

**Emily J. Fox, DPT, MHS, PhD**  
Research Associate Professor  
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Clinical Research Scientist and Director of Neuromuscular Research  
Director, Brooks Motion Analysis Center  
Brooks Rehabilitation, Jacksonville, FL 32216

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## **EDUCATION & TRAINING**

2011-2012	Post-Doctoral Research Associate, Neuromuscular Physiology Laboratory College of Health and Human Performance University of Florida, Gainesville, Florida
2007-2011	PhD, Rehabilitation Science PhD program College of Public Health & Health Professions University of Florida, Gainesville, Florida Locomotor Control and Recovery after Human Spinal Cord Injury
2004-2005	DPT, Doctor of Physical Therapy University of St. Augustine for Health Sciences, St. Augustine, Florida
1997-2000	MHS, Master of Health Science in Physical Therapy University of Florida, Gainesville, Florida
1992-1994	BS, Bachelor of Science in Physical Therapy Florida Agricultural and Mechanical University, Tallahassee, Florida
1988-1991	AA, Associate of Arts University of Florida, Gainesville, Florida

## **LICENSURE**

1994 to present Licensed by the State of Florida as a Physical Therapist

## **CERTIFICATION and PROFESSIONAL TRAINING**

2000 to 2020	Board Certified Clinical Specialist in Neurologic Physical Therapy American Board of Physical Therapy Specialties
2018	Leadership Challenge – Four-month course to enhance leadership acumen
2022	College of PHHP Mentorship Workshop – Four-month course to enhance knowledge and effectiveness as a mentor

## **PROFESSIONAL EXPERIENCE**

**Summary of current roles.** I am a Research Associate Professor at the University of Florida, Department of Physical Therapy and a Clinical Research Scientist at Brooks Rehabilitation. My roles are part of an established collaboration between the UF College of Public Health and Health Professions (PHHP) and Brooks Rehabilitation, the *Brooks-PHHP Research Collaboration*. I direct the Brooks Motion Analysis Center, a clinical and research assessment lab, and Direct the Neuromuscular Research Program at Brooks Rehabilitation. My responsibilities include promotion and conduct of funded rehabilitation research, facilitating translation between research and clinical practice, mentorship and teaching, and enhancing collaboration across Brooks and the UF College of PHHP.

2021-present	Editorial Board Member, Journal of Neurologic Physical Therapy
2021-present	Steering Committee, Rehabilitation Science Doctoral (PhD) Program, College of Public Health and Health Professions, University of Florida
2021-present	Chair-elect, Research Committee, Academy of Neurologic Physical Therapy, American Physical Therapy Association
2020-present	Research Associate Professor, Department of Physical Therapy, University of Florida
2019-present	Steering Committee, Breathing Research and Therapeutics Center, College of Public Health and Health Professions, University of Florida
2019-present	Director of Neuromuscular Research Brooks Rehabilitation, Jacksonville, FL
2013-present	Director, Brooks Rehabilitation Motion Analysis Center Brooks Rehabilitation, Jacksonville, FL
2012-2020	Research Assistant Professor, Department of Physical Therapy, College of Public Health & Health Professions, University of Florida, Gainesville, FL
2012-present	Clinical Research Scientist, Brooks Rehabilitation Clinical Research Center, Jacksonville, FL
2011- 2012	Post-Doctoral Research Associate, Neuromuscular Physiology Laboratory, College of Health and Human Performance, University of Florida Gainesville, FL
2010-2011	Health Science Specialist, Malcom Randall VA Brain Rehabilitation Research Center, Gainesville, FL
2008-2020	Adjunct Faculty, Brooks Rehabilitation/ University of North Florida Neurologic Residency Program, Jacksonville, FL
2007-2011	Research Physical Therapist & Research Coordinator, Department of Physical Therapy, University of Florida, Gainesville, FL

2001-2006	Assistant Professor, University of St. Augustine for Health Sciences St. Augustine, FL Doctor of Physical Therapy and Master of Occupational Therapy Programs
2004-2006	Research Physical Therapist, University of Florida, Brooks Center for Rehabilitation Studies, Jacksonville, FL.
1999-2001	Instructor, University of St. Augustine for Health Sciences St. Augustine, FL
2000-2003	Physical Therapist, Flagler Hospital, St. Augustine, FL
1997-1999	Graduate Teaching Assistant, Department of Physical Therapy University of Florida, Gainesville, FL
1998-1999	Research Assistant, Department of Physical Therapy University of Florida, Gainesville, FL
1994-1999	Physical Therapist, Brooks Rehabilitation Hospital, Jacksonville, FL Spinal Cord Injury Team Leader, Stroke Team Leader

### **RESEARCH MENTORSHIP**

I am faculty in the Department of Physical Therapy Rehabilitation Science PhD program and am a faculty mentor on three NIH T32 training programs: 1) Neuromuscular Plasticity Training program; 2) the Breathing Research and Therapeutics T32 training program (BREATHE) and 3) the Translational Research on Aging and Mobility (TRAM) T32 training program. I mentor post-doctoral trainees, doctoral degree (PhD) research trainees, undergraduate honor students, as well as clinicians and research team members at Brooks Rehabilitation. I completed a four-month workshop (2022) to enhance my knowledge and effectiveness as a mentor.

