

Curriculum Vitae - Daniel S. Peterson, PhD

Assistant Professor: College of Health Solutions, Arizona State University
Health Science Specialist: Research Division, Phoenix VA Medical Center
602-827-2279 • daniel.peterson1@asu.edu • ORCID: 0000-00024639-6544

My work aims to improve our understanding of why people with neurological conditions fall, and how to reduce the frequency of future falls. To achieve this goal, I conduct human subject research to 1) characterize balance deficits, 2) understand control of balance at the neural level, and 3) develop and assess fall-prevention rehabilitation interventions. My lab engages an interdisciplinary team of engineers, cognitive neuroscientists, neuropsychologists, and clinicians. These collaborations ensure our work is guided by a theoretical framework and simultaneously remains highly translatable to the clinical community. Our goals of reducing falls and improving people's quality of life directly support the mission of the College of Health Solutions to "make meaningful contributions to the health and well-being of society".

EMPLOYMENT & EDUCATION

Employment

Current positions

Assistant Professor: Arizona State University College of Health Solutions Director: Gait and Balance Disorders Laboratory	2016 – Present
Health Science Specialist; Phoenix VA Health Care System Research Division	2018 – Present
Affiliate Faculty: Arizona State University School of Biological and Health Systems Engineering	2016 – Present
Adjunct Instructor: University of Utah Program in Physical Therapy	2015 – Present

Previous positions

Postdoctoral Researcher: Oregon Health & Science University Department of Neurology	2013 – 2016
Health Science Specialist: Salt Lake City & Portland VA Medical Centers Research Division	2014 – 2016
Research Fellow: Steadman Philippon Research Foundation Biomechanics Laboratory	2008 – 2009

Education

Doctor of Philosophy – Movement Science Washington University in St. Louis	2009 – 2013
Master of Science – Clinical Investigation Washington University in St. Louis	2011 – 2013
Master of Science – Kinesiology (Biomechanics) Pennsylvania State University	2006 – 2008
Bachelor of Science – Exercise and Sport Sciences University of Florida	2002 – 2006

RESEARCH & HONORS

Funding

* Indicates internal funding

Current Funding (n=4; all as PI or Co-PI)

- 1) **Funding Source:** Michael J Fox Foundation
Role: PI
Total Costs: \$409,013
Title: Protective Step Training in People with PD and Postural Disturbances
Purpose: Understand the impact of perturbation training on people with PD who are at risk for falls.
Proposed effort: 1 calendar month / year
Dates of Award: 1/2019 – 10/2021

- 2) **Funding Source:** U.S. Dept. of Veterans Affairs / Career Development Award (CDA-2; RX002341)
Role: PI
Total Direct Costs: \$721,117
Title: “Protective Step Training in People with Multiple Sclerosis”
Purpose: Understand the whether long-term protective step training can improve protective stepping in people with MS; identify predictors of responsiveness to perturbation training.
Effort: 7.5 calendar months / year
Dates of Award: 10/2018 – 10/2023

- 3) ***Funding Source:** College of Health Solutions Jumpstart Grant
Role: PI
Total Costs: \$18,000*
Title: Assessing the use of laser shoes for freezing of gait in people with Parkinson’s disease
Purpose: Characterize the impact of a new technology to improve walking in people with PD
Proposed effort: 0 calendar months / year
Dates of Award: 2019-2021

- 4) ***Funding Source:** Northern Arizona University Seed Grant Program
Role: Co-PI (PI: Denney, Ivy)
Total Costs: \$2,000
Title: Assessing the use of laser shoes for freezing of gait in people with Parkinson’s disease
Purpose: Characterize the impact of a new technology to improve walking in people with PD
Proposed effort: 0 calendar months / year
Dates of Award: 2019-2021

Completed Funding (n=8)

Since 2016

- 1) **Funding Source:** National Multiple Sclerosis Society / Pilot Grant
Role: Co-PI (PI of ASU subcontract; Co-PI: Fling; Colorado State University)
Total Costs: \$40,000
Subaward Costs to ASU / DSP: \$13,607 / \$13,607
Title: Interhemispheric communication in people with MS: Implications for balance and mobility
Purpose: Investigate how interhemispheric communication is altered in people with MS, and how this may impact motor performance and learning.
Effort: 1 calendar months
Dates of Award: 03/2018 – 02/2019

- 2) **Funding Source:** National Multiple Sclerosis Society (NMSS) / Research Grant (RG-1701-26763)
Role: Co-I (PI of ASU subcontract; Project PI: Dibble; University of Utah)
Total Costs: \$458,000
Subaward Costs to ASU / DSP: \$32,880 / \$32,880
Title: Gaze and postural stability in persons with MS at risk for falls: Characterizing deficits and response to treatment.
Purpose: The purpose of this RCT is to characterize the impact of task specific gaze and postural stability training on balance, dizziness, and vestibular function in people with MS.

Effort: 1 calendar month / year
Dates of Award: 10/2017-10/2020

- 3) **Funding Source:** Lundbeck LLtC / Investigator Initiated Research Project
Role: Co-I (PI: Lieberman; Barrow Neurological Institute, AZ)
Total Costs: \$350,000
Subaward Costs to ASU / DSP: \$65,000 / \$16,250
Title: Effect of L-DOPS on falls among Parkinson's disease patients with orthostatic hypotension
Purpose: Understand the effect of anti-hypotension medication on balance in people with PD
Proposed effort: 1 calendar months / year
Dates of Award: 2018-2020

- 4) ***Funding Source:** Center for Innovation in Healthy & Resilient Aging
Role: Co-I (PI: Krishnamurthi; ASU [CONHI] faculty)
Total Direct Costs: \$50,000*
Title: Developing a real-time fall risk assessment in Parkinson's disease by continuous monitoring of free-living activities
Purpose: To evaluate the predictive capacity of real-time, free-living activities for fall prediction in people with Parkinson's disease.
Effort: 0 calendar months / year
Dates of Award: 1/2019 – 1/2021

- 5) **Funding Source:** Arizona State University & Mayo Medical Center / Pilot Seed Grant
Role: PI
Total Costs: \$50,000
Title: Dual-task Perturbation Training: A novel intervention for fall prevention in people with PD
Purpose: Determine whether people with Parkinson's disease can improve protective stepping over 1-day of practice while attention is divided (i.e. under dual tasking scenario).
Effort: 0%
Dates of Award: 1/2018 – 1/2019

- 6) **Funding Source:** National Multiple Sclerosis Society / Pilot Grant (PP-1512-07101)
Role: Co-I (PI of ASU subcontract; PI: Foreman; University of Utah)
Total Costs: \$39,640
Subaward Costs to ASU / DSP: \$16,200 / \$16,200
Title: Compensatory Stepping in People with Multiple Sclerosis
Purpose: The purpose of this study is to determine the degree to which people with multiple sclerosis can improve protective stepping over a short-term (1-day) practice period.
Effort: 1.2 calendar months / year
Dates of Award: 09/2016-01/2018

Pre-2016

- 7) **Funding Source:** U.S. Dept. of Veterans Affairs / Career Development Award (CDA-1; I01BX007080)
Role: PI
Total Costs: \$160,983
Title: Effect of levodopa on postural motor learning in Parkinson disease
Purpose: Understand whether people with Parkinson's disease improve protective stepping responses after repeated postural perturbations (i.e. simulated trips), and the effect of levodopa on improvements.
Effort: 12 calendar months / year
Dates of Award: 2014-2016

