

CURRICULUM VITAE University of Florida

PERSONAL INFORMATION:

Name: Adam J. Woods, PhD
Citizenship: USA

RANK/TITLE: Associate Professor, UF Preeminence Term Professor
Associate Director, Center for Cognitive Aging & Memory (CAM)
Director, CAM Neurophysiology & Neuromodulation Core
Director, CAM Clinical Trial Core
Co-Director, CAM Neuroimaging Core
Director, Woods Neuromodulation & Neuroimaging Lab
Co-Director, MBRF Cognitive Aging and Memory Intervention Core
Departments: Clinical and Health Psychology (Primary), Neuroscience (Joint)
Institute: McKnight Brain Institute
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Address: University of Florida
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Gainesville, FL 32610
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EDUCATION:

| Institution | Major/Focus | Degree/Position | Years |
|--------------------------------------------------------|---------------------------|----------------------|-----------|
| 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, attention/speed of processing, working memory, neuroplasticity/neuromodulation, non-invasive brain stimulation, clinical translational neuroscience

RESEARCH METHODS:

Clinical trials, structural and functional magnetic resonance imaging, proton and phosphorous magnetic resonance spectroscopy, diffusion weighted imaging, human electrophysiology, event-related potentials, non-invasive brain stimulation, transcranial direct current stimulation (tDCS), transcranial alternative current stimulation (tACS), transcranial magnetic stimulation (TMS), near-infrared photobiomodulation

RESEARCH SYNOPSES:

Cognitive Aging, Dementia & Neuromodulation: 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. Increased rates of cognitive and functional decline associated with dementia represent a growing concern in light of our rapidly aging population. There are currently a paucity of effective treatments for preventing dementia or recovering age-related cognitive decline. A variety of methods have been proposed to counteract cognitive aging and/or

slow onset of dementia (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, TMS, tACS) facilitates neural plastic response, improves cognitive abilities (specifically working memory, attention, and speed of processing), 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. This work has recently led to funding of the largest and only Phase III randomized clinical trial for tDCS as an adjunctive method with cognitive training to combat cognitive aging and slow dementia onset. In addition, my lab is funded to investigate mobility enhancement in older adults, treat chronic knee osteoarthritic pain, and enhance working memory using a variety of non-invasive electrical brain stimulation methods in Phase II trials. At present, my lab maintains over 10 million dollars in NIH funding to investigate non-invasive brain stimulation-related interventions. In addition, my lab also maintains funding to investigate a variety of non-pharmacological compounds in a Phase II pilot clinical trials to investigate novel methods for improving brain metabolism, neuroplasticity, and cognitive function. This work capitalizes on novel methods for imaging mitochondrial function and cerebral energy metabolism in the brain, as well as state of the art diffusion-weighted and functional imaging methods. Collectively, my work aims to slow or reverse the effects of cognitive aging and slow the onset of dementia using non-invasive and minimally invasive approaches. In addition, the extension of my work to chronic pain and mobility decline in older adults represents an exciting new arm of my intervention work. At present, a major focus in my lab uses machine learning approaches paired with multimodal imaging, behavior and clinical variables/outcomes to identify novel pathways to precision dosing/medicine applications of non-invasive brain stimulation methods in patient populations.

Neuroplasticity and Neuromodulation: Over the past decade, my work has focused on identifying and implementing novel methods for alteration of the neuroplastic response of brain tissue. This work started with my early work in basic science approaches to alteration of brain response using peripheral sensory stimulation to alter brain arousal systems to alter attention and treat disorders like spatial neglect. This approach proved transient without lasting impact to beyond 10-20 minutes. Transitioning to more direct approaches of neuromodulation that had potential for lasting impact on the response of brain tissue, I began working with transcranial magnetic stimulation and transcranial direct current stimulation (tDCS) methods. Between these methods, tDCS proved to have the better safety profile and the greatest potential for easy deployment and application in a variety of contexts, both basic science and clinical research oriented. Over the past 8 years, I have carried out a series of complementary studies investigating the potential for alteration of neuroplastic response in brain tissue through tDCS as a means for altering cognitive function in the domains of working memory, speed of processing and decision-making. This basic research provided the impetus for initial investigation of clinical translational applications of tDCS. My work has demonstrated that applying tDCS in the context of an ongoing learning paradigm (e.g., cognitive training, novel learning paradigms, etc.) significantly enhances the overall outcomes for training and transfer of training gains. Based on a series of pilot trials, my lab has demonstrated transfer effect sizes of Cohen's d 1.2 pre to post 2-week intervention, with effect sizes of .8 maintained 3 months after intervention. My lab's work to investigate the neural mechanisms of change in learning using fMRI provides evidence of not only decreased functional expenditure of oxygenated hemoglobin, but also increased connectivity within task-based networks trained during intervention. Further still, using GABA-MEGAPRESS 1H MRS, our work demonstrates significant augmentation of GABA+ levels in stimulated cortices as a result of adjunctive training+tDCS intervention compared to sham-tDCS+training, providing an indirect metric of change in the neuroplastic response of brain tissue targeted during intervention. Collectively, this work has led to NIH funding of several clinical trials using tDCS as both an adjunctive and stand-alone intervention to modulate neuroplasticity to impact cognitive function, chronic pain, and other disease symptoms thought to stem from alterations in the neuroplastic behavior of brain networks. This work in my lab serves as a key example of bench to bedside translation of research.

ONGOING RESEARCH SUPPORT**PRINCIPAL INVESTIGATOR**

NIH/NIA R01AG064587 (Woods/Bowers/Alexander; MPIs) 08/01/19-04/31/24

National Institutes of Health

\$3,797,247

Title: Revitalizing Cognition in Older Adults at Risk for Alzheimer's Disease with Near-Infrared Photobiomodulation

Description: This five-year R01 multisite Phase II randomized clinical trial will investigate the impact of near-infrared (NIR) photobiomodulation, a form of non-invasive brain stimulation, on cognition and mitochondrial function in older adults at risk for Alzheimer's disease. University of Florida (parent site) and the University of Arizona will perform a six-week intervention using NIR and assess changes in cognition, functional brain response and mitochondrial function (31P magnetic resonance spectroscopy) before, immediately post-intervention, and 3 months post-intervention in a population of 168 older adults.

Role: MPI

NIA R01AG054077 (Woods/Cohen/Marsiske; MPIs) 09/01/16-04/31/21

National Institutes of Health

\$5,778,764

Augmenting Cognitive Training in Older Adults (ACT)

This study is a Phase III definitive multi-site randomized clinical trial with an adaptive design that will establish the benefit of delivering adjunctive transcranial direct current stimulation (tDCS) with cognitive training in older adults to combat cognitive aging. This trial measures both trial success and intervention mechanisms using multimodal neuroimaging and magnetic resonance spectroscopy, as well as comprehensive neurocognitive and functional assessment.

