**JACOB J. SOSNOFF**

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## EDUCATION

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| The Pennsylvania State University | Ph.D., Kinesiology  (Gerontology minor) | 2005 |
| The Pennsylvania State University | M.S., Kinesiology | 2002 |
| Ithaca College | B.S., Exercise and Sport Science,  *summa cum laude* | 2000 |

## PROFESSIONAL EXPERIENCE

1. Post-Doctoral

Assistant Professor: Department of Kinesiology and Community Health; University of Illinois at Urbana Champaign; 2005-2011.

Faculty Affiliate, Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana‑Champaign, 2006-present

Research Fellow, Center of Advanced Study, University of Illinois at Urbana-Champaign, 2009-2010.

Faculty Fellow, National Center for Supercomputing Applications, 2009-2010.

Faculty Affiliate, Department of Bioengineering, University of Illinois at Urbana-Champaign, 2010-present.

Associate Professor: Department of Kinesiology and Community Health; University of Illinois at Urbana Champaign; 2011-2018.

Vice Chair (appointed), Illinois Department of Public Health, Multiple Sclerosis (MS) Task Force; March 2013-2015.

Associate Director, Center for Health Aging and Disability, University of Illinois at Urbana Champaign; 2016-present.

Director, Illini Falls Prevention Clinic, University of Illinois at Urbana Champaign; 2016-present.

Professor, Department of Kinesiology and Community Health; University of Illinois at Urbana Champaign; 2018-present.

Dean Fellow, College of Applied Health Sciences, University of Illinois at Urbana Champaign; 2018-present.

Fellow, Interdisciplinary Health Science Institute, Office of the Vice Chancellor for Research and Innovation, University of Illinois at Urbana Champaign; 2019-present.

Fellow, Leadership Institute, American Kinesiology Association

2. Graduate

Kligman Research Fellow: Motor Behavior Laboratory, Department of Kinesiology, The Pennsylvania State University, 2004-2005. (Research mentor: Dr. Karl Newell, Associate Dean of Graduate Research and Education, College of Health and Human Development)

NIA Pre-Doctoral Fellow: Motor Behavior Laboratory, Department of Kinesiology, The Pennsylvania State University, 2001-2004. (Research mentor: Dr. Karl M. Newell)

Research Assistant: Motor Behavior Laboratory, Department of Kinesiology, The Pennsylvania State University, August 2000-June 2001. (Research adviser: Dr. Karl M. Newell).

Graduate Teaching Assistant: Movement Bioscience, Department of Kinesiology, The Pennsylvania State University, August 2000-June 2001. (Supervisor: Dr. Robert Rickets).

3. Undergraduate

Undergraduate Teaching Assistant: Physiology I & II, Department of Exercise and Sport Sciences, Ithaca College, August 1998-May 1999. (Supervisor: Dr. Thomas Swenson, Department of Exercise and Sport Sciences).

**ACADEMIC HONORS**

Phyllis J. Hill James Scholar College of Applied Health Sciences, 2019

Award for Exemplary University of Illinois at Urbana-Champaign

Mentoring

Research Featured in Wall Wall Street Journal October 2016

Street Journal

AARP Innovation Award American Association of Retired Persons 2016

Foundation

Research Fellow of the University of Illinois at Urbana Champaign 2015-2016

Center for Wounded Veterans

in Higher Education

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| College Excellence in Undergraduate Teaching Award | College of Applied Health Sciences,  University of Illinois at Urbana-Champaign | 2014 |
| Faculty Fellow | National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign | 2009-2010 |
| Research Fellow of the Center of Advanced Study | Center for Advanced Study, University of Illinois at Urbana-Champaign | 2009-2010 |
| Arnold O. Beckman Research Award | University of Illinois at Urbana-Champaign | 2005 |
| Kligman Research Fellowship | College of Health and Human Development, The Pennsylvania State University | 2004 |
| Graduate Research Award | Department of Kinesiology,  The Pennsylvania State University | 2002 |
| NIA Pre-doctoral Training Fellowship | Gerontology Center  The Pennsylvania State University | 2001-2004 |
| Professional Excellence Award in Exercise Science | Department of Exercise and Sport Sciences  Ithaca College | 2000 |
| Phi Beta Phi National Honor Society Membership | Ithaca College | 1999 |
| Dean Scholarship | Ithaca College | 1996-2000 |
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**GRANTS**

**Internal Funding:**

(Sosnoff) 1/1/06-12/31/07

University of Illinois Research Board

Aging, Cardioballistics and Motor Variability .

This project examines the association between aging, cardioballistics and motor variability.

Role: PI

Total for all years: ($15,086)

Percent effort: no support

(Sosnoff) 12/15/05-12/15/06

Mary J. Neer Research Fund

Aging, Physiological Complexity, Functional Limitations and Disability.

This project examines the association between Aging, Physiological Complexity, Functional Limitations and Disability.

Role: PI

Total for all years: ($10,000)

Percent effort: no support

(Sosnoff) 5/2/06-5/1/07

Aging Incentive Grant, Aging Initiative, University of Illinois

Aging, Physiological Complexity, Functional Limitations and Disability.

This project examines the association between Aging, Physiological Complexity, Functional Limitations and Disability.

Role: PI

Total for all years: ($5,000)

Percent effort: no support

(Sosnoff) 6/1/06-5/30/07

Center for Healthy Minds

Variability of Cognitive Processing in Older Adults: The Role of Cardiovascular Fitness.

This project examines the role of cardiovascular fitness in variability of cognitive processing in older adults.

Role: PI

Total for all years: ($19,490)

Percent effort: no support

(Rosengren) 6/1/07-5/30/08

Center for Healthy Minds

Effects of regular Taiji practice on cognitive and sensorimotor performance.

This project examines the effects of regular Taiji practice on cognitive and sensorimotor performance.

Role: Co-I

Total for all years: ($15,000)

Percent effort: no support

(Sosnoff) 3/20/08-5/30/09

University of Illinois Research Board

Shoulder pain in manual wheelchair users: the influence of gender.

This project examines the influence of gender on shoulder pain in manual wheelchair users.

Role: PI

Total for all years: ($11,332)

Percent effort: no support

(Sosnoff) 1/12/09-12/30/10

Mary J. Neer Research Fund

Wheelchair Use and Shoulder Pain: The Role of Motor Variability.

This project examines the role of motor variability on shoulder pain during wheelchair use.

Role: PI

Total for all years: ($14,989)

Percent effort: no support

(Loucks) 5/15/09-5/1/10

Mary J. Neer Disability Research Fund

Sensorimotor Dedifferentiation as a Marker of Aging: Behavioral and Neurological Evidence.

This project examines behavioral and neurological evidence of sensorimotor dedifferentiation as a marker of aging.

Role: Co-I

Total for all years: ($14,725)

Percent effort: no support

(Sosnoff) 8/15/09-5/15/10

National Center for Supercomputing Applications

Accelerometery of Manual Wheelchair Propulsion.

This project examines accelerometry of manual wheelchair propulsion.

Role: PI

Current year: ($10,000)

Total for all years: ($10,000)

Percent effort: no support

(Loucks) 8/15/09-5/15/10

Center for Health, Aging and Disease

Demyelination in motor pathways of the Central Nervous System predicts motor control reductions in healthy aging.

This project examines demyelination in motor pathways of the central nervous system as a predictor of motor control reductions in healthy aging.

Role: Co-I

Current year: ($10,000)

Total for all years: ($10,000)

Percent effort: no support

(Sosnoff) 8/15/10-8/14/11

University of Illinois Research Board

Effect of Acute Passive Leg Cycling on Spasticity of the Legs in Spinal Cord Injury.

This project examines the effect of acute passive leg cycling on spasticity of the legs in spinal cord injury.

Role: PI

Current year: ($13,370)

Total for all years: ($13,370)

Percent effort: no support

(Sosnoff) 6/1/11-5/30/12

Center for Health, Aging and Disability

Project E-FIT: Exercise-Fall Intervention Training in Multiple Sclerosis.

This project examines the effect of exercise-fall intervention training in multiple sclerosis.

Role: PI

Current year: ($15,000)

Total for all years: ($15,000)

Percent effort: no support

(Wilund) 6/1/11-5/30/12

Center for Health, Aging and Disability

Efficacy of Functional Electrical Stimulation-Enhanced Cycling in Disabled Populations.

This project examines efficacy of functional electrical stimulation-enhanced cycling in disabled populations.

Role: Co-I

Current year: ($15,000)

Total for all years: ($15,000)

Percent effort: no support

(Sosnoff)

ISIP/INSPRIE

A Trans-Atlantic Examination of Falls in Non-ambulatory Individuals with Multiple Sclerosis.

This project examines falls in a trans-atlantic population of non-ambulatory individuals with multiple sclerosis.

Role: PI

Current year: ($7,500)

Total for all years: ($7,500)

Percent effort: no support

NA (Rice) 01/15/16-01/14/17

Center For Wounded Veterans in Higher Education

Home based Telerehabilitation Training System for Veterans with Spinal Cord Injury

This project seeks to develop and validate Kinect-based transfer training modules for veterans with spinal cord injury

**Role: Co-I**

Current Year: $30,000

Total for all years: ($30000)

Percent effort: no support

Carle/Illinois Seed Grant (Sosnoff, Jain) Awarded

Automatic Fall Risk Screening in High Risk Older Adults

Role: PI

Current Year: $43,675

Total for all Years: $43,675

Percent Effort: No Support

Illinois-Proof of Concept Funding (Sosnoff) Awarded

Smartphone Based Fall Risk Assessment

Role: PI

Current Year: $16000

Total for all Years: $16000

Percent Effort: No Support

Collaborations in Health, Aging, Research and Technology (Sosnoff) 6/01/17-8/31/17

Real-world usability testing of a smart phone application designed to measure fall risk in seniors

Role: PI

Current Year: $5000

Total for all Years: $5000

Percent Effort: No Support

Collaborations in Health, Aging, Research and Technology (Sosnoff) 3/01/18-8/31/18

*Real-world usability/feasibility testing of  a mixed  reality  headset for fall  risk evaluation in older adults*

Role: PI

Current Year: $1000

Total for all Years: $1000

Percent Effort: No Support

Center for Social and Behavioral Science Mejia pending

*Intraindividual variability in physiological fall risk, perceptions of fall risk, and awareness of fall risk as unique and modifiable targets for fall prevention.*

Role: co-I

Current Year: $20000

Total for all Years: $2000

Percent Effort: No Support

**External Funding**

PP (Sosnoff) 9/30/06-9/29/07

National Multiple Sclerosis Society

Alleviating spasticity with chronic cycling exercise.

This project examines the role of chronic cycling exercise in alleviating spasticity.

Role: PI

Total for all years: ($44,000)

Percent effort: 15%

A10338 (Sutton)

American Federation of Aging Research

Demyelination in the motor system and reductions in motor control with advanced age.

This project examines demyelination in the motor system and reductions in motor control as a function of age.

Role: Co-I

Total for all years: ($75,000)

Percent effort: 7.5%

# (Hsiao-Wecksler)

National Collegiate Inventors and Innovators Alliance

Intelliwheels: the continuously variable transmission for manually-propelled wheelchairs.

This project examines the continuously variable transmission for manually-propelled wheelchairs using Intelliwheels.