#### **Post-Doctoral Research Associates**

Alicia Vose, CCC-SLP, PhD (2019-present)

Joseph Welch, PhD (2019-present)

Jayakrishnan Nair, PT, PhD (2020-2022)

#### **Doctoral (PhD) Chair or co-Chair**

Todd Williams, DPT, NCS (current)

(Funded by the College of Public Health & Health Professions Dean's scholarship)

Tinuade Olarewaju, MSPT (current)

(Funded by McKnight Brain Institute and the NIH BREATHE T32 Training Fellowship)

Kelly Hawkins, DPT, PhD, NCS (degree conferred 2020)

(Funded by the Foundation for Physical Therapy Research, NIH T32 Neuromuscular Plasticity Training Fellowship, UF Department of PT)

Tommy Sutor, MS, PhD (degree conferred 2020)

(Funded by the NIH BREATHE T32 Training Fellowship, Brooks-PHP Research Collaboration)

Katie Butera, DPT, PhD (degree conferred 2020)

(Funded by the NIH T32 Neuromuscular Plasticity Training Fellowship, Brooks-PHHP Research Collaboration, International Chapter of the P.E.O. Sisterhood Scholar Award, NIH Loan Repayment Award)

**Doctoral (PhD) Committee Member**

Chatchamarn (Deam) Soonhuae (current)

Yoonjin Choi (current)

Hannah Sweatland (current)

Steven Winesett (current)

Kim Stubbs (current)

May Smith-Hublou (current)

Kanika Bansal (degree conferred 2022)

Elaheh Sujjadi (degree conferred 2021)

Brendon Allen (degree conferred 2021)

Jayoung Kim (degree conferred 2020)

Marissa Ceisla (degree conferred 2020)

Michael Sunshine (degree conferred 2020)

Sudeshna Chatterjee (degree conferred 2017)

Jayakrishnan Nair (degree conferred 2016)

Yen-Ting Chen (degree conferred 2015)

Minhyuk Kwon (degree conferred 2015)

**Undergraduate Honors Thesis**

Hannah Prudencio (current)

Kaitlyn Smith (2017)

Nikki Weiss (2015-2016)

Danielle Nystrom (2014-2015)

Jacquelyne Garner (2014-2015)

MacKenzie Roberts (2010-2011)

**CURRENT DPT TEACHING and MENTORSHIP RESPONSIBILITIES**

Doctor of Physical Therapy (DPT) program, Department of Physical Therapy, University of Florida: PHT 6169  
Neurorehabilitation (3 credits; spinal cord injury unit)

DPT program faculty mentor to two students in each of three class groups. Role involves regular review of goals, professional development, troubleshooting situations affecting professional performance or growth.

**PRIOR COURSE INSTRUCTION**

Basic Skills and Procedures

Massage and Soft Tissue Palpation

Neurologic Rehabilitation One (Assessment)

Neurologic Rehabilitation Two (Intervention Approaches)

## CURRENT RESEARCH SUPPORT

**Craig H. Neilsen Foundation** 6/15/20-6/14/22  
Neilsen Postdoctoral Fellowship Research Grant  
ID: 647662 \$150,000 total  
*Acute intermittent hypoxia to improve breathing in humans with spinal cord injury*  
Role: Mentor (Awarded to Joseph Welch)

**DoD CDMRP SCI Clinical Trial** 9/15/2018-9/14/2022  
ID: W81XWH1810718 \$2,364,000 total 4.8 calendar months  
*Acute intermittent hypoxia and respiratory strength training to improve breathing function after spinal cord injury*  
Role: Principal Investigator (Co-PI Mitchell)

**NIH Stimulating Peripheral Activity to Relieve Conditions (SPARC)**  
ID: OT2OD0023854 9/25/2016-7/31/2022 (NCE)  
Fox Sub-project(s) \$334,000 3.3 calendar  
*Functional mapping of peripheral and central circuits for airway protection and breathing*  
Dr. Fox's subprojects investigate the effects of intramuscular diaphragm stimulation in humans after cervical spinal cord injury.  
Role: Co-Investigator (PI Bolser)

**Brooks Collaborative Research Fund** 10/15/2018-10/14/2023  
\$715,000 total 1.4 calendar  
*Walking Rehabilitation after spinal cord injury: locomotor training using adaptive robotics*  
Role: Principal Investigator

**Craig H. Neilsen Foundation**  
SCIRT Pilot Award 1/31/2021-1/30/2023  
ID: 649726 \$300,000 total 1.0 calendar  
*Locomotor training with testosterone to promote bone and muscle health*  
Role: Co-Principal Investigator (PI J Yarrow)

**Brooks-PHP Research Collaboration**  
Pilot Award 7/31/2022-7/30/2024  
\$24,000 total  
*Static stretching effects on motor activation and locomotion in adults with spinal cord injury*  
Role: Principal Investigator

## FUNDED and PENDING

**Craig H. Neilsen Foundation**  
SCIRT Pilot Award 7/31/2022-7/30/24  
ID: 890033 \$399,000 total  
*Transcutaneous Spinal Direct Current Stimulation to Enhance Locomotor Rehabilitation after SCI*  
Role: Principal Investigator

**Department of Defense CDMRP**

Clinical Trial Award 9/30/2022-9/29/2026  
ID: SC210065 \$3,613,189 total  
Genetic Biomarkers of Intermittent Hypoxia Induced Respiratory Motor Plasticity in Chronic SCI  
Role: Principal Investigator (Co-PI Mitchell)

**PENDING**

**National Institutes of Health**

NCMRR, R03 12/01/2022-11/30/2024  
\$272,291 total  
Trunk control after human spinal cord injury  
Role: Co-Investigator (PI Hawkins)

