., Potoicchio, S., Mennemeier, M. (2009). Cortical arousal influences early but not late visual perception. *Journal of Vision*, 9(8): 1113.

Mark, V.W., **Woods, A.J.** (2009). A novel use of the cancellation test to assess cognitive change after acute brain injury. *Journal of the International Neuropsychological Society*, 17(S2): 69.

Woods, A.J., Philbeck, J.W. (2008). Comparison of rope-pulling to blindwalking as measures of distance perception. *Journal of Vision*, 8(6): 351.

Mennemeier, M., Triggs, W., Chelette, K.C., **Woods, A.J.**, Myhill, J., Winham, W., Kimbrell, T., Dornhoffer, J. (2008). An advanced method of sham rTMS using electrical stimulation of the scalp. *Brain Stimulation*, 1(3): 285-286.

Mark, V.W., **Woods, A.J.**, Hamilton, L.C. (2008). Visual memory and search organization during cancellation testing, *Journal of the International Neuropsychological Society*, 14(S1): 287.

Woods, A.J., Philbeck, J.W. (2007). Perceived effort recalibrates verbal distance judgments without altering perceived distance, *Visual Cognition*, in press.

Woods, A.J., Philbeck, J.W. (2007). Does perceived effort influence verbal reports of distance? *Journal of Vision*, 7(6): 521.

Philbeck, J.W., **Woods, A.J.** (2007). Does perceived effort influence verbal reports of shape? *Journal of Vision*, 7(6): 522.

Mennemeier, M.S., Chelette, K.C., **Woods, A.J.**, Hudson, J., Dewi, E., Taylor-Cooke, P.A., Wallace, T., Skinner, R.D., Garcia-Rill, E. (2007). The P50 ERP is sensitive to arousal states in both neglect and normal subjects. *Journal of the International Neuropsychological Society*, 13(S1): 39.

Woods, A.J., Mennemeier, M., Garcia-Rill, E., Wallace, T., Chelette, K.C., McCullough, G., Schmidley, J. (2006). Cold pressor stimulation improves neglect, magnitude estimation, and arousal (P50 amplitude). *Journal of the International Neuropsychological Society*, 11(S1): 259.

Woods, A.J., Mark, V.W. (2005). Severe executive dysfunction is a component of left but not right neglect. *Journal of the International Neuropsychological Society*, 11(S1): 45.

Woods, A.J., Jewell, G., Kretzmer, T, Murphy, H., Meidinger, A., Liem, S., Nunn, T., Mark, V.W., Chatterjee, A., Anderson, B., Mennemeier, M. (2005). A broad spectrum of

cognitive deficits in neglect. *Journal of the International Neuropsychological Society*, 11(S1): 45.

Mark, V.W., **Woods, A.J.**, Mennemeier, M., Taub, E. (2005). Cognitive screening for constraint-induced movement therapy in the Outpatient Stroke Rehabilitation Clinic. *Archives of Physical Medicine and Rehabilitation*, 86: E22.

Mark, V.W., **Woods, A.J.**, Ball, K.K., Mennemeier, M., Abbas, S. (2005). Aphasia does not prevent assessing executive functions after stroke. *Neurology*, 64(6), A224.

Kretzmer, T, Jewell, G., Murphy, H., Meidinger, A., Liem, S., **Woods, A.J.**, Mark, V.W., Anderson, B., Chatterjee, A., Mennemeier, M. (2005). Aging has little effect on perception of stimulus intensity. *Journal of the International Neuropsychological Society*, 11(S1): 122.

Mark, V.W., **Woods, A.J.**, Ball, K.K., Mennemeier, M., Abbas, S. Comprehension ability does not predict executive test compliance following stroke. Second Congress of the International Society for Vascular Behavioural and Cognitive Disorders – Florence, Italy, June 8-12, 2005.

Kretzmer, T, Jewell, G., Murphy, H., Meidinger, A., Liem, S., **Woods, A.J.**, Mark, V.W., Anderson, B., Chatterjee, A., Mennemeier, M. (2005). Understanding perceptual deficits following right hemisphere injury. *Journal of the International Neuropsychological Society*, 11(S1): 182.