Role: Contact PI; Administrative Coordinating Center PI; UF Site PI (Overlap covered by K01AG050707-A1)

NIA T32AG020499 (Marsiske/Woods/Smith; MPIs) 05/01/20-04/30/25

National Institutes of Health

\$1,788,970

Research Training in Non-Pharmacological Interventions for Cognition in Aging, MCI, and Alzheimer's Disease

This pre-doctoral training grant will provide dedicated research training to PhD students in non-pharmacological intervention methods for remediating age-related cognitive decline, cognitive symptoms of MCI and AD as well as methods for potentially preventing conversion to MCI and AD. The training program is designed around three substantive areas: 1) behavioral interventions, 2) multi-component compensatory interventions, and 3) non-invasive brain stimulation interventions. The training grant provides training to 6 predoctoral students per year.

Role: MPI

K01AG050707-A1 (Woods; PI) 09/30/16-05/31/21

National Institutes of Health

\$612,715

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. Training will focus on cognitive aging interventions and advanced magnetic resonance imaging and spectroscopy methods.

Role: PI

NIA U01AG062368 (Edwards; PI) 09/30/18-05/31/21 (NCE)

\$614,914

National Institutes of Health

Planning an adaptive clinical trial of cognitive training to improve function and delay dementia

July 8, 2020

Woods AJ/ CV

This two-year U01 project will develop the infrastructure for a large Phase II/III clinical trial investigating the impact of various forms of cognitive training on functional abilities and dementia conversation in patients with mild cognitive impairment. I will lead the UF site on this trial and will also lead the neuroimaging and data management for the pilot trial and in the subsequent full trial submission. This grant involves sites at University of South Florida (parent site), University of California San Francisco and the University of Florida.

Role: Site PI

NIMH R21MH112206 (Woods/Ding, MPIs) 1/15/18-12/31/20 (NCE)

National Institutes of Health

\$395,034

Stimulating Theta Oscillations to Enhance Working Memory

This project will the impact of transcranial alternating current stimulation (tACS) on working memory network synchrony in the theta band of EEG using electrophysiology and functional magnetic resonance imaging.

Role: MPI

McKnight Brain Research Foundation (Woods/Bowers, MPIs) 05/1/18-04/31/21

McKnight Brain Research Foundation

\$120,000

Near infrared brain stimulation in older adults.

The goal of this funding is to use near infrared brain stimulation to improve cognition, 31P MRS markers of ATP, and functional neuroimaging biomarkers of cognitive and metabolic decline in healthy aging in a 2-site phase II pilot trial.

Role: MPI

McKnight Brain Research Foundation (Woods, PI) 09/1/19-08/31/21

Center for Cognitive Aging and Memory Pilot

\$100,000

Enhancing Cognition in Older Adults with Intermittent Hypoxia and Cognitive Training (EXCITE)

The goal of this funding is to use intermittent hypoxia paired with cognitive training to improve cognition, 31P MRS markers of ATP, and functional neuroimaging biomarkers of cognitive and metabolic decline in healthy aging.

Role: PI

CO-PRINCIPAL INVESTIGATOR

UF Pain and Aging Pilot Initiative (Woods/Cruz-Almeida, Co-PIs)

University of Florida

\$30,000

Treating generalized pain in older adults with transcranial direct current stimulation (tDCS)

This study will use two weeks of tDCS to treat generalized pain disorder in older adults and investigate neural correlates of tDCS related analgesic effects.

Role: Co-PI

CO-INVESTIGATOR

Parkinson's Foundation Impact Award (Bowers, PI)

Parkinson's Foundation

\$150,000

Revitalizing Cognition and Motor Symptoms in Parkinson Disease: A pilot study with NIR stimulation

The goal of this pilot clinical trial is to evaluate the impact of near infrared photobiomodulation in alleviating cognitive and motor symptoms of Parkinson Disease. The study will use a multi-week transcranial and intranasal application of NIR and participants will be randomized to active or sham stimulation with evaluation of 31P MRS, rs-fMRI, cognitive and motor function pre and post-intervention.

Role: Co-I

NIA R37AG033906 (Fillingim; PI) 06/01/19-04/31/24

National Institutes of Health

\$6,144,138

July 8, 2020

Woods AJ/ CV

Understanding Pain and Limitations in Osteoarthritic Disease

The goal of this project is to evaluate transcranial direct current stimulation and mindfulness-based stress reduction, alone and in combination, as treatments of chronic osteoarthritic knee pain in a two-site phase II clinical trial.

Role: Co-I

NIMH RF1MH114290-01 (Sadlier; PI) 07/19/17-07/18/21

National Institutes of Health

\$2,046,092

Mechanism and dosimetry exploration in transcranial electrical stimulation using magnetic resonance current mapping methods

The goal of this project is to pioneer an objective measure of current flow in the brain using state of the art magnetic resonance imaging methods combined with in scanner application of tDCS and tACS. This project will also assess the relationship between activation in working memory related regions from an NBACK fMRI task and correspondence of change following F3-F4 in scanner tDCS.

Role: Co-I (overlap covered by K01)

VA Merit Review

\$62,788

VA Rehabilitation Research and Development Service

Title: Cerebral networks of locomotor learning and retention in older adults

Description: This four-year Merit application extends the ongoing collaborative work in R21AG053736 to investigate the impact of tDCS paired with complex walking as an intervention for mobility decline in older adults to a larger Phase II trial with increased mechanistic insight through multimodal neuroimaging. I will lead all aspects of tDCS clinical trial implementation in the trial.

Role: Co-I

NIA R01AG061065 (Barve/Cohen, MPIs) 09/01/18-05/31/21

0.00 cal months

National Institutes of Health

\$779,748

Role of Gut Microbial Dysbiosis and Aging on HIV-associated neurocognitive and brain dysfunction
The goal of this project is to investigate the relationship between gut microbiota and neurocognitive function in older adults with HIV. The project uses multimodal imaging with ³¹P phosphorous MRS, functional MRI, and structural MRI to investigate brain-based mechanisms.

Role: Co-I

McKnight Brain Research Foundation (Williamson, PI) 08/1/19-07/31/21

McKnight Brain Research Foundation

\$120,000

Transcutaneous Vagal Nerve Stimulation and Cognitive Training to Enhance Cognitive Performance in Healthy Older Adults

The goal of this funding is to use transcutaneous auricular vagal nerve stimulation with cognitive training to improve cognition and functional neuroimaging biomarkers in healthy aging in a two site Phase I/II clinical trial.

Role: Co-I

MENTORSHIP-BASED FUNDING

Francis Marion College Internal Grant (Sargent; PI)

01/30/18-12/31/20

Francis Marion College

Enhancing Undergraduate Student Exposure to Research

The goal of this project is to increase research exposure to students at Marion College and enhance the Marion College PIs lab with equipment and expertise in modern neuroscience methods (EEG) by mentorship from an established PI at a top-tier university. Dr. Woods serves as mentor to Dr. Sargent on this project, providing training in EEG. Dr. Sargent and 8 undergraduates from Marion College visit Dr. Woods' lab once per year to gain exposure and experience with research in a state-of-the-art academic medical research environment. This internal project is intended to prepare the faculty mentee for submission of an NIH R15 grant.