**COMPLETED RESEARCH SUPPORT**

**Paralyzed Veterans of America** 6/1/2019-8/31/2021  
ID: AGR DTD 4-17-2019 \$50,000 total .60 calendar  
*Perceptions of Individuals living with spinal cord injury regarding autonomous vehicles*  
Role: Co-Investigator (PI: S Classen)

**NIH Center for Rehabilitation Research to Enhance Clinical Trials**

**Pilot Grant** 10/1/2018-6/30/2021  
ID: 000509380-SP004-011 \$60,524 total .48 calendar  
*Transcutaneous spinal direct current stimulation to enhance locomotion after spinal cord injury*  
Role: Principal Investigator (Co-PI Clark)

**VA SPIRE RR& D Service** 12/15/2018-12/14/2020

ID: AGR DTD 01-08-2019 \$200,000 total  
*Spinal excitation to enhance mobility in elderly adults*  
Role: Co-Investigator (PI: D Clark)

**NIH Center of Neuromodulation for Rehabilitation**

Pilot Award 07/15/2018-07/14/20  
\$37,000 total  
*Neuromodulation of spinal circuits to enhance performance on a complex walking task*  
Role: Principal Investigator (Co-PI Clark)

**Craig H. Neilsen Foundation** 12/31/2015-12/30/2019

\$290,817 total  
*Intramuscular pacing to enhance voluntary diaphragm activation*  
Role: Principal Investigator

**VA RR&D Merit Review** 07/1/2014-05/1/2019

\$1,099,510.00 total  
*Rehabilitation of corticospinal control of walking following stroke*  
Role: Co-Investigator (PI: Clark)

**NIH/ NICHD K12 HDO55929 09/1/2014-09/1/2017**

*Rehabilitation Research Career Development Program*

Role: Scholar (PI: K. Ottenbacher)

**Brooks Rehabilitation Collaborative Grant 09/1/2014-12/1/2016**

\$25,600 total

*Development of a clinical assessment tool for the measurement of walking adaptability post-stroke*

Role: Co-Principal Investigator

**UF Informatics Institute Seed Fund Program 09/15/2014-09/14/2016**

\$49,943 total

*A novel framework for physical tele-therapy using infrared depth sensors and haptic feedback*

Role: Co-Principal Investigator

**Department of Defense: FL Trauma Center 08/1/2012-03/1/2015**

\$156,400.00 total

*Adaptive walking responses critical for effective community ambulation post-incomplete SCI*

Role: Co-Principal Investigator

**UF CTSI, Pilot Project Award 08/15/2012-08/14/2014**

\$7,500.00 total

*Exciting kids to walk: Game technology to enhance sensory input and promote walking recovery*

Role: Principal Investigator

**Florida Department of Health Brain and Spinal Cord Injury Program**

**Early Career Rehabilitation Research Award 08/15/2010-08/14/2011**

\$5,000.00 total

*Functional Recovery in Children with Incomplete SCI: Computational Muscle Synergy Analysis*

Role: Principal Investigator

### **AWARDS and SCHOLARSHIPS**

- |           |   |
|-----------|---|
| 2019      | American Physical Therapy Association Eugene Michels Young Investigator Award<br>(Awarded to physical therapists within 10 years of their research training who have demonstrated outstanding research accomplishments, believed to have a current or future impact on the profession.) |
| 2012      | Neuromuscular Plasticity Symposium Post-doctoral Research Award, University of Florida  |
| 2011      | Neurology Section, American Physical Therapy Association, Best Post-Professional Student Abstract Award   |
| 2010-2011 | Clinical and Translational Science Institute (CTSI) TL-1 (NIH) Pre-doctoral Education and Training Fellowship-Competitive Award Renewal, University of Florida  |

2009-2010	Clinical and Translational Science Institute (CTSI) TL-1 (NIH) Pre-doctoral Education and Training Fellowship, University of Florida
2009	Howard H. Steel Conference: Pediatric Spinal Cord Injuries and Dysfunction Educational Scholarship to fund conference travel and attendance
2009	UF College of Public Health and Health Professions Student Research Day Award