Woods, A.J., Mark, V.W. (2004). Cognitive impairment in non-neurologic elderly hospital inpatients. *Journal of the International Neuropsychological Society*, 10(S1): 182.

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Woods, A.J., Garcia-Rill, E., Meythaler, J., Mark, V.W., Jewell, G.R., Mennemeier, M. (2004). Altered magnitude estimation in neglect following left-hemisphere damage improves with pharmacologic treatment for arousal. *Journal of the International Neuropsychological Society*, 10(S1): 91-92.

Woods, A.J., Jewell, G.R., Fisk, G., Tipton, S., Dowler, R., Mennemeier, M. (2004). Caloric stimulation in neglect: not just for the vestibular system anymore. *Journal of the International Neuropsychological Society*, 10(S1): 92.

Mark, V.W., **Woods, A.J.**, Mennemeier, M. (2004). Cancellation target marking procedure affects perseveration but not neglect following brain injury. *Journal of the International Neuropsychological Society*, 10(S1): 172.

Jewell, G., Kretzmer, T., Meidinger, A., **Woods, A.J.**, Murphy, H., Liem, S., Mark, V.W., Mennemeier, M. (2004). Merging neuropsychology and psychophysics: right-hemisphere dominance for ratio scaling. *Journal of the International Neuropsychological Society*, 10(S1): 211.

Mark, V.W., **Woods, A.J.**, Ball, K.K., Roth, D.L., Mennemeier, M. Computerized cancellation test performance and aging. Annual Cognitive Aging Conference – Atlanta, Georgia, April 1-4, 2004.

Mark, V., **Woods, A.** (2003). Face validity of search organization measures on cancellation tests. *Journal of the International Neuropsychological Society*, 9, 267.

Mark, V., **Woods, A.** (2003). Speed vs. organization measures on cancellation following stroke. *Journal of the International Neuropsychological Society*, 9, 267.

Mark, V.W., **Woods, A.** (2003). Age effects on cancellation speed and organization. *Journal of the American Geriatrics Society*, 51(4), S388.

Mennemeier, M., Jewell, G. Kretzmer, T., Murphy, H.L., **Woods, A.**, Nunn, T., Liem, S. (2003). Bridging neuroscience and psychophysics: heteromodal association cortex is a critical component of S.S. Stevens' Power Law. *Proceedings of the Annual Winter Conference on Brain Research*.

Mennemeier, M., Kretzmer, T., Murphy, H., Jewell, G.R., Nunn, T., **Woods, A.**, Meidinger, A., Leim, S. (2003). Aging and cerebrovascular disease can alter judgment of stimulus intensity and pain. *Annals of Behavioral Medicine*, Supplement of the proceedings of the 24th annual meeting.

INVITED LECTURES, SYMPOSIA, & CONFERENCE TALKS:

Porges E.C., **Woods, A.J.**, Bryant V.E., Cohen, R.A. The effect of current alcohol consumption on cognitive impairment varies as a function of HIV status and age. Research Society on Alcoholism, invited symposium, San Antonio, TX, USA, June 20, 2015.

Woods, A.J., Bryant, V., Sacchetti, D., Gervits, F., Hamilton, R. Reducing variability of effects in transcranial direct current stimulation. *Pre-INS Gator Meeting*. Keystone, CO, USA, February 3, 2015.

Woods, A.J., Bryant, V., Sacchetti, D., Gervits, F., Hamilton, R. Effects of electrode drift on transcranial direct current stimulation. *International Brain Stimulation Conference*. Singapore, March 5, 2015.

Woods, A.J. Effects of electrode drift and localization on transcranial direct current stimulation. *NYC Neuromodulation 2015*. New York, NY, USA, January 11, 2015.

Woods, A.J. Combating Cognitive Aging with Non-Invasive Brain Stimulation. University of Florida Institute on Aging Annual Spotlight on Aging Research Special Lecture, Gainesville, FL, USA, June 4, 2014.

Woods, A.J. Transcranial Direct Current Stimulation. Cognitive Aging and Memory Clinical Translational Research Program 2nd Annual External Advisory Board Meeting, Gainesville, FL, USA, June 2, 2014.