Role: Faculty Mentor

CONSULTANT

NIH R01AG058724, 09/01/18 to 08/31/24, Treating mild cognitive impairment using high definition transcranial direct current stimulation. Dr. Woods serves as an expert consultant for the tDCS and neuroimaging aims of the aforementioned R01 awarded to Dr. Benjamin Hampstead at University of Michigan.

Supplement to NIH R01MH111896, 06/01/18 to 08/31/19, A toolbox to control and enhance tDCS spatial precision. Dr. Woods serves as an expert consultant for the aging, tDCS, and neuroimaging aims of the awarded one-year supplement to the aforementioned R01 awarded to Dr. Marom Bikson at City College of New York.

YB-STPS1801, A pilot study of home-delivered non-invasive neurostimulation to evaluate improvement in mood and symptom distress in the elderly. Dr. Woods serves as an expert consultant for the aging and tDCS aims of this project awarded to Dr. Helena Knotkova at the Metropolitan Jewish Health System Institute for Innovations in Palliative Care in New York.

OTHER SUPPORT

L30 AG051178 (Woods; PI) 07/01/15-06/31/19
 NIH Loan Repayment Program; National Institute on Aging (NIA)
 Study Title: Neuromodulation of Cognition in Older adults
 Two-year loan repayment support for research on the use of transcranial direct current stimulation paired with cognitive training to enhance cognitive function in older adults.
 Role: PI

PENDING RESEARCH SUPPORT**COMPLETED RESEARCH SUPPORT**

NIA R21AG053736-01A1 (Clark; PI) 07/01/17-06/31/19
 National Institutes of Health \$189,233
 Combining tDCS and neurorehabilitation to treat age-related deficits of mobility and cognition
 The goal of this study is to obtain pilot data for a full-scale clinical trial combining transcranial direct current stimulation (tDCS) and complex walking intervention to enhance mobility in older adults.
 Role: Co-I

McKnight Brain Research Foundation (Woods; PI) 07/1/15-07/1/19
 McKnight Brain Research Foundation \$114,164
 Neuromodulation of cognition in older adults: The stimulated brain study
 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

Industry Sponsored Trial (Woods; PI) 06/15/16-06/15/18
 Osato Research Institute \$268,360
 Impact of Fermented Papaya Product on brain energetics, neuroplasticity, and cognition
 The goal of this study is to perform a pilot clinical trial investigating the influence of Fermented Papaya Product on brain energetics, neuroplasticity, and cognition in older adults with elevated systemic inflammation using multimodal neuroimaging (fMRI, DWI) and spectroscopy (31P, 1H-MRS), as well as assessment of systemic inflammation and cognition.
 Role: PI

NIA T32 (McLaren: Student PI) 04/01/17-03/30/19

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| July 8, 2020 | | Woods AJ/ CV |
| National Institutes of Health | | \$80,000 |
| Dissociating anhedonia and apathy in older adults: an fMRI study | | |
| The goal of this project is for the student to obtain training in functional magnetic resonance imaging on a project that enrolls older adults with symptoms of anhedonia and apathy and undergoing an fMRI EEfRT task, in addition to testing for cognitive function and depression. | | |
| Role: Mentor | | |
| UF Cancer and Aging Initiative (Lyon/Cohen, Co-PIs) | | |
| University of Florida | | \$100,000 |
| Neuroinflammation and Cognitive Dysfunction in Older Women with Breast Cancer | | |
| This pilot study will investigate the influence of chemotherapy on cognitive and brain function, focusing on the role of neuroinflammation in chemotherapy-associated cognitive decline. | | |
| Role: Co-I | | |
| TL1 (Nissim; Student PI) | 08/01/16-07/30/18 | |
| National Institutes of Health/UF CTSI | | \$80,000 |
| Enhancing working memory through neuromodulation and cognitive training | | |
| The goal of this project is for the student to obtain training in clinical translational science on a project using tDCS and cognitive training to enhance cognitive and functional brain response in older adults. | | |
| Role: Mentor | | |
| NIA R01AG044424 (Clark; PI) | 09/1/14-08/31/18 | |
| National Institutes of Health | | \$1,376,867 |
| Neural mechanisms of dynapenia: The UNCODE study | | |
| This translational physiology study seeks to determine the neurological mechanisms (or contributors) to muscle weakness (i.e., Dynapenia) classically observed in older adults. | | |
| Role: Co-I | | |
| NIDDK R01DK099334 (Cohen; PI) | 06/25/14-05/31/19 | |
| National Institutes of Health | | \$1,826,328 |
| Obesity and type-2 diabetes: Bariatric surgery effects of brain function | | |
| This prospective longitudinal study will examine whether cerebral metabolic and vascular dysfunction, including glucose/insulin disturbances (co-morbid diabetes) underlie obesity-associated cognitive dysfunction, and whether significant weight loss and diabetes remission following bariatric surgery reduces these disturbances. | | |
| Role: Co-I | | |
| NHLBI R56HL127175 (Williamson; PI) | 09/08/15-08/31/18 | |
| National Institutes of Health | | \$478,898 |
| Brain and cognition effects of cardio resynchronization therapy in heart failure | | |
| The goal of this study is to evaluate cognitive and brain consequences of cardiac resynchronization therapy in heart failure patients using functional neuroimaging, magnetic resonance spectroscopy, & arterial spin labeling. | | |
| Role: Co-I | | |
| NIBIB U54EB020403 (Thompson; PI) | 09/29/14-09/30/18 | |
| National Institutes of Health | | \$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. | | |
| NIAAA F31AA024060 (Bryant; Student PI) | 05/01/15-04/30/18 | |
| National Institutes of Health | | \$109,474 |

July 8, 2020

Woods AJ/ CV

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

Ethel Moore Fund (Bowers, PI)

02/01/16-08/31/16

State of Florida

\$99,000

Pilot Intervention in Mild Cognitive Impairment: A proof of concept study with Transcranial Near Infrared Stimulation

The goal of this study is to obtain pilot data for effectiveness of TNIS in treatment of cognitive impairment in MCI, with acquisition of mechanistic phosphorous magnetic resonance spectroscopy (31P MRS) data investigating change in brain ATP metabolism.

Role: Co-I (Neuroimaging expertise/analyses)

2 P30 AG028740-06 (Pahor; PI)

04/15/12-03/31/16

National Institutes of Health

\$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)

04/15/12-03/31/16

National Institutes of Health

\$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

2 P30 AG028740-06 (Pahor; PI)

04/15/12-03/31/17

National Institutes of Health

\$98,494

UF Claude D. Pepper Older Americans Independence Center (OAIC) KL2 Award:

A study of cross-cultural differences in analgesic effects of transcranial direct current stimulation (tDCS) in white and Asian older adults with chronic pain: KL2 awardee (Ahn).

