

# Tyler Wood MS, MAT, ATC

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## Education

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*University of Illinois at Urbana-Champaign – Urbana, IL*

### **Ph.D. of Kinesiology**

May 2019

Dissertation Title: Traumatic Brain Injury and Older Adults: The Implications of Neck Strength, Muscle Activation, and Range of Motion.

Advisor: Dr. Jacob Sosnoff

*Preliminary Exams Passed: September 21, 2018*

*Saint Louis University – St. Louis, MO*

### **Master of Science in Health Sciences**

Aug 2015

Master's Thesis Title: A Comparison of Two Methods of Measuring Ankle Range of Motion

Advisor: Dr. Katherine (Kitty) Newsham

### **Master of Athletic Training**

May 2014

### **Bachelor of Science in Exercise Science with a Minor in Biology**

May 2013

## Research Interest

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I am interested in quantifying human movement and impairment, with an emphasis on rehabilitation. It is my goal to seek out interdisciplinary collaborations to understand and rehabilitate movement impairments to improve quality of life.

## Research Experiences

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*University of Illinois at Urbana-Champaign – Urbana, IL*

### **Research Assistant**

Aug 2015 – Present

- Coordinated interdisciplinary research studies examining movement and impairment in young adults, older adults, and people with multiple sclerosis.
- Utilized quantifiable research methods including pressure sensitive walkways, force plates, the Physiological Profile Assessment, virtual reality, eye tracking, load cells in a custom frame to measure neck strength, and electromyography equipment.
- Developed research study protocols to examine cognitive demands of movement with pupillometry, understand the implications of neck muscle strength and activation in traumatic brain injuries, identify lingering balance and gait changes following a concussion, and sub-concussive head impacts in collegiate divers.
- Submitted research grant proposals on cognitive demands of movement and sub-concussive head impacts in collegiate divers.
- Authored original research manuscripts, systematic reviews, and meta-analyses.
- Mentored undergraduate kinesiology students on all aspects of research including initial research development, data collection and management, and manuscript development.

## Teaching Philosophy

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When teaching, I approach each setting with three core principles: All student learn differently, learning is not passive, acquired knowledge will provide immediate and future success. With these principles guiding my pedagogical practice, I take great responsibility in working with my students to help them learn.

## Teaching Experiences

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### Courses Previously Taught

- Musculoskeletal Assessment and Management I and II for master's athletic training students
- Therapeutic Modalities for master's athletic training and doctoral physical therapy students
- Gross Anatomy for master's athletic training, doctoral physical therapy, and master's occupational therapy students
- Healthcare and Human Resources Management for undergraduate health sciences students
- Motor Coordination, Control, and Skill for undergraduate kinesiology students
- Motor Development and Control for undergraduate kinesiology students

*University of Illinois at Urbana-Champaign – Urbana, IL*

#### Teaching Assistant

Aug 2015 – Present

- Developed original hands-on laboratory activities to enhance student learning of motor development, motor learning, and motor control.
- Written lectures to supplement the students' understanding of the course material.
- Presented course content and utilized active learning techniques to engage students.
- Prepared review materials and lesson to complement the students' learning.
- Composed quiz and test materials and managed online course content through Blackboard.
- Scored 4.9/5 on end of semester reviews by students and ranked as an Outstanding Teacher for 4 semesters.

*Saint Louis University – St. Louis, MO*

#### Teaching Assistant and Lab Instructor

Aug 2014 – May 2015

- Constructed syllabi, assignments, group projects, case studies, and review material to augment students' learning.
- Demonstrated musculoskeletal assessment and therapeutic modality techniques and utilized past experiences to solidify understanding of the material.
- Mentored master's level athletic training students on summer internships and other experiences for professional development.

#### Gross Anatomy Tutor

June – July 2013 & June – July 2014

- Developed innovative methods, such as acronyms, songs, and depictions, to assist students in learning the material.
- Assisted students with developing study strategies to improve their academic performance in the course.
- Mentored students on approaches to be successful in their respective allied health programs.