Woods, A.J. Neuroimaging, Electrophysiology, and Neuromodulation. Cognitive Aging and Memory Clinical Translational Research Program 2nd Annual External Advisory Board Meeting, Gainesville, FL, USA, June 2, 2014.

Woods, A.J. Enhancing Cognitive Function using Transcranial Direct Current Stimulation. The Mcknight Brain Institute Multi-Institution Meeting, Gainesville, FL, USA, March 27, 2014.

Woods, A.J. The alert brain: the role of brain alerting mechanisms in cognitive function. Oak Hammock Institute on Higher Education Lecture Series, Gainesville, FL, USA, March 5, 2014.

Woods, A.J. Space, Time, and Causality in the Human Brain. GATOR Pre-INS Conference, British Columbia, Canada, February 11, 2014.

Woods, A.J. Multimodal Combination of fMRI and tDCS. NYC Neuromodulation Conference 2013, New York, NY, USA, November 22, 2013.

Woods, A.J. Exploring Structure-Function Relationships Using Parallel BOLD fMRI and Transcranial Direct Current Stimulation. Southeastern Magnetic Resonance Imaging Conference 2013, Tallahassee, Florida, USA, October 11-13, 2013.

Woods, A.J. Space, Time, and Causality in the Human Brain. Neuroscience Lecture Series, University of Florida, Gainesville, FL, USA, September 26, 2013.

Woods, A.J. Space, Time, and Causality: a tDCS study. Neuroscience Chalk Talks, Children's Hospital of Philadelphia, Philadelphia, PA, USA, February 28, 2013.

Woods, A.J. Brain Arousal Systems: Treating Spatial Neglect following Stroke. Laboratory for Cognition and Neural Stimulation, University of Pennsylvania, Philadelphia, PA, USA, January 14, 2013.

Woods, A.J. Space, Time & Causality in the Brain. Psychology Lecture Series, University of Maryland Baltimore County, Baltimore, MD, USA, December 17, 2012.

Woods, A.J. Brain Arousal Systems: The Gateway to Conscious Behavior. Institute of Aging Center for Aging and Memory Lecture Series, University of Florida, Gainesville, FL, USA, December 13, 2012

Woods, A.J. Space, Time & Causality in the Human Brain. Psychology Lecture Series, Texas Christian University, Ft. Worth, TX, USA, November 30, 2012.

Woods, A.J. Space, Time & Causality in the Brain. Experimental Psychology Lecture Series, Texas Tech University, Lubbock, TX, USA, November 23, 2012.

Woods, A.J. Space, Time & Causality in the Brain. Neuroscience Lecture Series, Bowdoin College, Brunswick, ME, USA, November 12, 2012.

Woods, A.J. Space, Time, & Causality: a tDCS study. International Research Training Group Winter School (IRTG 1328, Schizophrenia and Autism), Aachen University, Aachen, Germany, November 3, 2012.

Woods, A.J. Perceptual Bias in Athletic Decision-Making. Annual Colonial Athletic Association NCAA Football Officiating Clinic, Philadelphia, PA, USA, July 20, 2012.

Woods, A.J. Space, Time, and Causal Inference: a tDCS study. Laboratory for Cognition and Neural Stimulation, University of Pennsylvania, Philadelphia, PA, USA, May 7, 2012.

Woods, A.J. The Role of the Right Parietal Cortex in Causal Inference. Neuroscience Chalk Talks, Children's Hospital of Philadelphia, Philadelphia, PA, USA, March 22, 2012

Woods, A.J. Causal Event Perception Across the Lifespan. Intellectual and Developmental Disabilities Research Center Trainee Lecture Series, Children's Hospital of Philadelphia, Philadelphia, PA, USA, March 10, 2011.

Woods, A.J. Judging a Book by Its Cover: Causality and Surface Features. Center for Cognitive Neuroscience Lecture Series, University of Pennsylvania, Philadelphia, PA, USA, January 26, 2011.

Woods, A.J. Cortical Arousal and Visual Perception. Cognitive Neuroscience Brown Bag Lecture Series, Department of Psychology, The George Washington University, Washington, DC, USA, March 21, 2009.

