

# Clayton W. Swanson, Ph.D.

Clayton.Swanson@ufl.edu

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## Education

### North Florida/ South Georgia VA Medical Center 2021 – 2022

- Post-Doctoral Fellow – Brain Rehabilitation Research Center
  - *Advisor:* Dr. David J. Clark

### Colorado State University 2018 – 2021

- Doctor of Philosophy in Bioenergetics with a focus in Neuromechanics
  - *Dissertation title:* “Association between neuroanatomy and neurophysiology with turning performance in people with multiple sclerosis”
  - *Advisor:* Dr. Brett W. Fling
- Department of Health & Exercise Science

### Colorado State University 2020 – 2021

- Graduate Certificate in Data Analytics
- Department of Statistics

### Colorado State University 2016 – 2018

- Master of Science in Health and Exercise Science
  - *Dissertation title:* “Associations between gait coordination, variability and motor cortex inhibition in young and older adults”
  - *Advisor:* Dr. Brett W. Fling
- Department of Health & Exercise Science

### Oregon State University 2007 – 2012

- Bachelor of Science
- Major: Exercise and Sports Science
- Concentration: Pre-Therapy and Allied Health

### Wild Rockies Field Institute Fall 2007

- 12 semester credits accredited by the University of Montana

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## Work Experience

### University of Florida August 2022 – Present

- Department of Department of Physiology and Aging
- Research Assistant Professor

### North Florida/ South Georgia VA Medical Center July 2021 – Present

- Brain Rehabilitation Research Center
- Research Health Scientist

### Colorado State University January 2019 – May 2021

- Department of Health & Exercise Science
- Graduate Teaching Assistant

### Colorado State University August 2016 – May 2021

- Department of Health & Exercise Science: Sensorimotor Neuroimaging Laboratory
- Graduate Research Assistant

**Oregon Health & Science University****August 2013 – August 2016**

- Department of Neurology, Portland, OR
- Research Coordinator

**Oregon Health & Science University****June 2011 – August 2013**

- Doernbecher Children's Hospital, Portland, OR
- Inpatient/Outpatient Pediatric Rehabilitation Aide

**Teaching**

Multicultural Mentoring Certificate – University of Florida

**August 2022 (In-progress)**

Graduate Teaching Assistantships

**January 2019 – May 2021**

- Aspects of Neuromuscular Function: HES 319
  - Primary Instructor: Dr. Brian Tracy
- Principals of Kinesiology: HES 207
  - Primary Instructor: Dr. Kathy Hutchison
- Sports Medicine Capstone: Research: HES 478B
  - Primary Instructors: Drs. Josie Broussard & Frank Dinneno
- Biomechanics and Neurophysiology: HES 303
  - Primary Instructor: Dr. Brett Fling