## Professional Experiences

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*University of Illinois at Urbana-Champaign – Urbana, IL*

**Illini Fall Prevention Clinic: Head of Training and Coordination** May 2016 – Present

- Developed and implemented community clinic to provide fall risk screenings and fall prevention information to the public.
- Planned several community outreach events to provide the public information on fall risk and prevention.
- Assessed the fall risk of over 120 individuals in two years and instructed them on methods to decrease their fall risk.
- Taught over 40 undergraduate students how to conduct fall risk assessments and administer fall prevention exercises.

*Bishop DuBourg High School – St. Louis, MO*

**Athletic Trainer** Aug 2014 – May 2015

- Evaluated and triaged athletic-related injuries that occurred within the high school.
- Developed and implemented rehabilitation protocols with the oversight of the team physician.
- Designed a schoolwide emergency action plan for the high school's athletic-related medical emergencies.

## Publications

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### *-Accepted-*

- Hsieh KL, Fanning JT, Rogers WA, **Wood TA**, Sosnoff JJ. Development and usability of a fall risk mobile health application for older adults. *Journal of Medical Internet Research*. 2018.
- Kahya M, **Wood TA**, Sosnoff JJ, Devos H. Increased postural demand is associated with greater cognitive activity in healthy young adults: a pupillometry study. *Frontiers of Human Neuroscience*. 2018.
- **Wood TA**, Hsieh KL, Ballard RA, An R, Sosnoff JJ. Lingering gait speed deficits following concussion symptom resolution: a meta-analysis. [Abstract]. *Journal of Athletic Training*. 2018; 53(6s): S-41.
- **Wood TA**, Wajda DA, Sosnoff JJ. Use of a short version of the activities-specific balance confidence scale in multiple sclerosis. *International Journal of Multiple Sclerosis Care*. 2018.
- **Wood TA**, Markee MD, Newsham KR. Do traditional measures of plantarflexion induce systematic error? [Abstract]. *Journal of Athletic Training*. 2016; 51(6): S-358.

### *-Under Review-*

- **Wood TA**, Hsieh KL, Ballard RA, An R, Sosnoff JJ. Subacute changes to balance and gait in adults following concussion: a systematic review and meta-analysis. *American Journal of Physical Medicine and Rehabilitation*.
- **Wood TA**, Morrison S, Sosnoff JJ. Can sports medicine research on concussion provide insight into traumatic brain injuries in older adults? *Frontiers in Medicine – Geriatric Medicine*.
- Wajda DA, **Wood TA**, Sosnoff JJ. The Attentional Cost of Movement in Multiple Sclerosis. *Neurorehabilitation and Neural Repair*.

- Hsieh KL, **Wood TA**, An R, Trinh L, Sosnoff JJ. Gait and balance impairments in breast cancer survivors: a systematic review and meta-analysis. *Achieves of Physical Medicine and Rehabilitation*.

### **-In Preparation-**

- **Wood TA**, Moon Y, Bishnoi A, Sun R, Sosnoff JJ. Age-related head impact and acceleration differences during sideways falls.
- **Wood TA**, Sosnoff JJ. Utilizing undergraduate kinesiology students to administer a community-based fall risk assessment and prevention clinic.
- Tablerion JM, **Wood TA**, Hsieh KL, Sun R, Sosnoff JJ. Motor learning in people with multiple sclerosis: a systematic review and meta-analysis.

