Sara A. Myers samyers@unomaha.edu CURRICULUM VITAE University of Nebraska at Omaha Omaha Veterans' Affairs Medical Center

ACADEMIC AND EMPLOYMENT HISTORY

EDUCATION

August 2011 **Doctor of Philosophy** University of Nebraska Medical Center

Concentration: Biomechanics

Omaha, Nebraska

Dissertation: The Effect of Aging and Vascular Occlusion on Gait Variability

August 2007 Master of Science University of Nebraska at Omaha

Major: Exercise Science Concentration: Biomechanics

Omaha, Nebraska

Thesis: The Effect of Peripheral Arterial Disease on Variability Present in

Gait Patterns

December 2004 Bachelor of Science University of Nebraska at Omaha

Major: Exercise Science

Omaha, Nebraska

RESEARCH EXCELLENCE

Research: Since becoming a faculty member I have received and participated in a total of \$33,782,485 in external funding brought to the University of Nebraska at Omaha (UNO) from the National Institutes of Health (NIH), National Aeronautics and Space Administration, and the Department of Veterans' Affairs. From these grants the majority of my salary has been supported since beginning my tenure track appointment in 2011. I have been an instrumental component of the creation and growth of the Department of Biomechanics and the Center for Research in Human Movement Variability. Examples of significant accomplishments:

- I was the first doctoral student at UNO to receive a prestigious NIH F31 fellowship in 2009. I remained the only student at UNO to have received the fellowship until fall 2017.
- Through a Veterans' Affairs appointment (without compensation), I was the first investigator at UNO to receive a Merit research grant from the Department of Veterans' Affairs. I worked closely with the Research Service and UNO procurement to have the movement analysis laboratory, data processing room, and my office leased by the Omaha Veterans' Affairs Medical Center so that we could perform research with veterans from Nebraska and Western Iowa.
- In total, I have had funding from the NIH continuously since 2009. My research project was included in UNO's largest grant, an NIH Center of Biomedical Research Excellence which was also funded on the first submission. I was the first research project principal investigator to graduate from this grant due to receipt of an R01. I am the Principal Investigator for an R01 project that was funded on the first submission and on a VA Merit award that will run through 2024.
- I have 58 publications and more than 260 conference abstracts (oral or poster) or invited presentations.
- H index = 21, i10-index = 35, 1590 total citations

Mentoring and program development: Even with limited time in the classroom, I have been instrumental in the creation and development of programs and student research in Exercise Science and Biomechanics.

- I have mentored 10 post doctoral research associates, 27 graduate students and 31 undergraduates on my research team. These students have received a total of over 90 fellowships, scholarships, and awards totaling more than \$200,000 to fund their education and research projects. I have published peer reviewed articles with 20 of these students and written over 150 letters of recommendation since beginning my faculty appointment in 2011.
- I participated in the external program reviews for the PhD in Exercise Science and MS in Biomechanics. I reviewed courses and program materials for the BS and MS degrees in Biomechanics. I served as the Biomechanics representative on the Exercise Science doctoral committee, including Chairing the committee from 2014-2016.
- I have hosted students and faculty as interns from Iowa, South Dakota, Colorado, Nebraska, Japan, Australia, Ukraine, and Canada.
- I gave informal presentations to promote research in the Department of Biomechanics and Center for Research in Human Movement Variability to over 25 organizations in the community.
- I have partnered with Omaha Public Schools teachers in Science, Technology, Engineering, and Mathematics through the privately funded Teacher-Researcher Partnership Program in the summers of 2019-2021. We are continuing this partnership through multiple outreach events in schools and bringing middle school students into the laboratories.

- I am serving as President of the American Society of Biomechanics in 2023. This is a three year appointment that includes a President-Elect (2022), Presidential (2023), and Past President (2024) term.
- I was served as a permanent study section member for the NIH Musculoskeletal Rehabilitation Sciences panel from 2017-2021. I regularly review for the National Institutes of Health, Department of Veterans' Affairs, National Institute on Disability, Independent Living, and Rehabilitation (formerly NIDRR), Department of Defense, and the National Science Foundation.
- Currently or previously reviewed for more than 30 journals and four professional societies.
- I was received the UNMC Distinguished Early Career Award in 2020 and was recognized in the Midlands Business Journal 2014 class of 40 under 40 Greater Omaha, Sarpy County and Council Bluffs entrepreneurs, executives, and professionals under the age of 40.
- As a student, I secured more than \$100,000 to fund my undergraduate, masters, and doctoral research investigating functional problems in patients with peripheral artery disease.

ADMINISTRATIVE EXCELLENCE

<u>Development of the Office of Research and Creative Activity (ORCA)</u>: Since joining ORCA on July 1, 2016, I have been a driver of significant office reorganization which now channels more resources to and increases UNO's capability for seeking external funding. I have researched best practices from local institutions and traveled to one of UNO's high achieving peers. Significant accomplishments include:

- Named permanent Associate Vice Chancellor for Research and Creative Activity August 1, 2023. I served as the Interim for this position from October 1, 2022, until being named permanent.
- Selected as one of four fellows from UNO for the University of Nebraska Developing Emerging Academic Leaders program (2022-2024).
- In the 2015-2016 fiscal year, UNO's research awards were \$12,517,901. In 2022-2023, the awards increased to \$42,038,971 an increase of 13% from FY22. This is an increase of 235%, or roughly 39.2% per year since I joined ORCA.
- I created a more transparent process to explain the expenses covered by university-wide indirect cost and the resulting distributions to Colleges.
- I was involved in transforming the ORCA team, hiring more than 15 new individuals.
- I developed and am leading a new program to stimulate research development that is funded from the University of Nebraska Central Administration.
- I have worked closely with a committee to perform an ORCA Assessment, to ensure the research support needs of the campus are met.
- I developed a program to provide research laboratory opportunities to work-study eligible students.

<u>Research promotion</u>: To increase external dollars and recognition of research at UNO, I have worked to change UNO's research culture and make research more visible. Steps taken and planned thus far:

- I send letters of appreciation with small gifts to all faculty who have submitted or been awarded funding every month. Each year I personally sign and send more than 650 letters to faculty and staff.
- Along with my ORCA team, I conceptualized and implemented the first UNO Faculty research awards. This will be an annual event that celebrates multiple types of external funding projects from disciplines across campus. UNO has received funding from more than 80 unique sources this fiscal year.

• I send special gift packages to acknowledge the achievement of faculty receiving federal awards. These awards are typically more difficult to secure, are for higher dollar values, and bring significant indirect cost funds to UNO.

Research training and development: A considerable charge when I started in ORCA was to help UNO faculty pursuing external research funding to become more competitive. I collaborated with the University of Nebraska Medical Center and University of Nebraska Lincoln Research offices to learn from their successful events and implement them in a relevant way for UNO faculty. The following activities have occurred since I started my ORCA appointment:

- I developed several programs to help faculty understand the grant submission process at UNO including new faculty research orientation, Finding funding sessions, and Grant-writing workshops
- I have met with more than 75 faculty to discuss funding strategies, discuss research aims, and to review and help address summary statement weaknesses.
- I meet with an average of 50 faculty candidates each year to discuss research resources at UNO.
- I developed collaborations with Army Research Laboratories to develop new biomechanics research collaborations with the Department of Defense. These visits have led to new collaborations and contracts for UNO faculty members to contribute their expertise to important research projects for our nation's soldiers.

<u>Process improvement and data metrics:</u> I have been instrumental in moving forward and improving several vital research processes at UNO. My roles in each process are described below:

- Core Facility/Service centers: I serve on the committee that will evaluate applications for new core facilities. I met with the committee to write the policy and am in the process of working with the pilot unit to implement the procedures. Throughout each step, I provided feedback from a faculty and administrative perspective and advocate for important research considerations. I worked with the Directors of the first three Core Facilities at UNO to secure more than \$1,000,000 in start-up funds to from the Nebraska Research Initiative. These funds will help each Core develop sustainability within five years.
- F&A: Several of the suggestions to improve revenue at UNO included using indirect or "F&A" costs to supplement the budget. Many projects at UNO seek waivers and do not bring in all of these potential revenue (or reimbursement of actual costs to support research). ORCA currently does not have a way to track and report these potential lost funds. We are currently developing a process and software that will provide data to guide future decisions on waivers.
- In-take: I have initiated the development of a consistent process for faculty to contact ORCA when they are working on a grant. This will allow our office to have metrics on office performance and vital submission and award information that can gauge performance in various research areas.
- Research support: I am a strong advocate for research and serve as a liaison between multiple offices and communication points when needed. I have worked with compliance, procurement, budget, human resources, and the faculty resource officer at various times to ensure research can be completed as desired by faculty.

ACADEMIC APPOINTMENTS

2023-	Associate Vice Chancellor	Office of Research and Creative Activity University of Nebraska at Omaha	Omaha, Nebraska
2022-2023	Interim Associate Vice Chancellor	Office of Research and Creative Activity University of Nebraska at Omaha	Omaha, Nebraska
2021-	Professor	Center for Research in Human Movemen Department of Biomechanics	t Variability
		University of Nebraska at Omaha	Omaha, Nebraska
2021-	Courtesy Faculty	Durham School of Architectural Engineer Construction, University of Nebraska-Lin	•
2020-	Research Health Scientist	Omaha Veterans' Affairs Medical Center	Omaha, Nebraska
2022-	Alternate Voting Member	Research and Development Committee, V Western Iowa Health Care System	/A Nebraska-
2016-2022	Assistant Vice Chancellor	Office of Research and Creative Activity University of Nebraska at Omaha	Omaha, Nebraska
2016-2021	Associate Professor	Center for Research in Human Movemen Department of Biomechanics	t Variability
		University of Nebraska at Omaha	Omaha, Nebraska
2019-2021	Director	Movement Analysis Core University of Nebraska at Omaha	Omaha, Nebraska
2005-2020	Without Compensation (W	OC) Research Associate Omaha Veterans' Affairs Medical Center	Omaha Nebraska
2011-2016	Assistant Professor	Center for Research in Human Movemen Biomechanics	t Variability
		University of Nebraska at Omaha	Omaha, Nebraska
2013-2016	Director	Gait Analysis Laboratory, Biomechanics University of Nebraska at Omaha Oma	Research Building ha, Nebraska
2015-2016	Director	Nebraska Biomechanics Core Facility University of Nebraska at Omaha	Omaha, Nebraska
2010-2013	Assistant Director	Nebraska Biomechanics Core Facility University of Nebraska at Omaha	Omaha, Nebraska
2009-2011	Senior Research Associate	School of Health, Physical Education and University of Nebraska at Omaha	Recreation Omaha, Nebraska

2005-2010	Peripheral Arterial Diseas		
		School of Health, Physical Education and University of Nebraska at Omaha	Recreation Omaha, Nebraska
2007-2009	Cognition and Gait Study	Coordinator	
	(1/2007-8/2009)	School of Health, Physical Education and University of Nebraska at Omaha	Recreation Omaha, Nebraska
2007-2009	Graduate Research Assist	ant	
	(1/2005-8/2009)	School of Health, Physical Education and University of Nebraska at Omaha	Recreation Omaha, Nebraska
2005-2007	Graduate Teaching and R	Research Assistant	
	(8/2005 – 2007)	School of Health, Physical Education and University of Nebraska at Omaha	Recreation Omaha, Nebraska
HONORS A	AND AWARDS		
		braska Governor's New Venture Competiti	on
	President, American Soci President-Elect, American		
	· · · · · · · · · · · · · · · · · · ·	praska Developing Excellence in Academic	Leaders (NU
	DEAL) program		
		ofessor, University of Nebraska at Omaha	'. CNI 1 1
2020 Early Career Alumni Achievement Award, Graduate Studies, University of Nebraska Medical Center			
2018 Innovator Award, UNeMed, awarded to the UNO Department of Biomechanics.			
2014 Midlands Business Journal's 2014 class of 40 Greater Omaha, Sarpy County and Council			
2014	-	cutives and professionals under the age of 4	
2014			
2013			
		in Grantsmanship for Rehabilitation Resear	ch workshop
		lth Loan Repayment Program Recipient a Space Grant and EPSCoR Technical Adv	isawy Cammittaa
	· ·	ealth, Physical Education, Recreation, and I	•
	Abernathy Presidential So	· · · · · · · · · · · · · · · · · · ·	Amount:\$1750
2009-2011.		llth, Ruth L. Kirschstein National Research	
2000 2010	Fellowship NASA Nebraska Space G	Frant Fallowship	Amount:\$86408 Amount:\$2500
		ealth, Physical Education, Recreation and D	
	Student Grant	•	Amount:\$3000
	NASA Nebraska Travel (Amount: \$700
2009	University of Nebraska at Second Place	t Omaha Research and Creative Activity Gr	aduate Poster
2009	NASA Nebraska Space G	irant Fellowship	Amount: \$5000
2008	Finalist, European Societ	y of Biomechanics Clinical Biomechanics A	
2008	American Society of Bior	mechanics Grant-in-Aid	Amount: \$2000

2008NASA Nebraska Space Grant Scholarship for Service	Amount: \$1000
2007 American Heart Association Student Scholarship in Cardiovascular	Disease and Stroke
	Amount: \$2000
2007University of Nebraska at Omaha Graduate Summer Scholarship	Amount: \$1000
2007 University of Nebraska at Omaha Graduate Thesis Scholarship	Amount: \$1000
2007 Exercise Science Outstanding Graduate Student, University of Nebr	aska at Omaha
2006NASA Nebraska Space Grant Scholarship for Service	Amount:\$500
2006Kate Field Grant in Aid Recipient	Amount: \$8000
2006Ray Griffin Scholarship	Amount: \$400
2005-2009Graduate Assistantship, University of Nebraska at Omaha	
2004 Graduated Summa Cum Laude, University of Nebraska at Omaha	
2004-2005University of Nebraska at Omaha Women's Basketball Scholarship	Amount:\$1250
2004Todd Hendrickson Scholarship Amount: \$750	
2003Hamilton County Community Foundation Scholarship	Amount: \$400
2004College of Education Dean's Award	
2004University Honors Convocation Award	
2004College of Education Outstanding Undergraduate Award	
2003, 2004 Helen B. Hewitt Scholarship	Amount: \$1500
2002-2004Emley Undergraduate Scholarship	Amount: \$800
2001-2005Dean and Chancellor's List	
2001Frank and Alice Farr Scholarship	Amount: \$1500
2001James M. Cox Scholarship	Amount: \$1000
2001Elks Club Regional Scholarship	Amount: \$300

