# JACLYN "MEGAN" SIONS, PT, DPT, PhD

540 South College Ave, Suite 210JJ, Newark, DE 19713 Work: (302) 831-7231; Fax: (302) 831-4468 [Up-to-date as of 10/28/2022]

# **EDUCATION**

#### West Virginia University, Morgantown, WV

- Bachelor of the Arts in Human Performance and Health, May 2003
  - Magna Cum Laude
- Masters in Physical Therapy, August 2004

## University of Delaware, Newark, DE

• Orthopedic Residency, January-December 2007

## Temple University, Philadelphia, PA

• Transitional DPT in Physical Therapy, January 2009

#### **University of Delaware**, Newark DE

- Doctor of Philosophy in Biomechanics & Movement Science, February 2008-August 2012
- Areas of Focus: Geriatric Spine, Functional Assessment, Ultrasound Imaging (USI)
- Dissertation: Rehabilitative Ultrasound Imaging: An Investigation of Trunk Muscle Size, Activity, and Symmetry in the Presence of Age-Related Changes and Chronic Low Back Pain

# University of Delaware, Newark, DE; Northwestern University, Chicago, IL

- Post-Doctoral Researcher, September 2012-September 2013
- Area of Focus: Magnetic Resonance Imaging

## WORK EXPERIENCE

<u>Veterans Affairs, Wilmington VA Medical Center</u>, Physical Therapy Consultant. Wilmington, DE. September 2021-present

<u>University of Delaware, Department of Physical Therapy</u>, Assistant Professor in Physical Therapy, Faculty in the Biomechanics and Movement Science Interdisciplinary PhD Program, Director/Founder of the University's Limb Loss Clinic. Newark, DE. September 2016-present

- Research Areas: low back pain; lower-limb amputation; limb difference (i.e., arthrogryposis)
- **Teaching:** Doctor of Physical Therapy program: Spine Management; Functional Anatomy & Biomechanics (2016-2020); Clinical Gross Anatomy (2016-2019); Geriatrics (2018-present); Musculoskeletal Ultrasound Imaging in Clinical Practice & Research (2018-present)
- Mentorship: Summer Scholars/Senior Thesis/PhD Dissertation Committees; undergraduate researchers;
   Orthopaedics, Sports, and Geriatrics Physical Therapy Residencies; DPT student service learning (i.e., Limb Loss Clinic)
- Service: University's MRI Steering Committee (2016-present); University's Committee on Faculty Rights and Responsibilities (2020-present); College Curriculum Committee (2018-2019); various departmental committees & workgroups (e.g., Diversity, Equity, & Inclusion); clinical consultations

<u>University of Delaware, Department of Physical Therapy</u>, Clinical Research Scientist (2013-2016), Assistant Professor in Physical Therapy (2014-2016), Faculty in the Biomechanics and Movement Science Interdisciplinary PhD Program (2014-2016). Newark, DE. September 2013-August 2016

- Research Areas: low back pain; lower-limb amputation; imaging applications
- **Teaching:** Doctor of Physical Therapy program: *Spine Management*; *Musculoskeletal Evaluation*; *Functional Anatomy & Biomechanics*; *Clinical Gross Anatomy*
- Mentorship: Summer Scholars/Senior Thesis/PhD Dissertation Committees; undergraduate researchers;
   Orthopaedics, Sports, and Geriatrics Physical Therapy Residencies; DPT student service learning (i.e., Amputee Clinic); Delaware Physical Therapy Clinic junior clinicians
- **Service:** Faculty Mentor in the Orthopaedics, Sports, and Geriatrics Physical Therapy Residencies; Curriculum Coordinator for the Orthopaedics and Sports Residencies; Director of Limb Loss Clinic; clinical consultation; coverage of *Sports & Performing Arts Injuries Clinics*; participation in *Specialty Clinics*; DPT program interviews; clinical staff updates on DPT program curricular changes

# <u>University of Delaware, Department of Physical Therapy</u>, *Post-Doctoral Researcher*, Newark, DE, September 2012-September 2013

- Research: R01 Study Coordinator for Dr. Gregory E. Hicks, PT, PhD, FAPTA: training/management of laboratory staff, clinical trials development, procedures manual production, database development, participant recruitment/retention, data collections and analysis; Institutional Review Board compliance. Hands-on MRI training with Dr. James M. Elliott, PT, PhD, at Northwestern University, Chicago, IL; observation hours at local MRI facilities
- **Teaching:** Spine Management; Musculoskeletal Evaluation; Functional Anatomy & Biomechanics; Clinical Gross Anatomy; Orthopaedic Clinical Integrated Experience
- Mentorship: Summer Scholars; undergraduate researcher; Orthopaedics, Sports, and Geriatrics Physical Therapy Residencies; DPT student clinical instruction and service learning (i.e., Limb Loss Clinic); Delaware Physical Therapy Clinic junior clinicians
- **Service:** DPT program interviews; departmental Integrated Clinical Experience workgroup; clinical staff updates on DPT program curricular changes; clinical consultation; coverage of *Sports & Performing Arts Injuries Clinics*; participation in *Specialty Clinics*; DPT program interviews; clinical staff updates on DPT program curricular changes

# <u>University of Delaware, Department of Physical Therapy</u>, *Graduate Student Researcher*, Newark, DE, January 2008-August 2012

- Research: Trial/Study Coordinator for Dr. Gregory E. Hicks, PT, PhD, FAPTA: Responsibilities included participant recruitment/retention; data collection, management, and analysis; Institutional Review Board compliance; staff training in various areas, including musculoskeletal ultrasound imaging
- Clinical: Part-time physical therapist in the Delaware Physical Therapy Clinic; coverage of *Sports & Performing Arts Injuries Clinics*; participation in *Specialty Clinics*
- **Teaching:** Orthopaedic Integrated Clinical Experience; Spine Management and Grand Rounds; Clinical Gross Anatomy (2009-2012)

# <u>University of Delaware, Sports and Orthopedic Clinic</u>, *Orthopaedic Physical Therapy Resident*, Newark, DE, January 2007-December 2007

- Clinical: Part-time physical therapist in the Delaware Physical Therapy Clinic; therapist for Sports & Performing Arts Injuries Clinic/Specialty Clinics; ergonomic evaluations for the University's Department of Occupational Safety & Health; moderator for monthly Clinical Rounds
- **Teaching:** Orthopaedic Integrated Clinical Experience; Spine Management; Musculoskeletal Evaluation; Grand Rounds

#### Therapy Services LLC, Staff Physical Therapist, Morgantown, WV, August 2004-December 2006

• Clinical: Full-time physical therapist with out-patient rehabilitation agency, serving clients with orthopedic & neurological conditions; assisted-living facility supervision of PTA; home health coverage for local Health Department (2004-2005); coordinator for Balance and Falls Prevention Program & Wheelchair & Equipment Clinics; in-service provider for the Title XIX waiver program; service marketing; clinical Instructor for PT/PTA students

# HONORS AND AWARDS

- College of Health Sciences: Excellence in Teaching Award. May 2022.
- Invited Member. Sigma XI: The Scientific Research Honor Society. Inducted September 2021
- Prosthetics Orthotics International 2020 SAGE Elite Reviewer. April 2020
- Invited Speaker. Limb Loss Awareness Month Proclamation Signing with Governor Carney, Dover, Delaware. April 2019
- Delaware Center for Translational Research. ACCEL Researcher of the Quarter. Fall 2018
- APTA's 2017 NEXT Conference and Exposition Abstract Recognition for The Use of Ultrasound Imaging to Electrically Maximally Contact Multifidus Muscle in a Collegiate Field Hockey Player with Low Back Pain. Ackerman B, Giordano A, Manal TM, Sions JM. Boston, MA
- American Academy of Orthotists and Prosthetists. Thranhardt Lecture Award for Reduced Turn Ability, Transfer Ability, and Balance Confidence in Prosthesis Users with History of Falls. Akins JS, Sions JM, Poretti K, Eigenbrot SS, Horvath AM, Horne JR. AAOP: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL: March 2017
- Orthotics and Prosthetics Educational and Development Fund: American Orthotics and Prosthetics
   Association. Thranhardt Lecture Award for Balance-Confidence may Help Explain Physical Function and
   Community-Integration among Individuals with Unilateral Transfemoral and Transtibial Amputations.
   Sions JM, Horne J, Sarlo F, Manal T. AOPA National Assembly. San Antonio, TX: October 2015
- American Physical Therapy Association: Academy of Geriatric Physical Therapy. Fellowship for Geriatric Research Award. January 2013
- University of Delaware: Office of Graduate and Professional Education. *Professional Development Award*. June 2012
- Foundation for Physical Therapy. Promotion of Doctoral Studies II scholarship. September 2011
- University of Delaware: Office of Graduate and Professional Education. Professional Development Award. February 2011
- Foundation for Physical Therapy. Promotion of Doctoral Studies I scholarship. September 2010
- Therapy Services, LLC. *Employee of the Month*. November 2005, April 2006
- Therapy Services, LLC. "I'm Appreciated" Company Award, November 2005

# **GRANTS**

#### Active

22A01538 (Sions) 06/01/22-05/31/24 0.22 summer

University of Delaware Research Foundation (UDRF) \$45,000

Identification of Biopsychosocial Factors Associated with Persistent Low Back Pain among Adults with Lower-Limb Amputation

This project compares adults with an above-knee, lower-limb amputation with and without low back pain to determine differences in biopsychosocial factors and outcomes.

Role: Principal Investigator

22A00732 (Sions) 05/27/22-05/26/23 0.9 academic

Orthotic & Prosthetic Education & Research Foundation \$25,000

Can Comorbidity Screening and Referral by Prosthetists Enhance Post-Amputation Care?

As with other healthcare professions, such as physical therapy, where comorbidity screening are routine and referrals are common, this project seeks to determine the value-add of prosthetist identification and referral for impactful comorbidities.

Role: Principal Investigator

R01AG041202 (Hicks) 07/01/18-06/30/23 2.0 academic/1.0 summer

NIH \$859,458

Chronic Low Back Pain in Older Adults: The Role of Co-Existing Hip Impairments

The long-term goal of this line of research is to develop and test a standardized rehabilitation approach for older adults with chronic low back pain that is specifically designed to optimize mobility function by addressing pain and the unique impairments identified during the initial funding period of this grant

Role: Co-Investigator

## Complete

University of Delaware 2021 College of Health Sciences Equipment Fund Grant \$4,975

Portal Ultrasound Imaging
Silbernagel KG, Sions JM, Lobo M

Role: Co-investigator

University of Delaware 2018 College of Health Sciences Equipment Fund Grant \$24,125

Accelerometer Monitors

White D, Crenshaw J, Arch E, Reisman D, Sions JM

Role: Co-investigator

18A00364 (Hicks) 09/05/18-06/30/21 1.2 academic

NIH/State of Delaware \$79,625

Somatosensory Dysfunction, Prosthetic Use, and Function in Adults with Limb Loss

With advances in prosthesis design and innovative rehabilitation interventions, we may improve outcomes for patients who experience a lower-limb amputation.