Transcranial magnetic stimulation workshop for visiting graduate students

**July 2018****Publications** (*H-Index = 8, Average Journal Impact Factor = 3.508, Total Citations = 199*)

1. **Swanson, C.W.**, & Fling, B.W. (*in-prep*). Associations between Neuroanatomical Structure, Neurophysiological Function and Turning Characteristics in People with Multiple Sclerosis.
2. Bandera, V.M., **Swanson, C.W.**, Diehl, M., Leach, H.J., & Fling, B.W. (*Submitted*). Movement for Mobility: Associations Between Physical Activity, Postural Control and Gait in People with Multiple Sclerosis.
3. Hanson, M.R., **Swanson, C.W.**, Whittier, T.W., & Fling, B.W. (2022). Inhibitory Signaling as a Predictor of Leg Force Control in Young and Older Adults. *Experimental Brain Research*, 240(4), 1005-1016. DOI: 10.1007/s00221-022-06321-x
4. **Swanson, C.W.**, & Fling, B.W. (2021). Discriminative Mobility Characteristics between Neurotypical Young, Middle-Aged, and Older Adults. *Sensors*, 21(19), 6644. DOI: 10.3390/s21196644
5. **Swanson, C.W.**, Richmond, S.B., Sharp, B.E., & Fling, B.W. (2021). Middle-Age People with Multiple Sclerosis Demonstrate Similar Mobility Characteristics to Neurotypical Older Adults. *Multiple Sclerosis and Related Disorders*, 51: 102924. DOI: 10.1016/j.msard.2021.102924
6. **Swanson, C.W.**, Proessl, F., Stephens, J.A., Miravalle, A.A., & Fling, B.W. (2021). Non-invasive brain stimulation to assess neurophysiologic underpinnings of lower limb motor impairment in multiple sclerosis. *Journal of Neuroscience Methods*. 356(4):109143. DOI: 10.1016/j.jneumeth.2021.109143
7. Hupfeld, K.E., **Swanson, C.W.**, Fling, B.W., & Seidler, R.D. (2020). TMS-induced silent periods: A review of methods and call for consistency. *Journal of Neuroscience Methods*, 346: 108950. DOI: 10.1016/j.jneumeth.2020.108950
8. Richmond, S.B., **Swanson, C.W.**, Peterson, D.S., & Fling, B.W. (2020). A Temporal Analysis of Bilateral Gait Coordination in People with Multiple Sclerosis. *Multiple Sclerosis and Related Disorders*, 45:102455. DOI: 10.1016/j.msard.2020.102445

9. Odom, A.D., & **Swanson, C.W.** (2020) Cerebellar White Matter Structural Correlates of Locomotor Adaptation. Do They Reflect Neural Adaptation?. *The Cerebellum*, 19(5), 748-750. DOI: 10.1007/s12311-020-01147-1
10. **Swanson, C.W.** & Fling, B.W. (2020). Associations between Turning Characteristics and Motor Cortex Inhibition in Young and Older Adults. *Neuroscience*, 425: 59-67. DOI: 10.1016/j.neuroscience.2019.10.051
11. **Swanson, C.W.**, Haigh, Z.J., & Fling, B.W. (2019). Two-minute walk tests demonstrate similar age-related gait differences as a six-minute walk test. *Gait & Posture*, 69: 36-39. DOI: 10.1016/j.gaitpost.2019.01.019
12. Parrington, L., Fino, P.C., **Swanson, C.W.**, Murchinson, C.F., Chesnutt, J., & King, L.A. (2019). Longitudinal Assessment of Balance and Gait After Concussion and Return to Play in Collegiate Athletes. *Journal of Athletic Training*, 54(4): 429-438. DOI:10.4085/1062-6050-46-18
13. **Swanson, C.W.**, & Fling, B.W. (2018). Associations between gait coordination, variability and motor cortex inhibition in young and older adults. *Experimental Gerontology*, 113: 163-172. DOI: 10.4085/1062-6050-46-18
14. Proessl, F., **Swanson, C.W.**, Rudroff, T., Fling, B.W., & Tracy, B.L. (2018). Good agreement between smart device and inertial sensor-based gait parameters during a 6-minute walk. *Gait & Posture*, 64: 63-67. DOI: 10.1016/j.gaitpost.2018.05.030
15. **Swanson, C.W.**, & Proessl, F. (2018). High-definition transcranial direct-current stimulation of the right M1 further facilitates left M1 excitability during crossed facilitation. *Journal of Neurophysiology*, 120(1): 4-6. DOI: 10.1152/jn.00177.2018
16. King, L.A., Mancini, M., Fino, P.C., Chesnutt, J., **Swanson, C.W.**, Markwardt, S., & Chapman, J.C. (2017). Sensor-Based Balance Measures Outperform Modified Balance Error Scoring System in Identifying Acute Concussion. *Annals of Biomedical Engineering*, 1-11. DOI: 10.1007/s10439-017-1856-y