Role: Co-I

Total for all years: ($20,000)

Percent effort: no support

# (Sosnoff)

Innoventor, Inc.

TheraStride™ Training in persons with Multiple Sclerosis.

This project examines the effect of TheraStrideTM training in persons with Multiple Sclerosis.

Role: PI

Current year: ($150,000)

Total for all years: ($150,000)

Percent effort: 5%

#1R21HD066129-01 (Sosnoff)

National Institute of Health

Propulsion Mechanics Variability and Shoulder Pain in Manual wheelchair Users.

This project examines the association between propulsion mechanics variability and shoulder pain in manual wheelchair users.

Role: PI

Total for all years: ($392,578)

Percent effort: 15%

IL RG 4333A2/2 (Sosnoff) 4/1/11-3/31/13

National Multiple Sclerosis Society

Acute Exercise, Spasticity and Functional Outcomes in Multiple Sclerosis: Differential Effects of Duration and Intensity.

This project examines the differential effects of duration and intensity of acute exercise on spasticity and functional outcomes in multiple sclerosis.

Role: PI

Current year:

Total for all years: ($295,673)

Percent effort: 25%

IL RG 4499A3/1 (Motl) 4/1/11-3/31/13

National Multiple Sclerosis Society

Project METS in MS: Multimodal exercise training stimulus in multiple sclerosis.

This project examines the effects of multimodal exercise training stimulus in multiple sclerosis.

Role: Co-I

Current year:

Total for all years: ($286,700)

Percent effort: 10%

# (Sosnoff)

Consortium for Multiple Sclerosis Centers

Project FARMS: Fall Risk Reduction in Multiple Sclerosis.

This project examines home-based exercise as a fall prevention strategy in older adults.

Role: PI

Current year: ($39,740)

Total for all years: ($39,740)

Percent effort: 15%

1R43HD071653-01 (Diagle) 8/1/12-7/30/13

National Institute of Health: SBIR

IntelliWheels: the automatic transmission for manually propelled wheelchairs.

This project focuses on the development of automatic transmission for manual wheelchairs.

Role: Co-I

Current year: ($164,567)

Total for all years: ($164,567)

Percent effort: 10%

NMSS IL LOT 006 (Sosnoff) 10/5/12-10/4/13

National Multiple Sclerosis Society

Fall Risk Reduction in Multiple Sclerosis: Exercise versus Behavior Modification.

This project examines the effects of exercise versus behavior modification in reducing fall risk in multiple sclerosis.

Role: PI

Current year: ($109,981)

Total for all years: ($109,981)

Percent effort: 15%

(Finlayson)

Canadian Institute of Health Research

International MS Fall Prevention Research Network.

This project funded the initial meeting of the international MS fall prevention network

Role: Co-I

Current year: ($25,000)

Total for all years: ($25,000)

Percent effort: no support

PP2815 (Rice) 4/1/14-3/31/15

National Multiple Sclerosis Society

Management of Fall Risk in Non-Community Ambulators Affected by Multiple Sclerosis.

This project examines the effects of fall risk management in non-community ambulators affected by multiple sclerosis.

Role: Co-PI

Current year: ($43,983.50)

Total for all years: ($43,983.50)

Percent effort: 2.5%

ILLOT018 (Sosnoff) 7/1/14-6/30/15

National Multiple Sclerosis Society

Cognitive-motor interference rehabilitation in persons with multiple sclerosis.

This project examines the effects of dual task training on cognitive motor interference in persons with multiple sclerosis.

Role: PI

Current year: ($108,912)

Total for all years: ($108,912)

Percent effort: 15%

RG 5057‐A‐4 (Sosnoff) 10/1/14-9/30/17

National Multiple Sclerosis Society

Fall Risk and Incidence Reduction in Multiple Sclerosis.

This project examines home based exercise as a fall prevention strategy in older adults with MS.

Role: PI

Current year: $227,428

Total for all years: ($627,770)

Percent effort: 20%

NA (Sosnoff) awarded

Consortium of MS Centers

Computerized Cognitive Training and Cognitive Motor Interference in Multiple Sclerosis.

This project examines the effects of computerized cognitive training on cognitive motor interference in persons with multiple sclerosis.

Role: PI

Current year: $40,000

Total for all years: ($40,000)

Percent effort: 5%

NA (Rice) Awarded

Craig H. Neilsen Foundation

Management of Fall Risk in Full Time Wheelchair Users Living with Spinal Cord Injury.

This project examines the effects of behavioral and exercise intervention on fall risk in individuals with SCI .

Role: Co-I

Current year: $99,840

Total for all years: $99,840

Percent effort: 10%

Supplemental Award (Akinwuntan) Awarded

National Multiple Sclerosis Society

Relationship between fall risk and driving performance in multiple sclerosis.

This project examines the relationship between fall risk and driving performance in persons with multiple sclerosis.

Role: consultant

Current year: $30,000

Total for all years: ($44,000)

Percent effort: 2%

#2016-00480 (Sosnoff) 8/15/2015-8/14/16

MC10, Inc.

Sensor Calibration and Validation in Mobility in Persons with Multiple Sclerosis

This project seeks to validate wearable sensors to mobility impairment in persons with MS.

Role: PI

Current year: $38742

Total for all years: ($38742)

Percent effort: 3%

Jump Arches (Sosnoff, Ratnam, Biernot) Funded

Simulation Training to identify fall risk in the home environment

Role: Co-PI

Current Year: $50,215

Total for all years: $50,215

Percent Effort: no salary support

RG-1507-05433 (Hausdorff) Awarded

National Multiple Sclerosis Society

Virtual Reality-treadmill combined intervention for enhancing mobility and cognitive function in patients with Relapsing-Remitting Multiple Sclerosis

This project examines the efficacy of virtual reality training combined with treadmill training on mobility, cognition and quality of life in persons with multiple sclerosis.

Role: PI of UIUC site

Current year: $156,693

Total for all years: $549,771

Percent effort: 15%

NA (Rice, L) 9/01/16-08/31/17

Permobile, Inc

Fall Characteristics among Power Wheelchair Users

Role: Co-I

Current Year: $38,168

Percent Effort: 2%

NA (Rice, L) 9/01/16-08/31/17

Permobile, Inc

Fall Characteristics among Manual Wheelchair Users

Role: Co-I

Current Year: $38,484

Percent Effort: 2%

1R01HD084423-01(sub-contract) (M. Morrow) 04/01/17-3/31/20

Morrow, Melissa

Remote Patient Monitoring Technologies in Spinal Cord Injury Rehabilitation: Detection and Prevention of Shoulder Pathology in Manual Wheelchair Users

Role: Site-PI

Current year: $30168

Percent Effort: 2%

NA (Sosnoff) 12/01/17-6/31/18

Johnson and Johnson, Inc.

The effects of analgesics on gait in individuals with knee osteoarthritis

Role: PI

Current year: $134889

Percent Effort: 15%

RG-1701-26862 (Rice) 10/01/17-09/30/21

National Multiple Sclerosis Society

Validation of a Fall Prevention Program Among Non-Ambulatory Wheeled Mobility Device Users with Multiple Sclerosis  
Role: Co-I

Percent effort: 7.5%

Current year: $188,688

Total for all years: $557,431

NMSS 1703-27098 (Franz, UNC) 09/01/17-08/31/18

National Multiple Sclerosis Society

[Effect of Optical Flow Perturbations on Static and Dynamic Balance Control in People with Multiple Sclerosis](https://myresearch.uillinois.edu/piPortal/detail/proposal/292788/personal)

Role: Co-I

Percent effort: 2%

Total for all years: $3961

089679 (Rice, L) 12/01/18-08/31/18

Permobile, Inc

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| Examination of the Influence of Active Reach on Functional Mobility, Physical Well-being and User Satisfaction Among Power Wheelchair Users |

Current Year: $58,994

Percent Effort: 2%

NA (Sanford, Rogers, Mitzner) 10/01/18-9/31/2023

National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) Rehabilitation Engineering Research Center (RERC).  ($4,625,000 total costs)

*Technologies to Support Aging-in-Place for People with Long-Term Disabilities*

Role: PI on D1 project; Co-I on D2 project

Current Year: $15,861

Total for all years: $121,682

Percent Effort: 3%

MB-1807-31633 (Sosnoff) 04/01/19-03/31/2024

National Multiple Sclerosis Society

Mentor-based Rehabilitation Research Post-doctoral fellow: Cognitive-Motor Interference Rehabilitation in Multiple Sclerosis

Role: PI

Current Year: $82,342

Total for all years: $424,446.00

Percent Effort: 6%

NIH R21 AG064308-01 (Rudroff, Iowa) 9/15/19-5/31/21

Cannabis use and risk of falling in older adults

Role: Co-I

Current Year: $32,522

Total for all years: $65972

Percent Effort: 10%

Jump Arches Do Jan 21, 2020-Jan 20, 2021

Digitizing the Neurological Screening Examination

Role: Co-I

Current Year: $70,000.00

Percent Effort: No Salary Support

Jump Arches Sosnoff Jan 21, 2020-Jan 20, 2021

Development of a digital fall risk assessment and prevention tool for rural older adults

Role: Co-PI

Current Year: $71,000

Percent Effort: No Salary support

**Pending**

National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)

(Mahajan) **Pending**

## Feasibility and Efficacy of a Fear of Falling Intervention for Wheelchair Users with Multiple Sclerosis

Role: co-I

Current Year: $304,830

Total for all years: $2,463,767

Percent Effort: 11%

National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)

(Rice) **Pending**

[Development and Validation of an Online Fall Prevention Program Among Wheelchair and Scooter Users Living with Multiple Sclerosis](https://myresearch.uillinois.edu/myResearchPortal/proposal-summary/621116)

Role: co-I

Current Year: $361,977

Total for all years: $2,174,194

Percent Effort: 11%

National Multiple Sclerosis Society Sosnoff Unfunded

Multiple Sclerosis Wellness Research Collaborative at Illinois

Role: PI

Current Year: $150,000

Total for all years: $825,000

Percent Effort: 11%

National Multiple Sclerosis Society (Franz, UNC) August 2019 submission

Optical flow perturbations for the diagnosis and treatment of walking balance impairment in people with multiple sclerosis

Role: co-PI (Illinois site PI)

Current Year: $123042

Total for all years: $431,999

Percent Effort: 15%

National Multiple Sclerosis Society (Hernandez) August 2019 (unfunded)

## Neural mechanisms underlying mobility dysfunction in older adults with multiple sclerosis

Role: Co-I

Current Year: $116,250

Total for all years: $339,625

Percent Effort: 7.5%

R21AG063793

National Institute of Health (R21) (Sosnoff) Unfunded

Teaching Robust Older Adults to Fall Safely

Role: PI

Current Year: $182,336

Total for all years: $400,847

Percent Effort: 7.5%

Administration for Community Living (Chiu) UNfunded

## Tele-Dance Research Training Center for Family Caregivers Living with Individuals with Disability

Role: Co-I

Current Year: $874999

Total for all years: $4374996

Percent Effort: 20%

NA (Rice, L.A.) Unfunded

Paralyzed Veterans of America Research Foundation Development and Validation of an Online Fall Management Program Wheelchair and Scooter Users Living with Spinal Cord Injury and Multiple Sclerosis

Role: Principal Investigator

Total Cost: $149,952

Percent Effort: 2%

PP-1904-33942 (Sosnoff) Unfunded

National Multiple Sclerosis Society

BeSteady-MS: Development of a Fall Risk Self-Management App

Role: PI

Current Year: $54,542

Total for all years: $54,542

Percent Effort: 10%

Administration for Community Living (DRRP) (Rice) Pending

Development and Validation of an Online Fall Prevention Program Among Wheelchair and Scooter Users Living with Multiple Sclerosis

**Role: Co-I**

Current Year: $298,297

Total for all years: $1,829,959

Percent Effort: 10%

R21NR018518

National Institute of Health (R21) (Sosnoff) UNFUNDED

**Community-based Self-guided Fall Risk Assessment in Older Adults**

This project seeks to determine if automated fall risk screening with commercial technology is reliable and valid in older adults.