RESEARCH GRANTS AWARDED

- 1. Oxygen-guided supervised exercise therapy in peripheral artery disease. Grantor: VA Rehabilitation Research and Development, 2024-2026, \$229,922, Role: Co-Investigator.
- 2. Improving walking in peripheral artery disease using oxygen-guided supervised exercise therapy. Grantor: Nebraska Research Initiative, 2023-2025, \$149,643, Role: Co-Investigator.
- 3. Multi-mode exoskeleton boot to facilitate rehabilitation and return to service. Grantor: Defense Health Agency, 2022-2024, \$269,767, Role: PI.
- 4. Improving walking in peripheral artery disease using specially designed assistive shoes. Grantor: VA Rehabilitation Research and Development, 2021-2023, \$229,834, Role: PI.
- 5. Portable computerized dynamic posturography/training system for astronauts. Grantor: NASA Nebraska EPSCoR Research Development Infrastructure, 2021-2022, \$15,000, Role: PI.
- 6. Machine learning applications for gait signatures in patients with peripheral artery disease. Grantor: Nebraska Research Initiative, 2021-2023, \$150,000, Role: PI.
- 7. Improving mobility in patients with peripheral artery disease using specially designed tennis shoes. Grantor: Nebraska Research Initiative, 2021-2022, \$40,000, Role: Co-Investigator.
- 8. Exoskeleton foot to improve walking performance and subject-reported preference. Grantor: VA Rehabilitation Research and Development, 2020-2024, \$1,153,159. Role: PI.
- 9. Harnessing movement variability to treat and prevent motor related disorders: Phase II. Grantor: National Institutes of Health, 2019-2024, \$10,990,584. Role: Core Facility Director; Research Project Mentor.
- 10. Improving mobility in peripheral artery disease using an ankle foot orthosis. Grantor: National Institutes of Health, 2016-2021, \$2,083,569. Role: PI.
- 11. Ramipril treatment of claudication: Oxidative damage and muscle fibrosis.

- Grantor: National Institutes of Health, 2015-2020, \$4,705,116 (33,338). Role: Co-Investigator.
- 12. Great plains IDEA-CTR. Grantor: National Institutes of Health, 2016-2021, \$324,504. Role: University of Nebraska at Omaha PI.
- 13. Harnessing movement variability to treat and prevent motor related disorders. Grantor: National Institutes of Health, 2014-2018, \$10,748,897. Role: Research Project PI; Research Project Mentor.
- 14. Attachable radiation reduction extension support sheath (ARRESS) and the lock-block, stat-lock radiation reduction shield to reduce occupational health hazards for interventional radiologists. Grantor: Nebraska Research Initiative, 2014-2015, \$250,000. Role: UNO PI.
- 15. Portable gait variability device for clinical assessment utilizing a smartphone interface. Grantor: Nebraska Research Initiative, 2013-2015, \$100,000. Role: PI.
- 16. Biomechanics Research Building equipment. Grantor: Nebraska Research Initiative, 2013, \$843,005. Role: Co-Investigator
- 17. 37th American Society of Biomechanics Annual Conference. Grantor: National Institutes of Health/National Institute of Biomedical Imaging and Bioengineering, 2013, \$18,750. Role: Co-Investigator.
- 18. Use of gait analysis to assess the likelihood of falls in at-risk populations. Grantor: Nebraska Research Initiative, 2012-2013, \$82,500. Role: Co-Investigator.
- 19. Major research instrument acquisition: Acquisition of ETG-4000 24 Channel Optical Topography system for research, training, and outreach activities. Grantor: National Science Foundation. 2012-2013, \$233,367. Role: Co-Investigator.
- 20. Dual Tasking: A paradigm for cognitive and physical functioning assessment and training for astronauts.
 - Grantor: NASA Nebraska Space Grant Research Mini-Grant, 2012-2013, \$25,000. Role: PI.
- 21. Gait after intervention trial in peripheral arterial disease.
 Grantor: Veterans' Affairs Rehabilitation Research and Development Program, 2012-2016, \$803,364, Role: UNO PI.
- 22. The relationship between ambulatory activity patterns and gait variability. Grantor: University Committee on Research and Creative Activity. 2012, \$4500, Role: PI.
- 23. Effects of blood flow on dynamics of the neuromuscular system. Grantor: Fund for Investing in the Research Enterprise (FIRE). 2012, \$35,000, Role:PI.
- 24. Sensory interaction in patients with benign paroxysmal positional vertigo during locomotion in space.
 - Grantor: NASA Nebraska Space Grant Research Mini-Grant. 2011-2012, \$25,000. Role: Co-PI.
- 25. Restoration of function post-spaceflight through exercise rehabilitation.
 Grantor: NASA Nebraska Space Grant Research Mini-Grant. 2011-2012, \$25,000. Role: Co-PI.
- 26. The role of tactile sensation on locomotor adaptation in astronauts returning from long duration space flight.
 - Grantor: NASA EPSCoR, 2011-2014, \$750,000, Role: Co-Investigator
- 27. Externally powered orthosis to improve mobility after long duration space flight. Grantor: NASA Nebraska Research Mini-Grant, 2011-2012, \$25,000, Role: PI
- 28. The effect of physiological mechanisms on muscular strength and skeletal muscle performance. Grantor: NASA Nebraska Space Grant and EPSCoR, 2010, \$33,995, Role: Co-Investigator
- 29. The effect of aging and vascular occlusion on gait variability.
 Grantor: National Institutes of Health, Ruth L. Kirschstein National Research Service Predoctoral Fellowship (F31), 2009-2011, \$86,408, Role: Fellow
- 30. The effect of ischemia on muscular strength.
 Grantor: NASA Nebraska Space Grant and EPSCoR, 2009-2010, \$2500, Role: PI

- 31. The effect of aging and vascular occlusion on gait variability.
 - Grantor: American Alliance for Health, Physical Education, Recreation, and Dance, 2009-2010, \$3000, Role: PI
- 32. The associations between cognitive and physical function during dual task paradigms. Grantor: NASA Nebraska Space Grant and EPSCoR, 2009, \$5000, Role: PI
- 33. The effect of aging and vascular occlusion on variability in gait patterns. Grantor: American Society of Biomechanics, 2008-2009, \$2000, Role: PI
- 34. The effect of vascular occlusion on gait variability in healthy young. Grantor: NASA Nebraska Space Grant and EPSCoR, 2008, \$1000, Role: PI
- 35. The effect of peripheral arterial disease on variability in gait patterns. Grantor: American Heart Association, 2007, \$2000, Role: PI
- 36. Gait adaptations in persons experiencing claudication.
 Grantor: NASA Nebraska Space Grant and EPSCoR, 2006, \$500, Role: PI
- 37. Evaluation of gait abnormalities in geriatric patients induced by peripheral arterial disease utilizing advanced biomedical measures.

Grantor: The American Geriatrics Society, 2006-2008, \$150,000, Role: Co-Investigator

TOTAL AMOUNT AWARDED FOR RESEARCH RELATED GRANTS: \$34,454,669

BIBLIOGRAPHY ARTICLES IN PEER REVIEWED JOURNALS

https://www.ncbi.nlm.nih.gov/myncbi/sara.myers.1/bibliography/public/

- 1. Alli Takallou M, Fallahtafti F, Hassan M, Al-Ramini A, Qolomany B, Pipinos I, Myers SA, Alsaleem F. Diagnosis of disease affecting gait with a body acceleration-based model using reflected marker data for training and a wearable accelerometer for implementation. Sci Rep. 2024 Jan 11;14(1):1075.
- 2. Rahman H, Leutzinger T, Hassan M, Schieber M, Koutakis P, Fuglestad MA, DeSpiegelaere H, Longo GM, Malcolm P, Johanning JM, Pipinos II, **Myers SA.** People with peripheral artery disease walk in similar pattern irrespective of the location of claudication pain. Ann Phys Rehabil Med. 2023, in press.
- 3. Dinkel D, Hassan M, Rech JP, DeSpiegelaere H, Johanning JM, Pipinos II, **Myers SA.** A comparison of the perceptions of wearing an ankle foot orthosis by individuals with peripheral artery disease according to their baseline-level of physical activity. J Bodyw Mov Ther. 2023 Jul;25:268-272.
- 4. Dinkel D, Hassan M, Rech JP, DeSpiegelaere H, Johanning JM, Pipinos II, **Myers S.** Assessing wear time and perceptions of wearing an ankle foot orthosis inpatients with peripheral artery disease. P M R. 2023 Apr;15(4):493-500.
- 5. Fallahtafti F, Bruijn S, Mohammadzadeh Gonabadi A, Sangtarashan M, Boron JM, Curtz C, Siu KC, Myers SA, Yentes J. Trunk velocity changes in response to physical pertrubations are potential indicators of gait stability. Sensors. 2023 March 5;23(5).
- 6. Bapat GM, Bashir AZ, Malcolm P, Johanning JM, Pipinos II, **Myers SA.** A biomechanical perspective on walking in patients with peripheral artery disease. Vasc Med. 2023 Feb; 28(1):77-84.
- 7. Bashir AZ, Dinkel DM, Pipinos II, Estabrooks PA, Johanning JM, **Myers, SA.** Long-term use of an ankle-foot orthosis intervention in patients with peripheral artery disease using the integrated promoting action on research implementation in health services (i-PARIHS) framework. Int J Cardio. 2023 Feb 1;372-23-32. Doi: 10.1016/j.ijcard.2022.11.041.

- 8. Fallahtafti F, Salamifar Z, Hassan M, Rahman H, Pipinos II, **Myers SA.** Joint angle variability is altered in patients with peripheral artery disease after six months of exercise intervention. Entropy. 2022; 24, 1422. Doi:10.3330/e24101422.
- 9. Leutzinger TJ, Koutakis P, Fuglestad MA, Rahman H, Despiegelaere H, Hassan M, Schieber M, Johanning JM, Stergiou N, Longo GM, Casale GP, **Myers SA***, Pipinos II. Peripheral artery disease affects the function of the legs of claudicating patients in a diffuse manner irrespective of the segment of the arterial tree primarily involved. PLoS One. 2022;17(7):e0264598. doi: 10.1371/journal.pone.0264598. eCollection 2022. PubMed PMID: 35830421; PubMed Central PMCID: PMC9278728.*co-senior authors
- 10. Al-Ramini A, Hassan M, Fallahtafti F, Takallou M, Rahman H, Qolomany B, Pipinos I, Alsaleem F, **Myers SA**. Machine Learning-Based Peripheral Artery Disease Identification Using Laboratory-Based Gait Data. Sensors. 2022 October; 22(19). doi: 10.3390/s22197432.
- 11. Bashir AZ, Dinkel DM, Pipinos II, Johanning JM, **Myers SA**. Patient Compliance with Wearing Lower Limb Assistive Devices: A Scoping Review. J Manipulative Physiol Ther. 2022 Feb;45(2):114-126. doi: 10.1016/j.jmpt.2022.04.003. Epub 2022 Jun 24. Review. PubMed PMID: 35753880; PubMed Central PMCID: PMC9329246.
- 12. Rahman H, Anderson CP, Pipinos II, Johanning JM, Casale GP, Dong J, DeSpiegelaere H, Hassan M, **Myers SA.** Muscle forces and power are significantly reduced during walking in patients with peripheral artery disease. J Biomech. 2022 Feb 25;135:111024.
- 13. Antonellis P, Mohammadzadeh Gonabadi A, **Myers SA**, Pipinos II, Malcolm P. Metabolically efficient walking assistance using optimized timed forces at the waist. Sci Robot. 2022 Mar 16;7(64):eabh1925.
- 14. Bapat GM, **Myers SA.** A robust technique for optimal fitting of roll-over shapes of human locomotor systems. Med Eng Phys. 2022 Feb;100:103756.
- 15. Rahman H, Pipinos II, Johanning JM, Casale G, Williams MA, Thompson JR, O"Neill-Castro Y, Myers SA. Claudicating patients with peripheral artery disease have meaningful improvement in walking speed after supervised exercise therapy. J Vasc Surg. 2021 May 31;doi:10.1016/j.jvs.2021.04.069 [Epub ahead of print]. *Chosen as top publication of the quarter for Continuing Medical Education.
- 16. Rahman H, Pipinos II, Johanning JM, **Myers SA.** Gait variability is affected more by peripheral artery disease than by vascular occlusion. PLoS One. 2021;16(3):e0241727.
- 17. Casale GP, Thompson JR, Carpenter LC, Kim J, Lackner TJ, Mietus CJ, Ha DM, **Myers SA**, Brunette KE, Li s, Shields C, Willcockson G, Pipinos II. Cytokine signature of inflammation mediated by autoreactive Th-cells, in calf muscle of claudicating patients with Fontaine stage II peripheral artery disease. Transl Res. 2021 Feb;228:94-108.
- 18. Bashir AZ, Dinkel DM, Bapat GM, Despiegelaere H, Hassan M, Johanning JM, Pipinos II, **Myers SA**. Considerations for implementation of an ankle foot orthosis to improve mobility in peripheral artery disease. Arch Rehab Res Clin Transl. 2021 Mar; 3(1): 100092.
- 19. FallahTafti F, Watson K, Boron JB, Myers SA, Schmid KK, Yentes JM. Strength of plantar- and dorsiflexors mediates step regularity during a high cognitive load situation in a cross-sectional cohort of older and younger adults. J Geriatr Phys Ther. 2020 Oct/Dec;43(4):E45-E52.
- 20. Fuglestad M, Hernandez H, Gao Y, Ybay H, Schieber M, Brunette KE, **Myers S**, Casale G, Pipinos I. Reply. J Vasc Surg. 2020 Mar;71(3):1072-1073. doi: 10.1016/j.jvs.2019.11.014. PubMed PMID: 32089205.
- 21. Fuglestad MA, Hernandez H, Gao Y, Ybay H, Schieber MN, Brunette KE, Myers SA, Casale GP, Pipinos II. A low-cost, wireless near-infrared spectroscopy device detects the presence of lower extremity atherosclerosis as measured by computed tomographic angiography and