Role: Project PI

R03 HD088668 (**Sions**) 04/01/17-03/31/20 0.60 academic, 1.0 summer

NIH/NICHD \$156,000

Trunk Muscle Characteristics and their Association with Balance, Functions, and Participation among Individuals with Amputations

This study will allow us to determine whether trunk muscle impairments and asymmetries are associated with the presence of a lower-limb amputation. Results will inform the development of future, longitudinal work evaluating whether trunk muscle impairments predict balance, function and participation, and thus, should be considered as potential modifiable factors in future interventional studies designed to optimize function among individuals with a lower-limb amputation.

R01 AG041202 (Hicks) 08/01/12–06/30/17 6.0 calendar PM

NIH/NIA \$310,478

Chronic Low Back Pain in Older Adults: The Role of Co-Existing Hip Impairments

This study will lay the ground work for developing a therapeutic algorithm for evaluation and treatment of low back pain, specifically for older adults, to focus on prevention of chronic low back pain and development of functional limitations and disability.

Role: Investigator

5P20GM103446 (**Sions**) 07/27/16-10/31/16

CBBI/INBRE \$4,000

Characteristics of the Trunk Muscles among Prosthetic Users with a Transfemoral Amputation

Data obtained from this pilot feasibility study will support a future study evaluating trunk muscle impairments and side-to-side asymmetries among individuals with a unilateral limb loss.

15A01561 (MPI: Arch/**Sions**) 08/04/15–08/03/16 1.20 calendar PM Orthotic & Prosthetic Education & Research Foundation (OPERF) \$25,000

Can Clinical Measures Predict Real-World Walking Performance in Adults with Transtibial Amputations? The proposed project will help determine if performance-based and/or self-report clinical measures can accurately predict real-world walking function, i.e. step counts and cadence variability, for individuals with unilateral transtibial amputations.

## PEER-REVIEWED PUBLICATIONS

- 1. Knox PJ, Pohlig RT, Pugliese JM, Coyle PC, **Sions JM**, Hicks GE. A Clinical Measure of Trunk Neuromuscular Function Predicts Falling in Older Adults with Chronic Low Back Pain. *J Geriatr Phys Ther* [accepted October 2022].
- 2. Beisheim-Ryan EH, Pohlig RT, Hicks GE, Horne JR, **Sions JM**. Post-Amputation Pain: Comparing Pain Presentation Between Adults with and without Increased Amputated-Region Sensitivity. *Pain Pract*. 2022 Oct 17. doi: 10.1111/papr.13172. Online ahead of print. PMID: 36250812.
- 3. Seth M, Pohlig RT, Hicks GE, **Sions JM**. Clinical Mobility Metrics Estimate and Characterize Physical Activity following Lower-Limb Amputation. *BMC Sports Sci Med Rehabil* 2022;14(1):124. doi: 10.1186/s13102-022-00518-x. PMID: 35799260.
- 4. Coyle PC, Pohlig RT, Knox PJ, Pugliese JM, **Sions JM**, Hicks GE. Trajectories of Physical Function and Disability over 12 Months in Older Adults with Chronic Low Back Pain. *J Geriatr Phys Ther*. 2022. Sep 16. doi: 10.1519/JPT.0000000000000365. Online ahead of print.
- 5. **Sions JM**, Donohoe M, Beisheim EH, Pohlig RT, Shank TM, Nichols LR. Test-Retest Reliability for Performance-Based Measures among Individuals with Arthrogryposis Multiplex Congenita. *BMC Musculoskel Disord*. 2022;23(1):121. doi: 10.1186/s12891-022-05070-w. PMID: 35123456.
- 6. Seth M, Pohlig RT, Beisheim EH, Stauffer S, Horne JR, Hicks GE, **Sions JM**. Residual- and Sound-side Hip Strength Distinguish Between Sedentary and Non-Sedentary Adults with Transtibial Amputation. Internat J Rehabil Res. 2022;45(2):137-145. doi: 10.1097/MRR.000000000000520. Epub 2022 Feb 7. PMID: 35131977.
- 7. **Sions JM**, Donohoe M, Beisheim-Ryan EH, Pohlig RT, Shank TM, Nichols LR. Characterizing Pain among Adolescents and Young Adults with Arthrogryposis Multiplex Congenita. *Pediatr Phys Ther*. 2022;34(3):288-295. doi: 10.1097/PEP.00000000000000913. Epub 2022 May 30. PMID: 35639545.
- 8. **Sions JM**, Beisheim-Ryan EH, Pohlig RT, Seth M. Adults with Unilateral Lower-Limb Amputation: Greater Spatial Extent of Pain is Associated with Worse Adjustment, Greater Activity Restrictions, and Less Prosthesis Satisfaction. *Scand J Pain*. 2022;22(3):578-586. doi: 10.1515/sjpain-2021-0132. Print 2022 Jul 26. PMID: 35107232.
- 9. Algamdi NH, Pohlig RT, JM **Sions**, Silbernagel KG. Differences at the Achilles Insertion Between Adults with Insertional and Midportion Achilles Tendinopathy as Observed Using Ultrasound. *Muscle Ligaments Tendon J.* 2022;12(2):115-121. doi: 10.32098/mltj.02.2022.04. PMID: 36247413.
- 10. Knox PJ, Pohlig RT, Pugliese JM, Coyle PC, **Sions JM**, Hicks GE. Aberrant Movements Predict Prospective Functional Decline in Older Adults with Chronic Low Back Pina. *Arch Phys Med Rehabil*. 2022;103(3):473-480.e1. doi: 10.1016/j.apmr.2021.08.014. Epub 2021 Sep 20. PMID: 34547273.
- 11. Seth M, Beisheim EH, Pohlig RT, Horne JR, Sarlo FB, **Sions JM**. Time Since Amputation: An Important Consideration in Mobility Outcomes of Adults with Lower Limb Amputation. *Am J Phys Med Rehabil*. 2022;101(1);32-39. doi: 10.1097/PHM.0000000000001736. PMID: 34915544.
- 12. Beisheim-Ryan EH, Pohlig RT, Medina J, Hicks GE, **Sions JM**. Body Representation among Adults with Phantom Limb Pain: Results from a Foot Identification Task. *Eur J Pain*. 2022;26(1):255-269. doi: 10.1002/ejp.1860. Epub 2021 Sep 17. PMID: 34490685.
- 13. Knox PJ, Simon CB, Pohlig RT, Pugliese JM, Coyle PC, **Sions JM**, Hicks GE. A Standardized Assessment of Movement-Evoked Pain Ratings is Associated with Functional Outcomes in Older Adults with Chronic Low Back Pain. *Clin J Pain*. 2021. doi: 10.1097/AJP.000000000001016. Online ahead of print. PMID: 34954729.

- 14. Beisheim-Ryan EH, Hicks GE, Pohlig RT, Medina J, **Sions JM**. Body Image and Perception among Adults with and without Phantom Limb Pain. *PM R*. 2021 Dec 16. doi: 10.1002/pmrj.12750. Online ahead of print. PMID: 34914201.
- 15. Seth M, Beisheim EH, Pohlig RT, Horne JR, Hicks GE, Sions JM. Vibration Sensitivity and its Association with Balance Performance among Adults with Unilateral Transtibial Amputation as Compared to Age-Matched Adults without Amputation. *Arch Rehabil Res Clin Transl.* 2021;3:100161. doi: 10.1016/j.arrct.2021.100161. doi: 10.1016/j.arrct.2021.100161. eCollection 2021 Dec. PMID: 34977543.
- 16. Beisheim-Ryan EH, Pohlig RT, Hicks GE, Horne JR, Medina J, **Sions JM**. Mechanical Pain Sensitivity in Post-Amputation Pain. *Clin J Pain* 2021;38(1):23-31. doi: 10.1097/AJP.0000000000000989. PMID: 34620753.
- 17. Seth M, Coyle PC, Pohlig RT, Beisheim EH, Hicks GE, Horne JR, **Sions JM**. Gait Asymmetry is Associated with Mobility Performance among Adults with Lower-Limb Amputation. *Physiother Theory Pract*. 2021;17:1-11. doi: 10.1080/09593985.2021.1990449. Online ahead of print. PMID: 34657569.
- 18. **Sions JM**, Donohoe M, Beisheim EH, Shank T, Nichols LR. Falls and Associated Factors among Adolescents and Young Adults with Arthrogryposis Multiplex Congenita. *Int J Rare Dis Disord*. 2021;4:035. doi: 10.23937/2643-4571/1710035. Epub 2021 Sep 6. PMID: 34723192.
- 19. Knox PJ, Pohlig RT, Coyle PC, Pugliese JM, **Sions JM**, Hicks GE. Aberrant Lumbopelvic Movements Negatively Affect Prospective Function in Older Adults with Chronic Low Back Pain. *Arch Phys Med Rehabil*. 2021 Sep 20:S0003-9993(21)01424-6. doi: 10.1016/j.apmr.2021.08.014. Online ahead of print. PMID: 34547273.
- 20. Coyle PC, Knox PJ, Pohlig RT, Pugliese JM, **Sions JM**, Hicks GE. Hip Range of Motion and Strength Predict 12-Month Physical Function Outcomes in Older Adults with Chronic Low Back Pain: The Delaware Spine Studies. *ACR Open Rheumatol*. 2021;3(12):850-859. doi: 10.1002/acr2.11342. Epub 2021 Sep 15. PMID: 34524738.
- 21. Pugliese JM, Coyle PC, Knox PJ, **Sions JM**, Patterson CG, Pohlig RT, Simon CB, Weiner DK, George SZ, Piva S, Hicks GE. The Manual Therapy and Strengthening for the Hip (MASH) Trial: Protocol for a Multisite Randomized Trial of a Subgroup of Older Adults with Chronic Back and Hip Pain. *Phys Ther*. 2022;102(1):pzab255. doi: 10.1093/ptj/pzab255. PMID: 34751784.
- 22. Hicks GE, Pohlig RT, Coyle PC, **Sions JM**, Weiner DK, Pugliese JM, Velasco TO, O'Brien VA. Classification of Geriatric Low Back Pain Based on Hip Characteristics with a 12-Month Longitudinal Exploration of Clinical Outcomes. Findings from Delaware Spine Studies. *Phys Ther*. 2021; 101(12):pzab227. doi: 10.1093/ptj/pzab227. PMID: 34636887.
- 23. Knox PJ, Coyle PC, Pugliese JM, Pohlig RT, **Sions JM**, Hicks GE. Hip Osteoarthritis Signs and Symptoms Are Associated with Increased Fall Risk Among Community-Dwelling Older Adults with Chronic Low Back Pain: A Prospective Study. *Arthritis Res Ther*. 2021;23(1):71. doi: 10.1186/s13075-021-02455-5. PMID: 33658074.
- 24. **Sions JM**, Beisheim EH, Hoggarth M, Elliott JM, Hicks GE, Pohlig RT, Seth M. Trunk Muscle Characteristics: Differences Between Adults with and without Unilateral Lower-Limb Amputation. *Arch Phys Med Rehabil* 2021;102(7):1331-1339. doi: 10.1016/j.apmr.2021.02.008. Epub 2021 Mar 5. PMID: 33684366.
- 25. Beisheim EH, Seth M, Horne JR, Hicks GE, Pohlig RT, **Sions JM**. Sex-Specific Differences in Multisite Pain Presentation among Adults with Lower-Limb Loss. *Pain Pract*; 2021;21(4):419-427. doi: 10.1111/papr.12969. Epub 2020 Dec 12. PMID: 33251680.
- Seth M, Beisheim EH, Spencer M, Horne JR, Sarlo FB, Sions JM. Self-reported Socket Comfort, Mobility, and Balance-Confidence of Individuals with Trans-tibial Amputation using Pinlock versus Suction Suspension. *Prosthet Orthot Int*. 2021;45(3):214-220. doi: 10.1097/PXR.0000000000000007. PMID: 33840751.
- 27. **Sions JM**, Beisheim EH, Seth M. Selecting, Administering, and Interpreting Outcome Measures among Adults with Lower-Limb Loss: An Update for Clinicians. *Curr Phys Med Rehabil Rep.* 2020 Sep;8(3):92-109. doi: 10.1007/s40141-020-00274-4. Epub 2020 Aug 3. PMID: 33767921.
- Beisheim EH, Arch ES, Horne JR, Sions JM. Performance-based Outcome Measures are Associated with Cadence Variability during Community Ambulation among Individuals with a Transtibial Amputation. Prosthet Orthot Int. 2020;16:309364620927608. doi: 10.1177/0309364620927608. Online ahead of print. PMID: 32539665.