- 8) **Funding Source:** Medical Research Foundation of Oregon / Early Clinical Investigator Award
Role: PI
Total Costs: \$19,971
Title: Postural motor learning in Parkinson's disease
Purpose: Characterize the performance and improvement of protective stepping between healthy young, healthy old, individuals with Parkinson's disease.
Effort: 0%
Dates of Award: 2014-2015

Submitted; Unfunded

- 1) **Funding Source:** National Institutes of Health (R01)
Role: Multiple PI (MPI-Peterson, MPI-Lee; ASU; Biomedical Engineering)
Total Direct Costs: \$1,579,948
Title: Identifying Targets for Fall-prevention Rehabilitation in People with Parkinson's Disease
Purpose: Determine which factors of balance are most relevant for fall prevention in people with Parkinson's Disease
Effort: 1.5 calendar months / year
Dates of Award: 2021-2025
*This A0 application was scored at the 39th percentile in 2/18/21, and **will be resubmitted July, 2021.***
- 2) **Funding Source:** Michael J Fox Foundation
Role: Co-PI (Co-PI: Meier M; ASU- Psychology)
Total Costs: \$891,558
Title: Effects of cannabis dispensary edibles on pain, sleep, mood
Purpose: Characterize the impact cannabis on motor and non-motor symptoms in people with Parkinson's disease
Proposed effort: 1.5 calendar months / year
Dates of Award: 2021-2024
- 3) **Funding Source:** National Institutes of Health (R01)
Role: Multiple PI (MPI- Schaefer; ASU; Biomedical Engineering)
Total Costs: \$2,398,275
Title: Using cognition to predict individual differences in motor learning for older
Purpose: Determine the relationship between cognition and responsiveness to rehabilitation in people with Parkinson's Disease
Proposed effort: 1.5 calendar month / year
Dates of Award: 2021-2026
- 4) **Funding Source:** National Multiple Sclerosis Society / Research Grant
Role: Co-PI (Co-PI Huisinga; Kansas University Medical Center)
Direct Costs Proposed: 650,000
Title: Mechanisms of falls and of fall rehabilitation in persons with multiple sclerosis
Purpose: To identify targets for fall prevention rehabilitation in persons with multiple sclerosis
Proposed effort: 1.2 calendar months / year
- 5) **Funding Source:** Hilton Foundation
Role: PI
Direct Costs Proposed: \$120,000
Title: Dual Task Ability in People with Progressive Multiple Sclerosis.
Purpose: Understand how dual task ability during several postural stability tasks is affected in people with progressive MS.
Proposed Effort: 1 month/year
- 6) **Funding Source:** Alfred P Sloan Foundation
Role: PI
Direct Costs Proposed: \$75,000
Title: Brain-Behavior relationships in fall-related balance activities
Purpose: Evaluate the bi-directional relationships between balance, cognition, and brain activity
Proposed Effort: 1 month/year
- 7) **Funding Source:** National Institutes of Health / R21
Role: Co-I (PI: Dounskaia; College of Health Solutions))
Direct Costs Proposed: \$280,096
Purpose: The purpose of this clinical trial is to understand whether elevation of the center of mass via weighted vests during daily activities could improve balance in older adults.
Proposed effort: 0.6 calendar months

Peer Reviewed Publications

Source	H-index	Citations	i-10 index
Google Scholar	20	1268	27
Scopus	17	850	--

Full Bibliography:

- NIH: <https://www.ncbi.nlm.nih.gov/myncbi/1DAPA8aLlzUAm/bibliography/public/>
- Google Scholar: https://scholar.google.com/citations?user=zSjM_PEAAAAJ&hl=en
- Scopus: <https://www.scopus.com/authid/detail.uri?authorid=16307615200>
- ORCID: <https://orcid.org/0000-0002-4639-6544>

Shaded = student or mentee under the supervision of Dr. Peterson

2021

1. **Peterson DS^c**, Phan V, Richmond S, Lee H, Effects of dual-tasking on time-to-boundary during stance in people with PD: A Preliminary Study. *Accepted and in Press, Clinical Biomechanics*.
2. Monaghan A, Husinga J, **Peterson DS^c**. The Application of Principal Component Analysis to Characterize Gait and its Association with Falls in Multiple Sclerosis. *Sci Rep*. 2021 Jun 17;11(1):12811. doi: 10.1038/s41598-021-92353-2. PMID: 34140612,
3. Richmond SB, Lee H, Fling BW, **Peterson DS^c**. Novel portable assessments of center of mass and center of pressure during quiet stance: current applications and future directions. *Journal of Biomechanics*. 2021 Jun 23;123:110485. doi: 10.1016/j.jbiomech.2021.110485, PMID: 34004395.
4. Roman G, **Peterson DS**, Ofori E, Vidt M. Upper extremity biomechanics in native and non-native signers *Accepted and In Press, WORK*.
5. Monaghan A, **Peterson DS^c**. Torque and center of mass profiles after support-surface perturbations in people with multiple sclerosis. *Gait & Posture*. Feb;84:346-351. doi: 10.1016/j.gaitpost.2021.01.003. Epub 2021 Jan 10. PMID: 33454502;
6. Johansson H, Ekman, U, Rennie L, **Peterson DS**, Leavy B, Franzen E. Dual-Task Effects During a Motor-Cognitive Task in Parkinson's Disease: Patterns of Prioritization and the Influence of Cognitive Status. *Neurorehabilitation and Neural Repair*. 2021, March 10. DOI: 10.1177/1545968321999053, PMID: 33719728
7. **Peterson DS^c**, Moore A, Ofori E. Performance fatigue during walking in people with Charcot-Marie-Tooth disease. *Gait & Posture*. Feb 11;85:232-237. doi: 10.1016/j.gaitpost.2021.02.002. PMID: 33618167.
8. Richmond SB, Swanson CW, **Peterson DS**, Fling BW. Advanced characterization of Static Postural Control Dysfunction in Persons with Multiple Sclerosis and Associated Neural Mechanisms. *Gait & Posture*. Jan;83:114-120. doi: 10.1016/j.gaitpost.2020.10.015. PMID: 33129171.

2020

9. **Peterson DS^c**, Van Liew, Stuart S, Horak FB, Mancini M. Relating Parkinson freezing and balance domains: A structural equation modeling approach. *Parkinsonism Relat Disord*. 2020 Aug 25;79:73-78. doi: 10.1016/j.parkreldis.2020.08.027. PMID: 32889503
10. **Peterson DS^c**, Barajas J, Denney L, Mehta S. Dual task reactive stepping in people with Parkinson's disease. *Neurorehabilitation & Neural Repair*. Aug;34(8):702-710. doi: 10.1177/1545968320935814. Epub 2020 Jul 7. PMID: 32633614
11. **Peterson DS^c**, Mancini M, Fino P, Horak FB, Smulders KS. Speeding up Parkinson's Disease. *J Parkinsons Dis*. 2020;10(1):245-253. doi: 10.3233/JPD-191682. PMID: 31561384 PMCID: PMC7304052,
12. **Peterson DS^c**, Smulders K, Mancini M, Nutt JG, Horak FB, Fling B. Relating response inhibition, brain connectivity, and freezing of gait in people with Parkinson's disease. *Journal of the International Neuropsychological Society*, Dec 9;1-11. doi: 10.1017/S135561772000123X. PMID: 33292899;