- characterizes walking impairment in peripheral artery disease. Vasc Surg. 2019 Aug 21;. doi: 10.1016/j.jvs.2019.04.493. [Epub ahead of print] PubMed PMID: 31445826.
- 22. Schieber, MN, Pipinos, II, Johanning, JM, Casale, GP, Williams, MA, DeSpiegelaere, HK, Senderling, B, **Myers**, **SA**. Supervised walking exercise therapy improves gait biomechanics in patients with peripheral artery disease. *J Vasc Surg*. 2019 Aug 20.
- 23. Rosen, AB, Yentes, JM, McGrath, ML, Maerlender, AC, **Myers, SA**, Mukherjee, M. Alterations in cortical activation in individuals with chronic ankle instability during single-limb postural control. *J Athl Train*, 2018. *Epub ahead of print*.
- 24. Leeder, T, Tafti, FF, Schieber, M, Myers, SA, Blaskewicz Boron, J, Yentes, JM. Optic flow improves step width and length in older adults while performing dual task. *Aging clinical and experimental research*. 2019 Aug 31(8): 1077-1086.
- 25. Hernandez, H, **Myers, SA,** Schieber, M, Ha, DM, Baker, S, Koutakis, P, Kim, KS, Meitus, C, Casale, GP, Pipinos, II. Quantification of daily physical activity and sedentary behavior of claudicating patients. *Ann Vasc Surg.* 2018 Aug 13.
- 26. Weins, C, Denton, W, Schieber, MN, Hartley, R, Marmelat, V, **Myers, SA,** Yentes, JM. Walking speed and spatiotemporal step mean measures are reliable during feedback-controlled treadmill walking; however spatiotemporal step variability is not reliable. *J Biomech.* 2018 Jan 23; 83-211-226.
- 27. McCamley, JD, Cutler, EL, Schmid, KK, Wurdeman, SR, Johanning, JM, Pipinos, II, **Myers**, **SA.** Gait mechanics differences between healthy controls and patients with peripheral artery disease after adjusting for gait velocity, stride length, and step width. *J Appl Biomech.* 2018: Jul 10:1-19.
- 28. Weins, C, Denton, W, Schieber, M, Hartley, R, Marmelat, V, **Myers, SA**, Yentes, J. Reliability of a feedback-controlled treadmill algorithm dependent on the user's behavior. *IEEE Int Conf Electro Inf Technol.* 2017; 2017:545-550. PMCID: PMC5790169.
- 29. McCamley, JD, Pisciotta, EJ, yentes, JM, Wurdeman, SR, Rennard, SI, Pipinios, II, Johanning, JM, **Myers, SA.** Gait deficiencies associated with peripheral artery disease are different than chronic obstructive pulmonary disease. *Gait Posture*. 2017 Sep; 57:258-264. PMCID: PMC5563974.
- 30. Schieber, MN, Hasenkamp, RM, Pipinos, II, Johanning, JM, Stergiou, N, DeSpiegelaere, HK, Chien, JH, **Myers, SA.** Muscle strength and control characteristics are altered by peripheral artery disease. *J Vasc Surg.* 2017 Jul;66(1):178-186. PMCID: PMC5484068.
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BOOK CHAPTERS

Published

- 1. Nath, N, **Myers, SA.** (2022). Undergraduate Research in Medicine. In Mieg, H.A., Ambos, E., Brew, A., Galli, D., & Lehmann, J., *The Cambridge Handbook of Undergraduate Research*. Cambridge: Cambridge University Press. Doi: 10.1017/9781108869508.
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OTHER PUBLICATIONS

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- 1. Myers, SA. Grant funding strategy: Which grants to apply for? Edge for Scholars. 2021; https://edgeforscholars.org/grant-funding-strategy-which-grants-to-apply-for/. (892 views)
- 2. Myers, SA. Choosing what to do or not to do on the job. Edge for Scholars. 2021; https://edgeforscholars.org/choosing-what-to-do-or-not-to-do-on-the-job/. (720 views).
- 3. Myers, SA. Working with the kids at home? Tips from an experienced parent. Edge for Scholars. 2020; https://edgeforscholars.org/working-with-the-kids-at-home-tips-from-an-experienced-parent/. (1051 views). * Winner of the Virtual Conference Season tips contest.

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INTELLECTUAL PROPERTY

New Invention Notifications

- 1. Energy harvesting exoskeleton, NIN23103, 2023.
- 2. Safe portable bedside ambulatory treadmill, NIN23104, 2023.
- 3. The energy harvesting exoskeleton, NIN23105, 2023.
- 4. Virtual reality companion to portable computerized dynamic posturography system (Lokahi), NIN22051, 2022.
- 5. Lokahi: Portable computerized dynamic posturography system, NIN22050, 2022.
- 6. PAD Orthotic, NIN21089, 2021.
- 7. Bedside ambulation assist and assess system, NIN 20038, 2020.
- 8. Ballistography approach for diagnosing PAD, 20UNL2020-055, 2020.
- 9. Energy harvesting exoskeleton, NIN19038, 2019.
- 10. Spring two-stage assistive device, NIN20009, 2019.
- 11. Diagnosing peripheral artery disease from gait-acceleration measurements, 22UNL2022-078 (UNL), 2022

Patent submissions

1. Systems and methods for diagnosing peripheral artery disease (PAD) using gait acceleration characteristics, 2022.

ABSTRACTS

Refereed Conference Abstracts

- 1. Williams J, Fallahtafti F, Salamifar Z, Pipinos II, Myers SA. Assistive shoes affect step characteristics in patients with peripheral artery disease. Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.
- 2. Nguyen A, Fallahtafti F, Pipinos II, Myers SA. Assessment of assistive shoe preference before and after three months' use among patients with peripheral artery disease. Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.
- 3. Kirkland J, Fallahtafti F, Pipinos II, Myers SA. Effect of three-month use of assistive shoes on gait in patients with peripheral artery disease. *Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair*, Omaha, NE, March 22, 2024

- 4. Salamifar Z, Fallahtafti F, Pipinos II, Johanning JM, Rahman H, Myers SA. Assistive shoes can improve the vertical ground reaction forces in patients with peripheral artery disease. *Submitted to the 2024 American Society of Biomechanics Annual Conference*, Madison, WI, August 4-9, 2024.
- 5. Salamifar Z, Fallahtafti F, Pipinos II, Johanning JM, Rahman H, Myers SA. Enhancing vertical ground reaction force in peripheral artery disease patients through assistive shoes. *Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.*
- 6. Williams J, Fallahtafti F, Salamifar Z, Pipinos II, Myers SA. Assistive shoes affect gait of patients with peripheral artery disease. *Submitted to the 2024 American Society of Biomechanics Annual Conference*, Madison, WI, August 4-9, 2024.
- 7. Salamifar Z, Fallahtafti F, Samson K, Johanning J, Pipinos I, Myers SA. A three-month assistive shoe intervention improves muscle oxygenation in patients with peripheral artery disease. *Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair*, Omaha, NE, March 22, 2024.
- 8. Williams J, Fallahtafti F, Kirkland J, Salamifar Z, Pipinos II, Myers SA. Spring-loaded shoe affects step characteristics in patients with peripheral artery disease. *Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair*, Omaha, NE, March 22, 2024.
- 9. Fallahtafti F, Salamifar Z, Pipinos II, Myers SA. Passive exoskeleton reduces ankle muscle demand during walking in peripheral artery disease. *Submitted to the 2024 American Society of Biomechanics Annual Conference*, Madison, WI, August 4-9, 2024.
- 10. Fallahtafti F, Salamifar Z, Pipinos II, Myers SA. Passive exoskeleton decreases muscular demand during walking in peripheral artery disease. Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.
- 11. Fallahtafti F, Salamifar Z, Pipinos II, Myers SA. Passive exoskeleton affects the biomechanics of walking in peripheral artery disease. *Submitted to the 2024 Dynamic Walking Conference*, Pensacola Beach, FL, May 27-30, 2024.
- 12. Nguyen A, Fallahtafti F, Myers SA. Increasing lung capacity using the Lung Master pulmonary exerciser. Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair, Omaha, NE, March 22, 2024
- 13. Mahamane Iro Y, Rasmussen C, Myers SA. Mean pressures under the ischio-sacral region while seated on different cushion types. *Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair*, Omaha, NE, March 22, 2024
- 14. Neihart J, Fallahtafi F, Pipinos II, Myers SA. Passive exoskeleton footwear to improve walking performance in patients with peripheral artery disease. *Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair*, Omaha, NE, March 22, 2024
- 15. Razavi H, Myers SA, Pipinos II, Malcolm P. Effects of elastic hip flexion and extension assistance on kinetics and muscle activation I patients with peripheral artery disease and healthy. *Submitted to the 2024 American Society of Biomechanics Rocky Mountain Regional Meeting*, Estes Park, CO, April 5-6, 2024.
- 16. Rasmussen CM, Malloy J, Mahamane Iro Y, Eriks K, Cotton T, Roser MC, Myers SA. Balance and agility when wearing exoskeleton boots with built-in ankle bracing. Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.
- 17. Malloy J, Rasmussen CM, Myers SA, Roser MC. Ankle performance in a prototype exoskeleton boot compared to traditional military boots. *Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair*, Omaha, NE, March 22, 2024
- 18. Neihart J, Fallahtafti F, Pipinos I, Myers SA. Passive exoskeleton footwear to improve walking performance in patients with peripheral artery disease. Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.

- 19. Rasmussen CM, Malloy J, Mahamane Iro Y, Eriks K, Cotton T, Roser MC, Myers SA. Effects of exoskeleton boots with novel ankle bracing on static posture control and agility. *Submitted to the 2024 American Society of Biomechanics Annual Conference*, Madison, WI, August 4-9, 2024.
- 20. Williams J, Fallahtafti F, Kirkland J, Salamifar Z, Pipinos II, Myers SA. Spring-loaded shoe affects step characteristics in patients with peripheral artery disease. Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair, Omaha, NE, March 22, 2024
- 21. Malloy J, Rasmussen, Mahamane Iro Y, Eriks K, Cotton T, Roser MC, Myers SA. Ankle mechanics while wearing exoskeleton boots versus conventional military boots. *Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024*.
- 22. Mahamane Iro Y, Rasmussen C, Myers SA. Pressures under the ischio-sacral region while seated on different cushion types. Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.
- 23. Tian Y, Hakim AH, Fallah Tafti F, Moulton MJ, Koutakis P, Schieber MN, Thompson JR, Cook JR, Kim JKS, Zhu Z, DeSpiegelaere HK, Haynatzki GR, Casale GP, Myers SA, Pipinos II. Subclassification of Peripheral Artery Disease Based on Muscle Force: Leg Failure with Reduced Muscle Force (LEF-RF) and Leg Failure with Preserved Muscle Force (LEF-PF). Submitted to the 2024 Human Movement Variability Conference, Omaha, NE, May 2024.
- 24. Salamifar Z, Fallahtafti F, Samson K, Johanning J, Pipinos I, Myers SA. A three-month ankle foot orthosis improves the spatiotemporal parameters of gait in patients with PAD. Submitted to the 2024 University of Nebraska at Omaha Research and Creative Activity Fair, Omaha, NE, March 22, 2024
- 25. Rasmussen CM, Malloy J, Mahamane Iro Y, Eriks K, Cotton T, Roser MC, Myers SA. Exoskeleton boots provide lateral ankle bracing while preserving mobility and agility. *Submitted to the Nebraska Strategic Research Institute Fellow Conference*, Omaha, NE April 24-25, 2024.
- 26. Rasmussen CM, Malloy J, Mahamane Iro Y, Eriks K, Cotton T, Myers SA, Roser MC. Exoskeleton boots provide enhanced mediolateral ankle bracing while preserving agility compared to standard-issue equipment. Submitted to the Military Health System Research Symposium, 2024.
- 27. Roser MC, Cotton T, Eriks K, Rasmussen CM, Malloy J, Mahamane Iro Y, Myers SA. Exoskeleton boots: a model for accelerating how science and technology drives innovation and growth in the DOD. Submitted to the Military Health Systesm Research Symposium, 2024.
- 28. Fallahtafti F, Salamifar Z, Pipinos I, Johanning JM, Myers SA. Regularity of lower limb joint angle motions decreased after a six-month supervised exercise therapy. Presented at the 2023 annual meeting of the American Society of Biomechanics, Knoxville, TN, August 8-11, 2023.
- 29. Salamifar Z, Fallahtafti F, Samson K, Johanning JM, Pipinos I, Myers SA. The effect of three-month ankle foot orthosis (AFO) on spatiotemporal gait characteristics of patients with peripheral artery disease. Presented at the 2023 annual meeting of the American Society of Biomechanics, Knoxville, TN, August 8-11, 2023.
- 30. Fallahtafti F, Salamifar Z, Pipinos I, Johanning JM, Myers SA. Supervised walking exercise therapy affects walking variability in patients with peripheral artery disease. Presented at the Great Plains Biomechanics conference, Omaha, NE June 6, 2023.
- 31. Salamifar Z, Fallahtafti F, Johanning JM, Pipinos I, Myers SA. The impact of exoskeleton footwear with optimal stiffness on the angular joint motion in patients with peripheral artery disease. Presented at the Great Plains Biomechanics conference, Omaha, NE, June 6, 2023.
- 32. Wagle, N, Hassan, M, Weaver, M, Myers, SA. Peak pressure distribution of seat cushions. Presented at the Great Plains Biomechanics conference, Omaha, NE, June 6, 2023.
- 33. Woods, M, Hassan, M, Weaver, M, Myers, SA. Peak pressure distribution of seat cushions. Presented at the UNO Student Research and Creative Activity Fair, Omaha, NE, March 24, 2023.