- Sions JM, Manal TJ, Horne JR, Sarlo FB, Pohlig RT. Balance-Confidence is Associated with Community Participation, Perceived Physical Ability, and Performance-Based Function among Patients with a Unilateral Amputation. *Physiother Theory Pract*. 2020 May;36(5):607-614. doi: 10.1080/09593985.2018.1490939. Epub 2018 Jun 28. PMID: 29952694.
- Sions JM, Crippen DC, Hicks GE, Alroumi AM, Manal TJ, Pohlig RT. Exploring Neuromuscular Electrical Stimulation Intensity Effects on Multifidus Muscle Activity in Adults with Chronic Low Back Pain: An Ultrasound Imaging-Informed Investigation. Clin Med Insights Arthritis Musculoskelet Disord. May 20;12:1179544119849570. doi: 10.1177/1179544119849570. eCollection 2019. PMID: 31205429.
- 31. Beisheim EH, Horne JR, **Sions JM**. Differences in Measures of Strength and Dynamic Balance among Individuals with Lower-Limb Loss Classified as Functional Level K3 versus K4. *Am J Phys Med Rehabil*. 2019 Sep;98(9):745-750. doi: 10.1097/PHM.000000000001183. PMID: 30950838.
- 32. Sadeghi S, Quinlan K, Eilertson KE, Billy GG, Bible J, Sions M, Cortes DH. Changes in Shear Modulus of the Lumbar Multifidus Muscle during Different Body Positions. *J Biomech Eng.* 2019 Apr 9. doi: 10.1115/1.4043443. Online ahead of print. PMID: 30964941.
- 33. Coyle PC, Pugliese JM, **Sions JM**, Eskander MS, Schrack JA, Hicks GE. Pain Provocation and the Energy Cost of Walking: A Matched Comparison Study of Older Adults with and without Chronic Low Back Pain with Radiculopathy. *J Geriatr Phys Ther*. 2019;42:E97-E104. doi: 10.1519/JPT.0000000000000212. PMID: 30998562.
- 34. Coyle PC, Pugliese JM, **Sions JM**, Schrack JA, Eskander M, Hicks GE. Energy Impairments in Older Adults with Low Back Pain and Radiculopathy: A Matched Case-Control Study. *Arch Phys Med Rehabil*. 2018 Nov;99(11):2251-2256. doi: 10.1016/j.apmr.2018.03.016. Epub 2018 Apr 24. PMID: 29698638.
- 35. **Sions JM**, Arch ES, Horne J. Self-reported Functional Mobility, Balance-confidence, and Prosthetic Use are Associated with Daily Step Counts among Individuals with a Unilateral Transtibial Amputation. *Phys Act Health*. 2018 Jun 1;15(6):423-429. doi: 10.1123/jpah.2017-0196. Epub 2018 Mar 15. PMID: 29771620.
- 36. Arch ES, **Sions JM**, Horne JR, Bodt BA. Step Count Accuracy of the StepWatch and FitBit One among Individuals with a Unilateral Transtibial Amputation. *J Orthotics Prosth Int.* 2018 Oct;42(5):518-526. doi: 10.1177/0309364618767138. Epub 2018 Apr 6. PMID: 29623810.
- 37. Pugliese JM, **Sions JM**, Velasco TO, Hicks GE. Use of Trunk Muscle Training and Neuromuscular Electrical Stimulation to Reduce Pain and Disability in an Older Adult with Chronic Low Back Pain: A Case Study. *Physiother Theory Pract*. Aug;35(8):797-804. doi: 10.1080/09593985.2018.1457745. Epub 2018 Apr 4. PMID: 29617180.
- 38. **Sions JM**, Beisheim EH, Manal TJ, Smith SC, Horne JR, Sarlo FB. Differences in Physical Performance Measures among Patients with Unilateral Lower-Limb Amputations Classified as Functional Level K3 versus K4. *Arch Phys Med Rehabil*. 2018 Jul;99(7):1333-1341. doi: 10.1016/j.apmr.2017.12.033. Epub 2018 Feb 1. PMID: 29410114.
- 39. Hicks GE, **Sions JM**, Velasco TO. Hip Symptoms, Physical Performance and Health Status in Older Adults with Chronic Low Back Pain: A Preliminary Investigation. *Arch Phys Med Rehabil*. 2018;99(7):1273-1278. doi: 10.1016/j.apmr.2017.10.006. Epub 2017 Oct 27. PMID: 29111171.
- 40. **Megan Sions J**, Angelica Rodriguez C, Todd Pohlig R, Evan Hicks G, Charles Coyle P. Epidural Fat and Its Association with Pain, Physical Function, and Disability among Older Adults with Low Back Pain and Controls. *Pain Med.* 2018 Oct 1;19(10):1944-1951. doi: 10.1093/pm/pnx163. PMID: 29024961.
- 41. Hicks GE, **Sions JM**, Coyle PC. Altered Spatiotemporal Characteristics of Gait in Older Adults with Chronic Low Back Pain. *Gait & Posture*. 2017 Jun;55:172-176. doi: 10.1016/j.gaitpost.2017.04.027. Epub 2017 Apr 23. PMID: 28458149.
- 42. **Sions JM**, Elliott JM, Hicks GE. Trunk Muscle Characteristics of the Multifidi, Erector Spinae, Psoas, and Quadratus Lumborum in Older Adults with and without Chronic Low Back Pain. *J Orthop Sports Phys Ther*. 2017 Mar;47(3):173-179. doi: 10.2519/jospt.2017.7002. Epub 2017 Feb 3. PMID: 28158957.
- 43. **Sions JM**, Coyle PC, Velasco TO, Elliott JM, Hicks GE. Multifidi Muscle Characteristics and Physical Function among Older Adults with and without Chronic Low Back Pain. *Arch Phys Med Rehabil*. 2017 Jan;98(1):51-57. doi: 10.1016/j.apmr.2016.07.027. Epub 2016 Aug 30. PMID: 27590444.
- 44. Coyle PC, Velasco TO, **Sions JM**, Hicks GE. Lumbar Mobility and Performance-Based Function: an Investigation in Older Adults with and without Chronic Low Back Pain. *Pain Med*. 2017 Jan 1;18(1):161-168. doi: 10.1093/pm/pnw136.
- 45. **Sions JM**, Hicks GE. Back Stiffness is Associated with Physical Health and Low Back Pain-Related Disability in Community-Dwelling Older Adults. *Pain Med.* 2017 May 1;18(5):866-870. doi: 10.1093/pm/pnw107. PMID: 27288949.

- 46. **Sions JM**, Teyhen DS, Hicks GE. Criterion Validity of Ultrasound Imaging: Assessment of Multifidi Cross-Sectional Area in Older Adults with and without Low Back Pain. *J Geriatr Phys Ther*. 2017 Apr/Jun;40(2):74-79. doi: 10.1519/JPT.0000000000000073. PMID: 26703525.
- 47. Hicks GE, **Sions JM**, Velasco TO, Manal TM. Trunk Muscle Training Augmented with Neuromuscular Electrical Stimulation Appears to Improve Function in Older Adults with Chronic Low Back Pain: A Randomized Preliminary Trial. *Clin J Pain*. 2016 Oct;32(10):898-906. doi: 10.1097/AJP.00000000000348. PMID: 26736024.
- 48. **Sions JM**, Smith AC, Hicks GE, Elliott JM. Trunk Muscle Size and Composition Assessment in Older Adults with Chronic Low Back Pain: An Intra-examiner and Inter-examiner Reliability Study. *Pain Med*. 2016 Aug;17(8):1436-46. doi: 10.1093/pm/pnv023. Epub 2015 Dec 7. PMID: 26814258.
- 49. Coyle PC, **Sions JM**, Velasco TO, Hicks GE. Older Adults with Chronic Low Back Pain: A Clinical Population Vulnerable to Frailty? *J Frailty Aging*. 2015;4(4):188-90. doi: 10.14283/jfa.2015.75. PMID: 27031017.
- 50. **Sions JM**, Velasco TO, Teyhen DS, Hicks GE. Reliability of Ultrasound Imaging for the Assessment of Lumbar Multifidi Thickness in Older Adults with Chronic Low Back Pain. *J Geriatr Phys Ther*. 2015 Jan-Mar;38(1):33-9. doi: 10.1519/JPT.0000000000000021. PMID: 24743751.
- 51. **Sions JM**, Velasco TO, Teyhen DS, Hicks GE. Ultrasound Imaging: Intra- and Inter-Examiner Reliability for Multifidus Muscle Thickness Assessment in Adults Aged 60-85 Years versus Younger Adults. *J Orthop Sports Phys Ther*. 2014 Jun;44(6):425-34. doi: 10.2519/jospt.2014.4584. Epub 2014 Apr 25. PMID: 24766356.
- 52. **Sions JM**, Tyrell C, Knarr B, Jancosko A, Binder-Macleod S. Age- and Stroke-Related Skeletal Muscle Changes: A Review for the Geriatric Clinician. *J Geriatr Phys Ther*. 2012 Jul-Sep;35(3):155-61. doi: 10.1519/JPT.0b013e318236db92. PMID: 22107952.
- 53. **Sions JM**, Hicks GE. Fear Avoidance Beliefs are Associated with Disability in Older American Adults with Low Back Pain. *Phys Ther*. Apr;91(4):525-34. doi: 10.2522/ptj.20100131. Epub 2011 Feb 24. PMID: 21350033.