### **Invited Oral Presentations**

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- |   |                       |
|---|-----------------------|
| <b>University of Florida – Neuromechanics Seminar Series</b>  | <b>September 2021</b> |
| <b>Swanson, C.W.</b> , Associations between Neuroanatomical Structure and Neurophysiological Function in People with Multiple Sclerosis |                       |
| <b>Three Minute Thesis Challenge</b>  | <b>February 2019</b>  |
| <b>Swanson, C.W.</b> , Turning on Your Brain: Age Matters.  |                       |
| <b>Rocky Mountain American College of Sports Medicine</b>   | <b>April 2018</b>     |
| <b>Swanson, C.W.</b> , Haigh, Z.J., & Fling, B.W. The Effects of Aging on Cortical Inhibition and Gait Coordination.                    |                       |
| <b>Rocky Mountain American Society of Biomechanics</b>  | <b>April 2018</b>     |
| <b>Swanson, C.W.</b> , Haigh, Z.J., & Fling, B.W. Motor cortex inhibition is related to gait coordination in young and old adults.      |                       |

### **Poster Presentations**

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|---|------------------|
| <b>International Society for Posture &amp; Gait Research (Presented)</b>  | <b>June 2022</b> |
| <b>Swanson, C.W.</b> , Winesett, S.P., Miles, J.W., Callaway, J.A., Chatterjee, S.A., Cox, B.A., Woods, A.J., Rose, D.K., Seidler, R.D., Clark, D.J. (2022) Turning on the Brain; Associations between Turning Performance and Cognitive Function |                  |

- Rocky Mountain American Society of Biomechanics (Presented)** **April 2021**  
**Swanson, C.W.**, Fling, B.W. (2021) Function, Not Structure: Associations Between Neuroanatomy and Neurophysiology with Turning Performance in People with Multiple Sclerosis.
- College of Health and Human Sciences Research Day (Presented)** **March 2021**  
**Swanson, C.W.**, Fling, B.W. (2021) Neural Mechanisms Controlling Turning Performance in People with Multiple Sclerosis.
- Colorado State Graduate Student Showcase (Presented)** **November 2020**  
**(Awardee) Swanson, C.W.**, Fling, B.W. (2020) Neural Mechanisms Controlling Turning Performance in People with Multiple Sclerosis.
- International Symposium on Gait & Balance in Multiple Sclerosis (Presented)** **October 2020**  
**(Awardee) Swanson, C.W.**, Fling, B.W. (2020) Function, Not Structure: Neurophysiology may be More Important than Neuroanatomy for Controlling Turning Performance in People with Multiple Sclerosis.
- College of Health and Human Sciences Research Day (Presented)** **March 2020**  
**Swanson, C.W.**, Fling, B.W. (2020) The Effects of Motor Cortex Grey Matter Thickness on Corticospinal Inhibition and Turning Characteristics in People with Multiple Sclerosis & Healthy Controls.
- Colorado State Graduate Student Showcase (Presented)** **November 2019**  
**Swanson, C.W.**, Fling, B.W. (2019) Associations Between Motor Cortex Inhibition and Stable Turning Characteristics in Healthy Controls and People with Multiple Sclerosis.
- International Symposium on Gait & Balance in Multiple Sclerosis (Presented)** **October 2019**  
**Swanson, C.W.**, Richmond, S.B., Monaghan, A.S., Hanson, M.R., Whittier, T.T., Fling, B.W. (2019) Associations Between Motor Cortex Inhibition and Turning Characteristics in Healthy Controls and People with Multiple Sclerosis.
- International Society for Posture & Gait Research (Presented)** **June 2019**  
**Swanson, C.W.**, Monaghan, A.S., Hanson, M.R., Richmond, S.B., Whittier, T.T., Fling, B.W. (2019) Associations Between Motor Cortex Inhibition and Stable Turning Characteristics in Healthy Controls and People with Multiple Sclerosis.
- Rocky Mountain American Society of Biomechanics (Presented)** **May 2019**  
**Swanson, C.W.**, Monaghan, A.S., Hanson, M.R., Richmond, S.B., Whittier, T.T., Fling, B.W. (2019) Associations Between Motor Cortex Inhibition and Stable Turning Characteristics in Healthy Controls and People with Multiple Sclerosis.
- Front Range Neuroscience Group (Presented)** **December 2018**  
**Swanson, C.W.**, Fling, B.W. (2018) Associations between Motor Cortex Inhibition and Turning Characteristics.
- Colorado State Graduate Student Showcase (Presented)** **November 2018**  
**Swanson, C.W.**, Fling, B.W. (2018) The Associations of Age Between Turning and Cortical Inhibition.
- Neural Control of Movement (Presented)** **May 2018**  
**Swanson, C.W.**, Haigh, Z.J., Fling, B.W. (2018) Associations between motor cortex inhibition