- 34. Woods, M, Fallahtafti F, Pipinos I, Myers, SA. Muscle oxygenation in patients with peripheral artery disease during walking with different tennis shoes. Presented at the UNO Student Research and Creative Activity Fair, Omaha, NE, March 24, 2023.
- 35. Woods, M., Fallahtafti, F., Pipinos, I., Johanning, J., Myers, SA. Gait variability is altered after revascularization in patients with peripheral artery disease. Presented at the National Conferences on Undergraduate Research (NCUR), April 13-15 2023.
- 36. Salamifar Z, Fallahtafti F, Johanning JM, Pipinos I, Myers SA. The impact of exoskeleton footwear on joint angular motion in patients with peripheral artery disease. Presented at the UNO Student Research and Creative Activity Fair, Omaha, NE, March 24, 2023.
- 37. Fallahtafti, F, Pipinos, I, Johanning, J, Rahman, H, Hassan, M, Myers, SA. Ankle-foot orthoses alters joint motions in patients with peripheral artery disease, *World Congress of the International Society of Posture and Gait Research*. Montréal, CA, July 3-7, 2022.
- 38. Fallahtafti, F, Pipinos, I, Johanning, J, Rahman, H, Hassan, M, Myers, SA. Joint biomechanics is altered when walking with ankle-foot orthoses in peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, May 19, 2022.
- 39. Salamifar Z, Fallahtafti F, Pipinos I, Johanning J, Myers SA. Walking with exoskeleton footwear could affect the lower limb joint motion in patients with peripheral artery disease. The 8th Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), 2022.
- 40. Salamifar Z, Fallahtafti F, Pipinos I, Johanning I, Rahman H, Hassan, Myers SA. The Effect of Orthoses Ankle on Ground Research Forces in Patients with Peripheral Artery Disease. The 3rd Annual Great Plains Biomechanics Conference and the 7th Annual Human Movement Variability Conference 2022.
- 41. Salamifar Z, Fallahtafti F, Pipinos I, Johanning I, Rahman H, Hassan, Myers SA. Three-Month Intervention with Ankle Foot Orthoses Alters Kinetics of Walking in Patients with Peripheral Artery Disease. 12th annual meeting- YMCA the Rockies 2022.
- 42. Bashir A, Dinkel DM, **Myers SA.** An ankle foot orthosis implementation to improve mobility in peripheral artery disease. Accepted for poster presentation at the 99th Annual Conference of the American Congress of Rehabilitation Medicine, Chicago IL, November 8-11, 2022.
- 43. Evans N, Rahman H, Pipinos I, Johanning JM, Hassan M, **Myers SA.** Effects of assistive tennis shoe on ground reaction force for patients with peripheral artery disease during walking. Accepted for poster presentation at the Annual Meeting of the Gerontological Society of America, Indianapolis IN, November 2-6, 2022.
- 44. Al-Ramini A, Hassan M, Fallahtafti F, Ali Takallou M, Rahman H, Qolomany B, Pipinos II, Alsaleem F, **Myers SA.** Machine learning-based peripheral artery disease identification using laboratory-based gait data. Accepted for poster presentation at the Biomedical Research and Healthcare Informatics Conference, Omaha NE, October 17, 2022.
- 45. Mohammadzadeh Gonabadi A, Antonellis P, **Myers SA**, Pipinos I, Malcolm P. Effects of actuation timing and magnitude of a semi-rigid hip exoskeleton on metabolic cost. Oral presentation at the 2022 North American Congress on Biomechanics, Ottawa CA, August 21-25, 2022.
- 46. Salamifar Z, Fallahtafti F, Pipinos I, Johanning JM, Rahman H, Hassan M, **Myers SA.** The effect of ankle foot orthoses on ground reaction forces in patients with peripheral artery disease. Oral presentation at the 2022 North American Congress on Biomechanics, Ottawa CA, August 21-25, 2022.
- 47. Rahman H, Anderson C, Pipinos I, Johanning JM, Dong J, **Myers SA.** Patients with peripheral artery disease walk with reduced ankle plantarflexor muscle force and power. Poster presentation at the 2022 North American Congress on Biomechanics, Ottawa CA, August 21-25, 2022.

- 48. Fallahtafti F, Pipinos I, Johanning JM, Rahman H, Hassan M, **Myers SA.** Ankle foot orthoses alter joint torques and powers in patients with peripheral artery disease. Poster presentation at the 2022 North American Congress on Biomechanics, Ottawa CA, August 21-25, 2022.
- 49. **Myers SA**, Rahman H, Fallahtafti F, Malcolm P, Johanning JM, Pipinos II. Improving mobility in patients with peripheral artery disease using assistive shoes and devices. Oral presentation at the VA VISN 23 Research Symposium, Minneapolis MN, August 10, 2022.
- 50. Bashir, A., Dinkel, D., Johanning, J.M., Pipinos, I.I., Estabrooks, P.A., **Myers, S.A.** An ankle foot orthosis intervention and assessment of patients with peripheral artery disease using the i-PARIHS implementation framework. Presented at the Great Plains Biomechanics Conference, Omaha, NE, May 19, 2022.*Outstanding Poster Award.
- 51. Schieber, M., Myers, S.A., Li, S., Pipinos, I.I., Casale, G. Microvessel oxidative stress predicts changes in leg function of patients with peripheral arterial disease after supervised exercise. Submitted to the Society for Vascular Surgery VRIC meeting, June 15-18, 2022, Boston, MA.
- 52. Fallahtafti, F, Izuta, R., Scott-Pandorf, M., **Myers, S.A.** Portable computerize dynamic postruography/training system for astronauts. Poster presentation at the Nebraska Academy of Sciences Annual Meeting, April 22, 2022. Lincoln, NE.
- 53. Bashir, A., Myers, S.A., Dinkel, D., Pipinos, I.I. Considerations for implementing an ankle foot orthosis to improve mobility in peripheral artery disease. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 54. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 55. Gonabadi, A.M., **Myers, S.A.,** Pipinos, I.I., Malcolm, P. How can actuation timing and magnitude of a bilateral semi-rigid hip exoskeleton optimize metabolic cost. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 56. Evans, N., Rahman, H., Pipinos, I.I., Johanning, J.M., Hassan, M., **Myers, S.A.** The alteration in ground reaction force while walking with assistive tennis shoes in patients with peripheral artery disease. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 57. Anderson, C., Rahman, H., **Myers, S.A.** The optimal relationship between actuator stiffness and actuation timing for a passive ankle exoskeleton: An opensim simulation. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 58. Anderson, A., Rahman, H., **Myers, S.A.** Determining the impact of supervised exercise therapy on gait variability in patients with peripheral artery disease. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 59. Woods, M., Rahman, H., **Myers, S.A.** The changes in gait variability after revascularization in patients with peripheral artery disease. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 60. Staudacher, L. Fallahtafti, F., Rahman, H., **Myers, S.A.** Ankle-foot orthoses prevent excessive ankle range-of-motion in patients with peripheral artery disease before and after 3-month intervention. Oral presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 61. Rahman, H., Anderson, C., Pipinos, I.I., Johanning, J., Dong, J., **Myers, S.A.** Changes in ankle muscle force and power during walking in patients with peripheral artery disease. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.

- 62. Fallahtafti, F., Pipinos, I.I., Johanning, J., Rahman, H., Hassan, M., **Myers, S.A.** Ankle foot orthoses alter biomechanics of lower extremites during walking. Poster presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 63. Salamifar, Z., Fallahtafti, F., Pipinos, I.I., Johanning, J., Rahman, H., Hassan, M., **Myers, S.A.**Ankle foot orthoses improves ground reaction forces in patients with peripheral artery disease. Oral presentation at the University of Nebraska at Omaha Student Research and Creative Activity Fair, March 2, 2022, Omaha, NE.
- 64. Hassan, M., Evans, N., Dinkel, D., Johanning, J., Pipinos, I., **Myers, S.A.** Physical activity level impacts walking performance while wearing an ankle foot orthosis. Accepted for poster presentation at the 43rd Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, April 8, 2022, Baltimore, MD.
- 65. Evans, N., Hassan, M., Dinkel, D., Johanning, J., Pipinos, I., **Myers, S.A.** Physical activity impacts walking distances and energy consumption of patients with peripheral artery disease. Accepted for presentation at the 2021 Annual Scientific Meeting of the Gerontological Society of America, Virtual, November 13, 2021.
- 66. Rahman, H., Leutzinger, T., DeSpiegelaere, H., Hassan, M., Schieber, M., Johanning, JM., Casale, G.P., Pipinos, I., **Myers, S.A.** The effect of the location of claudication pain on the performance of the different muscle groups of the leg and the walking patterns of patients with peripheral artery disease. Presented at the 45th Annual meeting of the Midwestern Vascular Surgical Society, Chicago, IL, September 9, 2021.
- 67. Anderson, C., Rahman, H., Pipinos, I. Johanning, J., **Myers, S.A.** Posterior chain mechanics are altered in subjects with peripheral artery disease after supervised exercise training: An opensim simulation. Presented at the 2021 American Society of Biomechanics Annual Meeting, Virtual, August 6, 2021.
- 68. Graham, S., Rahman, H., Huber, J., **Myers, S.A.** Material science for physical science with biomechanics. Presented at the Teacher-Researcher Partnership Program 2021 Symposium, Omaha, NE, July 14, 2021.
- 69. Huber, J., Rahman, H., Graham, S., **Myers, S.A.** Improving walking with specialized assistive tennis shoes. Presented at the Teacher-Researcher Partnership Program 2021 Symposium, Omaha, NE, July 14, 2021.
- 70. Mietus, C.J., Gao, Y., Uberti, M.G., Lambert, N.G., Koutakis, P., Popoutsi, E., Thompson, J.R., DeSpiegelaere, H.K., Boska, M.D., **Myers, S.A.,** Casale, G.P., Pipinnos, I.I., Balarinivasa, R.S. Altered T1 and T2 relaxation times in leg muscles are linked to hemodynamic and ambulatory parameters in patients with peripheral artery disease. Presented at the 2021 International Society for Magnetic Resonance in Medicine Annual meeting, Virtual, May 15-20, 2021.
- 71. Anderson, C., Rahman, H., Pipinos, I. Johanning, J., **Myers, S.A.** Hip variance decreases in patients with peripheral artery disease as a result of set: An opensim simulation. Presented at the Great Plains Biomechanics Conference, Omaha, NE, May 12, 2021.*Delsys Best Scientific Impact Award
- 72. Bashir, A., Dinkel, D., Johanning, J., Pipinos, I., **Myers, S.A.** Implementation of an ankle foot orthosis to improve mobility in peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, May 12, 2021.
- 73. Evans, N.T., Rahman, H., Johanning, J., Pipinos, I., **Myers, S.A.** Improving mobility in peripheral artery disease using an ankle foot orthosis: Effect of physical activity on the metabolic cost in patients with peripheral artery disease while walking with and without an ankle foot orthosis. Presented at the Great Plains Biomechanics Conference, Omaha, NE, May 12, 2021.
- 74. Calpin, D., Rahman, H., Johanning, J., Pipinos, I., **Myers, S.A.** Improvement in walking speed following revascularization surgery in patients with peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, May 12, 2021.

- 75. Takallou M.A., Al-Ramin, A., **Myers, S.A.**, Pipinos, I, Hassan, M., Qolomany, B., Alsalaeem, F. Machine learning for diagnosing peripheral artery disease. Presented at the Great Plains Biomechanics Joint Conference, Omaha, NE, May 12, 2021.
- 76. Jensen, W., Todd-Hughes, B., **Myers, SA.** Approaches for measuring effectiveness of research development: How do we know if our research development work matters? Presented at the 2021 National Organization for Research Development Professionals, Virtual, April 26, 2021.
- 77. Calpin, D., Rahman, H., Pipinos, I., Johanning, J., **Myers, S.A.** Improvement in walking speed following revascularization surgery in patients with peripheral artery disease. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 26, 2021.
- 78. Rahman, H., Pipinos, I., Johanning, J., **Myers, S.A.** Walking speed meaningfully improves in patients with peripheral artery disease following supervised exercise therapy. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 26, 2021.
- 79. Anderson, C., Rahman, H., Pipinos, I. Johanning, J., **Myers, S.A.** Hip variance decreases in patients with peripheral artery disease as a result of set: An opensim simulation. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 26, 2021.
- 80. Bashir, A., Dinkel, D., Johanning, J., Pipinos, I., **Myers, S.A.** Considerations for implementing an ankle foot orthosis to improve mobility in peripheral artery disease. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 26, 2021.
- 81. **Myers**, **S.A.**, Leutzinger, T., Koutakis, P., Fuglestad, M., DeSpeigelaere, H., Johanning, J., Stergiou, N., Longo, G.M., Casale, G., Pipinos, I. Gait impairments are independent of the level of arterial occlusive disease in claudicating patients with peripheral artery disease. Presented at the Society for Clinical Vascular Surgery 2021 Annual Symposium, Virtual, March 13-18, 2021.
- 82. Mohammad, A.T., Alsaleem, F., Qolomany, B., **Myers, S.A.**, Hassan, M., Pipinos, I. Peripheral artery disease diagnostics using wearable accelerometer device. Presented at the University of Nebraska, Lincoln, Graduate Student Symposium, Lincoln, NE, February, 2021.
- 83. Dinkel, D., Hassan, M., Despiegelaere, H., Johanning, J., Pipinos, I., Myers, S.A. Patients with peripheral artery disease perceptions of an ankle foot-orthosis: A comparison by physical activity level. *Presented at the 2020 Scientific Sessions of the American Heart Association*, Virtual, November 13, 2020.
- 84. Bapat, G., Johanning, J., Pipinos, I., **Myers, S.A.** Investigation of roll-over characteristics in healthy older individuals and patients with peripheral artery disease. Presented at the Gerontological Society of America 2020 Annual Meeting, Virtual, November 4-8, 2020.
- 85. **Myers, S.A.,** Dinkel, D., Hassan, M., DeSpiegelaere, H., Johanning, J., Pipinos, I., Examining ankle foot orthosis wear time in patients with peripheral artery disease. Presented at the Gerontological Society of America 2020 Annual Meeting, Virtual, November 4-8, 2020.
- 86. Bapat, G., Pipinos, I., Johanning, J.M., **Myers, S.A.** Roll-over characteristics in patients with peripheral artery disease. Presented at the American Society of Biomechanics 2020 Annual Meeting, Virtual, August 4-7, 2020.
- 87. Dzewaltowski, A., Pipinos, I., Johanning, J.M., **Myers, S.A.** Faster walking following revascularization not associated ith increased joint work. Presented at the American Society of Biomechanics 2020 Annual Meeting, Virtual, August 4-7, 2020.
- 88. Talluri, G., Rahman, H., Pipinos, I., Johanning, J., **Myers, S.A.** Changes in muscle forces after exercise in patients with peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.
- 89. Rahman, H., Pipinos, I., Johanning, J., Sampson, K., **Myers, S.A.** Walking ability improves after revascularization in patients with peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.