### **PUBLICATIONS (underline= research trainee/mentee)**

<https://www.ncbi.nlm.nih.gov/myncbi/1biMwesBtmN5N/bibliography/public/>

1. Bansal K, Vistamehr A, Conroy CL, **Fox EJ**, Rose DK. The influence of backward versus forward locomotor training on gait speed and balance control post-stroke: Recovery or Compensation. *J Biomechanics*. Submitted May 11, 2022 (under review).
2. Howland D, Trimble S, **Fox EJ**, Tester N, Spiess M, Senesac C, Kleim J, Spierre L, Johns J, Rose D, Ugiliweneza B, Reier P, Behrman A. Recovery of walking in non-ambulatory children with chronic spinal cord injuries. *J Neurosci Research*. Submitted August 2021 (under review).
3. DeMark LA, **Fox EJ**, Manes MR, Conroy C, Rose DK. The 3-Meter Backward Walk Test (3MBWT): Reliability and validity in individuals with subacute and chronic stroke. *Physiotherapy Theory and Practice*. 2022 June 5: 1-8.
4. Sutor T, Fuller DD, **Fox EJ**. Locomotor respiratory coupling in ambulatory adults with incomplete spinal cord injury. *Spinal Cord Ser Cases*. 2022 Apr 30;8(1):49.
5. Hawkins KA, DeMark LA, Vistamehr A, Snyder HJ, Conroy C, Wauneka C, Tonuzi G, Fuller DD, Clark DJ, **Fox EJ**. Feasibility of transcutaneous spinal direct current stimulation combined with locomotor training after spinal cord injury. *Spinal Cord*. 2022 Apr 27.
6. Welch JF, Nair J, Argento PJ, Mitchell GS, Fox EJ. Acute intermittent hypercapnic-hypoxia elicits central neural respiratory motor plasticity in humans. *J Physiol*. 2022 Mar 29.
7. Clark DJ, Hawkins KA, Winesett SP, Cox BA, Pesquera S, Miles JW, Fuller DD, **Fox EJ**. Enhancing Locomotor Learning With Transcutaneous Spinal Electrical Stimulation and Somatosensory Augmentation: A Pilot Randomized Controlled Trial in Older Adults. *Front Aging Neurosci*. 2022;14:837467.
8. Butera KA, **Fox EJ**, Bishop MD, Coombes SA, Beneciuk JM, George SZ. Low risk for persistent low back pain-related disability is characterized by lower pressure pain sensitivity and higher physical performance. *Physical Therapy*. 2022 Mar 1;102(3).
9. Bansal K, Clark DJ, **Fox EJ**, Conroy C, Freeborn P, Rose DK. Spatiotemporal strategies adopted to walk at fast speed in high- and low-functioning individuals post-stroke; A Cross-sectional Study. *Topics in Stroke Rehabilitation*. 2022. In press.
10. Vose AK, Welch JF, Nair J, Dale EA, **Fox EJ**, Muir GD, Trumbower RD, Mitchell, GS. Therapeutic acute intermittent hypoxia: a translational roadmap for spinal cord injury and neuromuscular disease. *Experimental Neurology*. 2022 Jan;347:112891.
11. Clark DJ, Rose DK, Butera KA, Hoisington B, DeMark L, Chatterjee SA, Hawkins KA, Otzel DM, Skinner JW, Christou EA, Wu SS Fox EJ. Rehabilitation with accurate adaptability walking tasks or steady state walking: A randomized clinical trial in adults post -stroke. *Clin Rehabil*. 2021 Aug;35(8):1196-1206.
12. Sutor T, Cavka K, Vose AK, Welch J, Davenport P, Fuller DD, Mitchell GS, **Fox EJ**. Single-session effects of acute intermittent hypoxia on breathing function after human spinal cord injury. *Exp Neurol*. 2021 Aug;342:113735.
13. Cavka K, Fuller DD, Tonuzi G, **Fox EJ**. Diaphragm pacing and a model for respiratory rehabilitation after spinal cord injury. *Journal of Neurologic Physical Therapy*. 2021 Jul 1;45(3):235-242.

14. Welch JF, Perim RR, Argento PJ, Sutor TW, Vose AK, Nair J, Mitchell GS, **Fox EJ**. Effect of acute intermittent hypoxia on cortical evoked diaphragm potentials in healthy humans. *Experimental Neurology*. 2021 February 16; 339:113651.
15. Clark DJ, Rose DK, Butera K, Hoisington B, DeMark L, Chatterjee S, Hawkins K, Otzel D, Skinner J, Christou E, Wu S, **Fox EJ**. Walking rehabilitation with accurate adaptability walking tasks or steady state walking: A randomized clinical trial in adults post-stroke. *Clinical Rehabilitation*. 2021 Aug;35(8):1196-1206.
16. Bansal K, Clark DJ, **Fox EJ**, Rose DK. Does falls efficacy influence the relationship between forward and backward walking speed after stroke? *Physical Therapy Journal*. 2021 May 4;101(5).
17. Butera KA, **Fox EJ**, Bishop MD, Coombes SA, George SZ. Empirically derived back pain subgroups differentiated walking performance, pain, and disability. *Pain*. 2021 Jun 1;162(6):1806-1815.
18. Welch JF, Argento PJ, Mitchell GS, **Fox EJ**. Reliability of the diaphragmatic motor evoked potential induced by transcranial magnetic stimulation. *Journal of Applied Physiology*. 2020 Dec 1;129(6):1393-1404.
19. Welch JF, Sutor T, Vose AK, Perim RR, **Fox EJ**, Mitchell GS. Hypothetical Model: Synergy between Acute Intermittent Hypoxia and Task-Specific Training. *Exercise and Sport Sciences Reviews*. 2020 Jul;48(3):125-132.
20. Sunshine MD, Sutor TW, **Fox EJ**, Fuller DD. Targeted activation of spinal respiratory neural circuits. *Experimental Neurology*. 2020 Jun; 328:113256.
21. Duenas VH, Cousin CA, Rouse C, **Fox EJ**, Dixon WE. Distributed repetitive learning control for cooperative cadence tracking in functional electrical stimulation cycling. *IEEE Trans Cybern*. 2020 Mar;50(3):1084-1095.
22. Hornby TG, Reisman DS, Ward IG, Scheets PL, Miller A, Haddad D, **Fox EJ**, Fritz NE, Hawkins K, Henderson CE, Hendron KL, Holleran CL, Lynskey JE, Walter A. Clinical Practice Guideline to Improve Locomotor Function Following Chronic Stroke, Incomplete Spinal Cord Injury, and Brain Injury. *J Neurol Phys Ther*. 2020 Jan;44(1):49-100.
23. Cousin CA, Duenas VH, Rouse CA, Bellman MJ, Freeborn P, **Fox EJ**, Dixon WE. Closed-loop cadence and instantaneous power control on a motorized functional electrical stimulation cycle. *IEEE Trans. Control Syst Tech*. 2020 Nov;28(6):2276-2291.
24. Chatterjee SA, **Fox EJ**, Wu SS, Daly JJ, Rose DK, Christou EA, Hawkins KA, Otzel DM, Butera KA, Skinner JW, Clark DJ. Interpreting prefrontal recruitment during walking after stroke: influence of individual differences in mobility and cognitive function. *Front Hum Neurosci*. 2019 Jun 18;13:194. "Top 10" Editor's Pick for the Motor Neuroscience section of *Frontiers in Human Neuroscience*
25. DeMark L, **Fox EJ**, Spigel PM, Osborne J, Rose DK. Clinical application of backward walking training to improve balance and walking function in acute stroke: A case series. *Topics Stroke Rehabil*. 2019 Oct;26(7):497-502.
26. Hawkins KA, Balasubramanian CK, Vistamehr A, Conroy C, Rose DK, Clark DJ, **Fox EJ**. Assessment of backward walking unmasks mobility impairments in post-stroke community ambulators. *Top Stroke Rehabil*. 2019 Jul;26(5):382-388.
27. Duenas VH, Cousin CA, Parikh A, Freeborn P, **Fox EJ**, Dixon WE. Motorized and functional electrical stimulation induced cycling via switched repetitive learning control. *IEEE Transactions on Control Systems Technology*. 2019 vol 27, No.4. pp 1468-1479.
28. Duenas VH, Cousin CA, Ghanbari V, **Fox EJ**, Dixon WE. Torque and Cadence Tracking in Functional electrical stimulation induced cycling using passivity-based spatial repetitive learning control. *Automatica*. 2020 vol 115.108852.
29. Levac D, Glegg S, Pradhan S, **Fox EJ**, Espy D, Chicklis E, Deutsch JE. A comparison of virtual reality and active video game usage, attitudes and learning needs among therapists in Canada and the U.S. *Proceedings from the International Conference on Virtual Rehabilitation*, 2019.