13. Ehgoetz Martens KA, **Peterson DS**, Almeida QJ, Lewis SJG, Hausdorff JM, Nieuwboer A. Behavioural Manifestations and Associated Non-Motor Features of Freezing of Gait. *Neurosci Biobehav Rev*. 2020 Sep;116:350-364. doi: 10.1016/j.neubiorev.2020.06.026. Epub 2020 Jun 27. PMID: 32603716,
14. Roman G, **Peterson DS**, Ofori E, Vidt M. The modified Strain Index: A Composite Measure of Injury-Risk for Signers. *Journal of Motor Behavior*. 2020 Aug 17;1-10. doi: 10.1080/00222895.2020.1806778. PMID: 32799767,
15. Schlenstedt C, **Peterson DS**, Mancini M. The effect of tactile feedback on gait initiation in people with Parkinson's disease. *Gait Posture*. 2020 Jul;80:240-245. doi: 10.1016/j.gaitpost.2020.06.001. PMID: 32559642., (IF= 2.76). (DSP contributed to manuscript preparation)
16. Lingo VanGilder, JL, Hooyman A, **Peterson, DS**, Schaefer SY. Post-stroke cognitive impairments and responsiveness to gait rehabilitation: A review. *Current Physical Medicine and Rehabilitation Reports*. <https://doi.org/10.1007/s40141-020-00283-3>.
17. Richmond SB, Swanson CW, **Peterson DS**, Fling BW. A Temporal Analysis of Bilateral Gait Coordination in PwMS. *Multiple Sclerosis and Related Disorders*. 2020 Aug 7;45:102445. doi: 10.1016/j.msard.2020.102445. PMID: 32791490.
18. Morris R, Smulders K, **Peterson DS**, Mancini M, Carlson-Kuhta P, Nutt JG, Horak FB. Cognitive function in people with and without freezing of gait in Parkinson's disease. *NPJ Parkinsons Dis*. May 15;6:9. doi: 10.1038/s41531-020-0111-7. PMID: 32435690. PMCID: PMC7228938
19. Jung SH, Hasegawai N, Mancini M, King LA, Carlson-Kuhta P, Smulders K, **Peterson DS**, Barlow N, Harker G, Morris R, Nutt JG, Horak FB. Effects of the Agility Boot Camp with Cognitive Challenge (ABC-C) Exercise Program on Balance in Parkinson's Disease. *npj Parkinson's Disease*, 2020 Nov 2;6(1):31. doi: 10.1038/s41531-020-00132-z. PMID: 33298934
20. King LA, Mancini M, Smulders S, Harker G, Lapidus JA, Carlson-Kuhta P, Fling BW, Nutt JG, **Peterson DS**, Horak FB. Feasibility of a Cognitively Challenging Agility Boot Camp Program for Freezing of Gait in Parkinson's Disease. *Neurorehabil Neural Repair*. 2020 May;34(5):417-427. doi: 10.1177/1545968320909331. PMID: 32249668; PMCID: PMC7217755

2019

21. Loyd BJ, Fangman A, **Peterson DS**, Gappmaier E, Shubert M, Thackery A, Dibble LE: Rehabilitation to Improve Gaze and Postural Stability in People with Multiple Sclerosis: Study Protocol for A Prospective Randomized Clinical Trial. *BMC Neurology*. 2019 Jun 10;19(1):119. doi: 10.1186/s12883-019-1353-z. PMID: 31179920
22. Van Liew C, Foreman B, Hunt G, Dibble LE, **Peterson DS**^C,(2019) Protective stepping in people with MS: Impacts of a single session of in-place perturbation practice. *Multiple Sclerosis and Related Disorders* doi: 10.1016/j.msard.2019; PMID: 30716530.
23. Ellis T, Dibble LE, **Peterson DS**. (2019). Physical Therapy for Person's with Parkinson's disease: Moving Beyond Effectiveness; Editorial for Special Issue. *J Neurol Phys Ther*. 2019 Jan;43(1):1-2. PMID: 30531380 DOI: 10.1097/NPT.0000000000000248.
24. Schaefer SY, Sullivan J, **Peterson DS**, Fauth E. (2019) Cognitive function at admission predicts physical rehabilitation gains in translational care for older patients. *Annals of Physical Med & Rehabil*. Letter to the Editor. *Ann Phys Rehabil Med*. 2020 Jul;63(4):359-361. doi: 10.1016/j.rehab.2019.08.004. PMID: 31520785; PMCID: 736722,

2018

25. **Peterson DS**^C, Lohse KR, & Mancini, M. (2018) Relating Anticipatory Postural Adjustments to Step Outcomes During Loss of Balance in People with Parkinson's Disease. *Neurorehabilitation & Neural Repair*. Oct;32(10):887-898. PMID:30198384. doi: 10.1177/1545968318798937,
26. **Peterson DS**^C, Lohse KR, & Mancini, M. (2018) Anticipatory postural responses prior to protective steps are not different in people with PD who do and do not freeze. *Gait Posture*. 2018 Jul;64:126-129. doi: 10.1016/j.gaitpost.2018.06.006. PMID: 29902715,
27. Barajas JS, & **Peterson DS**^C. (2018) First trial effects after reactive stepping in people with Parkinson's disease *Journal of Neurology*. May;265(5):1138-1144. doi: 10.1007/s00415-018-8821-z. PMID: 29520471,

28. Paul SS, Dibble LE, & **Peterson DS**. (2018) Motor learning in people with Parkinson's disease: Implications for fall prevention across the disease spectrum. *Gait Posture*. 2018 Mar;61:311-319. doi: 10.1016/j.gaitpost.2018.01.026. PMID: 29413803,
29. Dounskaia N, **Peterson DS**, & Bruhns RP. (2018) Destabilization of the upright posture through elevation of the center of mass. *Ann Biomed Eng*. 2018 Feb;46(2):318-323. doi: 10.1007/s10439-017-1957-7. PMID: 29134294,
30. **Peterson DS**^C & Fling BW. (2018) How changes in brain activity and connectivity are associated with motor performance in people with MS. *Neuroimage: Clinical*. Sep 28;17:153-162. doi: 10.1016/j.nicl.2017.09.019. PMID: 29071209,

2017

31. Schlenstedt C, Mancini M, Horak FB, & **Peterson DS**^C. (2017) Anticipatory postural adjustment during self-initiated, cued and compensatory stepping in healthy elderly and patients with Parkinson's disease. *Arch Phys Med Rehabil*. 2017 Jul;98(7):1316-1324.e1. doi: 10.1016/j.apmr.2017.01.023. PMID: 28254637
32. El-Gohary, M, **Peterson DS**, Gera G, Horak FB, & Huisinga J. (2017). Validity of the Instrumented Push and Release Test to Quantify Postural Responses in Persons With Multiple Sclerosis *Arch Phys Med Rehabil*. Jul;98(7):1325-1331. doi:10.1016/j.apmr.2017.01.030. PMID:28279660; PMC5558828
33. **Peterson DS**^C, Gera G, Horak FB, & Fling BW. (2017) Corpus Callosum Structural Integrity Is Associated With Postural Control Improvement in Persons With Multiple Sclerosis Who Have Minimal Disability. *Neurorehabilitation & Neural Repair*. 2017; 31(4):343-353.; DOI: 10.1177/1545968316680487. PMID: 27932696