and gait variability in young and older adults.

**Rocky Mountain American College of Sports Medicine (Presented)**

**May 2018**

**Swanson, C.W.**, Haigh, Z.J., Fling, B.W. (2018) The Effects of Aging on Cortical Inhibition and Gait Coordination.

**Front Range Neuroscience Group (Presented)**

**December 2017**

**Swanson, C.W.**, Fling, B.W. (2017) Associations Between Motor Cortex Inhibition & Gait Variability.

**Front Range Neuroscience Group (Presented)**

**December 2017**

**Swanson, C.W.**, Fling, B.W. (2017) Associations Between Motor Cortex Inhibition & Gait Variability.

**Colorado State Graduate Student Showcase (Presented)**

**November 2017**

**Swanson, C.W.**, Fling, B.W. (2017) Associations Between Motor Cortex Inhibition & Gait Variability.

**Front Range Consortium on Aging (Presented)**

**October 2017**

**Swanson, C.W.**, Monaghan, A.S., Fling, B.W. (2017) Effects of Aging on Gait & Balance.

**OHSU Research Week 2015 (Presented)**

**May 2015**

Mancini, M., **Swanson, C.W.**, Chesnutt, J., King, L.A. (2015) Impaired Interlimb Coordination after Concussion.

**OHSU Research Week 2014 (Presented)**

**May 2014**

King, L.A., Chapman, J.C., Mancini, M., **Swanson, C.W.**, Chesnutt, J., Horak, F.B. (2014) Postural Sway Metrics after Concussion; Implications for Balance Testing

**Northwest Athletic Trainers' Association (Presented)**

**March 2014**

King, L.A., Chapman, J.C., Mancini, M., **Swanson, C.W.**, Chesnutt, J., Horak, F.B. (2014) Postural Sway Metrics after Concussion; Implications for Balance Testing

**Accepted Abstracts**

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**Swanson, C.W.**, Winesett, S.P., Miles, J.W., Callaway, J.A., Chatterjee, S.A., Cox, B.A., Woods, A.J., Rose, D.K., Seidler, R.D., Clark, D.J. (2022) Turning on the Brain; Associations between Turning Performance and Cognitive Function. International Society for Posture and Gait Research, (2022) Montreal, Canada.

**Swanson, C.W.**, Winesett, S.P., Miles, J.W., Callaway, J.A., Chatterjee, S.A., Cox, B.A., Woods, A.J., Rose, D.K., Seidler, R.D., Clark, D.J. Turning on the Brain; Associations between Turning Performance and Cognitive Function. Oak Hammock Research Day, (2022) Gainesville, FL.

**Swanson, C.W.**, Fling, B.W. Function, Not Structure: Associations Between Neuroanatomy and Neurophysiology with Turning Performance in People with Multiple Sclerosis. *Rocky Mountain American Society of Biomechanics*, (2021) Estes Park, CO.

**Swanson, C.W.**, Fling, B.W. Neural Mechanisms Controlling Turning Performance in People with Multiple Sclerosis. *College of Health and Human Sciences Showcase*, (2021) Fort Collins, CO.

Bandera, V., Richmond, S.B., **Swanson, C.W.**, Leach, H. J., Fling, B.W. Associations between Activity, Mobility, and Balance in People with Multiple Sclerosis. *Colorado State University Graduate Student Showcase*, (2020) Fort Collins, CO.