## **SOLICITED WORKS**

- 1. American Physical Therapy Association. Academy of Orthopaedic Physical Therapy. Seymour W, **Sions JM**, Palmer M, Manal TJ. *Patient Educational Resources for the Spine Patient*. 2018.
- 2. American Physical Therapy Association. Academy of Orthopaedic Physical Therapy. **Sions JM**, Elliott JM, Beneck G, Hazle C. *Spinal Imaging: Update for the Treating Physical Therapist.* 2019.
- 3. American Physical Therapy Association: PTNow.org. Sions JM. Neck Pain. 2017.

# **PRESENTATIONS**

#### Scientific

## **INTERNATIONAL**

- Platform Presentation: Comorbidities, Physical Function, and Daily Step Counts among Adults with a Unilateral Transtibial Amputation Who Are Using a Prosthetic. Sions JM, Arch ES, Horne J. 2<sup>nd</sup> American Orthotic & Prosthetic Association World Congress. Las Vegas, NV. 9/7/17
- Platform Presentation: Hip Strength Helps to Explain Walking Performance among Older Adults with a Primary Complain of Low Back Pain. Sions JM, Coyle P, Velasco TO, Hicks GE. International Conference on Frailty & Sarcopenia Research. Philadelphia, PA. 4/29/16
- Poster Presentation: Co-existing Hip Symptoms are Associated with Self-Efficacy and Pain-Related Fear in Older Adults with a Primary Complaint of Low Back Pain: Delaware Spine Studies. Hicks GE, Sions JM, Velasco TO. Osteoarthritis Research Society International, World Congress 2016. Amsterdam, The Netherlands. 4/1/16

- Poster Presentation: Older Adults with Low Back Pain who meet a Clinical Cluster for Hip Osteoarthritis have Ultrasound Joint Morphological Findings Consistent with Hip Osteoarthritis. Sions JM, Coyle P, Velasco TO, Hicks GE. Osteoarthritis Research Society International, World Congress 2016. Amsterdam, The Netherlands. 4/1/16
- Poster Presentation: Hip Symptoms Contribute to Low Back Pain-Related Disability in Older Adults with a Primary Complain of Low Back Pain: The Delaware Spine Studies. Hicks GE, Sions JM, Velasco TO. Osteoarthritis Research Society International, World Congress 2016. Amsterdam, The Netherlands: 4/1/16
- 6. Poster Presentation: Older Adults with Chronic Low Back Pain: A Clinical Population Vulnerable to Frailty? Coyle P, **Sions JM**, Velasco TO, Hicks GE. International Conference on Frailty & Sarcopenia Research. Boston, MA. 4/24/15
- Poster Presentation: Exploration of Trunk Muscle Composition and Select Physical Performance Measures:
   A Preliminary Analysis among Older Adults with and without Chronic Low Back Pain. Sions JM, Coyle P, Velasco TO, Elliott JM, Hicks GE. International Conference on Frailty & Sarcopenia Research. Boston, MA. 4/23/15

## **NATIONAL**

- Poster Presentation. Lack of Relationships between Measures of Achilles Tendon Structure, Symptoms Severity and Gait Biomechanics in Individuals with Insertional Achilles Tendinopathy. Alghamdi A, Sions JM, Crenshaw J, Pohlig RT, Silbernagel KG. American Institute of Ultrasound in Medicine 2022 Annual Meeting. San Diego, CA. 3/12/22-3/16/22
- 2. Poster Presentation. Preparatory Seal-In Suction Prostheses for 2 Patients with Gritti-Stokes Amputation Following Trauma. Stauffer SJ, Horne JR, **Sions JM**. 48th Academy Annual Meeting and Scientific Symposium. Atlanta, GA. 3/4/22
- 3. Platform Presentation. Clinical Measures of Mobility Estimate Daily Physical Activity Following Lower-Limb Amputation. Seth M, Pohlig RT, Hicks GE, **Sions JM**. 48th Academy Annual Meeting and Scientific Symposium. Atlanta, GA. 3/5/22
- 4. Poster Presentation. Underreporting of Life-Limiting Comorbidities among Adults with Lower-Limb Loss. Stauffer SJ, Beisheim EH, Seth M, Horne JR, **Sions JM**. 48th Academy Annual Meeting and Scientific Symposium. Atlanta, GA. 3/3/22
- 5. Platform Presentation. A Comparison of Movement Evoked Pain Calculation Methods in Older Adults with Chronic Low Back Pain. Knox PJ, Coyle PC, Pugliese JM, Pohlig RT, **Sions JM**, Hicks GE. Combined Sectional Meeting. San Antonio, TX. 2/3/22
- 6. Poster Presentation. Aberrant Lumbopelvic Movements Predict Falling in Older with Chronic Low Back Pain. Knox PJ, Pugliese JM, Coyle PC, Pohlig RT, **Sions JM**, Hicks GE. Combined Sectional Meeting. San Antonio. TX. 2/4/22
- 7. Platform Presentation. More Bodily Pain is Associated with Worse Adjustment, Greater Restrictions, and Less Prosthesis Satisfaction Post-Amputation. Beisheim EH, Pohlig RT, Seth M, **Sions JM**. Combined Sectional Meeting. San Antonio, TX. 2/4/22
- 8. Platform Presentation. Mental Rotation and Phantom Limb Pain: Evaluating Body Representation among Adults with Lower-Limb Loss. Beisheim EH, Pohlig RT, Medina J, Hicks GE, **Sions JM**. Combined Sectional Meeting. San Antonio, TX. 2/4/22
- 9. Platform Presentation. Differences in Body Image and Perception between Adults with and without Phantom Limb Pain. Beisheim EH, Hicks GE, Pohlig RT, Medina J, **Sions JM**. Combined Sectional Meeting. San Antonio, TX. 2/4/22
- Platform Presentation. Functional Ability and Residual Limb Hip Strength Distinguish Between Sedentary and Active Adults with Transtibial Amputation. Seth M, Pohlig RT, Beisheim EH, Stauffer SJ, Horne JR, Hicks GE, Sions JM. American Orthotic & Prosthetic Association. 2021 National Assembly. Virtual. 9/18/21
- Poster Presentation. Lower Limb Loss, Chronic Low Back Pain, and the START Back Screening Tool. Stauffer SJ, Beisheim EH, Horne JR, Sions JM. American Orthotic & Prosthetic Association. 2021 National Assembly. Boston, MA. 9/21
- 12. Platform Presentation. Adults with Unilateral Lower-Limb Amputation: Associations Between Trunk Muscle Characteristics and Physical Function. **Sions JM**, Beisheim EH, Hicks GE, Horne JR. American Orthotic & Prosthetic Association. 2021 National Assembly. Virtual. 9/18/21

- 13. Platform Presentation. Adults with Phantom Limb Pain Demonstrate Better Mobility than Peer-Free Peers after Bilateral Limb Loss. Beisheim EH, Seth M, Clancy M, Stauffer SJ, Horne JR, Sarlo FB, **Sions JM**. 47<sup>th</sup> Academy Annual Meeting and Scientific Symposium. Virtual. 5/21
- 14. Platform Presentation. Gait Asymmetry May Explain Mobility Outcomes in Adults with Lower Limb Amputation. Seth M, Coyle PC, Pohlig RT, Beisheim EH, Horne JR, Hicks GE, **Sions JM**. 47<sup>th</sup> Academy Annual Meeting and Scientific Symposium. Virtual. 5/21
- 15. Platform Presentation. Is Pain Self-Efficacy Related to Sociodemographic Characteristics and Pain Severity among Adults with Lower-Limb Loss and Chronic Low Back Pain? Stauffer SJ, Beisheim EH, Seth M, Horne JR, **Sions JM**. 47<sup>th</sup> Academy Annual Meeting and Scientific Symposium. Virtual. 5/21
- 16. Scientific Presentation. Movement-Evoked Pain: A Unique Construct that is Associated with Lower Extremity Functional Performance in Older Adults with Chronic Low Back Pain. Knox PJ, Coyle PC, Pugliese JM, Pohlig RT, Sions JM, Hicks GE. American Academy of Pain Medicine Conference. Virtual. 5/21
- 17. Platform Presentation: The Link Between Aberrant Lumbopelvic Movements and Physical Function in Geriatric Low Back Pain. Knox PJ, Coyle PC, Pugliese JM, Pohlig RT, **Sions JM**, Hicks GE. Combined Sections Meeting. Orlando, FL. 2/21
- 18. Poster Presentation. Alghamdi N, Pohlig R, **Sions J**, Crenshaw J, Silbernagel K. Determine Achilles Tendon Structure Differences Between Patients with Insertional Achilles Tendinopathy and Midportion Achilles Tendinopathy. Combined Sections Meeting. Virtual. 2/21
- 19. Platform Presentation: Test-Retest Reliability of Clinical Outcome Measures among Children and Adults with Arthrogryposis Multiplex Congenita. Donohoe M, Nichols LR, Shank T, Beisheim EH, Seth M, Lawall H, Sions JM. Combined Sections Meeting. Virtual. 2/21
- 20. Poster Presentation: Lumbar Muscle Characteristics Following Lower-Limb Loss: A Musculoskeletal Ultrasound and Magnetic Resonance Imaging Study. Beisheim EH, Hoggarth MA, Elliott JM, Hicks GE, Pohlig RT, **Sions JM**. Combined Sections Meeting. Virtual. 2/21
- 21. Poster Presentation: More than 1-Year Post-Amputation, Females Disproportionately Experience Multi-Site Pain. Beisheim EH, Hogan R, Basilio C, Seth M, Horne JR, Hicks GE, **Sions JM**. Combined Sections Meeting. Virtual. 2/21
- 22. Poster Presentation: Pain among Children and Adults with Arthrogryposis Multiplex Congenita. **Sions JM**, Donohoe M, Nichols LR, Shank T, Beisheim EH, Seth M, Lawall H. Combined Sections Meeting. Virtual. 2/21
- 23. Platform Presentation: Falling and Associated Factors among Children and Adults with Arthrogryposis Multiplex Congenita. **Sions JM**, Donohoe M, Nichols LR, Shank T, Beisheim EH, Seth M, Lawall H. APTA: American Pediatric Physical Therapy: 2020 Conference. Virtual. 11/20
- 24. Platform Presentation: Adults with Lower-Limb Loss and Chronic Low Back Pain: Differences Between Those Who Return to Work and Those Who Remain Unemployed. Stauffer SJ, Beisheim EH, Seth M, Horne JR, Sions JM. American Orthotic & Prosthetic Association 2020 National Assembly. Virtual. Las Vegas, NV. 9/20
- Platform Presentation: Sex-Specific Relationships Between Pain and Pressure Sensitivity Post-Amputation. Beisheim EH, Seth M, Horne JR, Pohlig RT, Hicks GE, Sions JM. American Orthotic & Prosthetic Association 2020 National Assembly. Virtual. Las Vegas, NV. 9/20
- 26. Platform Presentation: Time Since Amputation May Estimate Mobility Outcomes of Adults with Lower Limb Amputation. Seth M, Beisheim EH, Pohlig RT, Horne JR, **Sions JM**. American Orthotic & Prosthetic Association 2020 National Assembly. Virtual. Las Vegas, NV. 9/20
- 27. Poster Presentation: Gait Asymmetry is Associated with Mobility Performance of Individuals with Lower Limb Amputation. Seth M, Coyle PC, Pohlig RT, Beisheim EH, Horne JR, Hicks GE, **Sions JM**. Gait and Clinical Movement Analysis Society Annual Conference. West Chester, PA. [accepted, but not presented due to COVID-19]
- 28. Platform Presentation: Similar Functional Outcomes with Vacuum Assisted and Pin Lock Suspension in Adults with a Transtibial Amputation. Seth M, Beisheim EH, Horne JR, **Sions JM**. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/7/20
- Poster Presentation: The Impact of Chronic Low Back Pain Pre- and Post-Amputation Among Adults with Lower Limb Loss. Stauffer SJ, Palmaccio JN, Beisheim EH, Seth M, Horne JR, Sions JM. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/5/20