**Role: PI**

Current Year: $150,000

Total for all years: $275,000

Percent Effort: 10%

NIH F31 Hsieh K.L. Unfunded

*Fall Risk Assessment with a Smartphone Application for Older Cancer Survivors*.

National Institute of Health (National Cancer Institute). Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship program.

Role: Mentor/Sponsor

RG-1807-31846 (Sosnoff) unfunded

National Multiple Sclerosis Society

Safe Fall Training in Individuals with Multiple Sclerosis

Current Year: $121,614

Total: $363,852

Percent Effort: 15%

National MS Society (McGinnis, U Vermont) Unfunded

Wearable Sensors and Machine Learning for Determining Biomechanical Indicators

Role: PI UIUC-site

Current Year: $23,372

Total for all years: $23,372

Percent Effort: 1%

DOD (L. Rice) Unfunded

Transfer Training for Full Time Wheeled Mobility Users Living with Spinal Cord Injury in Acute Inpatient Rehabilitation

Role: Co-I

Current Year: $460327

Total for all years: $ 1,712,823

Percent Effort: 3%

National Institute of Health (R21) (Wajda, Cleveland State) Unfunded (submitted June ’17)

Clinical and Home-based Smartphone Fall Risk Assessment

Role: Co-I

Current Year: $15,000

Total for all years: $31,796

Percent Effort: 7%

**Invention Disclosures**

Jayranam C, **Sosnoff JJ**, Burns A. I3 – A home based rehabilitation training device for manual wheelchair users. Disclosed to UIUC July 14, 2015.

**Sosnoff JJ**, Ratnam R. Home-based Fall Prediction and Prevention System. Disclosed to UIUC Sept 13, 2015.

Wood TA, Ballard R, Zimmerman J, Sosnoff JJ (2019) Waterproof Instrumented Swim Cap with Hand Impact Sensor". OTM-reference number #2019-024

**License Agreements**

Sosnoff JJ. (9/17/2019-12/17/2019). Non-exclusive software and evaluation license agreement with Medopad, LTD. (<https://medopad.com/>).

**PUBLICATIONS**

Refereed Articles

1. Ives, JC & **Sosnoff, J.** (2000). Beyond the mind body exercise hype. *The Physician and Sportsmedicine*, *28*, 67-91. DOI: 10.3810/psm.2000.03.776
2. **Sosnoff, JJ,** Vaillancourt, DE, & Newell, KM. (2004). Aging and force output performance: The loss of adaptive control of multiple neural oscillators. *Journal of Neurophysiology*, *91*, 172-81. DOI: 10.​1152/​jn.​00613.​
3. Vaillancourt, DE, **Sosnoff, JJ** & Newell, KM. (2004). Age-related changes in complexity depends on task dynamics. *Journal of Applied Physiology*, *97*, 454-455. DOI: 10.​1152/​japplphysiol.​00244.​
4. **Sosnoff, JJ,** Vaillancourt, DE, Larson, L, & Newell, KM. (2005). Coherence of EMG activity and single motor unit discharge patterns in human rhythmical force production. *Behavioral Brain Research*, *158*, 301-310. DOI:10.1016/j.bbr.2004.09.009
5. **Sosnoff, JJ** & Newell, KM. (2005). Intermittent visual information and the multiple timescales of visual motor control of continuous isometric force production. *Perception and Psychophysics*, *67*, 335-344. DOI: 10.3758/BF03206496
6. Lai, S-C, Mayer-Kress, G, **Sosnoff, JJ,** & Newell, KM. (2005). Information entropy analysis of discrete aiming movements. *Acta Psychologica*, *119*, 283-304*.* DOI:10.1016/j.actpsy.2005.02.00
7. **Sosnoff JJ** & Newell KM. (2005). Intermittency of visual information and the frequency of rhythmical force production. *Journal of Motor Behavior*, *37*, 325-334. DOI: 10.3200/JMBR.37.4.325-336
8. **Sosnoff JJ,** Jordan, K, & Newell KM. (2005). Information and force level interact in regulating

force output during 2 and 3 digit grip configurations. *Experimental Brain Research,* *167*, 76-85. DOI: 10.1007/s00221-005-0009-y

1. **Sosnoff JJ**, Valantine AD, & Newell KM (2006). Independence between the amount and structure of variability at low force levels. *Neuroscience Letters, 392*, 165-169. DOI:10.1016/j.neulet.2005.09.010
2. **Sosnoff JJ** & Newell KM (2006). Aging, visual intermittency and variability in isometric force output, *Journal of Gerontology: B Psychological Sciences. 61*, P117-24. URL: <http://psychsocgerontology.oxfordjournals.org/content/61/2/P117.full.pdf+html>
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55. Wood TA, Hsieh K, Ballard R, An R, **Sosnoff JJ.** (in press). Lingering Gait and Balance Deficits After a Concussion: A systematic review and meta-analysis. *American Journal of Physical Medicine and Rehabilitation.*
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62. Abou L, Sung J, Rice LA, **Sosnoff JJ** (in press). Reliability and validity of the Function in Sitting Test (FIST) among non-ambulatory individuals with spinal cord injury. *Spinal Cord Medicine.* doi: 10.1080/10790268.2019.1605749.
63. Kistler B, Khubchandani J, Wiblishauser M, Wilund K, **Sosnoff JJ** (in press). Falls and fall-related injuries among middle-aged adults with kidney disease. *International Urology and Nephrology*
64. Shin S, Lim BO, Socie MJ, **Sosnoff JJ** (2019). Fourier-based footfall placement variability in Parkinson’s disease. *BioMed Research International*, <https://doi.org/10.1155/2019/2689609>
65. Sun R, Aldunate R, Sosnoff JJ (2019). The Validity of a Mixed Reality-based Automated Functional Mobility Assessment. *Sensors, 19, 2183; doi:10.3390/s19092183*
66. Hsieh KL, Trinh L, Sosnoff JJ (2019). Gait Variability is Altered in Cancer Survivors with Self-Reported Neuropathy. *Gait Posture.* 72:206-210. doi: 10.1016/j.gaitpost.2019.06.014.
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68. Rice, LA., Yarnot, R., Mills, S., **Sonsoff, JJ**. (In Press) A Pilot Investigation of Anterior Tilt Use Among Power Wheelchair Users. In Review: *Disability and Rehabilitation: Assistive Technology.*
69. Shema-Shiratzky S., Gazit E., Sun R., Regev K., Karni A., **Sosnoff J.J.**, Herman T., Mirelman A., Hausdorff J.M. (in press). Deterioration of specific aspects of gait during the instrumented 6-Minute walk test among people with multiple sclerosis: disability levels associated with common and disparate behaviors. *Journal of Neurology*
70. Frechette M, Meyer B, Tulipani L, Gurchiek RD, McGinnis RS, **Sosnoff JJ**. (2019). Next steps in wearable technology and community ambulation in multiple sclerosis. *Current Neurology and Neuroscience Reports.* 19(10):80. DOI: 10.1007/s11910-019-0997-9.
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72. Sun R, Hsieh LK, **Sosnoff JJ** (2019). Fall Risk Prediction in Multiple Sclerosis Using Postural Sway Measures: A Machine Learning Approach. *Scientific Reports.* 9(1):16154. doi: 10.1038/s41598-019-52697-2.
73. Wood TA, **Sosnoff JJ** (in press). Age-Related Differences to Neck Muscle Strength and Range of Motion: Potential Risk Factors to Fall-Related Traumatic Brain Injuries. *Aging Clinical and Experimental Research.* https://doi.org/10.1007/s40520-019-01429-7
74. Wood TA, Richards AKR, **Sosnoff JJ.** (in press). Utilizing Undergraduate Kinesiology Students to Administer a Community-Based Fall Risk Assessment and Prevention Clinic. *International Journal of Kinesiology in Higher Education.* UKHE-2019-0033.R1
75. Chaparro GN, **Sosnoff JJ** & Hernandez ME (in press). Effects of aerobic fitness on cognitive motor interference during self-paced treadmill walking in older adults. *Aging Clinical and Experimental Research.* ACER-D-19-00957R1
76. Moran R, Francioni K, Broglio S,***Sosnoff JJ.*** (in press). Exploring baseline concussion assessment performance in adapted wheel-chair sport athletes. *J Athletic Therapy.*
77. Shema Shiratzky, S; Hillel, I; Mirelman, At; Regev, K; Hsieh, K ; Karni, A; **Sosnoff, JJ**; Hausdorff, J (in press). A wearable sensor identifies alterations in community ambulation in multiple sclerosis: contributors to real-world gait quality and physical activity. *J Neurology*.
78. Wood TA, Hernandez ME*,* ***Sosnoff JJ.*** (in press). Age-Related Differences to Neck Muscle Activation Latency as a Potential Risk Factor to Fall-Related Traumatic Brain Injuries. *Journal of Electromyography and Kinesiology.*
79. Hsieh KL, Sun R, **Sosnoff JJ.**(in press). Usability of Self-Guided Mixed Reality Fall Risk Assessment for Older Adults. *Gerontechnology.*
80. Selgrade B, Meyer D, **Sosnoff JJ** & Franz JJ (2020). Can optical flow perturbations detect walking balance impairment in people with multiple sclerosis? *PLOS one*. 15(3):e0230202. doi: 10.1371/journal.pone.0230202

Under review:

Wood TA, Ballard R, Zimmerman J, **Sosnoff JJ** (under review). Head Acceleration and Sub-Concussive Head Impacts in Collegiate Divers: A Pilot Study.

Kistler B, Bennett P, Wilund K, **Sosnoff JJ**. (under review). Depressive Disorders Increase the risk of Fall Related Injuries Among Chronic Kidney Disease Patients.

Hsieh KL & **Sosnoff JJ.** (under review). Falling safely is a motor skill and should be learned by older adults.

**#**Hsieh KL, Shema-Shiratzky S, Galperin I, et al., (under review). Protocol for a Virtual Reality Treadmill Intervention for Enhancing Mobility and Cognitive Function in People with Multiple Sclerosi**s**

Hsieh KL & **Sosnoff JJ**. (under review).Smartphone Accelerometry to Assess Postural Control in Individuals with Multiple Sclerosis. *Gait Posture*

**#**Frechette ML, Abou L, Rice LA, **Sosnoff JJ.** (under review).The Validity, Reliability, and Sensitivity of a Smartphone-based Seated Postural Control Assessment in Wheelchair Users. *Frontiers in Sport Active Living*.