**Swanson, C.W.**, Fling, B.W. Function, Not Structure: Neurophysiology may be More Important

than Neuroanatomy for Controlling Turning Performance in People with Multiple Sclerosis. *Colorado State University Graduate Student Showcase*, (2020) Fort Collins, CO.

**[Awardee – Top Five Abstracts] Swanson, C.W.**, Fling, B.W. Function, Not Structure: Neurophysiology may be More Important than Neuroanatomy for Controlling Turning Performance in People with Multiple Sclerosis. *International Symposium on Gait & Balance in Multiple Sclerosis*, (2020) Denver, CO.

Bandera, V.B., Richmond, S.B., **Swanson, C.W.**, Leach, H.J., Fling, B.W. Associations Between Habitual Physical Activity, Postural Control and Gait Speed in People with Multiple Sclerosis. *International Symposium on Gait & Balance in Multiple Sclerosis*, (2020) Denver, CO.

**Swanson, C.W.**, Fling, B.W. (2020) The Effects of Motor Cortex Grey Matter Thickness on Corticospinal Inhibition and Turning Characteristics in People with Multiple Sclerosis & Healthy Controls. *College of Health and Human Sciences Showcase*, (2020) Fort Collins, CO.

**Swanson, C.W.**, Fling, B.W. (2019) Associations Between Motor Cortex Inhibition and Stable Turning Characteristics in Healthy Controls and People with Multiple Sclerosis. *Colorado State University Graduate Student Showcase*, (2019) Fort Collins, CO.

**Swanson, C.W.**, Fling, B.W. (2019) Associations Between Motor Cortex Inhibition and Stable Turning Characteristics in Healthy Controls and People with Multiple Sclerosis. *Rocky Mountain American Society of Biomechanics*, (2019) Estes Park, CO.

**Swanson, C.W.**, Richmond, S.B., Monaghan, A.S., Hanson, M.R., Whittier, T.T., Fling, B.W. Associations Between Motor Cortex Inhibition and Turning Characteristics in Healthy Controls and People with Multiple Sclerosis. *International Symposium on Gait & Balance in Multiple Sclerosis*, (2019) Denver, CO.

Whittier, T.T., Richmond, S.B., Monaghan, A.S., **Swanson, C.W.**, Fling, B.W. Virtual Time-To-Contact Indicates Deficits in State Prediction in Women with Multiple Sclerosis. *International Society for Posture & Gait Research*, (2019) Edinburgh, Scotland.

Richmond, S.B., **Swanson, C.W.**, Whittier, T.T., Peterson, D.S., Fling, B.W. Bridging the Callosal Gap in Gait: A Mechanistic Evaluation of White Matter's Role in Bilateral Coordination. *International Society for Posture & Gait Research*, (2019) Edinburgh, Scotland.

Fling, B.W., **Swanson, C.W.** Age-Related Differences in Associations Between Dynamic Gait Characteristics and Motor Cortex Inhibition. *International Society for Posture & Gait Research*, (2019) Edinburgh, Scotland.

**Swanson, C.W.**, Monaghan, A.S., Hanson, M.R., Richmond, S.B., Whittier, T.T., Fling, B.W. Associations Between Motor Cortex Inhibition and Stable Turning Characteristics in Healthy Controls and People with Multiple Sclerosis. *International Society for Posture & Gait Research*, (2019) Edinburgh, Scotland.

**Swanson, C.W.**, Fling, B.W. The Associations of Age Between Turning and Cortical Inhibition. *Front Range Neuroscience Group*, (2018) Fort Collins, CO.

**[Awardee] Swanson, C.W.**, Fling, B.W. The Associations of Age Between Turning and Cortical Inhibition. *Colorado State University Graduate Student Showcase*, (2018) Fort Collins, CO.