- 90. Mohammadzadeh, G., Antonellis, P., **Myers, S.A.**, Pipinos, I., Malcolm, P. Design and development of a semi-rigid bilateral hip exoskeleton. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.
- 91. Bashir, A., Dinkel, D., Johanning, J., Pipinos, I., **Myers, S.A.** Considerations for implementing an ankle foot orthosis to improve mobility in peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.
- 92. Anderson, C., Rahman, H., Beier, B., Arellano, A., Pipinos, I., Johanning, J., **Myers, S.A.**Determining the optimal tension for knee-ankle-foot assistive device. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.
- 93. Bapat, G., Johanning, J., Pipinos, I., **Myers, S.A.** Roll-over shape is preserved while walking with and without claudication pain in patients with peripheral artery disease. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.
- 94. Dzewaltowski, A., Pipinos, I., Johanning, J., **Myers, S.A.** Patients walk less efficiently following revascularization. Presented at the Great Plains Biomechanics Conference, Omaha, NE, August 6, 2020.
- 95. Li, S., Thompson, J., **Myers, S.A.,** Kim, J., Koutakis, P., Williams, M., Haynatzki, G., Zhu, Z., Schieber, M., Lackner, T., Willcockson, G., Shields, C., Brunette, K., Despiegelaere, H., Pipinos, I., Casale, G. Precition of walking performance after revascularization of arteries supplying the lower extremities of claudicating patients with peripheral artery disease. Presented at the Arteriosclerosis, Thrombosis and Vascular Biology Peripheral Vascular Disease 2020 Scientific Sessions, Chicago, IL, May 5-7, 2020.
- 96. Hassan, M., Dinkel, D., Johannning, J., Pipinos, I., DeSpiegelaere, H., **Myers, S.A.** Impact of an ankle-foot orthosis on physical activity in patients with peripheral artery disease. Presented at the American College of Sports Medicine 2020 Annual Conference, Virtual, May 26-30, 2020.
- 97. Rahman, H., Pipinos, I., Johanning, J., **Myers, S.A.** Ankle foot orthosis improves muscle oxygenation in patients with peripheral artery disease. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 6, 2020.
- 98. Bapat, G., Johanning, J., Pipinos, I., **Myers, S.A.** Roll-over shape characteristics in patients with peripheral artery disease during pain-free and painful overground walking. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 6, 2020.
- 99. Mohammadzadeh, G., Antonellis, P., **Myers, S.A.**, Pipinos, I., Malcolm, P. Design and development of a semi-rigid bilateral hip exoskeleton. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 6, 2020.
- 100. Talluri, G., Rahman, H., Pipinos, I., Johanning, J., **Myers, S.A.** Changes in muscle forces after exercise in patients with peripheral artery disease. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 6, 2020.
- 101. Dzewaltowski, A., Pipinos, I., Johanning, J., **Myers, S.A.** Patients walk less efficiently following revascularization. Presented at UNO Student Research and Creative Activity Fair, Omaha, NE, March 6, 2020.
- 102. Myers, S., Dmytriv, H. University Administration Support Program: New Research and Education Activities One Year Later, Presented at the Society for Research Administration International 2019 Annual Meeting, San Francisco, CA. October 21, 2019.
- 103. Shuai, L., Lackner, T., Wilcockson, G., Shields, C., Brunette, K., Zhu, Z., Kim, J., Myers, SA., Williams, M., Despiegelaere, H., Pipinos, I., Casale, G.. Histopathological study of calf muscle in claudicating patients with peripheral artery disease after supervised exercise therapy. Presented at the American Heart Association Scientific Sessions 2019, Boston, MA. May 14-16, 2019.

- 104. Hafiz Rahman: Rahman H, Pipinos I, Myers S. Musculoskeletal optimization modeling to design an assistive device for patients with peripheral artery disease. Great Plains IDeA-CTR Annual Scientific Meeting. Date: October 23, 2019, University of Nebraska Medical Center, Omaha, NE.
- 105. Leutzinger, T., Pipinos, I., Johanning, J., Mukherjee, M., Hassan, M., DeSpiegeleare, H., Myers, S., Single session walking adaptations to an ankle foot orthosis in patients with peripheral artery disease, Presented at UNO Human Movement Variability Conference, Omaha, NE. 2019
- 106. Dzewaltowski, A., Rahman, H., Pipinos, I., Johanning, J., Myers, S., "Collision work performed by patients with peripheral artery disease", Presented at UNO Human Movement Variability Conference, Omaha, NE. 2019
- 107. Ybay, H., Rahman, H., Pipinos, I., Johanning, J., Myers, S., "Correlation between initial claudication time, absolute claudication time, and muscle oxygen recovery time", Presented at UNO Human Movement Variability Conference, Omaha, NE. 2019
- 108. Beier, B., Anderson, C., Arellano, A., Pipinos, I., Myers, S., "Effects of a passive dynamic lower-leg exoskeleton during walking", Presented at UNO Human Movement Variability Conference, Omaha, NE. 2019
- 109. Anderson, C., Rahman, H., Hernandez, H., Myers, S., Schieber, M., Ha, D., Baker, S., Koutakis, P., Kim, K., Mietus, C., Casale, G., Pipinos, I., "Intensity and pattern of daily physical activity of claudicating patients", Presented at UNO Human Movement Variability Conference, Omaha, NE. 2019
- 110. Arellano, A., Rahman, H., Pipinos, I., Johanning, J., Myers, S., "Muscle oxygenation in patients with peripheral artery disease during walking with and without an ankle foot orthosis", Presented at UNO Human Movement Variability Conference, Omaha, NE. 2019
- 111. Dzwaltowski, A., Pipinos, I., Johanning, J., Myers, S., "Collision work performed b patients with peripheral artery disease", Presented at UNO Student Research and Creative Activity Fair, Omaha, NE. 2019
- 112. Ybay, H., Rahman, H., Pipinos, I., Johanning, J., Myers, S., "Correlation between initial and claudication time, absolute claudication time, and muscle oxygen recovery time", Presented at UNO Student Research and Creative Activity Fair, Omaha, NE. 2019
- 113. Beier, B., Anderson, C., Arellano, A., Pipinos, I., Myers, S., "Effects of a passive dynamic lower-leg exoskeleton during walking", Presented at UNO Student Research and Creative Activity Fair, Omaha, NE. 2019
- 114. Rahman, H., Schieber, M., Pipinos, I., Johanning, J., Myers, S., "Gait alterations in peripheral arterial disease are not worsened by the presence of diabetes", Presented at UNO Student Research and Creative Activity Fair, Omaha, NE. 2019
- 115. Anderson, C., Rahman, H., Hernandez, H., Myers, S., Schieber, M., Ha, D., Baker, S., Koutakis, P., Kim, K., Mietus, C., Casale, G., Pipinos, I., "Intensity and pattern of daily physical activity of claudicating patients", Presented at UNO Student Research and Creative Activity Fair, Omaha, NE. 2019
- 116. Arellano, A., Rahman, H., Pipinos, I., Johanning, J., Myers, S., "Muscle oxygenation in patients with peripheral artery disease during walking with and without an ankle foot orthosis", Presented at UNO Student Research and Creative Activity Fair, Omaha, NE. 2019
- 117. Andersson, J., Rahman, H., Graham, S., Dzewaltowski, A., Anderson, C., Rasmussen, E., Bapat, G., Hassan, M., Pipinos, I., Myers, S., "Assistive devices to improve quality of life for patients with peripheral artery disease", Presented at Teacher-Researcher Partnership Program Symposium, University of Nebraska at Omaha. September 20, 2019
- 118. Hafizur Rahman, Sara Myers. "Ankle foot orthosis improves muscle oxygenation in patients with peripheral artery disease." Research and Creative Activity Fair. Date: March 16, 2020. University of Nebraska at Omaha.

- 119. Andersson J, Rahman H, Graham S, Dzewaltowski A, Anderson C, Rasmussen E, Bapat G, Hassan M, Pipinos I, Myers S. Assistive devices to improve quality of life for patients with peripheral artery disease. Teacher-Researcher Partnership Program Symposium, 2019. Date: September 20, 2019, University of Nebraska at Omaha.
- 120. Graham S, Rahman H, Andersson J, Dzewaltowski A, Anderson C, Rasmussen E, Hassan M, Bapat G, Pipinos I, Myers S. Biomechanics application of exoskeleton footwear for the physical science classroom. Teacher-Researcher Partnership Program Symposium, 2019. Date: September 20, 2019, University of Nebraska at Omaha.
- 121. Bapat G, Johanning J, Pipinos I, Myers S. Investigation of roll-over shape in healthy older individuals. Trainees in Physiology Research Reception, 2019.
- 122. Rahman H, Pipinos I, Johanning J, Myers S. Ankle foot orthosis improves muscle oxygenation in patients with peripheral artery disease. Trainees in Physiology Research Symposium. Date: October 26, 2019, University of Nebraska at Omaha, Omaha, NE.
- 123. Leutzinger T, Pipinos II, Johanning JM, Mukherjee M, **Myers SA**, "Single Session Walking Adaptation to an Ankle Foot Orthosis in Individuals with Peripheral Artery Disease", Presented at the XXVII Congress of the International Society of Biomechanics, Calgary, Canada. July 31-August 4, 2019.
- 124. Dzewaltowski A, Pipinos II, Johanning JM, **Myers SA**, "Collision Work Performed by Patients with Peripheral Artery Disease", Presented at the XXVII Congress of the International Society of Biomechanics, Calgary, Canada. July 31-August 4, 2019.
- 125. Creely H, Eisenhower T, **Myers SA.** "Strategies for Increasing Research at a Predominantly Undergraduate Institution", Presented at the 2019 Annual Meeting of the National Organization of Research Development Professionals. April 29- May 1, 2019.
- 126. Eisenhower T, **Myers SA.** "Strategies for Increasing Research at a Predominantly Undergraduate Institution", Presented at the 2018 Annual Meeting of the Society for Research Administrators International. October 27-31, 2018.
- 127. Beier B, Senderling B, DeSpiegelaere H, Hassan M, Pipinos I, Johanning J, **Myers SA**, "An Ankle-Foot Orthosis Immediately Improves Walking Performance In Patients With Peripheral Artery Disease", Presented at American Society of Biomechanics, Mayo Clinic, Rochester, Minnesota. August 8, 2018
- 128. Leutzinger T, Hassan M, DeSpiegelaere H, Casale G, Pipinos I, **Myers SA**, "Propulsion Force Symmetry During Walking in Patients with Peripheral Artery Disease", Presented at American Society of Biomechanics, Mayo Clinic, Rochester, Minnesota. August 8, 2018
- 129. Pipinos, I., Myers, S., Koutakis, P., Kim, J., Thompson, J., Ha, D., Johanning, J., Casale, G. Revascularization improves the hemodynamics, function, quality of life, and myopathy of claudicating patients. Boston, MA: 2018 Society for Vascular Surgery Vascular Annual Meeting.
- 130. Fuglestad MA, Hernandez H, Ybay H, Schieber M, Brunette K, Gao Y, Hassan M, **Myers S**, Casale GP, Pipinos. "Characterization of Peripheral Artery Disease by Near-Infrared Spectroscopy." Poster presentation at Arteriosclerosis, Thrombosis, and Vascular Biology, San Francisco Conference, CA, 2018
- 131. Beier B, Senderling B, DeSpiegelaere H, Hassan M, Pipinos I, Johanning J, **Myers SA**, "An Ankle-Foot Orthosis Immediately Improves Walking Performance In Patients With Peripheral Artery Disease", Presented at Rocky Mountain American Society of Biomechanics Regional Meeting, Estes Park, Colorado. April 13-14, 2018
- 132. Ybay, H., Myers, S., "Muscle oxygen saturation of the gastrocnemius in healthy controls.", Presented at National Council for Undergraduate Research, Council for Undergraduate Research, Edmond, Oklahoma. April 2018