Role: Co-Mentor

NIA K99AG048762 (Fazeli; PI)

09/15/14-05/31/16

National Institutes of Health

\$1,712,409

A novel neurorehabilitation approach for cognitive aging with HIV

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

Fund to Cure Stroke (Mennemeier; PI)

05/15/14-05/15/16

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

CTSI KL2TR001429-01 (Woods; PI)

03/15/14-03/15/16

July 8, 2020

Woods AJ/ CV

NIH & 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

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

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

ACADEMIC AWARDS & HONORS:

| | |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019 | Tenure, University of Florida |
| 2018-2020 | University Preeminence Term Professorship, University of Florida, College of Public Health and Health Professions |
| 2017-2019 | NIH Loan Repayment Program Recipient, Funding Agency: National Institute on Aging |
| 2016-2021 | NIA K01 Career Development Award Recipient |
| 2015-2017 | NIH Loan Repayment Program Recipient, Funding Agency: National Institute on Aging |
| 2015 | Young Investigator Award, 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 |

July 8, 2020

Woods AJ/ CV

2003 1st 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:

Society for Neuroscience
World Academy of Art and Science
Association for Psychological Science
American Psychological Association
APA Division 20: Adult Development and Aging
North American Neuromodulation Society
International Neuropsychological Society
International Neuromodulation Society

EDITORIAL BOARD:

Frontiers in Psychology: Psychology for Clinical Settings
Frontiers in Perception Science
Frontiers in Aging Neuroscience (Special Edition Editor)

AD HOC REVIEWER:

Cognitive and Clinical Neuroscience

Brain Stimulation
NeuroImage
Journal of Cognitive Neuroscience
Journal of Neuroscience Methods
Journal of Clinical and Experimental Neuropsychology
Neurocase
PLoS ONE
Neuropsychologia
Frontiers in Cellular Neuroscience
Neural Plasticity
International Journal of Psychophysiology

Aging

Neurobiology of Aging
Experimental Gerontology
Journal of Gerontology: Medical Sciences
Alzheimer's Research & Therapy

Psychology

Psychonomic Bulletin & Review
Journal of Experimental Psychology: Human Perception & Performance
Journal of Experimental Psychology: Learning, Memory, & Cognition

Frontiers in Psychology: 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

GRANT REVIEW ACTIVITY

NIH Cognitive and Perception Study Section – standing member – 06/26/20-06/25/24
University of Florida Research Opportunity Seed Fund Translational Biomedical Science Review Committee – 03/20 to present
VA Rehabilitation Research & Development Service Review Group – SPIRE Special Emphasis Panel – 01/16
VA Rehabilitation Research & Development Service Review Group – SPIRE Special Emphasis Panel – 05/16
NIH RFA-MH-16-810, BRAIN Initiative: Non-Invasive Neuromodulation - New Tools and Techniques for Spatiotemporal Precision – Review Panel – 06/15/16
NIH RFA-MH-17-240, BRAIN Initiative: Non-Invasive Neuromodulation - New Tools and Techniques for Spatiotemporal Precision – Review Panel – 03/22/17
NIH Cognitive and Perception Study Section – ad hoc member – 06/26/17-06/27/17
NIH RFA-MH-16-240, BRAIN Initiative: Non-Invasive Neuromodulation - New Tools and Techniques for Spatiotemporal Precision – Review Panel – 03/16/18

DATA SAFETY AND MONITORING BOARD MEMBERSHIP

DSMB Board Member. The Papaya Study (Anton, PI). University of Florida Industry Trial. January 1, 2016 - September 1, 2016.

DSMB Chair. Study of the effects of transcranial magnetic stimulation and constraint induced language therapy for the treatment of chronic aphasia (Coslett, PI). NIDCD R01 DC016800. March 1, 2019 – March 1, 2024.

CONFERENCE ORGANIZING COMMITTEE ACTIVITY

NYC Neuromodulation 2020 Conference Online, April 20-23, 2020, Role: Conference Scientific Program Committee
NYC Neuromodulation Conference & NANS Summer Series, New York, NY, USA, August 24-26, 2018, Role: Conference Scientific Program Committee
NYC Neuromodulation 2017, New York, NY, USA, January 13-16, 2016, Role: Conference Co-Organizer, Conference Co-Chair
6th International Conference on Transcranial Brain Stimulation, September 9, 2016, Göttingen, Germany, Role: Abstract Reviewer
3rd International GABA MRS Symposium, Orlando, FL, USA, October 14-15, 2015, Role: Co-Organizer
1st NYC Neuromodulation 2013, New York, NY, USA, November 22-23, 2013, Role: Co-Organizer

CONFERENCE SESSION OR SYMPOSIUM CHAIR ACTIVITY

Symposium Chair, Invited: Neuromodulation of Cognition in Older Adults: From behavior to imaging and machine learning, NYC Neuromodulation 2020 Online, April 21st 2020.
Symposium Chair, Invited: Variability in Neuromodulation, NYC Neuromodulation 2017, New York, NY, USA, January 15, 2017.

Symposium Chair, Invited: Modeling in Neuromodulation, NYC Neuromodulation 2017, New York, NY, USA, January 15, 2017.

Symposium Chair, Invited: New Frontiers in tDCS Mechanisms, NYC Neuromodulation 2017, New York, NY, USA, January 14, 2017.

Symposium Chair, Invited: Using Neuroimaging and EEG to Individualize Neuromodulation, NYC Neuromodulation 2017, New York, NY, USA, January 14, 2017.

Symposium Chair, Invited: Neuromodulation at Home, NYC Neuromodulation 2017, New York, NY, USA, January 14, 2017.

Symposium Chair, Invited: Therapy Psychiatry, 6th International Conference on Transcranial Brain Stimulation, Göttingen, Germany, September 9, 2016.

Symposium Chair, Invited: GABA Measures in Neurocognitive and Functional Research – Networks and Stimulation, 3rd International Symposium on GABA, Orlando, Florida, USA, October 15, 2015.

INTERNATIONAL COMMITTEES

United Nations and World Academy of Art and Science Welfare and Wellbeing Working Group, February 2020-present

OTHER SKILLS AND QUALIFICATIONS:

Functional and Structural Magnetic Resonance Imaging

Proton and Phosphorous Magnetic Resonance Spectroscopy

Diffusion Weighted Imaging

Diffusion Weighted Imaging-based Freewater analyses

Fluid Attenuated Inversion Recovery Imaging

Electroencephalography (EEG) and event-related potential (ERP) methods

Transcranial Magnetic Stimulation (TMS) techniques

Transcranial Direct Current Stimulation (tDCS) techniques

Transcranial Alternating Current Stimulation (tACS) techniques

Near-infrared Photobiomodulation

High-definition MRI-derived computational modeling of tDCS current density

Statistical expertise: Multivariate, univariate, and multivariable data analysis, non-parametric statistical techniques, basic & advanced statistical modeling using SAS and SPSS Programming

MANUSCRIPTS:

Published peer-reviewed papers (95 papers, 33 first/last author, Avg. journal impact: 3.74, 3121 citations, h-index: 26, i10 index: 49)

Clark DJ, Chatterjee S, Skinner J, Lysne P, Sumonthee C, Wu S, Cohen R, Rose D, **Woods AJ**.