Woods, A.J. The Various “Perceptions” of Distance: an alternative view of how effort influences judgments of absolute distance. Cognitive Neuroscience Brown Bag Lecture Series, Department of Psychology, The George Washington University, Washington, DC, USA, February 16, 2008.

Woods, A.J., Philbeck, J.W. Perceived Effort Recalibrates Verbal Distance Judgments Without Altering Perceived Distance, *Object Perception Attention and Memory (OPAM) Conference*, Long Beach, CA, USA. November 15, 2007.

Woods, A.J. Does Physiological Effort Influence Perceived Distance? Cognitive Neuroscience Brown Bag Lecture Series, Department of Psychology, The George Washington University, Washington, DC, USA, April 21, 2007.

Woods, A.J. Neglect and Neural Mechanisms of Magnitude Estimation. Cognitive Neuroscience Brown Bag Lecture Series, Department of Psychology, The George Washington University, Washington, DC, USA, December 5, 2005.

Mennemeier, M., **Woods, A.J.** Hemispheric Laterality of Magnitude Estimation. Behavioral Neurology/Neuroscience Laboratory Meeting (PI: Anjan Chatterjee, M.D.), Department of Neurology, University of Pennsylvania, Philadelphia, PA, USA, October 29, 2004

Woods, A.J., Mark, V.W. Routine Cognitive Assessment of Elderly “Non-Neurological” Rehabilitation In-patients: surprising findings. Center for Aging Scientific Lecture Series, University of Alabama at Birmingham, Birmingham, AL, USA, January 23, 2004.

Woods, A.J. Cognitive Impairment in “Non-Neurologic” Elderly Rehabilitation Inpatients: fact or fiction? Department of Physical Medicine and Rehabilitation Grand Rounds, University of Alabama at Birmingham, Birmingham, AL, USA, January 16, 2004.

Woods, A.J. Cognitive Impairment in “Non-Neurologic” Rehabilitation Inpatients. National Institute of Health Training Seminar, Department of Physical Medicine and Rehabilitation, University of Alabama at Birmingham, Birmingham, AL, USA, April 30, 2003.

TEACHING EXPERIENCE:

<u>Position</u>	<u>Course</u>	<u>Institution</u>	<u>Year</u>
Director	Transcranial Direct Current Stimulation 2-Day Workshop	Neuromodec/Singapore	2015
Director	Transcranial Direct Current Stimulation 2-Day Workshop	Neuromodec/City College of New York	2015
Director	UF Transcranial Direct Current Stimulation 2-Day Workshop	Neuromodec/Gainesville, FL	2014
Director	Clinical Neuroscience of Aging	University of Florida	2014
Co-Director	Clinical and Translational Science Institute Student Seminar Course (GMS 6893)	University of Florida	2014

January 24, 2015

Woods AJ/ CV

Director	Transcranial Direct Current Stimulation 2-Day Workshop	Neuromodec/City College of New York	2013-2014
Co-Director	Clinical & Translational Research Practicum (GMS 6845)	University of Florida	2013-2014
Director	Transcranial Direct Current Stimulation Practical Course	NYC Neuromodulation Conference 2013	2013
Instructor	Penn Neuroscience Boot Camp: Brain Arousal	University of Pennsylvania	2012
Instructor	Memory & Cognition	George Washington University	2010
Instructor	Cognitive Neuroscience	George Washington University	2009
Instructor	Memory & Cognition	George Washington University	2009

FORMER AFFILIATIONS:

<u>Institution</u>	<u>Department</u>	<u>Position</u>	<u>Years</u>
University of Pennsylvania, Philadelphia, PA	Cognitive Neuroscience	Post-Doctoral Fellow	2010-2013
The George Washington University, Washington, DC	Psychology/Cognitive Neuroscience	PhD Graduate Student/ Instructor	2005-2010
University of Arkansas for Medical Sciences, Little Rock, AR	Neurobiology & Developmental Sciences	Lab Manager/ Research Associate	2004-2005
University of Alabama at Birmingham, Birmingham, AL	Physical Medicine & Rehabilitation	Research Assistant	2000-2004