Chapters

Newell KM, Deutsch KM, **Sosnoff** **JJ,** & Mayer-Kress G. (2005). Motor output variability as noise: A default and erroneous proposition? In K. Davids, S. Bennet & K. Newell (Eds.), *Variability in the Movement System: a Multi-Disciplinary Perspective* (p 3-22). Champaign, IL: Human Kinetics.

Hong SL, **Sosnoff JJ**, & Newell KM. (2005). Complexity and stability in isometric force production. In H. Heft & L. Marsh (Eds.), *Studies in Perception and Action VIII*. Lawrence Erlbaum Assoc, Inc.

Newell KM, Vaillancourt DE, & **Sosnoff JJ.**  (2006). Aging, complexity and motor performance: healthy and disease states.  In J.E. Birren & K.W. Schaie (Eds.), *Handbook of the psychology of aging (6th Ed.)* (p 163-182).  Amsterdam: Elsevier.

Sun R, Wood TA, **Sosnoff JJ** (2016). The use of low resolution pedoboragraphs. In F. Miller (Ed.), *Handbook of Human Motion*. New York: Springer.

Sun R, Paramathayalan V, Ratnam R, Jain S, Morrow D, & **Sosnoff JJ** (2018). Design and Development of an Automated Fall Risk Assessment System for Older Adults. In R. Pak & A. McLaughlin (Eds.), *Aging, Technology and Health* (p148-158). New York, Elsevier,

Bethoux F, **Sosnoff JJ**, McKee K (2018). Multiple Sclerosis and Mobility. In Robert J. Fox, MD, Alexander D. Rae-Grant, MD, and Francois Bethoux, MD Fox (Eds.) *Multiple Sclerosis and Related Disorders: Clinical Guide to Diagnosis, Medical Management, and Rehabilitation*. (p 268-276). New York: Springer.

**INVITED PRESENTATIONS**

**Sosnoff JJ**. (November, 2006). “Aging, force control and muscle weakness”. Building Bridges 2006: joint meeting of Canadian Society for Exercise Physiology and Canadian Society for Psychomotor Learning and Sports Psychology, Halifax, NS, Canada.

**Sosnoff, JJ, (**October, 2007). “Do sensorimotor deficits in advanced age result from a loss of complexity or loss of adaptability?” The University of Illinois Urbana-Champaign, College of Engineering, Bioengineering Interest Group (BIG) Seminar.

**Sosnoff JJ**, (April, 2009). “Aging and motor variability: Underlying mechanisms”. University of Nebraska Medical Center, Omaha, NE.

**Sosnoff JJ** (August 2009). “Aging, Motor Variability and Muscular Weakness”. International Sport Science Congress, Hanyang University, Seoul, Korea.

**Sosnoff JJ** (August 2009). “Aging, Sensorimotor Declines and Loss of Adaptability”. Seoul National University, Seoul, Korea

**Sosnoff JJ** (December 2010). Breaking the Cycle: Determining the Effects and Management of Spasticity in Multiple Sclerosis. Center for Health, Aging and Disability and Health, Wellness Research Initiative Symposium: Redefining Disability. University of Illinois at Urbana-Champaign.

**Sosnoff JJ** (February 2012). Falls and Multiple Sclerosis. Dean Speaker Series, College of Health Sciences. Old Dominion University, Norfolk, VA.

**Sosnoff JJ** (Septemeber 2013). Falls: Assessment and Intervention. Midwest Geriatric Medicine Symposium: Solutions in Aging, Carle Hospital, Urbana, IL.

**Sosnoff JJ** (November 2013). Dual Task Cost of Walking and Balance in Multiple Sclerosis. American

Congress of Rehabilitation Research 90th Annual Meeting. Orlando, FL.

**Sosnoff JJ** (February 2014). Cognitive Motor Interference in Walking in Persons with MS. American Academy of Orthotics and Prosthetics Annual Meeting. Chicago, IL.

**Sosnoff JJ** (March 2014). Falls prevention in Persons with Multiple Sclerosis. School of Rehabilitation Therapy, Queen’s University, Kingston, Ontario.

**Sosnoff JJ** (March 2014). Falls in non-ambulatory in persons with Multiple Sclerosis. Karolinska Institutet, Stockholm, Sweden.

**Sosnoff JJ** (June 2014). One step at a time: Evidence for body weight supported treadmill training in MS. Consortium of MS Centers Annual Meeting, Dallas, TX.

**Sosnoff JJ** (October 2014). Rehabilitative strategies to prevent falls in Persons with multiple sclerosis. American Congress of Rehabilitation Research 91st Annual Meeting. Toronto, Canada.

**Sosnoff JJ.** (October 2014). Assessment of Cognitive-Motor Interaction in Gait and Balance. 4th Annual International Symposium on Gait and Balance in Multiple Sclerosis. Cleveland, Oh.

**Sosnoff JJ.** (January 2015). Cognitive-Motor Interaction in Multiple Sclerosis. Chittenden Symposium on Technology and Mobility: The future of health. University of Illinois at Urbana-Champaign.

**Sosnoff JJ.** (March 2015). Cognitive-Motor Interaction in Multiple Sclerosis: Evidence, Predictors, and Consequences. Department of Physical Therapy, Tel Aviv University, Tel Aviv, Israel.

**Sosnoff JJ.** (March 2015). Fall Prevention in Multiple Sclerosis. MS Center, Sheba Medical Center, Tel Aviv, Israel.

**Sosnoff JJ.** (March 2015). Cognitive-Motor Interaction in Multiple Sclerosis: Evidence, Predictors, and Rehabilitation. Center for Movement, Cognition, and Mobility. Tel Aviv Sourasky Medical Center, Israel.

**Sosnoff JJ** (April 2015). Fall Prevention in Persons with multiple sclerosis. END-MS Symposium. Toronto, Canada.

**Sosnoff JJ** (May 2015). Cognitive-Motor Interaction in Multiple Sclerosis: Predictors, Consequences

and Rehabilitation. Department of Rehabilitation, Division of Physical Therapy, University of

Washington, Seattle, WA.

**Sosnoff JJ** (May 2015). Cognitive-Motor Interaction in Multiple Sclerosis: Predictors, Consequences

and Rehabilitation. Department of Physical Therapy, Georgia Regents University, Augusta, GA.

**Sosnoff JJ.** (November 2015). Cognitive-Motor Interaction in Multiple Sclerosis: Assessment, Predictors, and Rehabilitation. Department of Physical Therapy, University of North Carolina-Chapel Hill.

**Sosnoff JJ.** (February 2016). Cognitive-Motor Interaction in Multiple Sclerosis: Assessment, Predictors, and Rehabilitation. Department of Health and Exercise Science, Colorado State University.

**Sosnoff JJ** (April 2016). Neuroscience of Falls. Clinical & Translational Neuroscience Workshop, Health Innovations Lecture Series, Carle Foundation Hospital & UIUC.

**Sosnoff JJ** (December 2016). Cognitive-Motor Interaction in Multiple Sclerosis: Assessment,

Consequences and Rehabilitation. Center for Bionic Medicine, Rehabilitation Institute of Chicago, Chicago, IL.

**Sosnoff JJ** (March 2017). Falls in wheelchair users: Predictors and Prevention. Chittenden Symposium

on Health and Technology: Assistive Technology, University of Illinois at Urbana-Champaign.

**Sosnoff JJ** (November 2017). Falls: Screening and Assessment for Prevention and Intervention. *Falls –*

*Prevention, Assessment and Intervention- Research to Practice*, Carle Forum, Urbana, IL.

**Sosnoff JJ (February 2018).** Dual Task Rehabilitation in Multiple Sclerosis, Combined

Section of American Physical Therapy Association Annual Meeting, New Orleans, LA.

**Sosnoff JJ** (December 2017). Cognitive-Motor Interaction in Multiple Sclerosis: The Promise of

Rehabilitation. (Research Keynote), *Impact Series, Greater Illinois Chapter of the National Multiple Sclerosis Society*, Rosemont, IL.

**Sosnoff JJ** (March 2018). Chronic Disease: Can Exercise Effect Change. Veteran Administration MS

Center of Excellence webinar series, *Whole Health: Patient Centered Care for MS*.

**Sosnoff JJ** (June 2018). Fall Risk Assessment and Prevention: The Role of Technology. *Navigating*

*Change Symposium*, Illinois Department of Aging, Peoria, IL.

**Sosnoff JJ** (September 2018). Real world mobility monitoring in multiple sclerosis: Next Steps. *Abbvie*

*Neuroscience Grand Rounds*, Abbvie, Inc. North Chicago, IL.

**Sosnoff JJ (**September 2018). Fall Risk Assessment and Prevention: The Role of Technology. *Illinois*

*Fall Prevention Symposium*. College of Nursing, University of Illinois-Chicago.

**Sosnoff JJ (**April 2019). Next Steps in Fall Prevention. School of Human Performance and Health

Profession, Ithaca College, Ithaca, NY

**Sosnoff JJ** (October 2019). Cannabis and Multiple Sclerosis. Podcast for MS Living Well (Dr. Barry

Singer). <https://www.mslivingwell.org/2019/10/10/cannabis-ms-podcast/>

**Sosnoff JJ** (November 2019). The role of technology in fall risk assessment and prevention.

Accessibility and Inclusion Technology Research Collaborative, Electrical Engineering and

Computer Science Department, Wichita State University, Wichita, KS.

**Sosnoff JJ**, Rica LA, Rogers WA.(February 2020). Maximizing Independence with Technology in the Home. Brain Injury Symposium, Carle Rehabilitation Center, Carle Foundation Hospital, Champaign, IL.

**Conference Presentations**

**Sosnoff JJ,** VaillancourtDE, Larsson L and Newell KM. (June 2002). Rhythmical force production and spectral analysis of intramuscular EMG and motor unit discharge patterns. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Baltimore, MD, (Presenter).

Lai S, **Sosnoff JJ**, Meyer-Kress G & Newell K. (June 2002). Application of information technology. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Baltimore, MD.

**Sosnoff JJ,** VaillancourtDE, Larsson L and Newell KM. (Nov 2002). Rhythmical force production and spectral analysis of intramuscular EMG and motor unit discharge patterns. Society for Neuroscience, Orlando, FL, (Presenter).

**Sosnoff JJ,** VaillancourtDE, and Newell KM. (Nov 2002). Aging and the frequency structure of intramuscular EMG. Gerontological Society of America, Boston, MA, (Presenter).

Lai S, Meyer-Kress G, **Sosnoff JJ** & Newell KM. (June 2003). Examination of entropy algorithm’s in the analysis of discrete aiming movements. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Savannah, GA.

**Sosnoff JJ** & Newell KM. (June 2003). Intermittent control of continuous isometric force output across sub-maximal force levels. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Savannah, GA. (Presenter).

**Sosnoff JJ**, Vaillancourt DE & Newell KM (Nov 2003). The effects of aging on the complexity of motor output: A multi-scale entropy analysis. Dynamic Neuroscience XI: Neuronal Variability and Noise, New Orleans, LA. (Presenter).

**Sosnoff JJ** & Newell KM. (Nov 2003). Intermittency in the control of rhythmic force production. Society for Neuroscience, New Orleans, LA. (Presenter).