Combining frontal tDCS with walking rehabilitation to enhance mobility and executive function: a pilot clinical trial. *Neuromodulation*. Accepted July 2020.

Chatterjee S, Seidler R, Skinner J, Lysne P, Sumonthee C, Wu S, Cohen R, Rose D, Woods AJ,

Clark DJ. Obstacle negotiation in older adults: prefrontal activation interpreted through conceptual models of brain aging. *Innovation in Aging*. Accepted June 2020.

Gullett J, O'Shea A, Cohen R, Porges E, Lamb D, O'Shea D(g), Pasternak O, **Woods AJ**. The

Association of White Matter Free water with cognition in older adults. *NeuroImage*. Accepted June 2020.

Hausman H(g), O'Shea A, Kraft J(g), Boutzoukas E(g), Evangelista N(g), Van Etten E, Bharadwaj

P, Smith S, Alexander G, Cohen R, Porges E, Marsiske M, Wu S, DeKosky S, Hishaw A, **Woods AJ**. The role of resting-state network functional connectivity in cognitive aging. *Frontiers in Aging Neuroscience*. Accepted May 2020. *Impact Factor: 3.582*.

Bikson M, Hanlon C, **Woods AJ**, Gillick BT, Charvet L, Lamm C, Madeo G, Holczer A, Almeida J, Antal A, Ay M, Baekon C Blumberger D, Campanella S, Camprodon J, Christiansen L, Loo C, Crinion J, Fitzgerald P, Gallimberti L, Ghobabi-Azbari, Ghodratoostani I, Grabner R, Hartwigsen G, Hirati A, Kirton A, Knotkova H, Krupitsky E, Marangolo P, Nakamura-Palacios, Potok W, Praharaj S, Ruff C, Schlaug G, Siebner H, Stagg C, Thielscher A, Wenderoth N, Yuan T, Zhang X, Ekhtari H. Guidelines for TMS/tES clinical services and research through the COVID-19 pandemic. *Brain Stimulation*. Accepted May 2020. *Impact Factor: 6.078*.

Sieder T(g), Porges E, **Woods AJ**, Cohen R. An fMRI Study of Age-Associated Changes in Basic Visual Discrimination. *Brain Imaging and Behavior*. Accepted April 2020. *Impact Factor: 3.418*

Charvet L, Shaw M, Bikson M, **Woods AJ**, Knotkova H. Supervised Transcranial Direct Current Stimulation (tDCS) At Home: A Guide for Clinical Research and Practice. *Brain Stimulation*. Accepted February 2020. *Impact Factor: 6.078*.

Bryant V, Britton M, Gullett J, Porges E, **Woods AJ**, Cook R, Williamson J, Ennis N, Bryant K, Cohen R. History of alcohol consumption and HIV status relate to functional connectivity differences in the brain during working memory performance. *Current HIV Research*. Accepted February 2020. *Impact Factor: 1.115*

Indhalastari A, Albizu A, O'Shea A, Forbes M, Nissim N, Kraft J, Evangelista N, Hausman H, **Woods AJ**. Modeling Transcranial Electrical Stimulation in the Aging Brain. *Brain Stimulation*. Accepted February 2020. *Impact Factor: 6.078*.

Sergiou CS, **Woods AJ**, Franken I, van Dongen J. Transcranial Direct Current Stimulation (tDCS) as an intervention to improve empathic abilities and reduce violent behavior in forensic offenders: Study protocol for a randomized controlled trial. *Trials*. Accepted January 2020. *Impact Factor: 1.287*

Esmailpour Z, Shereen D, Ghobadi-Azbari P, Datta A, **Woods AJ**, Ironside M, O'Shea, J, Kirk U, Bikson M, Ekhtari H. Methodology for tDCS integration with fMRI. *Human Brain Mapping*. Accepted December 2019. *Impact Factor: 4.554*

Povazan M, Mikkelsen M, Berrington A, Bhattacharyya P, Brix M, Buur P, Cecil K, Chan K, Chen D, Craven A, Cuypers K, Dacko M, Duncan N, Dydak U, Edmondson D, Ende G, Erslund L, Forbes M, Gao F, Greenhouse I, Harris A, He N, Heba S, Hoggard N, Hsu T, Jansen J, Kangarlu A, Lange T, Lebel M, Li Y, Lin C, Liou J, Lirng J, Liu f, Long J, Ma R, Maes C, Moreno-Ortega M, Murray S, Noah S, Noeske R, Noseworthy M, Oeltzschner G, Porges E, Prisciandaro J, Puts N, Roberts T, Sack M, Sailasuta N, Saleh M, Schallmo M, Simard N, Stoffers D, Swinnen S, Tegenthoff M, Truong P, Wang G, Wilkinson I, Wittsack H, **Woods AJ**, Xu H, Yan F, Zhang C, Zipunnikov V, Zöllner H, Edden R, Barker P. Comparison of multi-vendor, single-voxel MR spectroscopy data acquired in healthy brain at 26 sites. *Radiology*. Accepted December 2019. *Impact Factor: 7.608*

Borges H, Dufau A, Paneri B, **Woods AJ**, Knotkova J, Bikson M. (2020). Updated technique for reliable, easy and tolerated transcranial electrical stimulation including transcranial direct current stimulation. *Journal of Visualized Experiments*. 155: e59204. *Impact Factor: 1.108*.

Nissim N(g), O'Shea A, Indahlastari A(p), Kraft JK(g), von Mering O, Aksu S, Porges E, Cohen R, **Woods AJ**. (2019). Effects of transcranial direct current stimulation paired with cognitive training on functional connectivity of the working memory network in older adults. *Frontiers in Aging Neuroscience*. 11: 340. *Impact Factor: 3.582*.