- 133. Ybay, H., Myers, S., "Muscle oxygen saturation of the gastrocnemius in healthy controls", Presented at NeScifest, UNMC. April 28, 2018
- 134. Arellano, A. L., Schieber, M., Pipinos, i., Johanning, J., DeSpiegelaere, H., Senderling, B., Berlin, C., Myers, S., "Supervised walking exercise therapy improves gait biomechanics in patients with peripheral artery disease", Presented at NeScifest, UNMC. April 28, 2018
- 135. Leutzinger T, Myers SA, Pipinos II. "Individuals with peripheral artery disease alter spatiotemporal gait parameters when walking with pain versus without pain." Omaha, NE: 2018 UNO Student Research and Creative Activity Fair.
- 136. Beier B, Gonzalez A, Patterson J, Rasmussen C, Pipinos II, **Myers SA.** "The Astro XOTM exoskeleton alters ankle kinetics in healthy individuals." Omaha, NE: 2018 UNO Student Research and Creative Activity Fair. 3/4/2018.
- 137. Ybay H, **Myers SA**. "Muscle oxygen saturation of the gastrocnemius in healthy controls." Omaha, NE: 2018 UNO Student Research and Creative Activity Fair.
- 138. Arellano A, Schieber M, Pipinos II, DeSpiegelaere HK, Senderling B, Berlin C, **Myers SA**. "Supervised walking exercise therapy improves gait biomechanics in patients with peripheral artery disease." Omaha, NE: 2018 UNO Student Research and Creative Activity Fair.
- 139. Leutzinger T, **Myers SA**, Pipinos II. "Individuals with peripheral artery disease alter spatiotemporal gait parameters when walking with pain versus without pain." Omaha, NE: 2018 UNO Human Movement Variability Conference.
- 140. Beier B, Senderling B, DeSpiegelaere H, Hassan M, Pipinos I, Johanning J, **Myers SA**, "An Ankle-Foot Orthosis Immediately Improves Walking Performance In Patients With Peripheral Artery Disease." Omaha, NE: 2018 UNO Human Movement Variability Conference.
- 141. Ybay H, **Myers SA**. "Muscle oxygen saturation of the gastrocnemius in healthy controls." Omaha, NE: 2018 UNO Human Movement Variability Conference.
- 142. Arellano A, Schieber M, Pipinos II, DeSpiegelaere HK, Senderling B, Berlin C, **Myers SA**. "Supervised walking exercise therapy improves gait biomechanics in patients with peripheral artery disease." Omaha, NE: 2018 UNO Human Movement Variability Conference.
- 143. Malcolm P, **Myers SA**, Pipinos I, "Simulated evaluation of human-in-the-loop exoskeleton optimization to reduce gait variability in patients with peripheral artery disease." Omaha, NE: 2018 UNO Human Movement Variability Conference.
- 144. Myers SA, Eisenhower T. "Strategies for Increasing Research in a Predominantly Undergraduate Institution", Presented at The Society of Research Administrators International Annual Meeting, The Society of Research Administrators International, Orlando, Florida. October 2018
- 145. Batton, C. L., Myers, S., "Career Perspectives from Senior Level Academic Administrators", Presented at 2018 Annual Meeting, Nebraska Women in Higher Education Leadership, Omaha, NE. October 19, 2018
- 146. Myers SA, Beier B, Senderling B, DeSpiegelaere HK, Hassan M, Johanning JM, Pipinos II. "An ankle-foot orthosis immediately improves walking performance in patients with peripheral artery disease". Presented at 2018 National IDeA Symposium of Biomedical Research Excellence, Washington DC. June 24-26, 2018.
- 147. Rosen AB, Yentes JM, McGrath ML, Mukherjee M, **Myers SA.** "Sample entropy differences in static postural control in individuals with chronic ankle instability." Presented at the 2018 Human Movement Variability Conference, Omaha, NE. May 17, 2018.
- 148. Fuglestad M, Hernandez H, Schieber M, Brunette K, Gao R, **Myers SA**, Casale G, Pipinos II. "Near-infrared spectroscopy for diagnosis and characterization of peripheral artery disease severity.", Presented at Vascular Research Initiatives Conference, Society for Vascular Surgery, San Francisco, California. May 9, 2018

- 149. Schieber, MN, **Myers, SA**, Johanning, JM, Senderling, B, Baker, S, Hernandez, H, Pipinos, II. Gait is improved but not restored in peripheral artery disease following revascularization. *Proceedings of the 2017 Midwestern Vascular Annual Meeting*. Chicago, IL September 7-9 2017. *Winner of the D. Emerick Szilagyi Award, given to the trainee with the most outstanding Clinical Research paper in Vascular Surgery.
- 150. Schieber, MN, Pipinos, II, Johanning, J, DeSpiegelaere, HK, Senderling, B, Berlin, C, **Myers, SA.** Supervised walking exercise therapy improves gait biomechanics in patients with peripheral artery disease. *Proceedings of the 41st Annual Meeting of the American Society of Biomechanics*. Boulder, CO, August 8-11, 2017.
- 151. Watson, K, Boron, J, **Myers, SA,** Yentes, J. Increased difficulty of dual-motor tasks effects step length in young and older healthy adults. *Proceedings of the 20th International Association of Gerontological Societies World Congress of Gerontology and Geriatrics*. San Francisco, CA, July 23-27, 2017.
- 152. Leeder, T, Helseth, A, **Myers, SA,** Schieber, M, Blaskewiscz Boron, J. Effects of serial subtractions on elderly gait speed in a virtual reality setting. *Proceedings of the 20th International Association of Gerontological Societies World Congress of Gerontology and Geriatrics*. San Francisco, CA, July 23-27, 2017.
- 153. Helseth, A, Leeder, T, **Myers, SA,** Schieber, M, Blaskewiscz Boron, J. Effects of dual teasking on auditory selective attention in three different environments. *Proceedings of the 20th International Association of Gerontological Societies World Congress of Gerontology and Geriatrics*. San Francisco, CA, July 23-27, 2017.
- 154. Duncan, A, Hartley, R, Wiens, C, Schieber, M, Denton, W, Marmelat, V, **Myers, SA.** Comparison of stride dynamics during fixed speed and self-paced treadmill walking. *Proceedings of the 2017 World Congress of the International Society of Posture and Gait Research*. Fort Lauderdale, FL, June 25-29, 2017.
- 155. Takahashi, KZ, Patterson, JM, Papachatzis, N, Slivka, DR, **Myers, SA**, Kamenskiy, AV, Pipinos, II. Foot biomechanics and thermoregulation: Implications for tissue complications in diabetes and peripheral artery disease. *Proceedings of the 2017 Central Regional IDEA Conference*. Sioux Falls, SD, June 7-9, 2017.
- 156. Wiens, C, Denton, W, Schieber, M, Hartley, R, Marmelat, V, **Myers, SA,** Yentes, J. Reliability of a feedback-controlled treadmill algorithm dependent on the user's behavior. *Proceedings of the IEEE International Conference on Electro Information Technology*. Lincoln, NE, May 2017.
- 157. Kalina, A, **Myers, SA.** The effects of walking speed on gait propulsion when wearing an ankle-foot orthosis. *Proceedings of the 9th Annual UNO Student Research and Creative Activity Fair*. Omaha, Nebraska, March 3, 2017.
- 158. Lenz, S, **Myers, SA**, Pipinos, II, Johanning, JM. Treadmill walking in claudication. *Proceedings of the 9th Annual UNO Student Research and Creative Activity Fair*. Omaha, Nebraska, March 3, 2017.
- 159. Schieber, MN, Hasenkamp, RM, Pipinos, II, Johanning, JM, Stergiou, N, DeSpiegelaere, HK, Chien, JH, **Myers, SA.** Muscle strength and control characteristics are altered by peripheral artery disease. *Proceedings of the 9th Annual UNO Student Research and Creative Activity Fair*. Omaha, Nebraska, March 3, 2017.
- 160. Baker, S, **Myers, SA,** Pipinos, II, Johanning, JM. Gait biomechanics in patients with peripheral artery disease after revascularization. *Proceedings of the 9th Annual UNO Student Research and Creative Activity Fair*. Omaha, Nebraska, March 3, 2017.
- 161. Schieber, M*, Hasenkamp, RM, Stergiou, N, Johanning, JM, Pipinos, II, **Myers, SA.** Muscular strength and control characteristics at the ankle are altered by peripheral artery disease. *Proceedings of the 2016 Midwestern Vascular Annual Meeting*. Columbus, OH, August, 2016. *Winner of the

- Charles C. Guthrie Award, given to the trainee with the most outstanding Basic Research paper in Vascular Surgery.
- 162. Hernandez, H, **Myers, SA**, Schieber, MN, Koutakis, P, Ha, DM, Kim, KS, Mietus, C, DeSpiegelaere, HK, Casale, G, Pipinos, II. Intensity and pattern of daily physical activity of claudicating patients. *Proceedings of the 2016 Midwestern Vascular Annual Meeting*. Columbus, OH, August, 2016.
- 163. Stergiou, N, Schieber, M, Hasenkamp, R, Johanning, JM, Pipinos, II, **Myers, SA.** Muscular strength characteristics at the ankle are altered b peripheral artery disease. *Proceedings of the NIH, NIGMS Sixth Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE)*. Washington DC, June 26-28, 2016.
- 164. Applequist, BA, Kyvelidou, A, McCamley, J, **Myers, SA.** Time-distance parameters are affected by footwear stiffness in toddler-aged children. *Proceedings of the North American Society for Pscyhology of Sports and Physical Activity 2016 meeting.* Montreal, Quebec, Canada, June 15-18, 2016.
- 165. Hernandez, H, Myers, SA, Gordon, GI, Chien, JC, Schmid, KK. Attachable radiation reduction extension support sheath (ARRESS) to reduce radiation exposure for endovascular specialists. *Presented at the Society of Vascular Surgery 2016 annual meeting*, Washington, DC, June 8-11, 2016.
- 166. Hernandez, H, Gordon, GI, **Myers, SA,** Chien, JC, Schmid, KK. Improved physician ergonomics and fatigue reduction using the attachable radiation reduction extension support sheath (ARRESS) for endovascular procedures. *Presented at the Society of Vascular Surgery 2016 annual meeting*, Washington, DC, June 8-11, 2016.
- 167. Baker, S, Pipinos, I, Johanning, JM, Myers, SA. Gait biomechanics in patients with peripheral artery disease after revascularization. *Proceedings of the 2016 Annual Scientific Meeting of the Gerontological Society of America*. New Orleans, LA, November 2016.
- 168. Helseth, AL, Leeder, T, **Myers, SA**, Schieber, M, Blaskewicz Boron, J. Dual tasking in a virtual reality environment: Does auditory selective attention impact gait? *Proceedings of the 2016 Annual Scientific Meeting of the Gerontological Society of America*. New Orleans, LA, November 2016.
- 169. Leeder, T, Blaskewicz Boron, J, Helseth, AL, Schieber, M, **Myers, SA.** Virtual reality in elderly gait: Effects of semantic fluency. *Proceedings of the 2016 Annual Scientific Meeting of the Gerontological Society of America*. New Orleans, LA, November 2016.
- 170. Schieber, M, Hasenkamp, RM, Stergiou, N, Johanning, JM, Pipinos, II, **Myers, SA**. Muscular strength and control charactersites at the ankle are altered by peripheral artery disease. *Proceedings of the 2016 Nebraska Physiological Society Annual Conference*. Omaha, NE, October 15, 2016.
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- 277. Decker, LM, **Myers, SA,** Rodríguez-Aranda, CE, Potter, JF, and Stergiou, N. (2009). Performance of dual-tasks requiring language perception, attention, and executive control processes have differential effects on stride width in young adults. *Proceedings of the Society for Neuroscience's 39th Annual Meeting*. Chicago, IL, USA.
- 278. Decker, LM, Rodríguez-Aranda, CE, **Myers, SA**, Potter, JF, and Stergiou, N. (2009). Dichotic listening while walking: A dual-task paradigm to study gait changes in elderly populations. *Proceedings of the 19th IAGG World Congress of Gerontology and Geriatrics*. Paris, France.
- 279. Decker, LM, **Myers, SA**, Rodríguez-Aranda, CE, Potter, JF, and Stergiou, N. (2009). Task difficulty affects gait variability during dual task in healthy young and older adults. *Proceedings of the 19th IAGG World Congress of Gerontology and Geriatrics*. Paris, France.

- 280. Decker, LM, Rodríguez-Aranda, CE, **Myers, SA**, and Stergiou, N. (2009). Verbal fluency tasks affect gait variability and symmetry. *Proceedings of the 14th Annual Meeting of the Gait and Clinical Movement Analysis Society*. Denver, CO, USA.
- 281. Myers, SA, Stergiou, N, Pipinos, II, Johanning, JM, Blanke, D, Chen, S-J. (2008). Gait variability is altered in peripheral arterial disease patients prior to the onset of pain. *Journal of Biomechanics*. 41(S1): S26.
- 282. Myers, SA, Stergiou, N, Pipinos, II, Johanning, JM, Blanke, D, Chen, S-J. (2008). Nonlinear measures indicate gait variability is altered by Peripheral Arterial Disease. *Journal of Sport & Exercise Psychology*. 30, S112.
- 283. Decker, LM, Rodríguez-Aranda, CE, **Myers, SA**, and Stergiou, N. (2008). Cognitive performance on high-demanding tasks affects gait variability in healthy young adults. *Proceedings of the Society for Neuroscience's 38th Annual Meeting*. Washington, DC, USA.
- 284. Rodríguez-Aranda, CE, Decker, LM, **Myers, SA**, and Stergiou, N. (2008). Interplay between gait and attention: The unfavorable effects of walking on learning and cognitive performance of high demanding tasks. *Proceedings of the Society for Neuroscience's 38th Annual Meeting*, Washington, DC, USA.
- 285. **Myers**, **SA**, and Stergiou, N. (2008). Applications in biomechanics for rehabilitation: PAD and MS projects. *Proceedings of the Nebraska Research and Innovation Conference*. Lincoln, NE, USA.
- 286. Myers, SA, and Stergiou, N. (2008). Gait changes following an acute period of ischemia in healthy young individuals. *Proceedings of the Annual Meeting of the Nebraska Academy of Sciences Aeronautics & Space Science Section.* Lincoln, NE, USA.
- 287. **Myers, SA**, Pipinos, II, Johanning, JM, and Stergiou, N. (2008). Induced lower extremity vascular occlusion affects gait variability. *Proceedings of the 32nd Annual Meeting of the American Society of Biomechanics*. AnnArbor, MI, USA.
- 288. Koutakis, P, **Myers**, **SA**, Johanning, JM, Pipinos, II, and Stergiou, N. (2008). Bilateral intermittent claudication affects joint powers during gait. *Proceedings of the 32nd Annual Meeting of the American Society of Biomechanics*. AnnArbor, MI, USA.
- 289. Johanning, JM, Pipinos, II, Celis, R, **Myers, SA**, Koutakis, P, Stergiou, N. (2008). Quantification of reduced power output during ambulation for affected and non-affected limbs in patients with unilateral claudication. *Proceedings of the 32nd Annual Meeting of the Midwestern Vascular Surgical Society*. Madison, WI, USA.
- 290. **Myers, SA,** Stergiou, N, Pipinos, II, Johanning, JM, and Kochi, N. (2007). Peripheral arterial disease causes alterations in the variability of gait patterns. *Proceedings of the 31st Annual Meeting of the American Society of Biomechanics*. Stanford, CA, USA.
- 291. Myers, SA and Stergiou, N. (2007). Gait adaptations in persons experiencing claudication. Proceedings of the Annual Meeting of the Nebraska Academy of Sciences Aeronautics & Space Science Section. Lincoln, NE, USA.
- 292. Radovic, M, Huisinga, JM, Myers, SA, Pipinos, II, Johanning, JM, and Chen, SJ. (2007). Effects of vascular surgical treatment on peripheral arterial disease in gait. *Proceedings of the XXI Congress of the International Society of Biomechanics*. Taipei, Taiwan.
- 293. Chen, SJ, Huisinga, JM, Myers, SA, Radovic, M, Pipinos, II, Johanning, JM, Stergiou, N. (2007). The effects of peripheral arterial disease on gait stability. *Proceedings of the XXI Congress of the International Society of Biomechanics*. Taipei, Taiwan.
- 294. Chen, SJ, Pipinos, II, Johanning, JM, Huisinga, JM, **Myers, SA.** (2006). The effect of claudication on joint moments during walking. *Proceedings of the 30th Annual Meeting of the American Society of Biomechanics*. Blacksburg, VA, USA.
- 295. **Myers, SA**, Huisinga, JM, Johanning, JM, Pipinos, II, Chen, SJ. (2006). Ground reaction forces in patients with unilateral peripheral arterial disease. *Proceedings of the 30th Annual Meeting of the American Society of Biomechanics*. Blacksburg, VA, USA.