2016

34. **Peterson DS**^C & Horak FB. (2016) The effects of levodopa on improvement in protective stepping in people with Parkinson's disease. *Neurorehabilitation & Neural Repair*. 2016 Nov;30(10):931-940. doi: 10.1177/1545968316648669. PMID: 27162165,
35. **Peterson DS**^C & Horak FB. (2016) Effects of freezing of gait on postural motor learning in people with Parkinson's disease. *Neuroscience*. Oct 15;334:283-289. doi: 10.1016/j.neuroscience.2016.08.017. PMID: 27530701; PMCID: PMC5086435,
36. **Peterson DS**^C, Dijkstra BW, & Horak FB. (2016) Postural motor learning in People with Parkinson's disease. *Journal of Neurology*. 2016 Aug;263(8):1518-29. doi: 10.1007/s00415-016-8158-4. PMID: 27193311
37. **Peterson DS**^C, Gera G, Horak FB, & Fling BW. (2016) Supraspinal control of postural responses in people with multiple sclerosis. *Gait & Posture*. 2016 Jun;47:92-5. doi: 10.1016/j.gaitpost.2016.02.023. PMID: 27264410
38. **Peterson DS**^C, King LA, Cohen RG, & Horak FB. (2016) Cognitive Contributions to Freezing of Gait in Parkinson Disease- Implications for Physical Rehabilitation. *Phys Ther*. 2016 May;96(5):659-70. doi: 10.2522/ptj.20140603. PMID: 26381808,
39. **Peterson DS**^C, Huisinga J, Spain B, & Horak F. (2016) Characterization of compensatory Stepping in People with Multiple Sclerosis. *Archives of Physical Medicine & Rehabilitation*. 2016 Apr;97(4):513-21. doi: 10.1016/j.apmr.2015.10.103. PMID:26603657. EDITORS SELECTION
40. **Peterson DS**^C & Horak FB. (2016) Neural Control of Walking in People with Parkinson's disease *Physiology (Bethesda)*. Mar;31(2):95-107. doi: 10.1152/physiol.00034.2015. Review. PMID: 26889015; PMCID: PMC4888974,

2015

41. **Peterson DS**^C & Smulders K. (2015) Cues and attention in Parkinsonian gait: Potential mechanisms and future directions. *Front. Neurol*, 08 Dec 2015. PMID: 26696955, **IF: 3.55**. (DSP contributed to all aspects of manuscript conception & preparation)
42. **Peterson DS**^C, Fling B, Mancini M, Cohen RG, Nutt J, & Horak FB. (2015) Dual-task interference and brain structural connectivity in people with Parkinson's disease who freeze. *J Neurol, Neurosurg, and Psychiatry*; 86:786-792. doi:10.1136/jnnp-2014-308840. PMID: 25224677,
43. Dijkstra BW, Horak F, Kamsma Y, & **Peterson DS**^C. (2015) Older adults can improve

compensatory stepping with repeated postural perturbations. *Frontiers in Aging Neuroscience*. Vol 7. ISSN: 1663-4365. DOI. 10.3389/fnagi.2015.00201,

44. King LA, **Peterson DS**, Mancini M, Carlson-Kuhta P, Fling BW, Nutt J, Carter J, Winters-Stone KM, & Horak FB. (2015) Do cognitive measures and brain circuitry predict outcomes of exercise in Parkinson Disease: a randomized clinical trial. *BMC Neurol*. 2015 Oct 24;15(1):218. PubMed PMID: 26499867,

2014

45. **Peterson DS**, Pickett KA, Duncan RP, Perlmutter J, & Earhart GE. (2014) Gait Related Brain Activity in People with Parkinson Disease Who Experience Freezing of Gait. *PLoS ONE*; 2014;9(3):e90634. doi: 10.1371/journal.pone.0090634. PMID: 24595265; PMCID: PMC3940915,
46. **Peterson DS**, Pickett KA, Duncan RP, Perlmutter J, & Earhart GE. (2014) Brain Activity during Complex Imagined Gait Tasks in Parkinson Disease. *Clinical Neurophysiology*. [Epub ahead of print] doi: 10.1016/j.clinph.2013.10.008

2013

47. Williams AJ, **Peterson DS**, Ionno M, & Earhart GE. (2013) Upper Extremity Freezing and Dyscoordination in Parkinson Disease: Effects of Amplitude and Cadence Manipulations. *Parkinson Disease* doi: 10.1155/2013/595378,
48. Williams AJ, **Peterson DS**, & Earhart GE. (2013) Gait Coordination in Parkinson Disease: Effects of Step Length and Cadence Manipulations. *Gait and Posture*. Jun;38(2):340-4,
49. Torry MR, Shelburne KB, Myers C, Giphart JE, Pennington W, Krong JP, **Peterson DS**, Steadman JR, & Woo SLY. (2013) High Knee Valgus in Female Subjects Does Not Yield Higher Anterior and Lateral Tibial Translations During Drop Landings: A Biplane Fluoroscopy Study. *Journal of Orthopaedic Research* Feb;31(2):257-67,

2012

50. **Peterson DS**, Plotnik M, Hausdorff J, & Earhart GM. (2012) Evidence for a relationship between bilateral coordination during complex gait tasks and freezing of gait in Parkinson's disease, *Parkinsonism and Related Disorders*; 2012 Nov;18(9):1022-6. doi: 10.1016/j.parkreldis.2012.05.019,
51. **Peterson DS**, Pickett KA, & Earhart GM. (2012) Effects of Levodopa on Vividness of Motor Imagery in Parkinson Disease. *Journal of Parkinson's Disease*; 2(2)127-133; doi: 10.3233/PJD-1012-12077,
52. Pickett KA, **Peterson DS**, & Earhart GM. (2012) Motor imagery of gait tasks in individuals with Parkinson disease. *Journal of Parkinson's Disease*, 2(1):19-22. doi: 10.3233/JPD-2012-11045,

2011

53. Torry MR, Shelburne KB, **Peterson DS**, Giphart JE, Krong JP, Myers C, Steadman JR, & Woo SLY. (2011) Knee Kinematic Profiles During Drop Landings: A Biplane Fluoroscopy Study, *Medicine Science in Sports & Exercise*. Mar;43(3):533-41. PMID: 20689456; doi: 10.1249/MSS.0b013e3181f1e491,
54. Myers CA, Torry MR, **Peterson DS**, Shelburne KB, Giphart JE, Krong J, Woo SLY, & Steadman JR. (2011) Measurements of Tibiofemoral Kinematics During Soft and Stiff Drop Landings Using Biplane Fluoroscopy. *American Journal of Sports Medicine* Aug;39(8):1714-22. PMID: 21602566,
55. Torry MR, Myers C, Shelburne, KB, **Peterson DS**, Giphart JE, Pennington WW, Krong JP, Woo SLY, & Steadman, JR. (2011) Relationship of Knee Shear Force and Quadriceps Extensor Moment on Knee Translations in Females Performing Drop Landings: A Biplane Fluoroscopy Study. *Clinical Biomechanics* (26);1019-1024; doi:10.1016/j.clinbiomech.2011.06.010. PMID: 21820780,

2010

56. **Peterson DS**, Martin PE (2010) Effects of Age and Walking Speed on Coactivation and Cost of Walking in Healthy Adults. *Gait and Posture*. Mar; 31(3):355-9. PMID: 20106666