- Patel R, Ashcrof J, Patel A, Ashrafian H, **Woods AJ**, Singh H, Darzi A, Leff DR. (2019). The impact of transcranial direct current stimulation on upper-limb motor performance in healthy adults: A systematic review and meta-analysis. *Frontiers in Neuroscience*. 13: 1213. *Impact Factor*: 3.582.
- Bikson M, Esmailpour Z, Adair D, Kronberg G, Tyler WJ, Antal A, Datta A, Sabel BA, Nitsche MA, Loo C, Edwards D, Ekhtiari H, Knotkova H, **Woods AJ**, Hampstead BM, Badran BW, Peterchev AV. (2019). Transcranial electrical stimulation nomenclature. *Brain Stimulation*. 12(6): 1349-1366. *Impact Factor*: 6.078.
- Clark BC, **Woods AJ**, Clark LA, Criss C, Shadmehr R, Grooms DR. (2019). The aging brain & the dorsal basal ganglia: Implications to motor function & mobility. *Advances in Geriatric Medicine and Research*. 1: e190008. *Impact Factor*: pending.
- Monnig M, **Woods AJ**, Walsh E, Martone C, Blumenthal J, Monti P, Cohen R. (2019). Cerebral metabolites on the descending limb of acute alcohol: a preliminary 1H MRS study. *Alcohol and Alcoholism*. 54(5): 487-496. *Impact Factor*: 2.777.
- Cohen R, Gullett J, **Woods AJ**, Porges E, Starkweather A, Jackson-Cook C, Lynch-Kelly D, Lyon D. (2019). Cytokine-associated fatigue prior to, during and post-chemotherapy for breast cancer. *Journal of Neuroimmunology*. 334: 577001. *Impact Factor*: 2.655.
- Im J, Jeong H, Bikson M, **Woods AJ**, Unal G, Oh J, Na S, Park J, Knotkova H, Song I, Cung Y. (2019). Effects of 6-month at-home transcranial direct current stimulation on cognition and cerebral glucose metabolism in Alzheimer's disease. *Brain Stimulation*. 12(5): 1222-1228. *Impact Factor*: 6.078.
- Fernando H, Cohen R, Friedman J, Gullett J(p), Friedman J, Ayzengart A, Porges E, **Woods AJ**, Gunstad J, Ochoa C, Cusi K, Gonzalez-Louis R, Donahoo W. (2019). Neurocognitive deficits in a Class II and Class III obesity cohort: contributions of type-2 diabetes and other medical comorbidities. *Obesity*. 27(7): 1099-1106. *Impact Factor*: 4.402.
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- Soyata A, Aksu S, **Woods AJ**, Iscen P, Sacar K, Karamursel S. (2019). Effects of transcranial direct current stimulation on decision making and cognitive flexibility in gambling disorder. *European Archives of Psychiatry and Clinical Neuroscience*. 269: 275-284. *Impact Factor: 3.617*.
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- Ahn H, Suchting R, **Woods AJ**, Miao H, Green C, Cho R, Choi E, Fillingim R. (2018). Bayesian analysis of the effect of transcranial direct current stimulation on experimental pain sensitivity in older adults with knee osteoarthritis: randomized sham-controlled pilot clinical study. *Journal of Pain Research*. 11: 2071-2082. *Impact Factor: 2.645*.
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- Gullett J, Lamb D, Porges E, **Woods AJ**, Rieke J, Thompson P, Jahanshad N, Nir T, Tashima K, Cohen R. (2018). The impact of alcohol use on frontal white matter in HIV. *Alcoholism: Clinical and Experimental Research*. 1-12. 42(9): 1640-1649. *Impact Factor: 2.716*.
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Evangelista N(g), O'Shea A, Kraft J(g), Hausman H(g), Boutzoukas E(g), Nissim N(g), Albizu A(g), Hardcastle C(g), Van Etten E, Bharadwaj P, Smith S, Soung H, Hishaw G, DeKosky S, Wu S, Porges E, Alexander GE, Marsiske M, Cohen R, **Woods AJ**. Independent contributions of dorsolateral prefrontal structure and function to working memory in healthy older adults. *Cerebral Cortex*. Submitted May 2020.

Ashcroft J, Patel R, **Woods AJ**, Darzi A, Singh H, Leff D. Prefrontal transcranial direct current stimulation improves early learning of technical skills in surgery. *Brain Stimulation*. Submitted May 2020.

White T, Gonsalves M, Cohen R, Harris A, Monnig M, Nitenson A, Porges E, Lamb D, **Woods AJ**, Boyd C, Stolz E. Neocortical biomarkers of emotional health: 1H MRS correlates of agency and flexibility in young adults. *NeuroImage*. Submitted May 2020.

Albizu A(g), Fang R, Indahlastari A(p), O'Shea A, Stolte SE, See KB, Boutzoukas E(g), Kraft JN(g), Nissim N(g), **Woods AJ**. Machine learning and individual variability in electric field characteristics predict tDCS treatment response. *Brain Stimulation*. Submitted May 2020.

Floyd JT, Lairamore C, Garrison MK, Woods AJ, Rainey JL, Kiser T, Mennemeier M. Transcranial direct current stimulation (tDCS) can alter cortical excitability of the lower extremity in healthy participants. *Experimental Brain Research*. Submitted May 2020.

TEXTBOOKS AND BOOK CHAPTERS:

Books

Knotkova, H., Nitsche, M., Bikson, M., **Woods, A.J.** (2019). *Practical Guide to Transcranial Direct Current Stimulation - Principles, Procedures, and Applications*. Switzerland: Springer International Publishing.

Cohen, R., **Woods, A.J.** (Assoc. Editors) Topic Section: Vision. In *Encyclopedia of Clinical Neuropsychology, 2nd ed.* Springer. In press. Publication Date: October 2018

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Book Chapters (49 chapters, 5 first author, 40 senior author)

Indahlastari A(p), **Woods AJ**. Brain atrophy. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.

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Calfée K, **Woods AJ**. Language and communication disorders. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.

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Hausman H(g), **Woods AJ**. Montreal Cognitive Assessment. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.

Fillingim M, **Woods AJ**. Neuromuscular system. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.

- Boutzoukas E(g), **Woods AJ**. Neuroplasticity. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.
- Indahlastari A(p), **Woods AJ**. Neurotransmitters. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.
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- O'Shea D(g), **Woods AJ**. Prospective memory. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.
- Tewelde F(g), **Woods AJ**. Speech capability. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.
- Kraft J(g), **Woods AJ**. Speed of processing. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.
- O'Shea A, **Woods AJ**. White matter hyper-intensities. *Encyclopedia of Gerontology and Population Aging*. Springer New York, in press.
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- Woods, A.J.**, Flöel, A., Antonenko, D., Hummel, F., Knotkova, H., Hampstead, B. (2019). tDCS in aging. Knotkova, H., Bikson, M., Nitsche, M., Woods, A.J. (eds.). *Practical Guide to Transcranial Direct Current Stimulation (tDCS): Principles, Procedures and Applications*. Springer Publishing.
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- Woods, A.J.**, Martin, D. Clinical Research and Methodological Aspects for tDCS Research. In Brunoni, A., Nitsche, M., Loo, C. (Eds.) *Transcranial Direct Current Stimulation in Neuropsychiatric Disorders: Clinical Principles and Management*, Springer, New York, 2016, pp. 393-404.
- Nissim, N., **Woods, A.J.** Mach Bands. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.
- Ochoa, C., **Woods, A.J.** Visual Search. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.
- Szymkowicz, S.M., **Woods, A.J.** Binocular Disparity. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.
- Nissim, N., Szymkowicz, S.M., **Woods, A.J.** Edge Detection. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.
- Nissim, N., **Woods, A.J.** Digit Vigilance Test (DVT). *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.
- Nissim, N., **Woods, A.J.** Visual Psychophysics. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.
- McLaren, M., **Woods, A.J.** The Brief Test of Attention. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Sinha, P., Bowers, D., **Woods, A.J.** D2 Test of Attention. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Suryadevara, U., **Woods, A.J.** Motion Parallax. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Suryadevara, U., **Woods, A.J.** Eye Dominance. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

O'Shea, A., **Woods, A.J.** Useful Field of View. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Altmomare, L.G., **Woods, A.J.** Visual Convergence. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Richards, L., **Woods, A.J.** Posterior Cortical Atrophy. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Polejaeva, E., **Woods, A.J.** Behavioral Inattention Test (BIT). *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Polejaeva, E., **Woods, A.J.** Auditory Selective Attention Test. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

O'Shea, D., **Woods, A.J.** Tests of Variables of Attention. *Encyclopedia of Clinical Neuropsychology, 2nd Ed.* Springer New York, in press.