Monaghan, A.S., Richmond, S.B., Yassa, S.N., **Swanson, C.W.**, Fling, B.W. The Effects of Varying Midsole Cushioning in Footwear on Gait in Females with Multiple Sclerosis. *Colorado State University Graduate Student Showcase*, (2018) Fort Collins, CO.

**Swanson, C.W.**, Haigh, Z.J., Fling, B.W. Associations between motor cortex inhibition and gait variability in young and older adults. *Neural Control of Movement*, (2018) Santa Fe, NM.

**Swanson, C.W.**, Haigh, Z.J., Fling, B.W. The Effects of Aging on Cortical Inhibition and Gait Coordination. *Rocky Mountain American College of Sports Medicine*, (2018) Colorado Springs, CO.

**Swanson, C.W.**, Haigh, Z.J., Fling, B.W. Motor cortex inhibition is related to gait coordination in young and old adults. *Rocky Mountain American Society of Biomechanics*, (2018) Estes Park, CO.

**Swanson, C.W.**, Fling, B.W. Associations Between Motor Cortex Inhibition & Gait Variability. *Front Range Neuroscience Group*, (2017) Fort Collins, CO.

**Swanson, C.W.**, Fling, B.W. Associations Between Motor Cortex Inhibition & Gait Variability. *Colorado State University Graduate Student Showcase*, (2017) Fort Collins, CO.

Fino, P.C., Mancini, M., **Swanson, C.W.**, Horak, F.B., King, L.A. Postural complexity predicts increased postural sway following removal of visual sensory cues. *Biomechanics and Neural Control of Movement*, (2016) Mt. Sterling, OH.

Mancini, M., **Swanson, C.W.**, Chesnutt, J., King, L.A. Impaired gait coordination after concussion; effects of dual task. *Combined Sections Meeting*, (2016) Anaheim, CA.

Fling, B.W., **Swanson, C.W.**, Chesnutt, J., King, L.A. Locomotion and interhemispheric motor connectivity in mTBI. *Society for Neuroscience*, (2015) Chicago, IL.

Mancini, M., **Swanson, C.W.**, Chesnutt, J., King, L.A. Impaired Interlimb Coordination after Concussion. *International Society for Posture and Gait Research*, (2015) Seville, Spain.

Mancini, M., **Swanson, C.W.**, Markwardt, S., Chesnutt, C., King, L.A. Gait Coordination is Impaired after Concussion. *The Gait and Clinical Movement Analysis Society*, (2015) Portland, OR.

King, L.A., Mancini, M., **Swanson, C.W.**, Chesnutt, J., Wilhelm, J., Peterka, R.J. Sensory Processing and Sensory Augmentation for Balance Control in Chronic Post-concussive Syndrome. *Society for Neuroscience*, (2014) Washington, DC.

King, L.A., Chapman, J.C., Mancini, M., **Swanson, C.W.**, Chesnutt, J., Horak, F.B. Postural Sway Metrics after Concussion; Implications for Balance Testing. *Military Health System Research Symposium*, (2014) Fort Lauderdale, FL.

**Funding and Grants**

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Submitted

Federal (Title, Source, PI, Anticipated Funding Period, Value)

Funded

Federal (Title, Source, Role, PI, Funding Period, Value)

Project Title:	Development of a Home-based Self-delivered Prehabilitation Intervention to Proactively Reduce Fall Risk in Older Adults
Source:	NIH/NIA Pilot P30-AG028740 via the University of Florida Claude D. Pepper Older Americans Independence Center
Principal Investigator:	<b>Clayton Swanson, Ph.D.</b>
Funding Period:	8/1/2022 – 9/1/2024
Amount:	\$149,994
Project Title:	Brain Networks of Turning Performance with Aging and Stroke
Source:	Veterans' Health Administration: Career Development Award – 1 (RX003954-01A1)

Role: Graduate Research Assistant  
Principal Investigator: **Clayton Swanson, Ph.D.**  
Funding Period: 11/1/2022 – 12/1/2024  
Amount: \$242,000