**Sosnoff JJ,** Jordan K & Newell KM. (June 2004). Control of force output as a function of grip configuration, force magnitude and visual intermittency. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Vancouver, Canada.

**Sosnoff, JJ** & Newell, KM. (Oct 2004). Visual information scale, aging and the control of isometric force output. Society for Neuroscience, San Diego, CA. (Presenter).

**Sosnoff JJ**, Carter RM, & Newell KM. (June 2005). Cognitive constraints and the stability of postural control in older adults. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Tampa, FL. (Presenter).

Vallantine AD, **Sosnoff JJ** & Newell KM. (June 2005). The invariance of force irregularity at low force levels. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Tampa, FL.

**Sosnoff JJ** &Newell KM. (June 2005). Bringing down the noise: An empirical test of the neural noise hypothesis. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Tampa, FL. (Presenter).

Valantine AD, **Sosnoff JJ**, & Newell, KM. (August 2005). The control of force production at low force levels. Progress in Motor Control V, University Park, PA.

**Sosnoff JJ** & Newell KM. (August 2005). Aging, visual motor processing and deficits in isometric force output. Progress in Motor Control V, University Park, PA.

**Sosnoff JJ**, Valantine AD, & Newell KM. (Nov 2005). Force magnitude does not influence force irregularity at low force levels. Society of Neuroscience, Washington, DC. (Presenter).

**Sosnoff JJ** & Newell KM. (May 2006). Aging: Loss of Complexity or Loss of Adaptability. Understanding Complex Systems, Urbana, IL. (Presenter).

**Sosnoff JJ** & Newell KM (June 2006). Aging and intra-individual variability in motor performance North American Society for Psychology of Sport and Physical Activity Annual Meeting, Denver, CO. (Presenter).

**Sosnoff JJ** & Newell KM (June 2006). Force variability, aging and muscle weakness. American College of Sports Medicine, Denver, CO. (Presenter).

**Sosnoff JJ,** Valantine AD**,** & Newell KM. (August 2006). The adaptive range of fractal force production. Society for Chaos Theory in Psychology and Life Sciences. Baltimore, MD.

**Sosnoff JJ,** Jang J & Ofori,E.(October 2006). The neuromuscular correlates of the structure of force variability. Society of Neuroscience, Atlanta, GA. (Presenter).

Contakos J, **Sosnoff JJ**, McAuley E, Rosengren K. (June 2007) Changes in postural dynamics as a function of task constraints in elderly women, North American Society for Psychology of Sport and Physical Activity Annual Meeting, San Diego, CA.

**Sosnoff JJ**, Valantine & Newell K. (June 2007). Aging, loss of adaptability or loss of complexity. North American Society for Psychology of Sport and Physical Activity Annual Meeting, San Diego, CA. (Presenter).

Ofori E & **Sosnoff JJ**. (June 2007). Does discrete force production impact continuous force production. North American Society for Psychology of Sport and Physical Activity Annual Meeting, San Diego, CA.

**Sosnoff JJ,** Voudrie S, Jae SY, Heffernan K & Fernhall B. (June 2007). Cardioballistic impulse and fluctuations in isometric force output. North American Society for Psychology of Sport and Physical Activity Annual Meeting, San Diego, CA.

**Sosnoff JJ** & Samson J. (June 2007). Aging, physical activity and variability of cognitive processing. North American Society for Psychology of Sport and Physical Activity Annual Meeting, San Diego, CA.

**Sosnoff JJ**, Voudrie S, Jae SY, Heffernan K & Fernhall B. (August 2007). Are age-related differences in tremor related to cardioballistics? Progress in Motor Control VI, Santos, Brazil. (Presenter).

Shin S, Voudrie SJ, Samson JM, Snook EM, **Sosnoff JJ,** Motl RW. (June 2008). Postural control in individuals with multiple sclerosis: A dual task approach. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Niagara Falls, Canada.

Ofori E, Heffernan KS, **Sosnoff JJ**, Baynard T, Woods JA, & Fernhall B. (June 2008). Down Syndrome and force variability. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Niagara Falls, Canada.

Ofori E, **Sosnoff JJ** & Carlton LG. (June 2008). The relationship between discrete and continuous force variability. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Niagara Falls, Canada.

Samson JM, **Sosnoff JJ, &** Hillman CH. (June 2008). Physical activity and intraindividual cognitive variability in children. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Niagara Falls, Canada.

Voudrie SJ, Ebersole KT, & **Sosnoff JJ**. (June 2008). The effects of ACL surgery and rehabilitation on torque control. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Niagara Falls, Canada. (Presenter)

**Sosnoff JJ,** Voudrie SJ, & Samson JM. (June 2008). Coupling between cognitive and motor variability in young and old adults. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Niagara Falls, Canada. (Presenter)

Ofori E, Heffernan KS, **Sosnoff JJ**, Baynard T, Goulopoulo S, Collier SR, Figueroa A & Fernhall B. (June 2008). Muscular weakness and force variability in individuals with Down Syndrome. American College of Sports Medicine Annual Meeting, Indianapolis, IN.

Samson JM, **Sosnoff JJ,** Buck SM, Pontifex MB, Themason JR & Hillman CH.(June 2008). Aerobic exercise training and intra-individual cognitive variability in older adults. American College of Sports Medicine Annual Meeting, Indianapolis, IN.

Heffernan KS, Fahs CA, Shinsako KK, **Sosnoff JJ,** Jae SY, & Fernhall Bo.(June 2008). Fractal properties of heart rate following resistance training: Chaotic times call for chaotic measures. American College of Sports Medicine Annual Meeting, Indianapolis, IN.

Voudrie SJ, Ebersole KT, & **Sosnoff JJ**. (June 2008). Joint angle and torque variability in the Quadriceps. American College of Sports Medicine Annual Meeting, Indianapolis, IN.

Morrison S **& Sosnoff JJ.** (June 2008). Aging-related changes in the adaptability of neuromuscular output. American College of Sports Medicine Annual Meeting, Indianapolis, IN. (Presenter).

**Sosnoff JJ,** Broglio SP, & Ferrara MS. (June 2008). Coupling between cognitive and motor function following mild traumatic brain injury. American College of Sports Medicine Annual Meeting, Indianapolis, IN. (Presenter).

**Sosnoff JJ** & Newell KM. (Nov 2008). Intentional fractal movement. Psychonomic Society Annual Meeting. Chicago, IL. (Presenter).

**Sosnoff JJ**, Samson JM, Voudrie SJ (Nov 2008). Practice and the age-related loss of complexity in perceptual motor output. Gerontological Society of America Annual Meeting, Baltimore, MD.

Broglio SP, **Sosnoff JJ**, Shin S, Ferrara MS. (May 2009). Long term changes in balance following concussion, American College of Sports Medicine, Seattle, WA.

Shin S, **Sosnoff JJ**, Broglio SP. (May 2009) Reducing ankle movement has no effect on postural control dynamics, American College of Sports Medicine, Seattle, WA.

**Sosnoff JJ**, Wessels K, Brown JL, Ebersole KE. (May 2009). Shoulder pain in manual wheelchair athletes: The role of gender. American College of Sports Medicine, Seattle, WA.

**Sosnoff JJ**, Culp S, Contakos J. (June 2009). Temporal dynamics of wheelchair propulsion. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Austin, TX. (Presenter).

**Sosnoff JJ** & Samson JM. (June 2009). Age-related motor variability across time scales. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Austin, TX. (Presenter).

Ofori E, Samson JM & **Sosnoff JJ**. (June 2009). Visual display and age-related differences in force production. North American Society for Psychology of Sport and Physical Activity Annual Meeting, Austin, TX.

Broglio SP & **Sosnoff JJ**. (June 2009). The relationship between cognitive and postural control performance with self-report concussion symptoms, National Athletic Trainers’ Association Annual Meeting and Clinical Symposium, San Antonio, TX.

Shin SH, Valentine R, Evans E, & **Sosnoff JJ** (August 2009). Lower extremity muscle quality and gait variability in older adults. American Society of Biomechanics Annual Meeting, State College, PA.

**Sosnoff JJ**, **Ofori E**, Knapik D, Grindrod CM, De Nil LF,  Ambrose NG, Carlton LG, & Loucks T. (Oct 2009). Auditory Motor Memory. Society for Neuroscience Annual Meeting, Chicago, IL.  

Grindrod CM, Loucks T, & **Sosnoff JJ.** (Oct 2009). Intraindividual response time variability during on-line sentence comprehension in left- and right-brain-damaged patients. Society for Neuroscience Annual Meeting, Chicago, IL.

**Sosnoff JJ**, Rampurawala ZM, Daigle SC, DiBerardino LA, Park K, Hsiao-Wecksler ET. (2010) Complexity and variability in manual wheelchair propulsion. 16th Annual US National Congress on Theoretical and Applied Mechanics. State College, PA.

Wessels K, **Sosnoff JJ,** , Butler JM, Serio S (June 2010). Force control in manual wheelchair users. American College of Sports Medicine. Baltimore, MD.

**Sosnoff JJ** & Motl RW. Effect of arm vs. leg cycling exercise on spasticity of the legs in multiple sclerosis. (June 2010). Americas Committee for the Treatment and Research in Multiple Sclerosis (ACTRIMS). San Antonio, Texas.

**Sosnoff JJ**, Gappmeir E, Frame A & Motl RW. (June 2010). Spasticity, mobility and balance in persons with Multiple Sclerosis. Consortium for Multiple Sclerosis Centers (CMSC). San Antonio, Texas.

**Sosnoff JJ,** Wessels K, Serio S & Butler JM (June 2010). Sub-maximal force control as a function of shoulder pain in manual wheelchair users.North American Society for Psychology of Sport and Physical Activity Annual Meeting. Tucson, Az.

Shin S& **Sosnoff JJ.** (June 2010).Nonlinear time series analyses of seated postural control in young adults with spinal cord injury. North American Society for Psychology of Sport and Physical Activity Annual Meeting. Tucson, Az.

Ofori E, Loucks TM, Knapik DP, Carlton LG & **Sosnoff JJ.** (June 2010).Auditory and visual feedback in oral and manual force control. North American Society for Psychology of Sport and Physical Activity Annual Meeting. Tucson, Az.

Loucks TM, Ofori E, Grindrod CM, De Nil L & **Sosnoff JJ.** (June 2010). Auditory motor integration in oral and manual effectors. North American Society for Psychology of Sport and Physical Activity

Annual Meeting. Tucson, Az.

**Sosnoff, J. J**., Boes, M. K., Sandroff, B. M., Pula, J. H., & Motl, R. W. (June 2011). Walking and thinking

in people with multiple sclerosis [Abstract]. International Journal of MS Care, 13, 3.

**Sosnoff, J. J.,** Socie, M. J., Boes, M. K., Sandroff, B. M., Suh, Y., & Motl, R. W. (2011). Ambulatory

mobility monitoring in people with multiple sclerosis [Abstract]. International Journal of MS Care, 13,

69-70.

Socie, M.J., Boes, M. K., Motl, R. W., & **Sosnoff, J. J.**, (2011). Changes in spatiotemporal parameters of

gait during the 6-minute walk in people with multiple sclerosis [Abstract]. International Journal of MS

Care, 13, 71.