Manuscripts in review or revision

1. Van Liew C, Monaghan A, Foreman B, Dibble LE, **Peterson DS^c** Perturbation Practice in Multiple Sclerosis: Assessing Generalization from Surface Support Translations to Tether-Release Tasks.
2. Delgado F, Der Ananian C, Schaefer SY, Bosch P, **Peterson DS^c**. Impact of arthritic status on falls and reactive stepping in a heterogeneous older population.
3. Monaghan A, Johannson J, **Peterson DS^c**. Systematic review of dual tasking during reactive postural control.
4. Monaghan A, **Peterson DS^c**. Principle component analysis of gait disturbance in people with multiple sclerosis.
5. Monaghan A, Finley J, Mehta SH, **Peterson DS^c**. Changes in dual-task prioritization with repeated exposures
6. Van Liew C, Dibble L, Foreman B, **Peterson DS^c**. Change in “First Trial” Performance After Protective Step Practice in People with Multiple Sclerosis.
7. Van Liew C, Huisinga, **Peterson DS^c**. Evaluating the Relative Contributions of Various Domains on Fall Rates Cross-Section ally and Longitudinally in People with Multiple Sclerosis.
8. Monaghan A, Huisinga J, **Peterson DS^c**. The Influence of Plantar Sensation on Muscle Onset During Automatic Postural Responses in People with Multiple Sclerosis and Healthy Controls.
9. Richmond SB, **Peterson DS**, Fling BW. Bridging the Gap- Bilateral lower limb coordination and Callosal Integrity in people with Multiple Sclerosis.
10. **Peterson DS^c**, Ofori E^c. Characterization of gait and posture in people with CMT type 1 and CMT type 2. ASU. ^c- Ofori & Peterson Joint Corresponding authors
11. Ofori, E^c, Mahendran, J., Moore, A., Hollett, C., Aldrich. Ladha, S, Gudesblatt, M., **Peterson, DS^c**. Patient-reported outcomes and mobility function in adults with Charcot-Marie Tooth disease. ^c- Ofori & Peterson Joint Corresponding authors
12. Loyd B, Agnew L, Dibble L, **Peterson DS**, Schubert M, Gappmaier E, and Thackeray A. Characterization of posture and gaze stability function in individuals with Multiple Sclerosis and complaints of dizziness.

Selected Conference Abstracts

Mentee presenter or co-author under Dr. Peterson’s mentorship

Podium presentations

Delgado F, DerAnanian C, Schaefer S, Bosch P, **Peterson DS**. Balance and Reactive Steps in Older Adults With and Without Self-Reported Musculoskeletal Conditions. Gerontological Society of America, November 4-7, 2020

Peterson DS, Dijkstra BW, & Horak FB. Effects of Levodopa on Postural Motor Learning in Parkinson’s Disease. Podium Presentation at the International Society of Posture and Gait Research Annual Meeting, June, 2015.

Peterson DS, Dijkstra BW, & Horak FB. Effects of Parkinson’s Disease on Adaptation of Compensatory Stepping. Podium Presentation at the Gait and Clinical Movement Analysis Society Annual Meeting, March, 2015.

Peterson DS, Pickett KA, & Earhart GM. Supra-spinal Control of Locomotion in Freezers and Non-freezers with Parkinson Disease. Podium presentation at the International Society of Posture and Gait Research, Akita, Japan, June 25-29, 2013

Peterson DS, Pickett KA, & Earhart GE. “Cortical and subcortical brain activity during imagined gait tasks across age” Podium presentation at the International Society of Posture and Gait Research, Trondheim Norway, June 24-28, 2012.

Peterson DS, Pickett KA, & Earhart GE. “Comparing Supra-spinal Locomotor Regions in Parkinson’s Disease and Controls. Podium presentation at the Clinical Research Training Center National Meeting, Rochester MN, May 2012.

Peterson DS, & Martin PE. "Effects of Age and Walking Speed on Coactivation during Gait" Podium presentation at The American Society of Biomechanics. State College, PA. August 26-29, 2009.

Peterson DS, Krong J, Giphart JE, Shelburne K, Steadman JR & Torry M. "Comparison of Tibial Translations during Soft and Stiff Landings in Healthy Adults: A Biplane Fluoroscopy Study" Podium presentation at The American Society of Biomechanics. State College, PA. August 26-29, 2009.

Selected Poster Presentations

Barajas J, Denney L, Mehta SH, Peterson DS^c. Characterizing the Impact of Baseline Cognitive Status on Dual Task Performance While Backward Reactive Stepping *American Society of Neurorehabilitation*. April 5-9, 2021

Monaghan AS, Finley J, Mehta SH, Peterson DS^c. Adaptation of dual-task performance with reactive steps in people with PD. *American Society of Neurorehabilitation*. April 5-9, 2021

Phan V, **Peterson DS**, Richmond S, Lee, H. Effects of Parkinson's Disease and a Secondary Cognitive Task on Standing Postural Stability. International Conference on Neural Rehabilitation (ICNR) 2020

Monaghan AS, **Peterson DS**. Torque Responses to In-Place Perturbations in People with Mild Multiple Sclerosis. 10th International Symposium on Gait & Balance in Multiple Sclerosis. October, 2020

Van Liew C, Gudesblatt M, Srinivasan J, Kaczmarek O, Golan D, Doniger G, Wilken J, Ofori E, **Peterson DS**. Cognitive Domains and Dual Task-Walking in Persons with Multiple Sclerosis. 10th International Symposium On Gait & Balance in Multiple Sclerosis. October, 2020

Van Liew C, Dibble LE, Foreman KB, & **Peterson DS**. Change in 'First-Trial' Performance After Protective Step Practice in People with Multiple Sclerosis. 2020 Consortium for Multiple Sclerosis Centers. August 3rd, 2020

Monaghan A, Van Liew C, Dibble LE, Schaefer SY, Hunt GR, Foreman KB, **Peterson DS**. Understanding Generalization after Perturbation Practice in Multiple Sclerosis. 9th International Symposium On Gait & Balance in Multiple Sclerosis. Denver, CO, 2019

Barajas J, Nadkarni A, Denney L, Mehta S, **Peterson DS**. Protective Postural Control with Divided Attention: Effects of Parkinson's Disease. International Society of Posture and Gait Research. Edinburgh, Scotland, June 30-July 4; 2019.

Roman G, **Peterson DS**, Vidt ME. Quantification of ballistic signing: Does native and non-native status matter? Combined Sections Meeting of the American Physical Therapy Association, 2019.

Peterson DS, Lohse KR, Mancini M. Anticipatory postural responses prior to protective steps are not different in people with PD who do and do not freeze. International Freezing of Gait Society, Leuven, Belgium, 2018

Peterson DS, Lohse KR, Mancini M. How anticipatory postural adjustments affect protective steps: A step-by-step multi-level analysis American Society of Neurorehabilitation, San Diego, CA. 2018

Muthukrishnan N, **Peterson DS**, Choice of stepping limb after postural perturbations in people with PD, does disease severity or limb dominance matter? American Society of Neurorehabilitation, San Diego, CA. 2018

Roman G, **Peterson DS**, Vidt ME. Work Envelope in Native and Non-Native Signers. American Society of Biomechanics, 2018

Barajas J, Mehta S, **Peterson DS**. First trial protective step performance before and after short-term perturbation practice in people with Parkinson's disease. American Society of Neurorehabilitation. Baltimore, MD, 2017

Peterson DS, Kratz K, Foreman BK, Dibble L. Protective stepping in people with MS: effects of a single bout of practice. International Society of Posture and Gait Research. Ft Lauderdale, FL. 2017

Peterson DS, Schlenstedt C, Mancini M, Horak FB. Anticipatory Postural Adjustments to Internal and External Perturbations in People who Do and Do Not Experience Freezing of Gait. Society for Neuroscience, San Diego, CA. 2016.

Peterson DS, Huisinga JM, Spain R, & Horak FB. Characterization of protective stepping in people with Multiple sclerosis. Poster Presentation at the Society for Neuroscience. Chicago, IL. 2015

Peterson DS, Gera G, Horak FB, & Fling BW. Supra-spinal control of automatic postural reactions in

People with MS. Poster Presentation at the International Multiple Sclerosis Symposium. Portland, OR. September, 2015.