Project Title: Neural Mechanisms of Split Belt Treadmill Training Adaptation in People with Multiple Sclerosis  
Source: National Multiple Sclerosis Society  
Role: Graduate Research Assistant  
Principal Investigator: Brett Fling, Ph.D.  
Funding Period: 5/1/2020 – 5/1/2025

Project Title: Two legs, one brain: Transcallosal communication as a marker of asymmetric function and target for gait rehabilitation in people with multiple sclerosis  
Source: Dana Foundation's David Mahoney Neuroimaging Program  
Role: Graduate Research Assistant  
Principal Investigator: Brett Fling, Ph.D.  
Funding Period: 10/1/2017 – 9/30/2020

Project Title: The Associations Between Transcallosal Communication and Mobility Variability  
Source: Rocky Mountain American College of Sports Medicine (RMACSM)  
Role: Graduate Research Assistant  
Principal Investigator: **Clayton Swanson**  
Funding Period: 4/01/17-4/01/18

Title: Neural Characteristics of Proprioceptive-Related Balance Deficits in Multiple Sclerosis  
Source: National Multiple Sclerosis Society  
Role: Graduate Research Assistant  
Principal Investigator: Brett Fling, Ph.D.  
Funding Period: 4/1/2014 – 9/30/2017

Title: Assessment and Rehabilitation of Central Sensory Impairments for Balance in mTBI  
Source: Department of Defense (DoD)  
Role: Research Coordinator & Research Assistant  
Principal Investigator: Laurie King, Ph.D., PT  
Funding Period: 5/01/2015 – 12/31/19

Title: Peripheral and Central Postural Disorders in the Elderly  
Source: NIH/NIA (R01)  
Role: Research Coordinator & Research Assistant  
Principal Investigator: Fay Horak Ph.D., PT  
Funding Period: 4/1/2014 – 3/31/2019

Title: Frontal Cortex and Gait Freezing in Parkinson's Disease: Rehabilitation Impact  
Source: VA RR&D Merit Award  
Role: Research Coordinator & Research Assistant



Principal Investigator: Fay Horak Ph.D., PT  
Funding Period: 1/1/2014 – 12/31/2017

Title: Quantification of balance deficits after concussion; implications in return to play determination

Source: Oregon Health & Science University

Role: Research Coordinator & Research Assistant

Principal Investigator: Laurie King Ph.D., PT

Funding Period: 3/01/214 – 2/28/2015

Title: Objective and portable balance and gait measures to document recovery after concussion

Source: National Institute of Health; R21

Role: Research Coordinator & Research Assistant

Principal Investigator: Laurie King Ph.D., PT

Funding Period: 7/1/2012 – 6/30/2014

Title: Quantification of balance deficits after concussion; implications in return to play determination

Source: Oregon Clinical Translational Research Center (OCTRI) KL2 Award

Role: Research Coordinator & Research Assistant

Principal Investigator: Laurie King Ph.D., PT

Funding Period: 7/1/12 – 6/30/14

Title: Co-morbidities, Parkinson's disease and Exercise (COPE)

Source: Foundation for Physical Therapy

Role: Research Assistant

Principal Investigator: Laurie King Ph.D., PT

Funding Period: 1/1/2011 – 12/31/2013

#### Not Funded

Title: Age Differences in the Neural Correlates of Turning: Laboratory and Real-World Measures

Source: F31 – National Institute of Health

Principal Investigator: **Clayton Swanson**

Title: Age Related Differences in the Neural Correlates of Turning: Laboratory and Real-World Measures

Source: Dean's Doctoral Fellowship – College of Health and Human Sciences

Principal Investigator: **Clayton Swanson**

#### **Professional Service**

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Co-Guest Editor for Special Issue entitled "Sensors in Neuroimaging and Neurorehabilitation" – *Sensors 2022* **2022**