Woods, A.J., Cohen, R.A., Pahor, M. Cognitive frailty: frontiers and challenges. Vellas, B (eds). *White Book on Frailty.* 2016. pp. 44-47. International Association on Gerontology and Geriatrics.

Aubertin-Leheudre, M., **Woods, A.J.**, Anton, S., Cohen, R., Pahor, M. Clinical frailty phenotype: a physical and cognitive point of view. Fielding, Sieber, Vellas (eds). *Frailty: Pathophysiology, Phenotype and Patient Care.* 2015. Vol. 83, pp. 55-63. Nestle Nutrition Institute

Pending Books

Woods, A.J. (Assoc. Editor). *Encyclopedia of Gerontology and Population Aging*, Springer.

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.

INVITED LECTURES, SYMPOSIA, & CONFERENCE TALKS:

Woods AJ. *Symposium.* Enhancing cognition in older adults with tDCS and cognitive training. In: Updates on Transcranial Direct Current Stimulation (tDCS): Applications and Mechanisms. NYC Neuromodulation 2020 Online, April 20th 2020.

Woods AJ. *Symposium.* Neuromodulation of Cognition in Older Adults: From behavior to imaging and machine learning. NYC Neuromodulation 2020 Online, April 21st 2020.

Woods AJ. *Symposium.* Remediating working memory in older adults with tDCS and cognitive training: a pathway to precision medicine. International Neuropsychological Society Meeting, Denver CO, February 7th 2020.

Woods AJ. Lecture. A pathway to precision medicine for transcranial direct current stimulation. Pre-INS GATOR Conference. Beaver Creek, CO, February 4th 2020.

Woods AJ. Keynote Lecture. Leveraging neuroimaging, computational modeling and tDCS to remediate working memory decline in older adults. International Conference on Complex Medical Engineering. Dortmund, Germany, September 24th 2019.

Woods AJ. Symposium. Enhancing accuracy and application of individualized MRI derived computational models through 3D-capture of tES electrode positioning. IEEE EMBC. Berlin, Germany, July 27th 2019.

Woods AJ. Symposium. Hands on tDCS. 2019 Joint Meeting of Neuromodulation: The Science & NYC Neuromodulation. Napa, CA, October 4, 2019.

Woods, AJ. Lecture. An update on the ACT Study. Annual McKnight Brain Institute Inter-Institutional Meeting. Gainesville, FL, April 11th, 2019.

Woods, AJ. Lecture. Hands on tDCS. International Brain Stimulation Meeting, Vancouver, BC, February 26, 2019.

Woods, AJ. Lecture. The functional connectivity of working memory and tDCS in older adults. Gator Pre-INS Meeting. Hunter NY, February 18, 2019.

Woods AJ. Symposium. Neuromodulation in Extremes of Age: Elderly. Augmenting Cognitive Training in Older Adults: a Phase III tDCS trial. NYC Neuromodulation Conference & NANS Summer Series, New York, NY, August 23, 2018.

Woods AJ. Symposium. Current and emerging cognitive interventions. Augmenting cognitive training with neuromodulation. 126th Annual Convention of the American Psychological Association. San Francisco, CA, USA, August 11, 2018.

Woods AJ, Bikson M, Knotkova H. Lecture. Transcranial Direct Current Stimulation: Principles and Outcomes. NYC Neuromodulation Conference & NANS Summer Series, New York, NY, August 23, 2018.

Woods AJ, Bikson M, Knotkova H. Lecture. Transcranial Direct Current Stimulation: stimulation parameters, protocols, electrodes and montages. NYC Neuromodulation Conference & NANS Summer Series, New York, NY, August 23, 2018.

Woods AJ. Lecture. Transcranial Direct Current Stimulation: Safety. NYC Neuromodulation Conference & NANS Summer Series, New York, NY, August 23, 2018.

Woods AJ. Symposium. Current and emerging cognitive interventions. Augmenting cognitive training with neuromodulation. 126th Annual Convention of the American Psychological Association. San Francisco, CA, USA, August 11, 2018.

Woods AJ, Bikson M, Knotkova H. Lecture. Transcranial Direct Current Stimulation: an introduction. International Neuroergonomics Conference. Philadelphia, PA. June 27, 2018.

Woods AJ. Lecture. Transcranial Direct Current Stimulation: principles, mechanisms and targeted outcomes. International Neuroergonomics Conference. Philadelphia, PA. June 27, 2018.