- 30. Poster Presentation: Adults with Non-Vascular Transtibial Amputation: No Difference Between Limbs in Light Touch Sensation. McCartney KM, Beisheim EH, Seth M, Hicks GE, Pohlig RT, Horne JR, Sions JM. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/5/20
- Poster Presentation: Residual Limb Pain is Associated with Contralateral Limb Pain More Than One Year Post-Amputation. Beisheim EH, Seth M, Horne JR, Pohlig RT, Hicks GE, Sions JM. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/5/20
- 32. Platform Presentation: Suction Suspension May Result in Better Socket Fit Comfort among Adults with a Transtibial Amputation. Seth M, Pohlig RT, Beisheim EH, Horne JR, Smith S, **Sions JM**. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/5/20
- 33. Platform Presentation: Risk Factors for Falling and Multiple Falls among Adults with Lower-Limb Loss Beyond the First Year. **Sions JM**, Oteri M, Beisheim EH, Smith SC, Horne JR, Sarlo FB. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/5/20
- 34. Platform Presentation: Clinical Outcome Measure Performance is Similar Among Established Prosthesis Users Who Do and Do Not Report Falling. Beisheim EH, Oteri M, Smith SC, Horne JR, Sarlo FB, **Sions JM**. 46<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Chicago, IL. 3/5/20
- 35. Platform Presentation: Hip-Spine Syndrome: A Risk Factor for Multiple Falls? Knox PJ, Coyle PC, Pugliese JM, Sions JM, Hicks GE. Combined Sectional Meeting. Denver, CO. 2/14/20
- Poster Presentation: Differences in Trunk Muscle Activity in Adults with Lower-Limb Loss as Compared to Controls. Sions JM, Beisheim EH, Hicks GE, Pohlig RT. Combined Sectional Meeting. Denver, CO. 2/13/20
- 37. Poster Presentation: Differences in Self-Reported Physical and Psychosocial Function between Those with and without Chronic Limb Pain. Beisheim EH, Horne JR, Hicks GE, **Sions JM**. American Orthotic & Prosthetic Association 2019 National Assembly. San Diego, CA. 9/26/19
- 38. Poster Presentation: Vibration Detection in Adults with a Transtibial Amputation with and without Residual Limb Pain. **Sions JM**, Beisheim EH, Horne JR, Hicks GE. American Orthotic & Prosthetic Association 2019 National Assembly. San Diego, CA. 9/26/19
- Platform Presentation: Differences in Outcome Measures among Individuals with Lower-Limb Loss. Sions JM, Beisheim EH, Horne JR. American Academy of Orthotists & Prosthetists: 45<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Orlando, FL. 3/9/19
- 40. Platform Presentation: Physical Performance Predicts Cadence Variability during Community Ambulation among Individuals with a Transtibial Amputation. Beisheim EH, Arch ES, Horne JR, Sions JM. American Academy of Orthotists & Prosthetists: 45<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Orlando, FL. 3/8/19
- 41. Poster Presentation: Differences in Pressure Tolerance between Adults with and without Phantom Limb Pain. Beisheim EH, Horne JR, **Sions JM**. 45<sup>th</sup> Academy Annual Meeting & Scientific Symposium.

  Orlando FL 3/6/19
- 42. Poster Presentation: Oteri ML, Beisheim EH, Horne JR, **Sions JM**. Exploration of Factors Related to Fall Risk Among Community-Dwelling Adults with Lower-Limb Loss. 45<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Orlando, FL. 3/6/19
- 43. Platform Presentation: Fear-Beliefs and Low Back Pain-Related Disability Help Explain Immediate Response to Neuromuscular Electrical Stimulation in Adults with Low Back Pain. **Sions JM**, Alroumi AM, Crippen DC, Hicks GE. Combined Sections Meeting. Washington, DC. 1/24/19
- 44. Platform Presentation: Associations between Trunk Muscle Function, Physical Performance, and Community Participation in Adults with Lower-Limb Amputation: A Preliminary Data Analysis. Beisheim EH, Hicks GE, Sions JM. Combined Sections Meeting. Washington, DC. 1/24/19
- 45. Poster Presentation: Dynamic Balance Performance-Based Measures among Adults with a Unilateral Lower-Limb Amputation: A Test-Retest Reliability Study. Cardoso J, Beisheim E, Horne JH, Akins J, Sions JM. American Orthotic & Prosthetic Association 2018 National Assembly. Vancouver, CA. 9/27/18
- 46. Platform Presentation: Low Back Pain Intensity Predicts Dynamic Balance Task Performance among Individuals with Lower-Limb Loss. Beisheim E, Cardoso J, Horne J, Akins J, **Sions JM**. American Orthotic & Prosthetic Association 2018 National Assembly. Vancouver, CA. 9/28/18
- Poster Presentation. Comparison of Longitudinal Pain and Function Outcomes across Hip-Spine Subgroups in Older Adults with Chronic Low Back Pain. Hicks GE, Pohlig RT, Coyle PC, Sions JM. 17<sup>th</sup> IASP World Congress on Pain 2018. Boston, MA. 9/13/18

- 48. Poster Presentation. Sadeghi A, Lin C, **Sions JM**, Billy G, Bible J, Cortes DH. A Novel Shear Wave Elastography Protocol to Quantify Localized Active Contraction of Lumbar Multifidus Muscles. Orthopaedic Research Society, New Orleans, LA. 3/13/18
- Poster Presentation: Serial Assessments of Outcome Measures Show Change and Help Justify K3
   Componentry in a Patient with Bilateral Amputations. Smith S, Sions JM, Manal TJ. Combined Sections Meeting. New Orleans, LA. 2/23/18
- 50. Platform Presentation: Using Ultrasound Imaging to Dose Neuromuscular Electrical Stimulation in Patients with Back Pain. Sions JM, Hicks GE. Combined Sections Meeting. New Orleans, LA. 2/22/18
- 51. Platform Presentation: Relationship between Residual Limb Pain Intensity and Mobility in Adults with Lower-Limb Amputations. Petel M, Sarlo FB, Horne JR, **Sions JM**. American Academy of Orthotists and Prosthetists 44<sup>th</sup> Academy Annual Meeting & Scientific Symposium. New Orleans, LA. 2/15/18
- 52. Platform Presentation: Differences in Outcome Measures between Patients With Lower-Limb Amputations Classified as K2 Versus K3. **Sions JM**, Sarlo FB, Horne JR. American Academy of Orthotists and Prosthetists 44<sup>th</sup> Academy Annual Meeting & Scientific Symposium. New Orleans, LA. 2/15/18
- 53. Poster Presentation. Assessing the Validity of the G-Walk BTS on Individuals with Unilateral Transtibial Amputations. Courtney D, Koller C, Cacciola C, Horne J, **Sions JM**, Arch ES. 41st Annual Meeting of the American Society of Biomechanics. Boulder, CO. 8/1/17
- 54. Poster Presentation: The Use of Ultrasound Imaging to Electrically Maximally Contact Multifidus Muscle in a Collegiate Field Hockey Player with Low Back Pain. Ackerman B, Giordano A, Manal TM, **Sions JM**. APTA NEXT Conference and Exposition. Boston, MA. 6/23/17
- 55. Platform Presentation: Self-Report Measures Help Predict Daily Step Counts among Individuals with a Unilateral Transtibial Amputation. **Sions JM**, Arch ES, Horne JR. American Academy of Orthotists and Prosthetists: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL. 3/4/17
- 56. Platform Presentation: Socket Fit Comfort Helps to Predict Physical Activity Level among Adults with a Unilateral Transtibial Amputation. **Sions JM**, Arch ES, Horne JR. American Academy of Orthotists and Prosthetists: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL. 3/4/17
- 57. Platform Presentation: Step Count Accuracy of the StepWatch and FitBit One among Individuals with a Unilateral Transtibial Amputation. Arch ES, **Sions JM**, Horne JR. American Academy of Orthotists and Prosthetists: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL. 3/4/17
- 58. Platform Presentation: Turning Biomechanics of Lower Limb Prosthesis Users with a History of Falls. Akins JS, Eigenbrot SS, Horvath AM, **Sions JM**, Horne J. American Academy of Orthotists and Prosthetists: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL. 3/2/17
- 59. Howard R. Thranhardt Award Lecture Series. Reduced Turn Ability, Transfer Ability, and Balance Confidence in Prosthesis Users with History of Falls. Akins JS, **Sions JM**, Poretti K, Eigenbrot SS, Horvath AM, Horne JR. American Academy of Orthotists and Prosthetists: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL. 3/1/17
- 60. Platform Presentation: Older Adults with a Primary Complaint of Low Back Pain: Hip Strength Helps to Explain Physical Performance. **Sions JM**, Pohlig RT, Hicks GE. Combined Sections Meeting: San Antonio, TX. 2/18/17
- Platform Presentation: Epidural Fat and Its Association with Pain, Physical Function, and Disability among Older Adults with Low Back Pain, Low Back Pain Plus Leg Pain, and Controls. Sions JM, Rodriguez C, Hicks GE. Combined Sections Meeting: San Antonio, TX. 2/17/17
- 62. Platform Presentation: Prosthetic Users who Report Multiple Falls in the Past Year Walk Faster Than Their Peers Who Report Fewer Falls. Smith S, Manal T, **Sions JM**. Combined Sections Meeting: San Antonio, TX. 2/17/17
- 63. Platform Presentation: Differences in Physical Performance Measures among Patients with Unilateral Limb Amputations Classified as Functional Level K3 versus K4. **Sions JM**, Manal TJ, Smith SC, Horne J, Sarlo F. AOPA National Assembly. Boston, MA. 9/10/16
- 64. Poster Presentation: Importance of Screening for Depression among Individuals with Lower Limb Amputations. **Sions JM**, Manal TJ, Smith SC, Horne J, Sarlo F. AOPA National Assembly. Boston, MA. 9/9/16
- 65. Platform Presentation: Multifidi Activity Helps to Explain Clinical Measures in Older Adults with Low Back Pain. **Sions JM**, Coyle P, Velasco T, Hicks GE. 2016 American Institute of Ultrasound in Medicine Convention: New York, NY. 3/19/16