296. Huisinga, JM, **Myers**, **SA**, Johanning, JM, Pipinos, II, Chen, SJ. (2006). The effect of pharmacologic therapy on kinetic gait parameters in patients with peripheral arterial disease. *Proceedings of the 30th Annual Meeting of the American Society of Biomechanics*. Blacksburg, VA, USA.

INVITED PRESENTATIONS AT MEETING/CONFERENCE/SYMPOSIA

- 1. Baxter J, Finley J, Myers SA, Hsiao-Wecksler E. Early Career Affinity Group Panel, Annual meeting of the American Society of Biomechanics, Knoxville, TN, August 10, 2023.
- 2. Myers SA, Facilitated the Women In Science Event, Annual meeting of the American Society of Biomechanics, Knoxville, TN, August 9, 2023.
- 3. Myers SA. Assistive shoes and devices for improving mobility in peripheral artery disease. Seminar presentation to the University of Nebraska Medical Center Surgery Forum, Omaha, NE October 12, 2022.
- 4. Myers SA. Experiences in National Security Innovation Network (NSIN) programs. Oral presentation at the 2022 NSIN Defense Entrepreneurial Symposium, St. Louis, MO, August 11, 2022.
- 5. Myers SA and Izuta B. Elvee performance technologies: Biomechanics lab in a shoe to increase performance and decrease injuries in soldiers. Oral presentation at the 2022 NSIN Defense Entrepreneurial Symposium, St. Louis, MO, August 11, 2022.
- 6. Myers, SA, Experience in National Security Innovation Network (NSIN): Defense Innovation Accelerator. Presented to NSIN Defense Entrepreneurial Symposium. Virtual, August 5, 2021.
- 7. Myers, SA. Approaches for measuring effectiveness of research development. Presented to the National Organization of Research Development Professionals Metrics Learning Group, Virtual (Nation-wide), July 25, 2022.
- 8. Myers, SA., Application of Biomedical Research and Research Opportunities. Presented to Clarkson College Applied Research Forum for Biomedical Research. Omaha, NE, April 14, 2021.
- 9. Myers, SA., Women in Science, Participated in a Panel for Nebraska CURES. Omaha, NE, March 24, 2021.
- 10. Myers, SA., Recruitment and Retention in Aging. Presented at the Imagine an Age Friendly University: Content, Colleagues, and Conversation. Omaha, NE, March 16, 2021.
- 11. Myers, S., Symptom management and treatment of peripheral artery disease: Current research update. Presented at the Nebraska Healthcare Association 2020 Virtual Fall Convention. Omaha, NE, November 2, 2020.
- 12. Dzewaltowski, A., Pipinos, I., Johanning, J., Malcolm, P., Myers, S., Faster walking following revascularization not associated with increased joint work. Presented at the Human Movement Variability Conference, Omaha, NE, September 4, 2020.
- 13. Myers, S., Lightening Talk: Indirect cost tracking and recovery. Presented at NORDP Research Development Conference 2019. Providence, RI, May 1, 2019
- 14. Myers, S., How the microscope of gait is improving quality of life in patients with peripheral artery disease, Presented at College of Engineering Biomedical Engineering 2019-2020 Seminar Series, Lincoln NE. September 13, 2019
- 15. Myers, S. Biomechanics capabilities and success stories: Using the microscope of gait to improve quality of life in patients with peripheral artery disease. Invited lecture to Sigma Xi and members of the Biomechanics and Engineering Team, Combat Capabilities Development Center, Soldier Systems Center, Natick, MA. September 10, 2019.
- 16. Myers, S., How the microscope of gait is improving quality of life in patients with peripheral artery disease. Nigeria Conference, Omaha NE. September 23, 2019.
- 17. Myers, S., Using biomechanics to improve functional outcomes for patients with peripheral artery disease. Regenerative Medicine Symposium, Omaha, NE. May 30, 2019.

- 18. **Myers S A.** "Human Performance/Athletics/Movement thru Lifespan", Collaboration Initiative Retreat, Nebraska Innovation Campus, Lincoln, NE, October 31, 2019.
- 19. **Myers S A.** "How the microscope of gait is improving quality of life in patients with peripheral artery disease" College of Engineering Biomedical Engineering 2019-2020 Seminar Series, Lincoln, NE, September 13th, 2019.
- 20. **Myers, SA.** Health benefits of strength training. Presentation for NU Foundation Wellness program, Lincoln, NE, July 19, 2016.
- 21. **Myers, SA.** Biomechanics insights for peripheral artery disease. *Ist annual Human Movement Variability conference*, Omaha, NE June 7, 2016.
- 22. Myers, SA. Biomechanics technology. Presentation to Aurora Rotary. Aurora, NE, March 10, 2015.
- 23. **Myers, SA.** Biomechanics, technology from pop culture to rehabilitation. Science Pop Culture Talk, Lincoln, NE, March 4, 2015.
- 24. **Myers, SA.** Exercise for special populations. Presentation at the Children's Hospital Healthy Families Summit, 2015. Omaha, NE, February 17, 2015.
- 25. **Myers**, **SA**. Biomechanics research: Improving treatment and rehabilitation practices. Presentation at Science Café, Omaha, NE, August 8, 2014.
- 26. **Myers, SA.** Research that shapes the future of health care. Presentation for Omaha Kiwanis Club, Omaha, NE June 5, 2014.
- 27. **Myers, SA.** The biomechanics of peripheral artery disease. Presentation at Kansas University Medical Center, Rehabilitation Sciences seminar. Lawrence, KS, April 11, 2014.
- 28. **Myers, SA.** Utilizing gait and balance research to shape the future of health care. Presentation to Methodist Hospital Continuing Education Seminar, Omaha, NE, September 17, 2013.

REVIEWER AND CONSULTING POSITIONS INTERNATIONAL/FEDERAL REVIEW

	TOTAL TEDERALE REVIEW
2023	Ad hoc member, National Institutes of Health, Musculoskeletal, Rehabilitation and Skin
	Sciences Special Emphasis Panel ZRG1
2022-	Ad hoc member, VA Rehabilitation Research and Development, SPIRE review
2022	Ad. Hoc member, National Institutes of Health, National Institute on Aging Multi-site
	clinical trial implementation panel
2022	Ad hoc member, European Research Council, ERC Consolidator Grant
2022	Ad hoc member, National Institutes of Health, Loan Repayment Program panel
2022	Ad hoc member, National Institutes of Health, Musculoskeletal, Rehabilitation and Skin
	Sciences Fellowship panel
2022-	Standing member, VA Rehabilitation Research and Development, Chronic Medical
	Conditions and Aging
2019-	Program Reviewer, Council for Undergraduate Research, Health Sciences Division
2018-2022	Standing committee member, National Institutes of Health, Musculoskeletal
	Rehabilitation Sciences
2019	Program Reviewer, Department of Veterans' Affairs, Cooperative Studies Scientific
	Evaluation Committee
2019-2020	Reviewer, National Science Foundation, Graduate Research Fellowship program, Phase
	II
2017-2018	Ad hoc member, National Institutes of Health, Musculoskeletal Rehabilitation Sciences
2017	Reviewer, National Science Foundation, Research Traineeship Program Phase I
2014-2020	Reviewer, National Science Foundation, Graduate Research Fellowship program
2014-2018	Reviewer, Department of Defense, Clinical and Rehabilitative Medicine Research
	Program

Reviewer, National Institute on Disability, Independent Living, and Rehabilitation

	Research (formerly NIDRR)
2011	Reviewer, National Institutes of Health, Translational Research in Aging
OTHER	
2016-	Reviewer, Vascular Medicine
2015-	Reviewer, Journal of Rehabilitation Research and Development
2015-	Reviewer, Society of Health and Physical Educators Research Consortium Grant program
2015-	Reviewer, Back and Musculoskeletal Rehabilitation
2014-2016	Member, Omaha Veterans' Affairs Medical Center Institutional Review Board
2014-	Reviewer, McGraw-Hill publishers, Measurement by the Physical Educator
2014-	Reviewer, Experimental Brain Research
2014-	Reviewer, University of Nebraska at Omaha, Graduate Research and Creative Activity
2014-	Reviewer, Knee Surgery, Sports Traumatology, Arthroscopy
2013-	Reviewer, University of Nebraska at Omaha, Fund for Undergraduate Student Experience
2013-	Reviewer, Sports Medicine
2013-	Reviewer, Physical Therapy
2013-	Reviewer, NASA Nebraska Space Grant Program
2013-	Reviewer, Medicine and Science in Sports and Exercise
2013-	Reviewer, Medical Engineering and Physics
2013-	Reviewer, Journal of Neuroscience
2013-	Reviewer, Journal of Gerontology: Psychological Sciences
2013-	Reviewer, Journal of Biomechanics
2013-	Reviewer, Journal of Applied Biomechanics
2013-	Reviewer, Gait and Posture
2013-	Reviewer, Clinical Biomechanics
2013-	Reviewer, Archives of Physical Medicine and Rehabilitation
2013-	Reviewer, American Society of Biomechanics Annual Meeting Abstracts
2013-	Reviewer, American Journal of Physical Medicine and Rehabilitation
2012-	Reviewer, Journal of NeuroEngineering and Rehabilitation
2012-	Reviewer, Annals of Biomedical Engineering
2012-	Reviewer, Ammons Scientific
2012-	Reviewer, American Alliance for Health, Physical Education, and Recreation Conference Proposal
2011-	Reviewer, Footwear Science

ADVISING AND TEACHING

2013-2020

HONORS THESES (UNDERGRADUATE)

- 1. Madeline Holscher. *The effects of activity levels on function in patients with peripheral artery disease.* (CHAIRPERSON, May 2016).
- 2. Neil Huben. The effect of Masai Barefoot Technology (rocker bottom) shoes on joint kinematics and kinetics. (MEMBER, May 2011).

THESES COMMITTEES (MASTERS)

- 1. Michael Allen: Cardiovascular and autonomic responses to acute exposure to mild hypercapnic conditions in sedentary middle-aged adults. (MEMBER, July 2022).
- 2. Blake Beier: *Effects of the Astro XO Exoskeleton on ankle function in healthy individuals during walking.* (CHAIRPERSON, April 2020).
- 3. Todd Leutzinger: *Walking adaptations to an ankle foot orthosis in individuals with peripheral artery disease.* (CHAIRPERSON, Spring 2019).
- 4. Molly Schieber: Tradeoffs in attention during dual-task gait. (CHAIRPERSON, August 2017).
- 5. Kristen Watson, *The effects of task difficulty and vision during dual-motor tasking on gait in young and older healthy adults.* (MEMBER, May 2017).
- 6. Eric Pisciotta: Effects of aging on the magnitude and regularity of plantar pressure distributions. (MEMBER, August 2015).
- 7. Alek Diffendaffer. A comparison of joint torques and powers during overground versus treadmill walking in patients with peripheral arterial disease. (CHAIRPERSON, May 2014).
- 8. Ryan Hasenkamp. *Investigation of muscular strength in peripheral arterial disease.* (CHAIRPERSON, May 2014).
- 9. Troy Rand. *An investigation into the nonlinear dynamics of center of pressure and fall risk in the elderly.* (CHAIRPERSON, August 2013).
- 10. Holly Remmenga: *Gait mechanics and proprioceptive adaptations from minimalistic "five-finger" shoe use.* (MEMBER, May 2013).
- 11. Jon Carey. *Elastic band training protocol to improve preadolescent female leg strength.* (CHAIRPERSON, May 2013).
- 12. Nathaniel Hunt. *Manipulating gait variability with Fur Elise: Chaotic and fractal variations on a theme.* (MEMBER, August 2012).

DISSERTATION COMMITTEE (DOCTORAL)

- 1. Jania Williams:
- 2. Seyedeh Zahara Salamifar: *Muscle oxygen guided supervised exercise therapy*. (CHAIRPERSON, under development).
- 3. Mohammad Ali Takallou
- 4. Ali Hazem Al Ramini: (MEMBER, *Machine learning-based peripheral artery disease identification and e3valuation using biomechanics data*. Proposed Fall 2022
- 5. Ayisha Bashir: *Improve device implementation in patients with peripheral artery disease.* (CHAIRPERSON, Proposed Spring 2020, Defended April 2022)
- 6. Arash Mohammadzadeh Gonabadi: *Optimization of the musculoskeletal simulation in estimation of metabolic cost.* (MEMBER, Proposed Fall 2020; June 2021).
- 7. Farahnaz Fallahtafti: *Stability of human walking during steady state and perturbed conditions.* (MEMBER, Defended July 2021).
- 8. Troy Rand: *The effects of structured sensory stimulus training on the temporal structure of gait in stroke survivors.* (MEMBER, Proposed Fall 2016; expected defense Spring 2018).
- 9. Bryon Applequist: *The development and influence of footwear on gait variability in children from 2 to 10 years old.* (MEMBER, Fall 2017).
- 10. Laura Covert: Personality traits and physical activity in older adults. (MEMBER, May 2017).
- 11. Panagiotis Koutakis: *Muscle health in patients with peripheral arterial disease*. (MEMBER, December, 2014)
- 12. Jung Chien: Postural responses to perturbations of the vestibular system during walking in healthy young and older adults. (MEMBER, December 2015).
- 13. Joshua Haworth: *Perception and production of complex movement variability*. (MEMBER, Comps passed: Aug. 2012, Graduated: Summer 2013).