#### **Academic Peer Review**

Peer Reviewer – *Clinical Biomechanics* (IF: 2.063) **2022**

Peer Reviewer – *Multiple Sclerosis and Related Disorders* (IF: 4.339) **2022**

Peer Reviewer – *Brain Sciences* (IF: 3.394) **2022**

Peer Reviewer – *Experimental Gerontology* (IF: 4.032) **2022**

**Scholarships & Awards**

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University of Florida – <i>Cluff Aging Research Award</i> – \$1,200.00	2022
American Kinesiology Association – <i>Local Doctoral Scholar Award</i>	2021
Outstanding Graduate Student – Department of Health & Exercise Science (College Level Nominee)	2020
CSU Graduate Student Showcase – <i>CHHS Excellence in Research &amp; Scholarship Award</i> - \$250.00	2020
Top Five Abstracts – <i>International Symposium on Gait &amp; Balance in Multiple Sclerosis</i>	2020
Dr. Sally Phillips Travel Awards – \$500.00	2019
American Kinesiology Association – <i>National Graduate Student Writing Award</i>	2019
American Kinesiology Association Scholar – <i>Graduate Student Award</i>	2019
CSU Vice President of Research Fellow – \$4,000.00	2019-2020
Health & Exercise Science – <i>Dissertation Enhancement Award</i> – \$4,100.00	2019
CSU Graduate Student Showcase – <i>Great Minds in Science Award</i> - \$100.00	2018
Dr. Sally Phillips Travel Awards – \$350.00	2018
Columbine Health Systems Scholarship – \$2,000.00	2016 – 2017
Oregon State Men's Lacrosse Club	
– Club President	2009 – 2011
– Team Captain	2009 – 2011
– Sean Matsuda Commitment & Citizenship Award	2011
Individual Leadership Award, Oregon State Club Sports	2009-2010

**Educational Enhancement Workshops**

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FreeSurfer MRI Workshop	April 2019
Massachusetts General Hospital, Athinoula A. Martinos Center for Biomedical Imaging, Boston, MA Intensive Course in Transcranial Magnetic Stimulation (TMS)	June 2018
Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA	

**Certifications**

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Intensive Course in Transcranial Magnetic Stimulation (June 2018)
Functional Independence Measure (FIM™)
CPR-AED for Professional Rescuers

**Service and Volunteer**

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American Society of Biomechanics UF Student Chapter Outreach, Gainesville, FL	2022
Colorado State University Hack-a-Thon, Fort Collins, CO	2019
Colorado State Neuroscience Student Organization Outreach, Fort Collins, CO	2019
Colorado State Neuroscience Student Organization Outreach, Fort Collins, CO	2018
Columbine Health Systems – Educational Research Presentation, Fort Collins, CO	2018
Multiple Sclerosis National Walk Day, Windsor, CO	2017
Multiple Sclerosis Run Clinic, Denver, CO	2017
Colorado State Neuroscience Undergraduate Organization Outreach, Fort Collins, CO	2017
OMSI Brain Fair, Portland, OR	2014 – 2016
OHSU Concussion Screening, Portland, OR	2014 – 2016
OHSU Balance Day, Portland, OR	2014 – 2016
Paws for Parkinson's, Portland, OR	2014
Multiple Sclerosis Exercise Program, Corvallis, OR	2011 – 2012

**Laboratory Software and Device Skills**

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### Software

- AcqKnowledge (EMG)
- Mobility Lab v1
- Mobility Lab v2
- STATA
- Adobe Illustrator
- Adobe Photoshop
- Adobe Lightroom
- Adobe InDesign
- MatLab
- R Studio
- SPM (MRI)
- CONN Toolbox (MRI)
- FreeSurfer (MRI)
- JMP Pro 15
- REDCap

### Devices

- Transcranial Magnetic Stimulation (MagPro X100, Magstim BiStim)
- Octamon fNIRS
- Soterix tDCS
- BioPac Electromyography
- APDM Inertial Sensors
- NeuroCom©
- GAITRite
- CIRFace
- ActiGraph
- Actipal
- Vicon Motion Capture
- BERTEC Split Belt Force Platform