Peterson DS, Cohen RG, Fling B, Mancini M, Nutt JG, & Horak FB. “Dual-task interference in related to PPN structural connectivity in people with Parkinson’s disease who freeze.” Poster presentation at the International Society of Posture and Gait Research, Vancouver, Canada, June 28-July 2, 2014.

Peterson DS, Pickett KA, Duncan RP, & Earhart GM. Neural pathology during imagined locomotion in people with Parkinson disease. Combined Sections Meeting. San Diego, CA. January 21-24, 2013.

Peterson DS, Plotnik M, Hausdorff J, & Earhart, GM. “Effects of Turning and Backward Walking on Bilateral Coordination in Individuals with Parkinson Disease” Poster presentation at the World Parkinson Congress, Glasgow, Scotland, Sept 29-31, 2010.

Symposia and Invited Conference Presentations

** Indicates international conference or symposium

Symposium Speaker, Combined Sections Meeting (CSM) “Fake News: Understanding limitations and pitfalls of scientific literature”	2019
**Invited Speaker: International Symposium of Gait and Balance in MS “Compensatory Stepping in people with Multiple Sclerosis”	2019
**Invited Speaker: International Freezing of Gait Conference (Leuven, Belgium) Posture and Gait Control in People with PD who Freeze	2018
Symposium Speaker, 2017 Combined Sections Meeting (CSM) “Cognitive impairment in PD: Understanding and unlocking freezing of gait	2017
Invited Speaker, 2017 Washington State Traumatic Brain Injury Conference “Linking Mobility and Cognition: Implications for Rehabilitation”	2017
**Symposium Speaker, 2014 International Society of Posture and Gait Research “Supraspinal Control of Locomotion in PD- Implications for Rehabilitation”	2014
Invited Speaker, OHSU Parkinson Center: Managing & Treating PD “Integrating cognitive tasks into physical therapy	2014

Invited Academic Research Presentations

** Indicates international presentation

“Parkinson’s, Motor Disorders & the Community” ASU TRiP Talk	2021
“Dual Task Postural Control People with PD” Oregon Health & Science University	2020
“Protective Step Training in PD: Potential for Rehabilitative Application University of Southern California	2020
“One Step Backward and Two Steps Forward: Protective Posture in Clinical Populations” Arizona State University; Speech & Hearing Science	2019
“Protective Step Dysfunction and Training in Clinical Populations” University of Utah	2018
“Protective postural control in clinical populations: Potential for clinical intervention?” Colorado State University	2017
“Understanding and treating mobility dysfunction in clinical populations” Arizona State University, Biomedical Engineering Seminar Series	2016

“Compensatory Stepping in Parkinson’s disease and Multiple Sclerosis” University of Utah	2015
“Postural Motor Learning in Parkinson’s Disease: Implications for Rehabilitation” Utah State University	2014
“Biomechanical and Neural Factors Associated with Freezing in PD” Utah State University	2013
“Biomechanical and Neural Factors Associated with Freezing of Gait in PD” Oregon Health Sciences University	2012
“Freezing of Gait in Parkinson Disease” Illinois State University	2012
“Metabolic Cost of Walking in Older Adults and Mechanisms of ACL Injury in Young” University of Illinois in Chicago	2009
“Effects of age on Coactivation, Variability, and Joint Kinetics During Walking” Mayo Clinic, Rochester, MN	2008

Honors & Awards

Outstanding Teaching Award Nominee- 5 th Annual CHS Staff and Faculty Awards	2020
Outstanding Faculty Mentor Award Nominee- Arizona State University Graduate College	2020
Attendee: NIH-Sponsored “Training in Grantsmanship for Rehabilitation Research” workshop	2017
Manuscript selected as “Editor’s Choice” (Archives of Physical Medicine & Rehabilitation)	2016
Travel Grant Recipient- 2016 World Parkinson Congress	2016
Attendee, NIH-sponsored “Training Course in fMRI” (Univ. of Michigan)	2012
2 nd Place- Graduate Research Symposium; (Washington University in St. Louis)	2011
Selected as a Funded Pre-Doctoral Trainee on an NIH CTSA (T32 HD007434; PI: Mueller); Washington University School of Medicine; Program in Physical Therapy	2009
B.K. & Betty Stevens Undergraduate Scholarship (University of Florida)	2006
Anderson Scholar for Academic Achievements (University of Florida)	2005

Mentee awards (while under supervision of Dr. Peterson)

Graduate & Professional Student Association Outstanding Research Award (Monaghan)	2020
School of Biological and Health Systems Engineering Merit Award Stipend (Muthukrishnan)	2018
Northern Arizona University Annual 3-minute Research Presentation (3 rd place; Peters)	2017

SERVICE

Service for Arizona State University

College:

Member: CHS Personnel Committee	2021
Member: CHS Research Council	2018 – Present
Member: CHS Grant Review Committee	2020 – Present
Member: Jumpstart Grant Review Committee	2019 – Present
Member: Faculty success hub (CHS Visioning Committee)	2018
Member: Faculty success hub (Research subcommittee)	2018

Program:

Member: Search Committee (Human Neuroscience Tenure Track Hire)	2019 – 2020
Member: MS in EXW Curriculum Committee	2019 – Present
Member: MS in Biomechanics Curriculum Committee	2016 – 2018
Member: Search Committee (Biomechanics Tenure Track Hire)	2017 – 2018

Professional Service

Grant Review Service (national & international)

NIH Grant Review Activities:

Ad-Hoc Member: NINDS ZNS1 G38 Special Emphasis Panel	2021
Ad-Hoc Member: NINDS NSD-K (Clinical Trials) Study Section	2018
Ad-Hoc Member: Special Emphasis Panel/SRG ZRG1 ETTN-C (10) B: Small Business panel: Clinical Neurophys, Devices, Neuroprosthetics, & Biosensors	2017

Dept. of Veterans Affairs Grant Review Activities

Standing Member- Rehabilitation R&D Scientific Group Review (RRD6-Chronic Medical Conditions and Aging)	2020 – Present
Ad-Hoc Member: Rehabilitation R&D Scientific Group Review (RRD6-Chronic Medical Conditions and Aging)	2018 – 2019
SPiRE Grant reviewer (RRDS R); Rehabilitation Research and Development	2017 – 2019

NSF Study Section Grant Review Activities

Ad-Hoc Member: Program in Perception, Action, and Cognition	2018
---	------

International Funding Agency Review Activities:

Ad-Hoc Member: Parkinson's UK Grant Review Panel (UK)	2020
Ad-Hoc Member: Dunhill Medical Trust (UK)	2020
Ad-Hoc Member: Health Research Board, national funding agency for Ireland	2019
Ad-Hoc Member: Research Foundation Flanders (Belgium)	2017 & 2018
Ad-Hoc Member: Israeli Science Foundation (Israel)	2017

Other, National Grant Review Activities

Univ. of Maryland Claude D. Pepper Older Americans Independence Center (UM-OAIC)	2020
--	------

Service to Societies

Comprehensive Care Program Subcommittee; World Parkinson's Congress, 2022	2020-2022
--	-----------

Service to Journals

Review Editor- Frontiers in Movement Disorders	2020 - Present
Editorial Board Member (Journal of Neurologic Physical Therapy)	2016 – Present
Special Issue Editor (Journal of Neurologic Physical Therapy) “Physical Therapy for Parkinson’s Disease – Mechanisms and Interventions”	2017 – 2018

Ad Hoc Reviewer (**approximately 25-35 per year**) for the following journals:

<i>Anatomical Record</i>	<i>J. of NeuroEng. & Rehab.</i>	<i>Motor Control</i>
<i>Arch Phys Med & Rehab</i>	<i>J. of Motor Learning & Devel.</i>	<i>Movement Disorders</i>
<i>Behavioural Brain Research</i>	<i>J. of Sci & Medicine in Sport</i>	<i>Neurobiology of Aging</i>
<i>Brain Imaging and Behavior</i>	<i>J. of Applied Biomechanics;</i>	<i>Neuroimage</i>
<i>Cerebral Cortex</i>	<i>J. of Parkinson’s Disease</i>	<i>Neuroscience Letters</i>
<i>Clinical Neurophysiology</i>	<i>JOVE</i>	<i>Neurorehab. & Neural Repair</i>
<i>Disability & Rehabilitation</i>	<i>Peer J</i>	<i>Neuroscience and Biobehav. Rev</i>
<i>Experimental Aging Research;</i>	<i>Parkinson Disease</i>	<i>Sensors</i>
<i>Gait & Posture</i>	<i>Pilot & Feasibility Studies</i>	<i>Scientific Reports</i>
<i>Human Brain Mapping</i>	<i>Physiotherapy Theory & Practice;</i>	<i>Transactions on Neural Systems</i>
<i>J. of Biomechanics</i>	<i>PLoS One</i>	<i>& Rehab Eng</i>
<i>J. of Gerontology: Med. Sci.</i>	<i>Physical Therapy Journal</i>	
<i>J. of Neurology, Neurosurgery,</i>	<i>Medical Engineering & Physics</i>	
<i>& Psychiatry</i>	<i>Medicine & Sci in Sports & Ex.</i>	

Professional Memberships

Society for Neuroscience
International Society for Posture and Gait Research

Community service

Community Research / Educational Presentations

“Balancing activity, safety, and quality of life” Braille Institute Quarterly Fall Prevention Seminar	2020 / 2021
“PT and PD: Balance and physical therapy in people with Parkinson’s disease” Arizona Rehab PT Clinic	2019
“Balance and posture in Parkinson’s disease” Scottsdale Parkinson’s disease support group	2018
“Parkinson’s Disease: Symptoms and Signs” Cache Valley Senior Center, Logan UT	2016
“Walking & Balance in Parkinson’s Disease: Latest Research” Logan, UT Parkinson’s Disease Support Group	2013
“Imagine That! Imagined walking to gain insights into locomotor control in PD” Young Onset PD Support Group, St. Louis, MO	2013

Community Engagement

“New Adventures in Learning” (NAIL) Continued adult education program Instructor / Presenter	2017- 2020
---	------------

Hereditary Neuropathy Foundation- “Movement is Medicine” Summit (Phoenix, AZ) Co-presenter / researcher	2018
Hereditary Neuropathy Foundation Center for Excellence for CMT (ASU & BNI) contributor	2021 – present

TEACHING & MENTORING

Teaching (ASU)

Instructor of Record

“Neural Aspects of Movement and Rehabilitation (KIN 424 / 598)	2016 – Present
Motor and Developmental Learning (KIN345)	2021 – Present

Teaching (Other Institutions)

Instructor of Record

“Neural Aspects of Rehabilitation”; MS in Exercise Science Curriculum Utah State University	2016
--	------

Guest Lecturer

“Motor Control”; Doctorate in Physical Therapy Curriculum University of Utah	2015 – Present
“Biocontrol”; Movement Science PhD Curriculum Washington University in St. Louis	2012
“Development, Control, and Analysis of Human Movement”; Post Professional DPT Washington University in St. Louis	2012
“Neuroscience” Doctorate in Physical Therapy Curriculum Washington University in St. Louis	2011 – 2012

Teaching Assistant and Guest Lecturer

“Biomechanics” Undergraduate Curricula Penn State University	2006 – 2008
---	-------------

Mentoring - ASU

Committee Chair:

Graduate: PhD

Charles Van Liew (Exercise & Nutrition Science; College of Health Solutions) Thesis: Dual-Task Walking in MS: Correlates, Moderators, and Consequences <i>Successfully defended thesis: April 2021</i> Received the CHS 2021 Christine Wells Outstanding Research Award	2018 – 2021
--	-------------

Andrew Monaghan (Exercise & Nutrition Science; College of Health Solutions) Thesis: Neural Control of Protective Stepping in Neurological Populations; <i>Project development Phase</i>	2019 – Present
--	----------------

Graduate: MS

Jordan Barajas (MS: Exercise, Nutrition, & Wellness; College of Health Solutions) 2017 – 2020
Thesis: Effects of Dual Tasking on protective stepping in people with PD
Thesis successfully defended 11/2020
Currently working in industry

Marvin Vergara (MS: Applied Project; Fulton Schools of Engineering) 2019
Thesis: Characterizing electromyographic activity in people with PD
Project successfully defended 5/2019
Currently working in industry

Matthew Gerveler (MS Applied Project; Fulton Schools of Engineering) 2017 – 2018
Thesis: Characterizing protective stepping in healthy young adults via TMM
Project successfully defended, 05/2018
Currently working in industry

Undergraduate Honors Theses

Finn Larsen (Barrett Honors Senior Thesis, College of Nursing) 2019 - Present
Thesis: Transfer of skills across hockey & Golf
Project Successfully defended: May 2021

Randall Arroyo (Barrett Honors Thesis, Kinesiology) 2018 – 2019
Thesis: Generalization of protective stepping across lateral stepping directions
Thesis successfully defended: 4/2019

Rachael Nowak (Barrett Honors Thesis, Kinesiology) 2017 – 2018
Thesis: Generalization of protective stepping: forward and backward steps
Thesis successfully defended: 11/2018
Currently in Physical Therapy School

Rachael Preshler (Barrett Honors Senior Thesis, Kinesiology) 2017 – 2018
Thesis: Relating reactive stepping to falls in community dwelling older adults.
Thesis successfully defended; 05/2018
Currently in Physical Therapy School

Committee Member:

Graduate: PhD

Ferdinand Delgado (PhD in Exercise & Nutrition Science; CHS) 2018 – Present
Thesis Title: TBD
Committee Chair: Cheryl Der Ananian
Thesis Defense: TBD

Josh Beaumont (PhD in Exercise & Nutrition Science, CHS) 2017 – Present
Thesis title: TBD
Committee Chair: Glenn Gaesser
Thesis Defense: TBD

Seong Moon (PhD in Biomedical Engineering; Fulton Schools of Engineering) 2017 – Present
Thesis: under development
Committee Chair: Thurmon Lockhart
Thesis Defense: TBD

Markey Olsen (PhD in Biomedical Engineering; Fulton Schools of Engineering) 2017 - Present
Thesis; under development
Committee Chair: Thurmon Lockhart
Thesis Defense: TBD

Kaycee Glattke (PhD in Biomedical Engineering, Fulton Schools of Engineering) 2017 – Present
Thesis: Low-Intensity Blood Flow Restriction Training as a Pre-Operative Rehabilitative Modality to Improve Post-Operative Outcomes for ACL Reconstruction
Committee Chair: Thurmon Lockhart
Thesis Defense: TBD

Victoria Smith (PhD in Biomedical Engineering; Fulton Schools of Engineering) 2015 – 2019
Thesis: Understanding the application and limitations of Lyapunov exponents for fall risk assessments
Committee Chair: Thurmon Lockhart
Dissertation successfully defended: 10/2019
Currently working in industry

Gretchen Roman (PhD in Exercise & Nutrition Science; College of Health Solutions) 2015 – 2019
Thesis: 'Upper extremity biomechanics in native and non-native sign language
Committee Chair: Swan
Dissertation successfully defended: 11/2018
Currently in a postdoctoral position- University of Rochester