- 66. Platform Presentation: Ambulation-Activities Difficulty and Residual Limb Pain, Socket-Fit, and Balance-Confidence. Sions JM, Horne J, Sarlo F, Manal TJ. American Academy of Orthotists & Prosthetists: 42<sup>nd</sup> Academy Annual Meeting & Scientific Symposium: Orlando, FL. 3/11/16
- 67. Poster Presentation: Professional Violinist Diagnosed with Suspected Thoracic Outlet Syndrome Returns to Concert Following Identification of Scapular Dyskinesia. Mahon J, Hunter-Giordano A, **Sions JM**. Combined Sections Meeting: Anaheim, CA. 2/18/16
- 68. Poster Presentation: Evaluating Older Adults for Lower Limb Prostheses: Selecting & Utilizing Performance-Based Measures with Consideration of Available Evidence. Smith S, **Sions JM**, Manal TJ. Combined Sections Meeting: Anaheim, CA. 2/18/16
- 69. Poster Presentation: A Comparison of Older Adults with and without Chronic Low Back Pain: Are Abdominal Muscle Differences Present at Rest and During a Straight Leg Raise? Velasco TO, **Sions JM**, Coyle P, Hicks GE. Combined Sections Meeting: Anaheim, CA. 2/18/16
- 70. Poster Presentation: Lumbar Exercises & Neuromuscular Electrical Stimulation versus Exercises Alone: Changes in Lumbar Multifidi Activity May be related to Electrical Stimulation Intensity. **Sions JM**, Coyle P, Hicks GE. Combined Sections Meeting: Anaheim, CA. 2/18/16
- 71. Poster Presentation: Exploration of Prosthetic Use and Community Integration among Older Patients with Unilateral Lower Limb Amputations. **Sions JM**, Hajek JN, Manal TJ, Sarlo F, Horne J. Combined Sections Meeting: Anaheim, CA. 2/18/16
- 72. Howard R. Thranhardt Lecture Award Series. Balance-Confidence may Help Explain Physical Function and Community-Integration among Individuals with Unilateral Transfemoral and Transtibial Amputations. **Sions** JM, Horne J, Sarlo F, Manal T. AOPA National Assembly. San Antonio, TX. 10/8/15
- 73. Platform Presentation: No Difference in Multifidi and Erector Spinae Cross-Sectional Area and Intramuscular Fat between Older Adults with and without Chronic Low Back Pain. **Sions JM**, Elliott JM, Hicks GE. Combined Sections Meeting: Indianapolis, IN: 2/6/15.
- 74. Platform Presentation: The Relationship between Self-Rated Health and Changes in Function in Older Adults with Chronic Low Back Pain. Coyle P, **Sions JM**, Velasco TV, Hicks GE. Combined Sections Meeting: Indianapolis, IN. 2/6/15
- 75. Platform Presentation: Extreme Skier Returns to Sport Following Trunk Puncture Wound after Treatment of Stabilization Exercises Supplemented with Neuromuscular Electrical Stimulation. Mahon J, Hunter-Giordano A, Sions JM. Combined Sections Meeting: Indianapolis, IN. 2/6/15
- 76. Platform Presentation: Improved Trunk Mobility is Linked to Better Function in Older Adults with Chronic Low Back Pain. Coyle P, Allen V, Velasco T, **Sions JM**, Hicks GE. Gerontological Society of America's 67<sup>th</sup> Annual Scientific Meeting: Washington, DC. 11/6/14
- 77. Platform Presentation: Contributions of Cardiovascular Risk Factors to Physical Performance in Older Adults with Chronic Low Back Pain. Allen V, Velasco T, Coyle P, **Sions JM**, Hicks GE. Gerontological Society of America's 67<sup>th</sup> Annual Scientific Meeting: Washington, DC. 11/6/14
- Platform Presentation: Psychosocial Contributors to Differences in Performance-Based vs. Self-Reported Function among Older Adults with Chronic Low Back Pain. Hicks GE, Sions JM. Gerontological Society of America's 67<sup>th</sup> Annual Scientific Meeting: Washington, DC. 11/6/14
- 79. Platform Presentation: Chronic Low Back Pain Intervention: Exercise + Neuromuscular Electrical Stimulation versus Exercise. **Sions JM**, Hicks GE. Gerontological Society of America's 67<sup>th</sup> Annual Scientific Meeting: Washington, DC. 11/6/14
- 80. Platform Presentation: Ultrasound Imaging Guides Physician Injection and Return to Sport Progression after a Hamstring Injury: A Case Study. Velasco T, Schmitt L, **Sions JM**. Combined Sections Meeting: Las Vegas, NV. 2/6/14
- 81. Platform Presentation: Trunk Mobility and Performance in Older Adults with and without Chronic Low Back Pain. Coyle P, Velasco T, **Sions JM**, Hicks GE. Combined Sections Meeting: Las Vegas, NV: 2/5/14.
- 82. Platform Presentation: Comparison of Bilateral versus Unilateral Chronic Low Back Pain in Older Adults: Differences in Muscle Size, Impairments, and Physical Functioning. **Sions JM**, Velasco T, Hicks GE. Combined Sections Meeting: Las Vegas, NV. 2/5/14
- 83. Platform Presentation: Low Back Pain and the Older Adult: Contributions of Comorbidity Burden to Physical Performance in Older Adults with Chronic Low Back Pain. Allen V, **Sions JM**. Hicks GE. Gerontological Society of America's 66<sup>th</sup> Annual Scientific Meeting: New Orleans, LA. 11/22/13
- 84. Platform Presentation: Low Back Pain and the Older Adult: Potential Pathways to Address Functional Limitations. A Trunk Muscle Training Program Augmented with Neuromuscular Electrical Stimulation Appears to Improve Function in Older Adults with Chronic Low Back Pain: A Pilot Randomized Trial.

- Hicks GE, **Sions JM**. Gerontological Society of America's 66th Annual Scientific Meeting: New Orleans, LA. 11/22/13
- 85. Platform Presentation: Low Back Pain and the Older Adult: Potential Pathways to Address Functional Limitations. High Fear Avoidance Beliefs are Associated with Poorer Physical Function in Older Adults with Chronic Low Back Pain. Hicks GE, **Sions JM**. Gerontological Society of America's 66th Annual Scientific Meeting: New Orleans, LA. 11/22/13
- 86. Poster Presentation: Ultrasound Imaging: A Comparison of Anterior and Lateral Trunk Muscle Thicknesses in Healthy, Older Males and Females. **Sions JM**, Hicks GE. APTA Meeting: Salt Lake City, UT. 6/28/13
- 87. Platform Presentation: Inter-Examiner Reliability for Ultrasound Imaging of the Anterior and Lateral Abdominal Walls in Older versus Younger Adults. Velasco T, **Sions JM**, Hicks GE. Combined Sections Meeting: San Diego, CA. 1/23/13
- 88. Poster Presentation: Posterior Trunk Muscle Size and Activity in the Presence of Low Back Pain and Age-Related Changes, Sions JM, Hicks GE. Combined Sections Meeting: San Diego, CA. 1/22/13
- 89. Poster Presentation: Criterion Validity of Ultrasound Imaging for the Assessment of Posterior Trunk Muscles among Older Adults with Low Back Pain. **Sions JM**, Hicks GE. APTA: Tampa, FL. 6/8/12
- 90. Poster Presentation: Criterion Validity of Rehabilitative Ultrasound Imaging for the Paraspinal Muscles in Older Adults. **Sions JM**, Hicks GE. Combined Sections Meeting: Chicago, IL. 2/9/12
- 91. Poster Presentation: Hip Manual Therapy for Older Adults with a Primary Complaint of Chronic Low Back Pain and Co-Existing Hip Impairments: A Case Series. Velasco T, **Sions JM**, Hicks GE. Combined Sections Meeting: Chicago, IL. 2/8/12
- 92. Platform Presentation: Chronic Low Back Pain and Performance-Based Function in Older Adults: A Case-Control Study. Hicks GE, **Sions JM.** Combined Sections Meeting: New Orleans, LA. 2/12/11
- 93. Platform Presentation: Asymmetry of the Lumbar Multifidi in Older Adults with Chronic Low Back Pain as Compared to Healthy Controls. **Sions JM**, Hicks GE. Combined Sections Meeting: New Orleans, LA. 2/11/11
- Poster Presentation: Spatiotemporal Parameters of Gait in Older Adults with and without Chronic Low Back Pain. Hicks GE, Sions JM, Velasco T. Orthopedic Research Society Annual Meeting. Long Beach, CA. 1/14/11
- 95. Poster Presentation. Rehabilitative Ultrasound Imaging of the Posterior Trunk Muscles in Older Adults with and without Chronic Low Back Pain: an Investigation of Measurement and Procedural Reliability.

  Sions JM, Velasco T, Hicks GE. Orthopedic Research Society Annual Meeting. Long Beach, CA. 1/14/11
- 96. Poster Presentation: Fear-Avoidance Beliefs Are Associated with Disability in Older Adults with Low Back Pain. **Sions JM**, Hicks GE. Exercise and Physical Activity in Aging Conference (EXPAAC): Indianapolis, IN. 7/29/10 AND Platform Presentation: CSM: San Diego, CA. 2/20/10
- 97. Poster Presentation: Neuromuscular Electrical Stimulation as an Adjunct to a Trunk Muscle Training Program for an Older Adult with Low Back Pain. Velasco T, Hicks GE, **Sions JM**. Exercise & Physical Activity in Aging Conference (EXPAAC): Indianapolis, IN. 7/29/10
- 98. Poster Presentation: Reproduction and Treatment of Quadratus Lumborum Trigger Points in a Collegiate Pitcher Using Motor Transcutaneous Electrical Stimulation. Velasco TO, **Sions JM**, Manal TJ. APTA Annual Meeting: Boston, MA. 6/17/10
- 99. Poster Presentation: Lumbar Stiffness is Associated with Physical Health and Low Back Pain-Related Disability in Community-Dwelling Older Adults. **Sions JM**, Hicks GE. APTA Annual Meeting: Boston, MA. 6/17/10
- 100. Poster Presentation: Reducing Chronic Shoulder Pain in a Throwing Athlete: the Role of the Thoracic Spine. Flug, J, Bell KA, **Sions JM**, Manal TJ. APTA Annual Meeting: Baltimore, MD. 6/12/09
- 101. Poster Presentation: Treatment of Severe Spinal Stenosis Using 100% Body-Weight Mechanical Traction and Body-Weight Supported Treadmill Training. Sions JM, Manal TJ. APTA Annual Meeting: Baltimore, MD. 6/12/09
- 102. Platform Presentation: Physical Therapy Interventions for an Older Adult with Low Back Pain and History of Scoliosis. Ciampa J, **Sions JM**, Ciolek C, Manal TJ. Combined Sections Meeting: Las Vegas, NV. 2/12/09
- 103.Poster Presentation: Thoracic Manipulations May Show Promise in the Conservative Management of Thoracic Outlet Syndrome. **Sions JM**, Manal TJ. Combined Sections Meeting: Las Vegas, NV. 2/12/09
- 104.Poster Presentation: Combining Mobilization and Stabilization Clinical Prediction Rules Provide Relief for Patient with Acute Exacerbation of Chronic Low Back Pain. Sions JM, Manal TJ. Combined Sections Meeting: Las Vegas, NV. 2/12/09