30. Levac D, Pradhan S, **Fox E**, Espy D, Deutsch J. Usability of the Kinect-ing with Clinicians website: A knowledge translation resource supporting decisions about active video game use in rehabilitation. *Games Health J*. 2018 Dec;7(6):362-368.
31. Chatterjee SA, Daly JJ, Porges EC, **Fox EJ**, Rose DK, McGuirk TE, Otzel DM, Butera KA, Clark DJ. Mobility function and recovery after stroke: insights from sympathetic nervous system activity. *J Neurol Phys Ther*. 2018 Oct;43(4):224-232.
32. Casamento-Moran A, Fleeman R, Chen YT, Kwon M, **Fox EJ**, Yacoubi B, Christou EA. Neuromuscular Variability and spatial accuracy in children and older adults. *J Electromyogr Kinesiol*. 2018 Apr 24;41: 27-33.
33. Vistamehr A, Balasubramanian CK, Clark DJ, Neptune RR, **Fox EJ**. Dynamic balance during walking adaptability tasks in individuals post-stroke. *J Biomech*. 2018; 74:106-115.
34. Hawkins KA, **Fox EJ**, Daly JJ, Rose DK, Christou EA, McGuirk TE, Otzel DM, Butera KA, Chatterjee SA, Clark DJ. Prefrontal over-activation during walking in people with mobility deficits: interpretation and functional implications. *Hum Mov Sci*. 2018 Mar 28;59:46-55.
35. Clark DJ, Chatterjee SA, McGuirk TE, Porges EC, **Fox EJ**, Balasubramanian CK. Sympathetic nervous system activity measured by skin conductance quantifies the challenge of walking adaptability tasks after stroke. *Gait and Posture*. 2018 Feb;60:148-153.
36. Rose DK, DeMark L, **Fox EJ**, Clark DJ, Wdyluka P. A backward walking training program to improve balance and mobility in acute stroke: A pilot randomized controlled trial. *J Neurol Phys Ther*. 2018 Jan;42(1);12-21. (2018 Golden Synapse Award for best JNPT publication)
37. Nair J, Streeter KA, Turner SMF, Sunshine MD, Bolser DC, **Fox EJ**, Davenport PW, Fuller DD. Anatomy and Physiology of Phrenic Afferent Neurons. *J Neurophysiol*. 2017 Dec 1;118(6);2975-2990
38. **Fox EJ**, Tester NJ, Butera K, Howland DR, Spiess M, Castro-Chapman PL, Behrman AL. Retraining walking adaptability following spinal cord injury: an initial feasibility study. *Spinal Cord Series and Cases*. 2017 Dec 14;3:17091.
39. Hawkins KA, Clark DJ, Balasubramanian CK, **Fox EJ**. Walking on uneven terrain and its implications for people after stroke. *NeuroRehabilitation*. 2017;41(4):765-744.
40. Lodha N, Chen YT, **Fox EJ**, McGuirk T, Kautz SA, Christou EA, Clark DJ. EMG synchrony to assess impaired corticomotor control of locomotion after stroke. *J Electromyogr Kinesiol*. 2017 Sep 1;37:35-40.
41. Casamento-Moran A, Hunter SK, Chen YT, Kwon M, **Fox EJ**, Yacoubi B, Christou EA. Sex differences in spatial accuracy relate to the neural activation of antagonistic muscles in young adults. *Exp Brain Res*. 2017Aug;235(8):2425-2436.
42. Butera KA, **Fox EJ**, George SZ. Towards a transformed understanding: from pain and movement to pain with movement. *Phys Ther*. 2016 Oct;96(10):1503-1507.
43. Barmpoutis A, Alzate J, Beekhuizen S, Delgado H, Donaldson P, Hall A, Lago C, Vidal K, **Fox EJ**. Assessment of haptic interaction for home-based physical tele-therapy using wearable devices and depth sensors. *Stud Health Technol Inform*. 2016; 220:33-8.
44. Gerena R, VanDeventer P, Vistamehr A, Conroy C, Freeborn P, Govin H, **Fox E**, Aceros J. Wireless instrumented walker for remote rehabilitation monitoring. *Proceedings of the IEEE, Virtual Conference on Applications of Commercial Sensors*. 2015.
45. Foster H, Demark L, Spigel P, Rose DK, **Fox EJ**. The effects of backward walking training on balance and mobility in a person with chronic incomplete spinal cord injury: A case report. *Physiother Theory Pract*. 2016. Oct;32(7):536-45.
46. Moon H, Kim C, Kwon M, Chen YT, **Fox EJ**, Christou EA. High-gain visual feedback exacerbates ankle movement variability in children. *Exp Brain Res*. 2015; 233(5):1597-1606.
47. Levac D, Espy D, **Fox E**, Pradhan S, Deutsch J. 'Kinecting' with clinicians: A knowledge translation resource to support decision-making about video game use in rehabilitation. *Phys Ther*. 2015 Mar;95(3):426-40.