Balantrapu, S., Sandroff, B. M., **Sosnoff, J. J.**, & Motl, R. W. (2011). Self- reported impact of spasticity

is associated with spatiotemporal parameters of gait [Abstract]. *International Journal of MS Care, 13*,

81-82.

Balantrapu, S., **Sosnoff, J. J.,** Pula, J. H., Weikert, M. L., Suh, Y., Boes, M. K., Sandroff, B. M., & Motl, R.

W. (2011). Spasticity of the legs and its effect on measures of ambulation and gait [Abstract].

International Journal of MS Care, 13, 82.

Boes, M. K., **Sosnoff, J. J.**, Pula, J. H., Sandroff, B. M., & Motl, R. M. (2011). Standing, walking, and

thinking in multiple sclerosis [Abstract]. International Journal of MS Care, 13, 67-68.

Goldman, M., Suh, Y., Weikert, M. L., Pula, J. H., **Sosnoff, J. J.**, & Motl, R. W. (2011). Confirmation of 6-

minute walk test utility in multiple sclerosis subjects [Abstract]. International Journal of MS Care, 13, 6.

**Sosnoff, J. J.,** Shin, S., Stergiou, N., Huisinga, J., van Emmerick, R.E.A., & Busa, M.A. (2011).

Postural and gait dysfunction in Multiple Sclerosis: Novel insights from motor control [Abstract].

Journal of Sport and Exercise Psychology, 33, S21.

**Sosnoff, J. J.,** Shin, S., & Motl, R.W. (2011). A test of the rambling trembling hypothesis in Multiple

Sclerosis. [Abstract]. Journal of Sport and Exercise Psychology, 33, S22.

Ofori, E. **Sosnoff, J. J.,** Morrison, S.,Boes, M.K., Pula, J.H., &Motl, R.W. (2011). Tremor and multiple

sclerosis. [Abstract]. Journal of Sport and Exercise Psychology, 33, S95.

Shin, S., Motl, R.W.& **Sosnoff, J. J.** (2011). Spasticity and postural asymmetry in persons with

multiple sclerosis. [Abstract]. Journal of Sport and Exercise Psychology, 33, S22.

**Sosnoff JJ**, Sandroff BM, Pilutti LA, Pula JH, Morrison SM & Motl RW. (Oct 2011) Falls and activity

curtailment in persons with multiple sclerosis. First International Symposium on Gait and Balance in

Multiple Sclerosis. Portland, OR.

**Sosnoff, J. J.**, Sandroff, B. M, Socie MJ, Balantrapu S, Suh Y, Pula, J. H., & Motl, R. M. (2012). Predictors of dual task cost in persons with MS. International Journal of MS Care, 14, 1.

Balantrapu S, Suh Y, Sandroff BM, Pilutti LA, Dlugonski D, **Sosnoff, JJ**, Pula, JH, Motl RM. (2012). Total macular volume and its association with ambulatory parameters in persons with MS. International Journal of MS Care, 14, 73.

Sandroff, B. M, Pilutti LA, Dlugonski D, Balantrapu S, Suh Y, Pula, J. H., **Sosnoff, J. J.**, & Motl, R. M. (2012). Two conditions of administering the 6-minute walk in persons with MS. International Journal of MS Care, 14, 77.

**Sosnoff JJ**, Socie MJ, Sandroff BM, Pilutti LA, Pula JH & Motl RW. Walking impairment and gait variability in multiple sclerosis. International Journal of MS Care, 14, 82

Pilutti LA, Sandroff, BM, Dlugonski D, Balantrapu S, Suh Y, Pula, J. H., **Sosnoff, J. J.**, & Motl, R. M. (2012). Multiple Sclerosis Walking Scale-12 Scores and gait parameters. International Journal of MS Care, 14, 87.

**Boes MK,** Motl RM **& Sosnoff, JJ.** (2012). Dual task, mobility and fall risk in persons with multiple sclerosis. International Journal of MS Care, 14, 89.

Balantrapu S,Socie MJ, Sandroff BM, Pilutti LA, Pula JH & **Sosnoff JJ**, Motl RW. (2012). Validation of the six spot step test as a measure of ambulation in multiple sclerosis. International Journal of MS Care, 14, 91.

Coote S, Finlayson M, **Sosnoff JJ** (Oct 2012). Mobility status and falls in persons with multiple sclerosis. Second International Symposium on Gait and Balance in Multiple Sclerosis. Portland, OR.

**Sosnoff JJ** Moon Y, Wajda DA, Finlayson M, McAuley E, Peterson E, Morrison S, Motl RW. (June 2014). Fall Risk Reduction in Individuals with MS: Pilot Examination of Exercise and Education. Annual Meeting of Consortium of MS Centers, Dallas, TX.

Wadja DA, Motl RW, **Sosnoff JJ.** (June 2014). Gait Initiation and Fall Risk in Individuals with MS. Annual Meeting of Consortium of MS Centers, Dallas, TX.

Chruzander C**,** Johansson S, Peterson E, Rice LA, **Sosnoff JJ**, A Widen Holmquist, L Von Koch, C Yetterberg. (September 2014). Falls among non-ambulatory individuals with multiple sclerosis: an international expert panel consensus statement. MS Boston 2014: Joint meeting of American Committee on Treatment and Research in MS and European Committee on Treatment and Research in MS. Boston, MA.

**Sosnoff JJ**, Klaren R, Pilutti LA, Dlugonski D, Motl RW (September 2014). Reliability of clinically feasible gait analysis in multiple sclerosis. MS Boston 2014: Joint meeting of American Committee on Treatment and Research in MS and European Committee on Treatment and Research in MS. Boston, MA.

Finlayson M, Cattaneo D, Cameron M, Coote S, Freeman J, Gunn H, Jonsdottir J, Matsuda P, Peterson

E, **Sosnoff J**. The international MS falls prevention research network: development and direction. Multiple Sclerosis Journal. 2015;21(4): 520.

Roeing, K. L., Wajda, D. A., Motl, R. W., & **Sosnoff, J. J.** (2015). Gait termination in individuals with

multiple sclerosis. International Journal of MS Care, 17, S29.

**Sosnoff, J. J.**, Wajda, D. A., Pilutti, L. A., Ousley, C., Sung, J., & Motl, R. W. (2015). Body weight

supported treadmill training in people with multiple sclerosis with mobility limitations.

International Journal of MS Care, 17, S76.

Wajda, D. A., Motl, R. W., & **Sosnoff, J. J.** (2015). Falls in older individuals with multiple sclerosis.

International Journal of MS Care, 17, S30.

**Sosnoff JJ**, Jayaranam C, Moon Y, Rice IM, & Hsiao-Wecksler ET. (2015). Shoulder Pain and

Variability in Manual Wheelchair Propulsion. 10th Annual NIH Pain Symposium, Bethesda, MD.

Rice LA, Kalron A, Berkowitz SH, Backus D, **Sosnoff JJ.** Fall prevalence in wheeled mobility device users living with multiple sclerosis. 4th Annual International Symposium on Gait and Balance in Multiple Sclerosis. Portland, OR.

Matsuda PN, Ciol M, **Sosnoff JJ**, Kraft G (2015) Measures of falls risk in persons with Multiple Sclerosis: a comparative study of the Timed Up-and-Go and Timed Up-and-Go Cognitive test. 4th Annual International Symposium on Gait and Balance in Multiple Sclerosis. Portland, OR.

**Sosnoff JJ** (2015). Rehabilitation strategies to reduce Cognitive motor interference in walking in MS. American Congress of Rehabilitation Medicine. Dallas, Texas

**Sosnoff JJ** (2015). Spasticity and mobility in individuals with multiple sclerosis. American Congress of Rehabilitation Medicine. Dallas, Texas

Roeing K, Wajda, D. A., & **Sosnoff, J. J.** (2016). Novel Biomarker of Balance Impairment in Minimally Impaired Individuals with Multiple Sclerosis. International Journal of MS Care, 18, S30.

Rice, LA., Kalron, A., Berkowitz, S.H., Backus, D., **Sosnoff, J.J.** (2016, October 30-November 4) *Fall Prevalence in Wheeled Mobility Device Users Living With Multiple Sclerosis.* Accepted at the American Congress of Rehabilitation Medicine 93rd Annual Conference. Chicago, IL.

Yaejin Moon**,** R.S. McGinnins, K. Seagers, R.W. Motl, N. Sheth, J.A. Wright Jr., R. Ghaffari, J**.J. Sosnoff**. (Nov 2016). Monitoring gait in Multiple Sclerosis with novel wearable motion sensors, American Congress of Rehabilitation Medicine, Chicago, Illinois

Yaejin Moon, **J.J. Sosnoff**. (Nov 2016). Safe landing strategies during a fall: Systematic review and meta-analysis, American Congress of Rehabilitation Medicine, Chicago, Illinois Poster

Yaejin Moon, K.L. Roeing, V. Ramkrishnan, R. Ratnam, N. Sheth, **J.J. Sosnoff**. (Nov 2016). Fall Risk Assessment: The potential for home-based technology, American Congress of Rehabilitation Medicine, Chicago, Illinois Poster

Devos H, Akinwuntan A, **J.J. Sosnoff**. (Nov 2016). Fall Risk and driving performance in persons with Multiple Sclerosis, American Congress of Rehabilitation Medicine, Chicago, Illinois Poster.

**Sosnoff JJ**, Jayaraman C, Beck C (Nov 2016). Shoulder pain and trunk kinematics in manual wheelchair propulsion. American Congress of Rehabilitation Medicine, Chicago, Illinois Poster.

Sun R, Yaejin M, Seager K, **Sosnoff JJ** (May 2017). Validation of novel conformal wearable sensor as a measure of balance in individuals with MS. Consortium of MS Centers Annual Meeting, New Orleans, LA.

Wadja DA, Wood TA, **Sosnoff JJ** (May, 2017). Attentional Cost of Movement in Individuals with Multiple Sclerosis. Consortium of MS Centers Annual Meeting, New Orleans, LA.

Bisson EJ, Deshpande N, French S, **Sosnoff JJ**, Finlayson M. (September 2017). Step detection and energy expenditure accuracy of hip and wrist-worn activity monitors in people with multiple sclerosis. 7th International Symposium on gait and balance in Multiple Sclerosis. Portland, WA,

Wajda DA, Roach KL, Sandroff BM, Benedict RHB, Motl RW, **Sosnoff JJ** (September 2017). Preliminary Investigation of Computer Cognitive Training on Cognitive Motor Interference in Persons with Multiple Sclerosis. 7th International Symposium on gait and balance in Multiple Sclerosis. Portland, WA,

Shema S, Moon Y, Hseih KL, Mirelman A, **Sosnoff JJ**, Hausdorff J. (September 2017). Associations between dual-task walking, motor and cognitive performance and disease severity in multiple sclerosis. 7th International Symposium on gait and balance in Multiple Sclerosis. Portland, WA,

Hsieh KL & **Sosnoff JJ**. (October, 2017*).* Gait Variability is Associated with Cognition in Individuals with Multiple Sclerosis. *American Congress of Rehabilitation Medicine*. Atlanta, GA.