- 105.Platform Presentation: Electrical Stimulation Case Studies: Use of NMES to Augment Return of Wrist Extensor Strength in an Information Technologist. Sions JM, Goodstadt NM, Manal TJ. Combined Sections Meeting: Nashville, TN. 2/8/08
- 106.Platform Presentation: Electrical Stimulation Case Studies: Can Electrical Stimulation to the Quadriceps Following TKA, Still Strengthen if Force Output Isn't Measured? **Sions JM**, Goodstadt NM, Manal TJ. Combined Sections Meeting: Boston, MA. 2/16/07

## **LOCAL**

- 1. Oral Poster Presentation. Clinical Mobility Metrics Distinguish Between Sedentary and Non-Sedentary Adults with Lower-Limb Amputation. Seth M, Pohlig RT, Hicks GE, **Sions JM**. University of Delaware. College of Health Sciences Research Day. Newark, DE. 3/9/22
- Poster Presentation. Hip Strength, Falls, and Performance-Based Function After Amputation: Analysis
  from Data from the University's Amputee Clinic. Stauffer S, Smith SC, Horne JR, Farlo FB, Sions JM.
  University of Delaware. College of Health Sciences Research Day. Newark, DE. 3/9/22
- Poster Presentation. Chronic Low Back Pain among Adults with Transtibial versus Transfemoral Amputation. Gillam R, Stauffer S, Seth M, Horne JR, Sions JM. Undergraduate Research Symposium. Newark, DE. 8/12/21
- 4. Poster Presentation. Vibration Detection Adults with a Transtibial Amputation with and without Residual Limb Pain. **Sions JM**, Beisheim EH, Horne JR, Hicks GE. ACCEL Program: IDeAs Symposium. Newark, DE. 11/7/19
- Poster Presentation. Differences in Self-reported Physical and Psychosocial Function between those with and without Chronic Limb Pain and Vibration Detection in Adults with a Transtibial Amputation with and without Residual Limb Pain. Beisheim EH, Horne, JR, Hicks GE, Sions JM. ACCEL Program: IDeAs Symposium. Newark, DE. 11/7/19
- 6. Poster Presentation. Shape Modeling and Multi-Axis Segmentation for Regional Tissue Identification in Radiological Imaging. Makrogiannis S, Okorie A, Biswas T, **Sions JM**, Ferrucci L. ACCEL Program: IDeAs Symposium. Newark, DE. 11/7/19
- Poster Presentation: Using Ultrasound Imaging to Dose Neuromuscular Electrical Stimulation in Patients with Chronic Low Back Pain. Crippen D, Hicks GE, Pohlig RT, Sions JM. Summer Research Symposium. Newark, DE. 8/10/17
- 8. Poster Presentation: Adults with Lower-Limb Amputations: Higher Residual Limb Pain Intensity is Associated with Poorer Physical Function. Petel M, Horne J, **Sions JM**. Summer Research Symposium. Newark, DE. 8/10/17
- 9. Poster Presentation: Evaluation of Accuracy of the Step Activity Monitors Among Individuals with Lower Limb Amputations. Christensen M, **Sions JM**, Horne J, Arch E. Summer Research Symposium. Newark, DE. 8/10/17
- 10. Poster Presentation: Assessing the Validity of the G-Walk BTS on Individuals with Unilateral Transtibial Amputations. Courtney C, Koller C, Cacciola C, Horne J, **Sions JM**, Arch ES. Annual Biomechanics Research Symposium. Center for Biomedical Engineering Research. Newark, DE. 5/12/17
- 11. Poster Presentation: Criterion Validity of Ultrasound Imaging as Compared to Magnetic Resonance Imaging in Older Adults. **Sions JM**, Hicks GE. 8<sup>th</sup> Annual Biomechanics Research Symposium. Center for Biomedical Engineering Research. Newark, DE. 5/13/11

# **Invited Presentations**

- 1. Amputee Coalition 2022 National Conference. *Finding and Fixing Your Fall-Risk Factors*. Palm Desert, CA. 8/12/22
- 2. Pediatric Physical Therapy Podcast. Characterizing Pain among Adolescents and Young Adults with Arthrogryposis Multiplex Congenita. Online. 5/25/22
- 3. 48th Academy Annual Meeting and Scientific Symposium. *Pain. Understanding and Treatment.* Atlanta, GA. 3/4/22
- 4. New Jersey Chapter of the American Academy of Orthotists and Prosthetists. *Assessment of Post-Amputation Pain: State of the Science and Integration into Prosthetic Clinical Practice*. Atlantic City, NJ. 11/4/21

- 5. AIUM and APTA Webinar. Musculoskeletal Ultrasound Imaging in the Hands of the Physical Therapist. Its Current and Expanding Utility. Part I. Online. 11/1/21
- 6. Amputee Coalition's 2021Virtual National Conference. Speak Up for Yourself-Taking an Active Role in Your Care Team. Online. 10/30/21
- 7. University of Colorado, Interdisciplinary Movement Science Lab Scientific Meeting. *Think Tanking...Research in Lower-Limb Amputation*. Virtual. 8/12/21
- 8. Penn Institute for Rehab Medicine. Amputee Special Interest Group for Clinicians. *Update on Outcome Measures for Adults with Lower-Limb Loss*. Virtual. 9/18/20
- 9. Johns Hopkins Grand Rounds. "How Do I Measure Up?" Providing Patients with Lower-Limb Loss with Outcome Measure Results. Virtual. 4/28/20
- 10. ACCEL Annual Meeting. Exploring Sensory Dysfunction, Prosthesis Use, Balance, and Falls in Adults with and without Residual Limb Pain. Charleston, SC. 2/24/20
- 11. University of Maryland Network & University of Maryland School of Medicine, Department of Physical Therapy and Rehabilitation Science. Update on Prosthetics and Outcome Measures. *Outcome Measures in Limb Loss*. Baltimore, MD. 11/20/19
- 12. New Jersey Chapter of the American Academy of Orthotists and Prosthetists. *Screening Patients with Lower-Limb Loss*. Atlantic City, NJ. 11/7/19
- 13. Hackensack Meridian Health JFK Medical Center. Excellence of Care and Innovative Concepts in Lower Limb Amputation and Prosthetic Management. *Objective Functional Assessment of Adults with Lower-Limb Loss*. Edison, NJ. 6/7/19
- 14. University of Maryland Rehabilitation Network Conference. *Data-Informed Recommendations for Patients with Unilateral Lower-Limb Loss*. Baltimore, MD. 6/1/19
- 15. Delaware CTR-ACCEL. Junior Investigators Network Meeting. *Residual Limb Pain Post-Amputation: Vibration Detection and Balance*. Virtual. 4/25/19
- 16. American Academy of Orthotists & Prosthetists: 45<sup>th</sup> Academy Annual Meeting & Scientific Symposium. Back to the Future: A Look over the Five-Year Horizon of Academy-Led Outcome Measure Initiatives. *K2 versus K3? Using Outcome Measures to Support Functional Level Classification*. Orlando, FL. 3/9/19
- 17. Delaware CTR-ACCEL Quarterly Meeting: Somatosensory Dysfunction, Prosthetic Use, and Function in Adults with Limb Loss. Wilmington, DE. 11/28/18
- 18. University of Maryland Rehabilitation & Orthopaedic Institute: Amputee Walking School: *Measuring Outcomes in Adults with Limb-Loss: An Update for Clinicians*. Linthicum, MD. 11/14/18
- 19. New Jersey Chapter of the American Academy of Orthotists and Prosthetists. *Justifying K-Level Assignment Using Outcome Measures in Adults with a Unilateral Lower-Limb Amputation*. Atlantic City, NJ. 11/8/18
- 20. American Academy of Orthotists and Prosthetists Webinar. *Differences in Outcome Measures between Patients with Lower-Limb Amputations Classified as K2 versus K3*. Virtual. 6/6/18
- 21. Penn State College of Medicine's Continuing Education. Current Concepts in Limb Loss: Tactics, Touch, Technology, and Tomorrow. *Justifying K-level Assignment Using Outcome Measures in Adults with a Unilateral Lower-Limb Amputation*. Hershey, PA. 4/5/18
- 22. Delaware State University: OSCAR Lecture Series. Low Back Pain in Older Adults: Exploring Trunk Muscle Morphology as a Target for Rehabilitation. Dover, DE. 10/19/17
- 23. University of Maryland Rehabilitation & Orthopaedic Institute: Amputee Walking School: *Lower Limb Prosthesis Prescription and Training Considerations*. Linthicum, MD. 6/21/17
- 24. Independence Prosthetics-Orthotics, Inc. *Physical Activity, Turning, and Balance in Adults with Lower-Limb Amputations Symposium.* Newark, DE. 5/9/17
- 25. The Gait Society and Lower Limb Prosthetics Society. *Smart Data: The Interdisciplinary Approach at the University of Delaware Amputee Clinic*. American Academy of Orthotists and Prosthetists: 43<sup>rd</sup> Annual Meeting and Scientific Symposium: Chicago, IL. 3/3/17
- 26. Ammon Education Center: Christiana Health Care Center. G-Codes Implementation. Newark, DE. 5/21/13
- 27. Delaware Physical Therapy Association: *Ultrasound Imaging of the Trunk: A New Way to View Patients with Low Back Pain.* Wilmington, DE. 10/27/12

# **Other (Peer-Selected)**

1. Pediatrics Programming: Arthrogryposis: While Rare, Enhance Your Clinical Care. Donohoe M, **Sions JM**, Cherry S. Combined Sections Meeting. Orlando, FL-Online Content. 2/21-3/21

- Geriatrics Programming: Evaluation of an Amputee: Ensuring a Leg to Stand On! Sions JM, Manal TJ, Smith S. APTA NEXT Conference and Exposition. Boston, MA. 6/23/17
- 3. Educational Session. It's Not Just for G-Codes! Measuring Patient Outcomes to Guide Intervention. **Sions JM**, White D, Hicks GE, Manal TJ. NEXT: Baltimore, MD. 6/5/15
- 4. Orthopedic Programming: Challenging Ageism in Outpatient Physical Therapy Orthopedics: Applying Evidence to the Evaluation and Treatment of Older Adults with Low Back Pain. Manal TJ, Hicks GE, **Sions JM**, Velasco T. Combined Sections Meeting: New Orleans, LA. 2/11/11
- Geriatrics Programming: Treating Low Back Pain in Older Adults- Special Understanding of Epidemiology, Bone Related Changes, and Function Can Lead to an Improved Lifestyle. Manal TJ, Hicks GE, Sions JM, Velasco T. Combined Sections Meeting: San Diego, CA. 2/19/10
- 6. Special Interest Series: Physical Therapy Ethics. Sions JM. Newark, DE. 11/1/09-11/30/09