48. Barmpoutis A, **Fox EJ**, Elsner I, Flynn S. Augmented-reality environment for locomotor training in children with neurological injuries. *Lecture Notes Computer Science*. 2014: 108-117.
49. Balasubramanian CK, Clark DJ, **Fox EJ**. Walking adaptability after a stroke and its assessment in clinical settings. *Stroke Res Treat*. 2014:5910-13.
50. **Fox EJ**, Moon H, Kwon M, Chen YT, Christou EA. Neuromuscular control of goal-directed ankle movements differs in healthy children and adults. *Eur J Appl Physiol*. 2014 Sep;114(9):1889-99.
51. Chen YT, Kwon M, **Fox EJ**, Christou. Altered activation of the antagonist muscle during practice compromises motor learning in older adults. *J Neurophysiol*. 2014 Aug 15;112(4):1010-9.
52. Kwon M, Chen YT, **Fox EJ**, Christou EA. Aging and limb alter the neural control of goal-directed movements. *Exp Brain Res*. 2014 Jun;232(6):1759-71.
53. **Fox EJ**, Tester NJ, Kautz SA, Howland DR, Clark DJ, Garvan C, Behrman AL. Modular control of varied locomotor tasks in children with incomplete spinal cord injuries. *J Neurophysiol*. 2013;110(6):1415-25.
54. **Fox EJ**, Baweja HS, Kim C, Kennedy DM, Vaillancourt DE, Christou EA. Modulation of force within 0-1 Hz: Age-associated differences and the effect of magnified visual feedback. *Plos ONE*. 2013;8(2).
55. Chen YT, Neto OP, Miranda Marzullo AC, Kennedy DM, **Fox EJ**, Christou EA. Age-associated impairment in endpoint accuracy of goal-directed contractions performed with two fingers is due to altered activation of the synergistic muscles. *Exp Gerontology*. 2012 July;47(7):519-26.
56. **Fox EJ**, Tester NJ, Phadke CP, Nair PM, Senesac CR, Howland DR, Behrman AL. Ongoing Walking Recovery Two Years Post Locomotor Training in a Child with Severe Incomplete Spinal Cord Injury. *Phys Ther*. 2010 May;90(5):793-802.
57. Plummer-D'Amato P, Altmann LJ, Saracino D, **Fox E**, Behrman AL, Marsiske M. Interactions between cognitive tasks and gait after stroke: A dual task study. *Gait Posture*. 2007 May; 27(4):683-8.
58. Plummer P, Behrman AL, Duncan PW, Spigel P, Saracino D, Martin J, **Fox E**, Thigpen M, Kautz SA. Effects of stroke severity and training duration on locomotor recovery after stroke: a pilot study. *Neurorehabil Neural Repair*. 2007;21(2):137-51.
59. Day JA, **Fox E**, Lowe J, Swales HB, Behrman AL. Locomotor training with partial body weight support on a treadmill in a non-ambulatory child with spastic tetraplegic cerebral palsy: a case report. *Pediatr Phys Ther*. 2004; 16(2): 106-113.

#### **NATIONAL & INTERNATIONAL PRESENTATIONS**

1. Bowden M, **Fox EJ**, Rose DK. New strategies in Gait Rehabilitation following Neurologic Injury. Brooks-PHHP Research Connection Webinar. Online. May 10, 2022.
2. Brunetti G, Hawkins KA, Cavka KL, Snyder H, Olarewaju T, **Fox EJ**. Trunk strength is associated with maximal respiratory pressure generation in individuals with spinal cord injury. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
3. Bansal K, Clark D, Monaldi M, **Fox EJ**, Rose DK. Objective measurement of perceived walking challenge differentiates between home and community ambulation levels post-stroke. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
4. DeMark LA, Dunn J, Kettles M, Snyder H, Brunetti G, Cavka K, Conroy C, Wauneka CN, Mclver B, Tonuzi G, **Fox EJ**. Locomotor training using adaptive robotics in adults with spinal cord injury: Preliminary feasibility and outcomes. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
5. **Fox EJ**. Strategies to Augment Respiratory Recovery after SCI. Kentucky Spinal Cord Injury Center, University of Louisville. October 21, 2021.
6. **Fox EJ**. Strategies to augment SCI rehabilitation: Promoting breathing and walking recovery. Brooks Research Connection. Online seminar. April 26, 2021.