Sosnoff JJ, Hsieh KL, Fanning J, Wajda DA, McDonagh D, (November 2017). Real-world usability testing of a smartphone application to measure fall risk in seniors. C*ollaborations in Health, Aging Research and Technology* Symposium, Champaign, IL.

Rice, L.A.**,** Sung, JH., Trace, Y., Peterson, E.W., **Sosnoff, J.J.** (2017, September 3-6) *Fall Characteristics of Full Time Wheelchair Users Living with Spinal Cord Injury.*  Presented at the Academy of Spinal Cord Injury Professional 2017 Educational Conference and Expo, Denver, Co.

Rice, LA.**,** Isaacs, Z.J., Ousley, CM., **Sosnoff, JJ.** (2017, March 1 – 3) *Transfer Training for Wheelchair Users with Multiple Sclerosis.* Presented at the International Seating Symposium, Nashville, TN.

Wood TA, Hsieh KL, Ballard RA, An R, **Sosnoff JJ**. (May 2018). Lingering Gait Speed Deficits Following Concussion Symptom Resolution: A Meta-Analysis. 2018. NATA 69th Clinical Symposia, New Orleans, LA.

Sun R., Musaad S., Hsieh K.L., **Sosnoff J.J.** (May 2018) [Assessment of Postural Control in Multiple Sclerosis: Identification of Core Outcome Variables](javascript:void(0)). 2018. 23rd Annual Rehabilitation in Multiple Sclerosis Conference, Amsterdam

Hsieh K.L., Trinh L., **Sosnoff J.J.** (July, 2018). The Romberg Test in Cancer Survivors with Neuropathy. *Progress in Clinical Motor Control*. State College, PA.

Sun R., Musaad S., Hsieh K.L., **Sosnoff J.J.** (July, 2018). Fall Risk Prediction in Multiple Sclerosis Using Postural Sway Metrics. *Progress in Clinical Motor Control*. State College, PA.

Moon Y., Bishnoi A., Wood T.A., **Sosnoff J.J.** (July, 2018). Head-acceleration During Experimentally Induced Falls as a Function of Age. *Progress in Clinical Motor Control*. State College, PA.

Sun R., Musaad S., Hsieh K.L., **Sosnoff J.J.** (Aug 2018) [Assessment of Postural Control in Multiple Sclerosis: Identification of Core Outcome Variables](javascript:void(0)). American Society of Biomechanics Annual Meeting. Rochester, MN

Hsieh K.L., Roach K.L., Wajda D.A., & Sosnoff J.J. (2018). Smartphone Technology Can Measure Postural Stability and Distinguish Fall Risk in Older Adults. *American Society of Biomechanics*. Rochester, MN.

Sun R, Morrow D, Jain S, **Sosnoff JJ**. (Nov 2018). Validity and Usability of an Automated Fall Risk Assessment Tool for Older Adults, Gerontology Society of America Annual Scientific Meeting, Accepted, Boston, MA.

Van Denend, T., Peterson, E., Sung, J., **Sosnoff, J**. & Rice, L. (2018, September).  *Validation of a fall prevention program among non-ambulatory wheeled mobility device users with Multiple Sclerosis: Protocol overview.*Poster session presented at the Illinois Symposium on Fall Prevention sponsored by the Illinois Fall Prevention Coalition, Chicago, IL.

Rice, L.A., Sung, JH, Peters, J, **Sosnoff, J.J.** (2018, March 6-9) *Best Practices in Management of Fall Risk Among Power Wheelchair Users.* Presented at the 34th International Seating Symposium, Vancouver, BC.

Sun R, Aldunate R, **Sosnoff, J.J.** (May 2019). The validity of a mixed reality-based functional mobility assessment. IEEE EMBS **Biomedical and Health Informatics**. Chicago, IL.

**Hsieh KL, Wood TA, Tablerion J, Bishnoi A, Hernandez ME, Sun R, An R, Sosnoff JJ. (May 2019). Motor Learning in People with Multiple Sclerosis: A Systematic Review and Meta-Analysis. Consortium of MS Centers Annual Meeting, Seattle WA.**

**Frechette M, Hsieh KL, Sosnoff JJ. (May 2019). Preliminary Examination of Smartphone-Based Fall Risk Assessment in Individuals with Multiple Sclerosis. Consortium of MS Centers Annual Meeting, Seattle WA.**

**Wood TA, Sun R, Sosnoff JJ (August 2019). Intra-rater Reliability of a Novel Neck Strength Device with Implications for Older Adults. International Society of Biomechanics/American Society of Biomechanics Annual Meeting, Calgary, Canada.**

**Wood TA, Moon Y, Bishnoi A, Sun R, Sosnoff JJ (August 2019). Age Related Differences in Head Impact During Experimentally Induced Sideways Falls. International Society of Biomechanics/American Society of Biomechanics Annual Meeting, Calgary, Canada.**

Selgrade BP, Meyer D, **Sosnoff JJ**, Franz J **(August 2019). Optical Flow Perturbations to Detect Preclinical Walking Balance Impairment in People with Multiple Sclerosis. International Society of Biomechanics/American Society of Biomechanics Annual Meeting, Calgary, Canada.**

Hsieh, K. Trinh L, Sosnoff JJ. (**August 2019**). *Gait variability is altered in cancer survivors with neuropathy*. Poster session presented at the 43rd Annual Meeting of the American Society of Biomechanics, Calgary, AB.

Rice LA, Peterson E, Backus D, Sung J, Yarnot R, Van Denend T, Shen S, **Sosnoff JJ. (2020).**  Managing Fall Risk Among Wheelchair and Scooter Users: Best Practices and Lessons Learned. 6th International Seating Symposium: *Across the Lifespan*, Vancouver AB.

Frechette, M. L., Hsieh, K. L., & Sosnoff, J. J. (2019, October). *Preliminary Investigation of Smartphone Accelerometry In Individuals With Multiple Sclerosis.* 9th International Symposium on Gait & Balance in Multiple Sclerosis, Denver, CO.

**Wood TA, Sosnoff JJ (October 2019).** Neck Muscle Activation Latency in Older Adults**. Society for Neuroscience Annual Meeting, Chicago, IL.**

**Sosnoff JJ** (October 2019)**.** Use of Technology to Induce Cognitive-Motor Interference. *American Congress of Rehabilitation Medicine*. Chicago, IL.

Hsieh KL, Sun R, **Sosnoff JJ** (October 2019)**.** Using Technology for fall risk assessment in older adults. *American Congress of Rehabilitation Medicine*. Chicago, IL.

Sanford J, Remillard ET, **Sosnoff JJ,** Rice LA, Koon L (October 2019)**.** Rehabilitation technologies to support aging in place for people with long-term mobility disabilities. *American Congress of Rehabilitation Medicine*. Chicago, IL.

**Supervision of Student Research**

*McNair Scholars Program*

I have served as or am currently serving Director of Research for

Jeremy Butler, Force control in manual wheelchair users, June-August 2009

Higgins Durand, Aging and oral and manual motor variability, June-August 2010

Cherita Ousley, Spasticity and mobility in persons with multiple Sclerosis, June-

August 2011.

Matthew Weasley, Variability of gait kinematics in persons with multiple sclerosis, August 2011-May 2012.

*Undergraduate Senior Thesis Research*

I have served as or am currently serving Director of Research for

Jared Kennedy, Age-related differences in force variability, graduated May 2008

*James Scholar Project*

I have served as or am currently serving Director of Research for

Anna Wetzel, Predictors of dual-task cost in persons with MS

Justine Meyers, Fall risk in persons with multiple sclerosis

Jamie Rymut, BS, Falls in Older Adults with MS, research project supervisor, May 2017

*Master Thesis Research*

I have served as or am currently serving Director of Research for:

1. Stefani Voudrie, MS, Joint angle and torque control in the Quadriceps muscle group, graduated Dec 2008.
2. Karla Wessels, MS, Shoulder Pain and Joint Laxity in Manual Wheelchair Users, graduated May 2009.
3. Jennifer Brown, MS, Muscle Strength and Shoulder Pain in Manual Wheelchair Users, graduated May 2009.
4. Jean Samson, MS, Aging and variability in thought and action, Kinesiology, graduated May 2010.
5. Morgan Boes, MS, Postural control in multiple sclerosis: effects of disability and dual task, Bioengineering, graduated Dec 2011.
6. Zahid Rampurawala, MS, Motor Variability in Wheelchair Propulsion, Kinesiology, graduated May 2011.

1. Scott Diagle, MS, Intelliwheels: Design of CVT for manual Wheelchairs, Mechanical Engineering, graduated December 2011
2. Michael J. Socie, MS, Gait variability in persons with Multiple Sclerosis, Mechanical Engineering, graduated May 2011
3. Yaejin Moon, Variability of peak shoulder force during wheelchair propulsion as a function of shoulder pain, Kinesiology, graduated 2013
4. Jong Hun Sung, , The acute effect of body weight supported treadmill training on spasticity in persons with MS, Kinesiology, graduated 2013.
5. Chandrasekaran Jayaraman, Kinematic variability in wheelchair propulsion, kinesiology, Aug 15, 2014.
6. Zadok Isaacs, Effect of an exercise based intervention on seated postural control in non-ambulatory persons with multiple sclerosis, Kinesiology, 2015 (co-advised with Dr. Laura Rice)
7. Cherita Ousley, Validation of seated postural control measures in non-ambulatory persons with MS, Kinesiology, 2015
8. Kathleen Roeing, Use of smartphone based accelerometery to measure fall risk in older adults, Kinesiology, May 2017
9. Mikaela Frechette, Development of smartphone-based assessment of fall risk on older adult wheelchair users, Kinesiology, May 2020 (expected)

MS RUN the US Scholar

1. Huaijin Xu, Learning to walk, Kinesiology, May 2021 (Expected)
2. Aileen Griffin, Neck strength and function in older adults who have suffered a fall-related TBI. Kinesiology, May 2021 (Expected)

I have served or currently served as a MS committee member for:

1. Edward Ofori, MS, Discrete and Continuous Force Control, graduated Dec 2008.
2. Brain Sandroff, MS, Physical fitness, walking performance and gait in multiple sclerosis, May, 2012
3. Gina Jakubowicz, MS, Influence of Lifestyle factors and comorbid conditions on risk of falling and fall related injuries in patients with chronic kidney disease, Ball State University, Department of Nutrition and Dietetics
4. Rebecca K. Yarnot, MS, Perceptions of Anterior Tilt Seat Function among

power wheelchair users: a qualitative study, Kinesiology, August, 2019

*Doctorate Thesis Research*

I have served as or am currently serving Director of Research for:

1. Sunghoon Shin, Spinal Cord Injury and Seated Postural Control, Kinesiology, graduated August 2012.

Assistant Professor, Department of Human Ecology and Kinesiology,

Youngnam University, South Korea, 2014-present

1. Karla (Wessels) Francioni, Concussion incidence and assessment in wheelchair athletes, Kinesiology, graduated December 2013.