## PROFESSIONAL LICENSES

- Physical Therapist, Delaware. January 2007-present [#J1-0002171]
- Physical Therapist, West Virginia. August 2004-present [#PT 002447]

# **CERTIFICATIONS**

- University of Delaware Office of Equity & Inclusion, LEAD (Leveraging Equity & Diversity) Ally Certification, May 2021-present
- University of Delaware, MRI Level 1 User, March 2019-present
- American Physical Therapy Association (APTA): Academy of Geriatric Physical Therapists. Certified Exercise Expert for Aging Adults (CEEAA), Summer 2010-present
- APTA. Certified Advanced Clinical Instructor. October 2009-present
- University of Delaware. Research Ethics Peer Educator. February 2009- December 2019
- APTA: American Board of Physical Therapy Specialties. Board-Certified Clinical Specialist in Orthopaedic Physical Therapy, June 2008-June 2028
- American Red Cross. Emergency Medical Responder with Basic Life Support and Emergency Oxygen. August 2007-August 7, 2023
- APTA: Certified Clinical Instructor. November 2006-present

## PROFESSIONAL MEMBERSHIPS

- Arthrogryposis Multiplex Congenita Support, Inc. 2019-present
- American Physical Therapy Association (APTA): Academy of Pediatric Physical Therapy. 2019-present
- APTA: Federal Section. Amputation Care Special Interest Group. 2019-present
- APTA: Federal Section. 2019-present
- NIH Early Career Reviewer Program. 2018-2019
- APTA: Academy of Orthopaedic Physical Therapy. Pain Management Special Interest Group. 2018-present
- American Academy of Orthotists & Prosthetists. 2016-present
- American Institute of Ultrasound in Medicine. 2016-present
- APTA: Academy of Orthopaedic Physical Therapy. Imaging Special Interest Group. 2012-present
- APTA: Research Section. 2010-present
- APTA: Academy of Geriatric Physical Therapy. 2008-present
- APTA: Academy of Orthopaedic Physical Therapy. 2006-present
- Vestibular Disorders Association. 2006-present
- APTA. 2002-present

#### PROFESSIONAL SERVICE

# **National Committees/Appointments**

- Pain Practice Analysis for Physical Therapy to Determine Need for Pain Specialty Certification. May 2019present
- APTA: Academy of Orthopaedic Physical Therapy. Imaging Special Interest Group. Research Committee. April 2018-December 2021
- APTA: Pain Workgroup. Representative for Academy of Geriatric Physical Therapy. April 2018-December 2020
- American Academy of Orthotists & Prosthetists. Outcomes Research Committee: Lower-Limb Loss Toolbox Initiative. 2018-2019
- APTA: Academy of Orthopaedic Physical Therapy. Imaging Special Interest Group. Scholarship Committee, 2017-present
- American Physical Therapy Association (APTA): Academy of Orthopaedic Physical Therapy. Imaging Special Interest Group. Strategic Planning Committee. February 2016, July 2020-December 2021
- APTA: Academy of Geriatric Physical Therapy. State Advocate. September 2012-December 2017

# **Scientific Reviewer**

- American Orthotic and Prosthetic Association (AOPA)/Center for Orthotics and Prosthetics Learning and Outcomes/Evidence-Based Practice (COPL). Grant Reviewer. June 2022
- NIH. NCMRR. Special Interest Panel. Grant Reviewer. July 2021
- Rehabilitation Research and Development SPiRE Program. Veterans Health Administration. April 2021, October 2021, April 2022
- American Academy of Orthotists & Prosthetists. Academy Annual Meeting & Scientific Symposium. Abstract Reviewer. September 2020, October 2021, August 2022
- Mitacs Accelerate, Canadian Research Internship Program. Grant Reviewer. July 2020; July 2022
- Department of Defense, CDMRP Pre-Application Grant Reviewer. May 2020
- Department of Defense, CDMRP Grant Reviewer. September 2019, January 2020, October 2020, April 2021
- International Society for Prosthetics & Orthotics. 17<sup>th</sup>/18<sup>th</sup>/19<sup>th</sup> World Congress 2019/2021/2023. Abstract Reviewer. March 2019, March 2021, October 2022
- Orthotic & Prosthetic Education & Research Foundation. Grant Reviewer: January 2019, March 2020, March/April 2021
- NIH MRS: MOSS-V(15) Small Business. Grant Reviewer. March 2018
- American Physical Therapy Association (APTA), Combined Sections Meeting. Orthopaedics, Poster Award Committee. January 2013
- APTA. PTNow.org. 2015
- Gerontological Society of America's Annual Scientific Meeting. Abstract Reviewer. 2015, 2016
- APTA, Combined Sections Meeting. Orthopaedics, Abstract Reviewer. 2013-2022

# Manuscript Reviewer (in past 5 years)

- Pain Pract: 2022
- Pain Res Manag: 2022
- J Musculoskel Neuronal Interactions: 2022
- Musculoskel Sci Pract: 2021
- J Clin Med: 2020
- Dis Rehabil: 2020-2021
- Prosthet Orthot Int: 2019-2022

- *Phys Med Rehabil*: 2018-2022
- Inj Epidemiol: 2018
- J Pain Res: 2017-2022
- *Phys Ther*: 2017; 2019; 2021-2022
- *J Prosthet Orthot*: 2017; 2020
- Pain Med: 2017; 2022
- J Ortho Sports Phys Ther: 2016-2017; 2018-2021
- *Pediatr Phys Ther*: 2016; 2021
- *Phys Ther Sport*: 2016-2018; 2020-2021
- *Physiother Theory Pract*: 2016; 2020-2021
- Eur J Physiother: 2015; 2018
- J Geriatr Phys Ther: 2014-2018; 2020; 2022
- Arch Phys Med Rehabil: 2012-2016; 2020-2022
- *J Man Manip Ther*: 2012-2016; 2018

# **COMMUNITY OUTREACH & SERVICE**

- Integrate-Pain Core Outcome Set Initiative: Delphi Process participant. Acute-to-Chronic and Chronic Pain. July 2022
- Poster Judge. CHS Research Day. University of Delaware, Newark, DE. March 2022
- Invited Stakeholder Review, Common Data Elements for Lower Limb Loss Research Standards, Eunice Kennedy Shriner National Institute of Child Health and Human Development, March 2021
- Invited Stakeholder Review, Pain Education Manual, Pain Special Interest Group, American Physical Therapy Association, February 2021
- Patient Educational Seminars by the Delaware Limb Loss Studies laboratory
  - o "Sock It To Me: Managing Daily Limb Changes"
    - Wilmington Hospital Amputee Group. Virtual. August 2020
    - Amputee Coalition National Conference. Virtual. August 2020
  - o "Working the Brain in Phantom Limb Pain: An Overview of Conservative Treatment Strategies"
    - Amputee Coalition National Conference. Virtual. August 2020
  - o "Lower-Limb Loss and Low Back Pain: Causes, Impact, and Treatment"
    - Amputee Coalition National Conference. San Antonio, TX. July 2019
    - Wilmington Hospital Amputee Group. Wilmington, DE. May 2019
  - "Knowing Your K-Level and Why it Matters!"
    - Amputee Coalition National Conference. Virtual. August 2020
    - Amputee Coalition National Conference. San Antonio, TX. July 2019
    - Adventist Rehabilitation Hospital Amputee Support Group. Rockville, MD. January 2019
    - Amputee Coalition Limb Loss Education Day. West Orange, NJ. October 2018
    - Good Shepherd Penn Partners Amputee Support Group. Philadelphia, PA. June 2018
    - Wilmington Hospital Amputee Group. Wilmington, DE. April 2018, August 2019
- University of Delaware STAR Cook-off. Balance Screens. Newark, DE. February 2017
- Absalom Jones Health Fair with a Flare. Balance Screens. Hockessin, DE. November 2016
- Newark Community Day. PT Educational Booth. Newark, DE. September 2016
- Campaign to Revoke Medicare LCD Proposal for Lower Limb Prosthetics Coverage: Medicare Board Meeting Speaker. Linthicum, MD. August 2015
- Patient Advocacy. Medicare Policy Changes for Lower Limb Prosthetic Coverage. July

  –August 2015
- Modern Maturity Center. Low Back Pain Education Table. Dover, DE. May 2015
- Patient Educational Seminar by the Delaware Spine Studies
  - o "Low Back Pain: Understanding Your Treatment Options & Opportunities to Advance Research"
    - New Castle Senior Center, New Castle, DE. February 2014
- Newark Community Day. PT Educational Booth. Newark, DE. September 2014
- University of Delaware. Spring Employee Health Fair. Newark, DE. May 2013

- Luther Towers I Health Faire. Balance Screens. Wilmington, DE. April 2013
- Shamrock & Roll Race. PT Booth. Newark, DE. March 2013
- Sellers Senior Center Health Fair. Balance Screens. Wilmington, DE: February 2013
- Absalom Health Faire. Balance Screens. Wilmington, DE. November 2012
- Newark Community Day. Newark, DE. September 2012
- Newark Senior Center. Low Back Pain Education Table. Newark, DE. October 2011
- Luther Towers Mini-Health Fair. Wilmington, DE. September 2011
- Rodney Court Apartments Mini-Health Fair. Wilmington, DE. July 2011
- Chelton Apartments Mini-Health Fair. New Castle, DE. April 2011
- Patient Educational Seminar by the Delaware Spine Studies
  - "Low Back Pain in Older Adults"
    - Oak Grove Senior Center. Elsmere, DE. April 2013
    - New Castle Senior Center. New Castle, DE. June 2010; August 2012
    - Howard Weston Senior Center. New Castle, DE. June 2010
    - Clarence Fraim Community Center. Wilmington, DE. February 2010
    - Sacred Heart Village. Wilmington, DE. November 2009
    - Absalom Community Center. Wilmington, DE. October 2009
    - Marydale Retirement Community. Newark, DE. October 2009
  - o "Osteoporosis & Vertebral Fractures: A Cause of Low Back Pain in Older Adults"
    - Absalom Jones Community Center. Newark, DE. March 2013
    - Claymore Women's Club. Wilmington, DE. March 2013
    - New Castle Senior Center. New Castle, DE. January 2013
    - Marydale Retirement Community. Newark, DE. August 2010
- Seller's Community Center: Low Back Pain Education Table. Wilmington, DE. October 2009
- Newark Nite. "Ask the PT". Newark, DE. June 2009
- Celebrating Life: 50+ Expo. Wilmington, DE. May 2009
- Valero Health and Wellness Fair. Delaware City, DE. May 2009
- University of Delaware. Spring Employee Health Fair. Newark, DE. April 2009
- Delaware Healthy Living Expo. Newark, DE. March 2009
- Multiple Sclerosis Walk. Newark, DE. May 2007