- Woods AJ**, Bikson M, Knotkova H. *Lecture*. Transcranial Direct Current Stimulation: stimulation parameters, protocols, electrodes and montages. International Neuroergonomics Conference. Philadelphia, PA. June 27, 2018.
- Woods AJ**. *Lecture*. Transcranial Direct Current Stimulation: Safety. International Neuroergonomics Conference. Philadelphia, PA. June 27, 2018.
- Woods AJ**. *Symposium*. Augmenting Cognitive Training in Older Adults: a Phase III tDCS trial. International Learning and Memory Conference. Huntington Beach, CA, USA, April 20, 2018.
- Woods AJ**. *Lecture*. Augmenting Cognitive Training in Older Adults: a Phase III tDCS and Cognitive Training Trial. Annual McKnight Inter-Institutional Meeting. Birmingham, AL, USA, April 6, 2018.
- Woods AJ**. *Symposium*. Functional Neural Mechanisms of tDCS-related Working Memory Improvements in Older Adults. International Neuropsychological Society. Washington, DC, USA, March 16, 2018.
- Woods AJ**. *Lecture*. Clinical applications of tDCS in the aging population. North American Neuromodulation Society. Las Vegas, NV, USA, January 11, 2018
- Woods AJ**. *Symposium*. Continuum of Care from Wearables to Non-Invasive Neuromodulation. North American Neuromodulation Society. Las Vegas, NV, USA, January 11, 2018
- Woods AJ**. *Lecture*. Hands on tDCS and TMS. North American Neuromodulation Society. Las Vegas, NV, USA, January 11, 2018
- Woods AJ**. *Lecture*. Augmenting Cognitive Training in Older Adults: a Phase III tDCS trial. New Mexico Clinical Neurostimulation Meeting 2017. Albuquerque, NM, USA, October 5, 2017.
- Woods AJ**. *Symposium*. Pain and tDCS: Clinical trials. American Pain Society, Pittsburgh, PA, USA, May 19, 2017.
- Woods AJ**. *Lecture*. Successful cognitive aging. Penney Farms Annual Geriatric Medicine Symposium. Lunch Keynote Lecture. Penney Farms, FL, USA, April 21, 2017.
- Woods, A.J.** *Lecture*. Clinical and research applications of transcranial direct current stimulation. Department of Clinical and Health Psychology ANST Brown Bag. University of Florida, Gainesville, FL, USA, March 24, 2017.
- Woods, A.J.** *Lecture*. Research uses of tDCS. International Brain Stimulation, Barcelona, Spain, March 9, 2017.
- Woods AJ**. *Symposium*. Combating cognitive aging and dementia with transcranial direct current stimulation (tDCS). International Neuropsychological Society. New Orleans, LA, USA, February 2, 2017.
- Woods AJ**. *Symposium*. Is Neuromodulation Better Than Drugs? Prospects for tDCS in Age-related Cognitive Decline. NYC Neuromodulation 2017. New York, NY, USA, January 14, 2017.
- Woods AJ**. *Lecture*. Practical Demo: Modern tDCS/tACS Methodology. NYC Neuromodulation 2017. New York, NY. January 13, 2017.
- Woods AJ**. *Lecture*. Technical Aspects of tES: Hardware, Devices, and Procedures. NIMH Transcranial Electrical Stimulation (tES): Mechanisms, Technology and Therapeutic Applications.

Bethesda, MD, USA, September 29, 2016.

Woods AJ. *Symposium.* Neural correlates of tDCS effects on working memory: implications for adjunctive cognitive therapies. 6th International Conference on Transcranial Brain Stimulation. Gottingen, Germany, September 9, 2016.

Woods, A.J. The role of neuroinflammation in cognitive aging. University of Florida Clinical Translational Science Institute Research Day, Gainesville, FL, USA, June 24, 2016.

Woods AJ. *Lecture.* The impact of neuroinflammation on human cognitive aging. The McKnight Brain Institute Site Visit. UF, Gainesville, FL. Feb 17, 2016.

Woods, A.J. Expertise, Decision-Making, and Spatial Bias in American Football: an aging and expertise story. GATOR Pre-INS Conference. Water Valley, NH, USA, February 1, 2016.

Woods, A.J. Updates on cognitive training and tDCS clinical trials in cognitive aging. Updates on Clinical Trials in tDCS Symposium, City College of New York, New York, NY, USA, November 14, 2015.

Woods, A.J. Updates on cognitive training and tDCS clinical trials in cognitive aging. Updates on Clinical Trials in tDCS Symposium, City College of New York, New York, NY, USA, November 14, 2015.

Woods, A.J. Preliminary data from the STIMULATED BRAIN study: a novel transcranial direct current stimulation intervention for cognitive aging. 3rd International GABA MRS Symposium, Orlando, FL, USA, October, 15, 2015.

Woods, A.J. A Novel Non-Invasive Intervention for Cognitive Aging. University of Florida Clinical Translational Science Institute Research Day, Gainesville, FL, USA, June 12, 2015.

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. Effects of electrode drift on transcranial direct current stimulation. *International Brain Stimulation Conference.* Singapore, March 5, 2015.

Woods, A.J., Bikson, M. Research Uses of tDCS. Invited Symposium, *International Brain Stimulation Conference.* Singapore, March 5, 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. Reducing alcohol abuse in people living with HIV using tDCS. Annual Southeastern HIV and Alcohol Research Consortium (SHARC) Conference. Gainesville, FL, USA, January 28-29, 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/Organization</u> | <u>Year</u> |
|-----------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------|
| Director | NYC Transcranial Direct Current Stimulation 5-Day Fellowship | City College of New York/MJHS Institute for Advanced Palliative Care | 2019 |
| Director | Transcranial Direct Current Stimulation 1-Day Workshop | Napa Neuromodulation Joint Meeting | 2019 |
| Director | NYC Transcranial Direct Current Stimulation 5-Day Fellowship | City College of New York/MJHS Institute for Advanced Palliative Care | 2018 |
| Director | Clinical and Cognitive Neuroscience Methods and Theory (CLP 7934) Fall | University of Florida | Fall 2018 |
| Director | New Mexico tDCS Workshop | University of New Mexico | October 2017 |
| Director | Clinical and Cognitive Neuroscience Methods and Theory (CLP 7934) Fall | University of Florida | Fall 2017 |
| Director | NYC Transcranial Direct Current Stimulation 5-Day Fellowship | City College of New York/MJHS Institute for Advanced Palliative Care | 2017 |
| Director | Clinical Neuroscience of Aging (GMS 6771) Fall and Summer | University of Florida | Summer 2016 |
| Director | Clinical Neuroscience of Aging (GMS 6771) Fall and Summer | University of Florida | Fall 2015 |
| Director | NYC Transcranial Direct Current Stimulation 5-Day Fellowship | City College of New York/MJHS Institute for Advanced Palliative Care | 2016 |
| Co-Director | Clinical and Translational Science Institute Student Seminar Course (GMS 6893) Fall | University of Florida | Fall 2015 |
| Director | NYC Transcranial Direct Current Stimulation 5-Day Fellowship | City College of New York/MJHS Institute for Advanced Palliative Care | 2015 |
| Director | Transcranial Direct Current Stimulation 1-Day Workshop | Singapore | 2015 |
| Director | Transcranial Direct Current Stimulation 2-Day Workshop | City College of New York | 2015 |
| Director | UF Transcranial Direct Current Stimulation 2-Day Workshop | Gainesville, FL | 2014 |
| Co-Director | Clinical and Translational Science Institute Student Seminar Course (GMS 6893) Fall | University of Florida | 2014 |
| Director | Transcranial Direct Current Stimulation 2-Day Workshop | City College of New York | 2013 |

July 8, 2020

Woods AJ/ CV

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|-------------|---------------------------------------------------------------|-------------------------------------|-----------|
| Co-Director | Clinical & Translational Research Practicum (GMS 6845) Spring | 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 |

CURRENT AND FORMER AFFILIATIONS:

| <u>Institution</u> | <u>Department</u> | <u>Position</u> | <u>Years</u> |
|--------------------------------------------------------------|----------------------------------------------|----------------------------------|--------------|
| University of Florida | Clinical and Health Psychology, Neuroscience | Associate Professor | 2019-present |
| University of Florida | Clinical and Health Psychology, Neuroscience | Assistant Professor | 2016-2019 |
| University of Florida | Center for Cognitive Aging and Memory | Assistant Director | 2014-present |
| University of Florida | Aging and Geriatric Research, Neuroscience | Assistant Professor | 2013-2016 |
| 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 |