Graduate: MS

Theophilus Annan (MS Applied Project; Fulton Schools of Engineering) 2020 – 2021
Thesis: Backward reactive stepping in stroke survivors
Committee Chair: Honeycutt
Thesis defense TBD

Niveditha Muthukrishnan (MS in Biomedical Engineering; Fulton Schools of Engineering) 2016 – 2018
Thesis: Evaluation of a Soft Robotic Knee Exosuit for Assistance in Stair Ascent
Committee Chair: Polygerinos
Thesis successfully defended: 05/2018
Currently completing an PhD at ASU

Chloe Houlihan (MS Applied Project; Fulton Schools of Engineering) 2017 – 2018
Thesis: Testing the Relationship Between Dexterity and Cognitive Ability in Healthy Older Adults
Committee Chair: Schaefer
Project successfully defended: 05/2018
Currently working in industry

Troy Ramos (MS Applied Project; Fulton Schools of Engineering) 2017 – 2018
Thesis: Quantifying Local Dynamic Stability in Healthy and Fall Prone Adults
Committee Chair: Lockhart
Project successfully defended: 05/2017
Currently working in industry

Undergraduate Honors Theses

Lauren Berrett (Barrett Honors Senior Thesis, Engineering) 2020 – Present
Thesis: gait in people with multiple sclerosis
Committee Member; Chair: Lee

Danielle Keim (Barrett Honors Senior Thesis, CHS) 2019 – 2020
Thesis: Postural control after varying interventions in children with Autism
Committee Member; Chair, Ringenbach
Thesis successfully defended: 10/2020

Cheng Chang (Barrett Honors Senior Thesis, CHS) 2019 - 2020
 Thesis: App Development for facilitating PT at-home exercise prescription
Committee Member; Chair, Holzapfel
Thesis successfully defended: 03/2020
Currently working in industry

Jonathan Talos (Barrett Honors Senior Thesis, Fulton Schools of Engineering) 2019
 Thesis: Gait monitoring for transtibial amputees
Committee Member; Chair: Schaefer
Thesis successfully defended: 05/2019
Currently working in industry

Sydney Connor (Barrett Honors Senior Thesis, Fulton Schools of Engineering) 2016 – 2017
 Thesis: Utilizing Motor Practice to Prime Motor Performance
Committee Member; Chair: Schaefer
Thesis successfully defended: 03/2017
PhD Candidate, Johns Hopkins University

Other

Hanna Johannsson, PhD (Visiting PhD student; Karolinska Institute) 2020
 Topic: Cognition and motor learning in people with PD
Currently a postdoctoral scholar at Karolinska Institute

Anandita Nadkarni (Summer Intern; Milburn High school) 2017
 Topic: Protective postural control in people with PD
Currently an undergraduate student at Carnegie Mellon University

Other Research Mentoring at ASU

For-credit research experiences and mentorship to undergraduate (UG) & Graduate (Grad) students.

	<i>Spring 2017</i>	
Austin Alderman (UG: 3 credits)		Kristin Riordan (UG: 2 credits)
Taylor Wenzel (UG: 2 credits)		Jordan Barajas (UG: 2 credits)
	<i>Spring 2018</i>	
Jacob Young (Grad: 2 credits)		
	<i>Fall 2018</i>	
Brook Carrol (Grad: 3 credits)		Jena Wingett (Grad: 3 credits)
	<i>Spring 2019</i>	
Eashan Das (UG: 1 credit)		Lindsay Mostrom (UG: 1 credit)
Nicole Elms (UG: 2 credits)		
	<i>Fall 2019</i>	
Ferdinand Delgado (Grad; 3 credits)		Chatrin Soimora (UG; 3 credits)
Adrian Jimenez (UG; 3 credits)		

Mentoring Outside of ASU

Committee Chair / co-chair:

Graduate: MD / Pre-MD

University of Arizona, School of Medicine

Andrew Acosta (U of A “Pathway Scholar”) 2020 - Present
 Thesis: Relating Cognition and Depression to learning in people with PD

Graduate: Doctorate in Physical Therapy

Northern Arizona University (NAU), Program in Physical Therapy

- Alyssa Martin** 2020 – 2021
Thesis: Impacts of “laser shoes” on freezing episodes in people with PD
* Joint project with Rachael Nowak
DSP Co-Chair; Linda Denney (NAU)
Project successfully defended, March, 2021
- Rachael Nowak** 2020 – 2021
Thesis: Impacts of “laser shoes” on freezing episodes in people with PD
* Joint project with Alyssa Martin
DSP Co-Chair; Linda Denney (NAU)
Project successfully defended, March, 2021
- Madison Scavarda** 2020 – 2021
Thesis: Impacts of “laser shoes” on freezing episodes in people with PD
* Joint project with Kenneth Nagel
DSP Co-Chair; Linda Denney (NAU)
Project successfully defended, March, 2021
- Kenneth Nagel** 2020 – 2021
Thesis: Impacts of “laser shoes” on freezing episodes in people with PD
* Joint project with Madison Scavarda
DSP Co-Chair; Linda Denney (NAU)
Project successfully defended, March, 2021
- Sidney Gutierrez** 2019 – 2020
Thesis: Dual tasking and postural control in community dwelling older adults
DSP Co-Chair; Linda Denney (NAU)
Project successfully defended in May 2020
- Wendy Peters** 2017 – 2018
Thesis: Understanding Stroke: A Physical Therapy Perspective
DSP Co-Chair; Pamela Bosch (NAU)
Project successfully defended (05/2018)
**Won 3rd place at Annual NAU 3-minute Research Symposium*
- Lisa Britton** 2017 – 2018
Thesis: Prioritization of a Cognitive Task and an Increased Risk of Falls in Community Dwelling Older Adults; *Joint project with Alexa Zienka
DSP Co-Chair; Pamela Bosch, (NAU)
Project successfully defended (05/2018)
- Alexa Zienka** 2017 – 2018
Thesis: Prioritization of a Cognitive Task and an Increased Risk of Falls in Community Dwelling Older Adults; *Joint project with Lisa Britton
DSP Co-Chair; Pamela Bosch (NAU)
Project successfully defended (05/2018)
- Jenna Martinez** 2016 – 2017
Thesis: Dual Task Performance in people with Parkinson’s Disease
DSP Co-Chair; Linda Denney (NAU)
Project successfully defended (05/2017)

Graduate: MS

Oregon Health & Science University

Bauke Dijkstra (MS, Kinesiology)

2013 – 2014

Thesis: Older Adults Improve Postural Control Through Perturbation Training
Visiting Scholar from the University of Groningen, The Netherlands
DSP Co-Chair; Yvo Kamsma

Committee Member / Dissertation reader:

Graduate: PhD

Colorado State University

Sutton Richmond (PhD, Human Bioenergetics)

2018 – 2020

Thesis: Bridging the Callosal Gap in Gait: A mechanistic Evaluation of White Matter's Role in Bilateral Coordination
DSP Committee Member; Chair: Brett Fling
Dissertation successfully defended; 3/6/2020

Ben Gurion University, Be'er Sheva, Israel

Uri Rosenblum Belzer (PhD)

2021

Thesis: Mechanisms of Balance Recovery During Walking in Complex Environments in Healthy Young and Older Adults
DSP- External thesis reviewer; Chair: Drs. Melzer & Plotnik

Post-doctoral Mentorship

University of Utah

Brian Loyd, PhD

2018 – Present

DSP was a distance co-mentor
Primary mentor- Lee Dibble