Assistant Professor, Director of Athletic Training Program, Department of

Kinesiology and Health Studies, Georgetown College, Georgetown, Kentucky

1. Chandsekran Jayaraman, Variability in Wheelchair Propulsion, Department of Industrial and Enterprises Engineering, graduated May 2016

Research Associate, Center for Bionic Medicine, Shirley Ryan Ability Lab formerly Rehabilitation Institute of Chicago)

1. Douglas A. Wajda, Cognitive-Motor Inference in Neurodegenerative Diseases, Kinesiology, August 2016

Assistant Professor in Practice, Department of Exercise Science, Cleveland State University, Cleveland, Ohio

1. Christina Bronson-Love, Oral motor complexity in older adults, research chair (*Speech and Hearing Sciences*), December 2017
2. Yaejin Moon, Teaching older adults to fall safely, Kinesiology, May 2018.

Research Associate, Center for Bionic Medicine, Shirley Ryan Ability Lab (formerly Rehabilitation Institute of Chicago)

1. Tyler Wood, Traumatic Brain Injuries and Older Adults: The Implications of Neck Strength, Muscular Activation and Range of Motion, Kinesiology, August 2019

Assistant Professor, Department of Kinesiology and Physical Education, Northern Illinois University

1. Katherine Hseih, Fall Risk Assessment with Mobile Technology for People with Multiple Sclerosis, Kinesiology, expected May 2020

Chittenden Fellow; Doolen Scholar

1. Lingjun Chen, TBD, Kinesiology, (1st year PhD)
2. Daniel Aslan, TBD, Kinesiology, (1st year PhD)

I have served or currently served as a PhD committee member for:

1. Richard Doyle, Generalization of postural control, Kinesiology.
2. Jonas Contakos, Perception of Rotational Biological Motion, Kinesiology
3. HeenCheong Chon, Kinematics of stuttering, Speech and Hearing Sciences
4. Matthew Sabin, The introduction of the condition-modified star excursion balance test, Kinesiology and Community Health

Professor, Exercise and Sports Sciences, Eastern Kentucky University

1. Marco Boscolo, Optimization of adhesive athletic tape: A Tauguchi method based study, Kinesiology and Community Health
2. Jong Il Lim, Visual search strategy and interception accuracy, Kinesiology and Community Health

Assistant Professor, College of Education and Human Development, Texas A&M-San Antonio

1. Edward Ofori, Aging, sensory feedback and force control, Kinesiology and Community Health.

Assistant Professor, School of Health Solutions, Arizona State University

1. R. Davis Moore, The influence of pediatric concussion on cognitive control and neuroelectric function, Kinesiology and Community Health

Assistant Professor, Department of Exercise Science, University of South Carolina

1. John Jang, Measuring changes in cognitive load in language processing through measuring postural sway, Linguistics, October 2017.
2. Gioella Chaparro, The effect of Aerobic Fitness and Body Wight Support on the Prefrontal Cortex Activation Levels and Dual Task Cost in Older Adults, Kinesiology and Community Health. August 2018.

Assistant Professor, Kinesiology, California State University Dominguez Hills

1. Jong Hun Sung, Fall Management among full time wheelchair users. Kinesiology and Community Health. August 2019.

Assistant Professor, Sport Science and Physical Education, Idaho State University

**Post-doctoral Research Supervision**

1. Dr. Roupeng (Robin) Sun, Fall Risk Assessment Technology, 2016-2018

Research Scientist, Department of Rehabilitation and Physical Medicine, Stanford University

**PROFESSIONAL SERVICES**

Served on the following committees:

Department of Kinesiology and Community Health

*Coordinator* Health Disparity and Disability (‘13-’16)

*Kinesiology PhD student required teaching* (Spring 2008);

*Kinesiology Education Policy Committee* (Fall ’09-Spring 10; Spring ‘13);

*Kinesiology Ad Hoc Committee on Course Fees* (Spring 2010;2011;2012;2013)*;*

*HHD search Committee – fall 2012; fall 2013;*

*Falls/Fall Prevention search Committee (Fall ’13; Chair);*

*Health Technology and Aging Search Committee (Chair, Spring’17);*

*Area of Study Review Committee (Fall ’16, Chair).*

*Health Technology and Aging Search Committee (Chair, Fall’17);*

*Promotion and Tenure Committee, (Fall ’17-18)*

*KCH Framework Committee (Sp’18)*

*Advisory Committee, (Fall ’18-present)*

*Health Technology and Aging Search Committee (Fall’19);*

College of Applied Health Sciences:

*College of Applied Health Sciences Education Policy Committee* (Fall ’11-2014; Co-Chair ‘13)*,*

*Experience AHS Planning Committee* (Fall `11-Spring -`12)*.*

*Disability-Veterans Issues Search Committee (Spring ’13; Chair Fall’14; Fall ‘16)*

*Health Technology Committee (Spring ’15)*

*Director, Center for Wounded Veterans in Higher Education,* Search Committee *(Sp ’16)*

*Visiting Research Specialist, Center for Wounded Veterans in Higher Education,* Search

Committee *Chair (Fall’17)*

*Open Rank Professor in Communication Sciences and Disorders, Department of Speech and*

*Hearing Sciences, (Fall ’17)*

*Executive Committee, College of Applied Health Sciences, (Fall ’18-present)*

*Grant Specialist, Search Committee (Fall ’18)*

*Director, Information and Technology Services, Search Committee (Fall ’19)*

*Promotion and Tenure Committee, College of Applied Health Sciences, (Chair, Fall ’19)*

*Assistant Director, Center on Health Aging and Disability, Search Committee (Fall ’19)*

CAMPUS

*IRB – Biomedical* (Fall ’12-Fall ‘16)

*General Education Board – UIUC* (Fall ’12-Sp15)

*Chancellor’s Visioning Future Excellence Speaker Series, Steering Committee,* (Spring ’13)

*Provost’s Committee for Campus Conversation on Undergraduate Education,* (Facilitator; Fall ’13-Spring ‘14)

*Working Group on Campus Conversation on Undergraduate Education, International Campus in a Global World (*Spring ’14*)*

Center for Wounded Veterans in Higher Education, *Research Steering Committee* (Chair, Fall ’14-2018)

*Faculty/Staff Assistance Program Advisory Committee* (2015-2018)

*Office of Technology Management Advisory Committee* (2016-2018)

*Entrepreneurial Roundtable* (Sp’17-present)

*Cognition, Lifespan Engagement, Aging and Resilience Award Committee*, Beckman Institute (Sp’17)

*Illinois Data Science Initiative, Steering Committee,* (2017-2018)

*Illinois Data Science Strategy Task Force,* (2017-2018)

*Fall Prevention Advisory Panel*, Fall Prevention Design Challenge, OpenIdeo, AARP and United Healthcare (Spring ’17)

Editorial Board:

*ISRN Rehabilitation* (Fall ’11-‘13).

*Journal of Motor Behavior* *(*Spring ’13-present)

*Biomed Research International* (Spring ’13-present)

*International Journal of Multiple Sclerosis Care* (Fall ’16-present)

*Research Quarterly for Exercise and Sport* (Spring ’17-Spring ‘18)

*Professional Organizations:*

Organized and moderated Symposium on Aging and Motor Control, North American Society for Psychology of Sport and Physical Activity (NASPSPA), June 2006 (Denver).

Moderated slide presentation focusing on Perception and Action, North American Society for Psychology of Sport and Physical Activity (NASPSPA), June 2008 (Niagra Falls, Canada).

Moderated slide presentation focusing on Timing, Coordination and Interdisciplinary Studies, North American Society for Psychology of Sport and Physical Activity (NASPSPA), June 2009 (Austin, TX).

Served on the Program Committee for the 2011 North American Society for Psychology of Sport and Physical Activity (NASPSPA), Burlington, VT.

Organized and moderated Symposium on Motor Control and Multiple Sclerosis, North American Society for Psychology of Sport and Physical Activity (NASPSPA), June 2011 (Burlington, VT).

Organized and moderated Symposium on Falls in Non-ambulatory Individuals with multiple Sclerosis, Karolinska Institutet, Stockholm, Sweden. (March 2014).

Serve on the Steering Committee for the Neurodegenerative Disease networking group for the American Congress of Rehabilitation Medicine (2013-2017).

*Reviewing:*

**Manuscripts/Text:**

Have reviewed manuscripts for the following journals: *Annals of Biomedical Engineering*, *Archives of Physical Medicine & Rehabilitation*, *BMC Medical Methodology*, *Clinical Neurophysiology*, *Disability and Rehabilitation, European Journal of Applied Physiology*, *European Journal of Physical Medicine and Rehabilitation*, *European Journal of Neurology,* *Exercise and Sport Science Reviews,* *Experimental Brain Research*, *Human Movement Sciences*, *International Journal of Sports Psychology*, *International Journal of Sports Medicine, Journal of Advance Research, Journal of Biomechanics, Journal of Applied Physiology*, *Journal of American Geriatric Society, Journal of Gerontology: Psychological Sciences*, *Journal of Motor Behavior*, *Journal of Neurological Sciences*,  *Journal of Neurophysiology*, *Journal of Personality,* *Journal of Rehabilitation Research and Development, Medicine and Science in Sport and Exercise, Motor Control, Muscle & Nerve*, *Neuroscience Letters* and *Physiological Measurement*.

Have reviewed the following texts: *Handbook of the Psychology of Aging (2008), Motor Control (2010)*

**Grant Reviewer**

*Internal*

Have served as ad hoc grant reviewer for the Research Board at the University of Illinois at Urbana-Champaign.

Grant reviewer for Center on Health, Aging and Disability seed funding mechanism (2015-current).

Chair CWVHE seed grant review committee (Fall 2015)

*External*

Have served as an ad hoc grant reviewer for:

* European Science Foundation’s Motor Control and Perception Panel (Dec 2009, Spring 2014)
* National Multiple Sclerosis Society pilot grant project (Spring 2011, Spring 2012).
* Ireland Health Research Board (Fall 2012).
* Ministry of Health, Fall Prevention Technology, Singapore (Fall 2018)
* Multiple Sclerosis Australia (Summer 2012; 2015; 2016).
* Joint Projects 2012: University of Verona (Spring 2013).
* MS Society (United Kingdom; Spring 2013)
* NIH study section: Sensorimotor Learning: ZRG1-IFCN-B-04M (Spring ’13); Aging Systems and Geriatrics Study Section
* United Arab Emirates University: Program for Advanced Research (2015)
* NIH study section: Risk Prevention and Health Behavior AREA ZRG1 RPHB-R (80) A (Spring -19)
* NIH study section: CHHD-K 2. Function, Integration and Rehabilitation Sciences Subcommittee (Summer 2019)
* Swiss National Science Foundation, Swiss Innovation Agency Innosuisse, Bridge Discovery Program, (Summer 2019).

Member of Patient Management, Care, and Rehabilitation Review Committee for the National Multiple Sclerosis Society (Fall 2015-Spring 2021)

Member of Congressionally Directed Medical Research Program, Multiple Sclerosis Research Program, Exploration-Hypothesis Development Review Committee for the US Army Medical Research and Material Command, DOD (2016)

Have served as a reviewer for College of Reviewers for the Canada Research Chairs Program

External reviewer for promotion and tenure for Case Western University, Colorado State University, Arizona State University, Louisiana State University, Northeastern University, University of Vermont,

**PROFESSIONAL MEMBERSHIP**

American Society of Biomechanics

American Congress of Rehabilitation Medicine

Consortium for Multiple Sclerosis Centers

International Multiple Sclerosis Fall Prevention Research Network (Founding Member, Executive Committee)