STUDENT AND POSTDOCTORAL TRAINEES

High School Interns

- 1. Adithi Deeduvanu, 2022
- 2. Evann Duman, 2022
- 3. Marcus Chew, 2017

Undergraduate

- 1. Joe Neihart
- 2. Joey Malloy
- 3. Yassine Mahamane Iro
- 4. Ann Nguyen
- 5. Jonathan Kirkland
- 6. Daniel Davies
- 7. Megan Woods
- 8. Alicia Andersen
- 9. Liz Staudacher
- 10. Isaiah Brant
- 11. Danielle Calpin
- 12. Nate Evans
- 13. Eric Rasmussen
- 14. Cody Anderson
- 15. Coleman Westerby
- 16. Eric Hoie
- 17. Blake Beier
- 18. Neil Huben
- 19. Jessica Renz
- 20. Madeline Holscher
- 21. Whitney Korgan
- 22. Lauren Bowman
- 23. Shane Lenz
- 24. Ryan Hartley
- 25. Ryan Hasenkamp
- 26. Austin Davidson
- 27. Brian Arnold
- 28. Henamari Ybay
- 29. Anthony Arellano
- 30. Allison Kalina
- 31. Dylan Goodman

Graduate

- 1. Mohammad Ali Takallou
- 2. Ali Al-Ramini
- 3. Jania Williams
- 4. Zahra Salamifar
- 5. Ayisha Bashir
- 6. Farah Fallahtafti
- 7. Arash Mohammadzadeh Gonabadi
- 8. Gnapika Talluri
- 9. Alex Dzewaltowski

- 10. Blake Beier
- 11. Todd Leutzinger
- 12. Taylor Leeder
- 13. Kristin Watson
- 14. Molly Schieber
- 15. Sarah Baker
- 16. Bryon Applequist
- 17. Troy Rand
- 18. Xuan Liu
- 19. Alek Diffendaffer
- 20. Ryan Hasenkamp
- 21. Jon Carey
- 22. Nate Hunt
- 23. Josh Haworth
- 24. JC Chien
- 25. Laura Covert
- 26. Eric Pisciotta
- 27. Holly Remmenga
- 28. Angeline Helseth
- 29. Panagiotis Koutakis
- 30. Michale Hough
- 31. Daniel Lieb

Postdoctoral/Residents

- 1. Corbin Rasmussen
- 2. Farah Fallahtafti
- 3. Yohanis O'Neill-Castro
- 4. Ganesh Bapat
- 5. Hafiz Rahman
- 6. Matthew Fuglestad
- 7. Hernan Hernandez
- 8. John McCamley
- 9. DJ Eikema
- 10. Elena Sarabia Cachadina

TEACHING ACTIVITY

2005-2007	Laboratory Methods in Exercise Science	Laboratory Section
(4 semesters)	PE 4010 and PE 8016	12-24 students/semester
2006-2007	Basic Anatomy and Physiology	Laboratory Section
(2 semesters)	PE 4630	75-80 students/semester
2009	Measurement and Evaluation for Physical	Education
(1 semester)	PE 4930	42 students/semester
2010	Exercise for Special Populations	
(1 semester)	HPER 8850	27 students/semester
2010-2012	Biomechanics	Lecture Section
(6 semesters)	PE 4630	42 students/semester
2011-2012	Basic Anatomy and Physiology I	Lecture Section
(3 semesters)	PE 2400/2880	130 students/semester

2011-2012 **Laboratory Methods in Exercise Science** Lecture Section (3 semesters) PE 4010 and PE 8016 Settlement Section 38 students/semester

PROFESSIONAL ACTIVITY & PUBLIC SERVICE

UNIVERSITY COMMITTEE WORK

University of	Nebraska at Omaha
2022-	VA Research and Development Committee, alternate
2016-2022	Research Resources Board, University of Nebraska Medical Center
2022	Search Committee, Vice Chancellor for Business and Finance
2021-2022	Search Committee, Assistant Professor, Department of Biomechanics
2019-2020	Search Committee, Assistant/Associate Professor, Department of Biomechanics,
2017-2019	Reappointment, Promotion, and Tenure Committee, Department of Biomechanics
2017-2020	NU Research Services IRB Reciprocity Subcommittee
2017-2019	NU Research Services Research Training Subcommittee
2017-2019	NU Research Services Research Administration Software Subcommittee
2017-2019	UNO Research Strategic Working Group
2017-2018	UNO Transition Advisory Team
2016-	Ex Officio, University Committee for Research and Creative Activity
2016-	Ex Officio, UNO Award for Distinguished Research and Creative Activity
2016-	WiSTEM Pro^2 (Awards committee member, 2016-2018).
2015-2016	College of Education Graduate Program Committee
2014-2016	Chair, Doctoral Program Committee for Exercise Science
2015-2016	Department of Biomechanics Reappointment, Promotion, and Tenure Committee
2015	University Committee on Honors and Awards
2014-2015	School of Health, Physical Education, and Recreation Reappointment, Promotion, and
	Tenure Committee
2014-2015	University Named Professorship Review Committee
2014-2015	Search Committee, Director of the School of Health, Physical Education, and Recreation
2014	Grants Accounting Manager Search Committee Member
2014-	Center for Faculty Excellence Advisory Committee
2013	Search Committee, Assistant Professor in Biomechanics
2013	School of Health, Physical Education, and Recreation Instructor Search Committee
2012-2013	Department of Gerontology: Aging with Passion and Purpose Conference Planning
	Committee
2012-2016	School of Health, Physical Education and Recreation Doctoral Committee (Chair 2014-
2016)	
2012-2015	Evaluation Committee for Post-Doctoral Research Associates
2012-2015	University Committee for the Advancement of Teaching (Chair 2014-2015)
2011- 2013	Joint Appointment and Part time Faculty Awards Committee, School of Health, Physical
	Education, and Recreation
2008-2011	University of Nebraska at Omaha Chancellor's Commission on the Status of Women
	Awards Committee

Other University/Academic/Research Service

2022-	Internal Advisory Committee, Center for Research on Human Movement Variability,
	University of Nebraska at Omaha
2020-2023	Internal Advisory Committee, Cognitive Neuroscience of Development and Aging
	Center, University of Nebraska Medical Center
2017-2023	UNO Institutional Representative, Great Plains IDEA-CTR Steering Committee
2017-2018	Joint UNMC/UNO 2018-ACE Internationalization Lab Collaboration and Partnership
	Subcommittee for Research
2017-2022	Steering Committee Member for the UNMC Bioengineering/Regenerative Medicine
	track for the Medical Sciences Interdepartmental Area Graduate Program
2014-2016	Member, Omaha VA Medical Center IRB

MEMBERSHIPS

2005 -	Member, American Society of Biomechanics
2013-	Member, Council for Undergraduate Research
2015-	Member, Gerontology Society of America
2017 -	Member, National Council of University Research Administrators
2017-	Member, Society for Research Administrators- International
2018-	Member, National Organization for Research Development Professionals
2020-	Member, American Association for the Advancement of Science
2020-	Member, Association for Women in Science
2005 - 2016	Member, American Alliance of Health, Physical Education, Recreation and Dance
2015-2017	Member, Text and Academic Authors Association
2009 - 2015	Member, Society for Neuroscience
2007 - 2015	Member, American Heart Association
2005 - 2012	Member, North American Society for the Psychology of Sport and Physical Activity

PUBLIC SERVICE

2022	Guest Speaker, "Starting your Research Right", New faculty orientation
2022	Guest Speaker, "Introduction to ORCA", Center for Faculty Excellence new faculty
	onboarding session
2022	Guest Speaker, "UNO Academic Affairs Leadership", Center for Faculty Excellence new
	faculty onboarding session
2022	Guest Speaker, "Grant writing basics", given to NCITE students, interns, and fellows
2022	Speaker/tour guide for interns from the Latino Center of the Midlands
2022	Speaker, iSPARK Engineering program
2022	Participant, VA Office of Research and Development IT Service Catalog Project
2022	Mentor, UNeTech Opportunity Corps Entrepreneurship program
2022	Guest Speaker, "CIMER Mentoring Training", Great Plains IDeA CTR Mentoring series
	(2 sessions)
2022	Guest Speaker, "Navigating funding agencies", STEM TRAIL Center speaker series
2022	Guest Speaker, "Success in the National Institutes of Health Loan Repayment Program",
	Great Plains IDeA-CTR series
2022-	President Elect and Executive Board member, American Society of Biomechanics
2020-2022	Education subcommittee, American Society of Biomechanics
2021-	Mentor, Mentoring Program, National Organization for Research Development
	Professionals (2 mentees 2021, 2 mentees 2022)

2013-	Health Sciences Councilor, Council for Undergraduate Research
2020	Predoctoral Award Committee, American Society of Biomechanics
2019- 2020	American Society of Biomechanics, Grant-in-Aid Review subcommittee
2018-2019	Reviewer and participating host for the University Administration Support Program
2016-2020	Mentor, UNO Women's Basketball
2014	Guest Speaker, UNO Nonlinear Workshop
2014	Guest Speaker, Downtown Rotary Club
2014	Guest Speaker, Greater Omaha Kiwanis group
2014	Guest Speaker, UNMC Surgery Forum
2014	Guest Speaker, Omaha VA Research Service Seminar Series
2014-	Councilor, Health Sciences Division, Council for Undergraduate Research
2014	Guest Speaker, Department of Cellular and Integrative Physiology at UNMC
2013	Guest Speaker, West Omaha Kiwanis group
2013	Session Chair, American Society of Biomechanics 2013 Annual Meeting
2012-	Mentor, American Society of Biomechanics Annual Conference attendee
2012-2013	Member, 37 th Annual Meeting of the American Society of Biomechanics Organizing
	Committee
2012-2015	Member, NASA Nebraska Technical Advisory Committee
2012-2013	Member, Innovations: Inside Nebraska Robotics Exhibit Committee
2011-2012	Guest speaker at UNO Athletics Senior Awards Banquet
2011	Guest speaker at the HAWK Honor Assembly, Hampton, NE
2010-2011	Mentor, University of Nebraska Medical Center High School Alliance Program
2010	Presentation Titled: Research in the Nebraska Biomechanics Core Facility
	To: Creighton University Biosciences Graduate students
2009	Member, Review Committee for American Society of Biomechanics Grant-In-Aid
	Program
2009-2013	Laboratory tours: What is Biomechanics?
	To: R.M. Marrs Magnet Elementary School students as part of the Wellness Stampede at
	the University of Nebraska at Omaha
2009-2012	Advisory Board, University of Nebraska at Omaha Varsity Letter Club
2008-2012	Advisory Board, University of Nebraska at Omaha Women's Basketball Backboard
2006 2010	Bunch (Booster Club)
2006-2010	Committee Member, St. Luke United Methodist Church Children's Ministry
2007-2010	Youth soccer coach for Ralston Soccer Club
2007	Presentation Titled: Introduction to Biomechanics To: University of Nebraska at Omaha
2005 2016	Athletic Training Program students
2005-2016	Presentation Titled: Running Mechanics and Injury Prevention To: Yearly to Omaha
2001 2004	Running Club Marathon Clinic
2001-2004	Omaha Race for the Cure Volunteer
2002-2003	Read Across America Volunteer Youth girls healtathall goods and same instructor volunteer
1997-2006	Youth girls basketball coach and camp instructor volunteer

FEATURED IN THE MEDIA

Featured: Podcast guest, American Federation for Medical Research monthly podcast in conjunction with the Journal of Investigative Medicine, *Success in the National Institutes of Health Loan Repayment Program*, 2022.

Interviewed: Omaha World Herald, September 16, 2019. \$10.3 million federal grant is latest boost to UNO biomechanics program.

Featured: University of Nebraska NU for Nebraska Campaign, December, 2018. *Getting patients moving with specialty support.*

Interviewed for an article: Omaha World Herald, December 26, 2019. *UNO biomechanics program is more than doubling its space under a 'visionary leader'*.

Featured: University of Nebraska at Omaha website, October 18, 2018. A fellowship program has brought two research administrators to the US to learn about UNO's research program.

Featured: Omaha World Herald, December 19, 2016. UNO receives \$2 million grant to test device that might make walking easier for patients with artery disease. Interviewed by Rick Ruggles.

Featured: UNO Webpage, December 12, 2016. *Millions in funding will help fight artery disease*. Interviewed by Nolan Searl and Sam Petto.

Featured: UNO Webpage, July 4, 2016. Dr. Sara Myers Named Assistant Vice Chancellor for Research and Creative Activity.

Featured: Chancellor's Letter to UNO alumni, August 31, 2015.

Featured: Midlands Business Journal, 40 Under 40, November 14, 2014.

Featured: UNO Magazine, Interviewed November 11, 2014.

Featured: Omaha World Herald, August 15, 2014. \$10.1 million grant a major stride for UNO.

Featured: Tom Becka Show. Center for Research in Human Movement Variability to be housed at UNO.

Featured: NPR/KIOS News, August 2014. *UNO to be the home of a Center for Research in Human Movement Variability*.

Featured: NPR/KIOS News, August 2014. Science Café.

Featured: KETV News, March 2014. *Researchers seek early detection for autism.* http://www.ketv.com/news/researchers-seek-early-detection-for-autism/24928100.

Featured: UNO Magazine, October 2013. Going with the flow. Page 26.

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