7. **Fox EJ.** Strategies to promote respiratory recovery after human SCI. The International Online Spinal Cord Injury Seminars. Online seminar. March 2, 2021.
8. **Fox EJ.** Intramuscular diaphragm pacing and therapeutic intermittent hypoxia to promote breathing recovery after SCI. University of Maryland Baltimore. PTRS Rehabilitation Seminar. Online. October 2, 2020.
9. **Fox EJ.** Therapeutic Intermittent Hypoxia to restore breathing in humans with spinal cord injury. Neurotherapeutic Intermittent Hypoxia Workshop. Jacksonville, FL. February 2020.
10. Sandhu M, Rymer Z, Trumbower R, **Fox EJ**, Mitchell G. Therapeutic Intermittent Hypoxia: Basic Mechanisms to Clinical Studies. American Physical Therapy Association Combined Sections Meeting. Boulder, CO. February 2020
11. Butera KA, George SZ, Freeborn P, Patel J, Bishop MD, Coombes S, **Fox EJ.** Low Back Pain-Related Walking Impairments Are Associated with Pain Sensitivity, Movement-Evoked Pain, and Psychological Factors American Physical Therapy Association Combined Sections Meeting. Boulder, CO. February 2020
12. Butera KA, George SZ, Freeborn P, Bishop MD, Coombes SA, **Fox EJ.** Pain-related sensory and psychological factors may contribute to walking impairment in adults with low back pain. Pain Science in Motion III. Savona, Italy. June 2019.
13. **Fox EJ,** Cavka K, Freeborn PA, Tonuzi G, Kerwin A, Croft C, Yorkgitis B, Sunshine M, Martin, D, Fuller D. Diaphragm stimulation enhances respiratory function after cervical spinal cord injury. Experimental Biology, Emerging Therapeutics for Respiratory Dysfunction. Orlando, FL, April 2019.
14. **Fox EJ,** Cavka K, D'Alessandro A, Freeborn PA, Tonuzi G, Faison T, Kerwin A, Croft C, Yorkgitis B, Sunshine M, Martin, D, Fuller D. Intramuscular diaphragm stimulation to enhance respiratory function after cervical spinal cord injury. American Physical Therapy Association Combined Sections Meeting. Washington DC. January 2019.
15. **Fox EJ.** Effects of Acute Intermittent Hypoxia on breathing and trunk function after spinal cord injury. International Therapeutic Intermittent Hypoxia Symposium. Gainesville, FL. April 2018.
16. Hawkins KA, Vistamehr A, Balasubramanian CK, Conroy C, Rose DK, Clark DJ, **Fox EJ.** Post-stroke community ambulators demonstrate deficits in backward walking. American Physical Therapy Association Combined Sections Meeting. New Orleans, LA. February 2018.
17. Balasubramanian CK, Clark DJ, **Fox EJ.** Comprehensive and targeted assessment of walking adaptability is warranted for stroke population. American Physical Therapy Association Combined Sections Meeting. New Orleans, LA. February 2018.
18. **Fox EJ,** Doughty K, Jacobs G. Recovery of independent respiration following diaphragm pacing and spinal cord injury. Synapse Biomedical. Oberlin, OH. December 2017.
19. Clark DJ, Balasubramanian CK, **Fox EJ.** Walking adaptability after neurological injury: mechanisms, assessment and intervention. American Congress of Rehabilitation Medicine, Annual Conference. Atlanta, GA. October 2017.
20. Doughty K, D'Alessandro A, Jacobs G, **Fox EJ.** Introduction of a diaphragmatic pacer weaning protocol in patients with cervical spinal cord injury. American Academy of Spinal Cord Injury Professionals Annual Meeting. Denver, CO. September 2017.
21. Vistamehr A, Balasubramanian, Clark DJ, Conroy C, Neptune R, **Fox EJ.** Regulation of whole-body angular momentum and muscle activation during walking adaptability post-stroke. American Society of Biomechanics. Boulder, Colorado. August 2017.
22. Hawkins KA, Vistamehr A, Balasubramanian CK, Conroy C, Rose DK, Clark DJ, **Fox EJ.** Quantifying the executive demand of walking with fNIRS neuroimaging. International Society of Posture and Gait Research World Congress. Fort Lauderdale, FL. June 2017.