### **Conference Presentations**

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- Moon Y., Bishnoi A., **Wood T.A.**, Sosnoff J.J. Head-acceleration during experimentally induced falls as a function of age. *Progress in Clinical Motor Control*. 2018. State College, PA. [Poster]
- **Wood TA**, Hsieh KL, Ballard RA, An R, Sosnoff JJ. Lingering gait speed deficits following concussion symptom resolution: A Meta-Analysis. 2018. NATA 69th Clinical Symposia, New Orleans, LA. [Oral Presentation]
- **Wood TA**, Hsieh KL, Ballard RA, An R, Sosnoff JJ. A meta-analysis examining objective balance and gait measures following concussion symptom resolution. 2018. Great Lakes Athletic Trainers Association Annual Meeting, Wheeling, IL. [Oral Presentation]
- Kahya M, **Wood TA**, Akinwuntan AE, Williams K, Sosnoff JJ, Devos H. Does pupillometry reflect change in postural control? 2018. A proof-of-concept study, APTA Combine Sections Meeting, New Orleans, LA. [Poster]
  - *Winner of the Innovation award among posters for Balance and Fall Special Interest Group*
- Hsieh KL, **Wood TA**, McDonagh D, Fanning J, Wajda D, Sosnoff JJ. Usability of fall mobile health application in older adults. 2017. Collaborations of Health, Aging, Research, and Technology Symposium, Champaign, IL. [Poster]
- Wajda DA, **Wood TA**, Sosnoff JJ. The attentional cost of movement in individuals with multiple sclerosis. 2017. Annual Meeting of the Consortium of Multiple Sclerosis Centers, New Orleans, LA. [Poster]
- **Wood TA**, Markee MM, Newsham KR. Do traditional measures of plantarflexion induce systematic error? 2016. National Athletic Trainers' Conference, Baltimore, MD. [Poster]

### **Book Chapters**

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- Sun R, **Wood TA**, Sosnoff JJ. Low Density Pedobarography as a Gait Analysis Tool. In: Muller et al., ed. *Handbook of Human Motion*. New York, NY: Springer, 2017. ISBN: 978-3-319-30808-1

### **Grants**

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- Wood TA, Ballard RA, Sosnoff JJ. Sub-Concussive Head Impacts in Collegiate Divers. 2018. American College of Sports Medicine. Doctoral Research Award. [Unfunded]

- Wood TA, Beck D, Sosnoff JJ. Cognitive Demands of Fallers: A Pupillometry Study. 2017. Cognitive, Lifespan Engagement, Aging, and Resilience Initiative. Graduate Research Award. [Unfunded]

### **Invited Lectures**

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- Disordered Eating and the Athlete. (5 Semesters). UIUC Mental Health Course.
- The Otago Exercise Program. (Nov 2017). Falls: Prevention, Assessment, and Intervention Conference, Urbana, IL.
- Fall Risk and Fall Prevention in Stroke Survivors. (July 2017). Presence Hospital Stroke Support Group, Champaign, IL.
- Fall Risk and Fall Prevention in the Aging Population. (July 2017). Dine with a Doc, Shelbyville, IL.

### **Leadership Roles**

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#### **Iota Tau Alpha President**

Aug 2013 – May 2014

- Collaborated with the ITA executive board to create an athletes' mental health seminar for athletic trainers.
- Conducted monthly meetings with the ITA executive board to enhance athletic training education and development at Saint Louis University.

#### **Graduate Student Association Representative**

Aug 2013 – May 2014

- Advocated for the advancement of graduate education at Saint Louis University.
- Voted on the allocation of funds to enhance graduate student education throughout the university.

### **Honors and Awards**

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#### *University of Illinois at Urbana-Champaign – Urbana, IL*

- Ranked as an Outstanding Teacher based on student evaluations for 4 semesters (Top 10% of the University)

#### *Saint Louis University Doisy College of Health Science – Saint Louis, MO*

- Dean's List Recipient
- Graduated *Cum Laude* in May 2013
- Nominated for Graduating Graduate Student of the Year in May 2014

### **Professional Affiliations**

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- National Athletic Trainers' Association
  - Great Lakes Athletic Training Association
  - Illinois Athletic Trainers' Association
  - American College of Sports Medicine
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## Licensure and Certifications

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- Athletic Trainer
  - Illinois # 096004187
  - BOC # 2000016595
  - NPI # 1831641018
- University of Illinois
  - Certificate in Foundations of Teaching (May 2, 2018)

## References

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Jacob Sosnoff, PhD

Professor of Kinesiology at University of Illinois at Urbana-Champaign

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- Phone: 217-333-9472

Katherine (Kitty) Newsham, PhD, ATC

Associate Professor of Athletic Training at Saint Louis University

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- Phone: 314-977-8507

Anthony (Tony) Breitbach, PhD, ATC

Associate Professor of Athletic Training and Program Director at Saint Louis University

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- Phone: 314-977-8654