23. Clark D, Chatterjee S, Porges E, **Fox EJ**, Balasubramanian CK. Sympathetic nervous system activity as an assessment of perceived challenge of walking after stroke. International Society of Posture and Gait Research World Congress. Fort Lauderdale, FL. June 2017.
24. Hawkins KA, **Fox EJ**, Daly JJ, Rose DK, Christou EA, Nadeau SE, Otzel DM, Butera KA, Chatterjee SA, Rajaravivarma R, Ring SA, Emery H, Clark DJ. Thinking about walking: functional neuroimaging demonstrates increased demand for executive control of walking in adults with mobility deficits. American Physical Therapy Association CSM. San Antonio, TX. February 2017.
25. Butera KA, Fox EJ, George SZ. Studying pain with movement. North American Pain School. Montebello, QC Canada. June 2016.
26. Mushahwar V, **Fox EJ**, Smith B, Gonzalez-Rothi E, Streeter K, Mitchell G. Neurostimulation to restore breathing in neuromuscular disorders. Experimental Biology. San Diego, CA. April 2016.
27. **Fox EJ**, Clark DJ, Balasubramanian CK. Walking adaptability after neurologic injury: Assessment & intervention. American Physical Therapy Association, Combined Sections Meeting. Anaheim, CA. February 2016.
28. Behrman AL, Trimble S, **Fox EJ**, Howland DR. Rehabilitation and recovery in children with severe SCIs. American Physical Therapy Association, Combined Sections Meeting. Las Vegas, NV. February 2014.
29. Rademaker M, **Fox EJ**, Lange B, Thigpen M, Fox C. Made for Rehab: Feasibility and effect of a clinician-adapted video game using the Kinect™ on balance and falls in a woman with parkinsonism. American Physical Therapy Association, Combined Sections Meeting. San Diego, CA. January 2013.
30. **Fox EJ**, Flynn S, Barmpoutis A, Trimble, S, Howland, DR, Behrman AL. Game technology to enhance locomotor training in children with neurological injuries. American Physical Therapy Association, Combined Sections Meeting. San Diego, CA. January 2013.
31. **Fox EJ**, Flynn S, Barmpoutis A, Howland, DR, Behrman AL. Exciting kids to walk: Game technology to enhance locomotor training in children with spinal cord injury. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
32. Behrman AL, Trimble S, **Fox EJ**, Howland DR. Recovery and Restoration Paradigm to Improve Function in Children with SCI. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
33. Howland DR, **Fox EJ**, Trimble S, Tester N, Kleim J, Rose D, Stickles. Locomotor training promotes walking in young children with severe, chronic spinal cord injuries despite disparate etiologies and prior walking experiences. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
34. Trimble S, Jayakrishnan N, **Fox EJ**, Tester N, Senesac C, Spiess M, Rademaker M. Functional and musculoskeletal outcomes from age 5 to adolescence following walking recovery in a child with severe, incomplete spinal cord injury. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
35. **Fox EJ**, Flynn S, Barmpoutis A, Howland DR, Behrman AL. Exciting kids to walk: Enhancing walking recovery through game technology. 8<sup>th</sup> Annual Games for Health Conference. Boston, MA. June 2012.
36. **EJ Fox**, SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Mechanisms of walking recovery following locomotor training in adults with incomplete spinal cord injury. American Physical Therapy Association, Combined Sections Meeting. Chicago, IL. February 2012.
37. **EJ Fox**, SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Gait Recovery post Incomplete Spinal Cord Injury: Underlying Control Mechanisms. National Predoctoral Clinical Research Training Program Meeting. Washington University, St. Louis, MO. May 2011.
38. **Emily J Fox**, Nicole J Tester, Chetan P Phadke, Preeti M Nair, Claudia R Senesac, Dena R Howland, Andrea L Behrman. Recovery Continues Two Years After Locomotor Training in a Child with Incomplete Cervical Spinal Cord Injury. Howard H. Steel Conference, Pediatric Spinal Cord Injuries and Dysfunction. Lake Buena Vista, FL. December, 2009.

## **LOCAL & REGIONAL PRESENTATIONS**

1. **Fox EJ.** Cyberdyne Robotic Technology: Walking Rehabilitation for People with Spinal Cord Injury. Ascension Health Innovation Summit. Jacksonville, FL. April 26, 2022.
2. Paris T, **Fox EJ**, Rose DK. Brooks Rehabilitation: Opportunities for Collaborative Research. University of Florida Brain Building Seminar Series, BRAIN Center, University of Florida. February 24, 2022.
3. **Fox EJ.** Respiratory Rehabilitation and Recovery after Human Spinal Cord Injury. Center for Respiratory Research and Rehabilitation. January 2020.
4. **Fox EJ.** Neuromuscular rehabilitation research for walking and respiratory function after stroke and spinal cord injury. Brooks Rehabilitation Research Spotlight. August 2019.
5. **Fox EJ.** Activity-Based Rehabilitation to Restore Function in Children with Neurologic Injuries. Brooks Rehabilitation Pediatric Residency Program. December 2018.
6. **Fox EJ.** Rehabilitation research targeting breathing and walking recovery: Neuromuscular program updates. Brook Rehabilitation Research Spotlight. July 2018.
7. **Fox EJ,** Doughty K, Brunetti G. Principles of locomotor rehabilitation after spinal cord injury. Brooks Rehabilitation. Jacksonville, FL. December 2017.
8. **Fox EJ.** D’Alessandro A. Diaphragm pacing for the restoration of breathing after spinal cord injury. Research Day. Brooks Rehabilitation. Jacksonville, FL. November 2016.
9. **Fox EJ.** Intense rehabilitation to promote activity-dependent plasticity in children with neurologic disorders. Brooks Rehabilitation. Pediatric Residency program. Jacksonville, FL. April 2016.
10. **Fox EJ.** Diaphragm pacing following acute spinal cord injury. Center for Respiratory Research and Rehabilitation. University of Florida. Gainesville, FL. August 2015.
11. **Fox EJ.** Locomotor training for adults and children with neurologic injuries. Brooks Rehabilitation Institute of Higher Learning. Jacksonville, FL. November 2015.
12. **Fox EJ.** Locomotor rehabilitation for adults and children with incomplete spinal cord injury. Brooks Rehabilitation Institute of Higher Learning. Jacksonville, FL. December 2014.
13. **Fox EJ.** Locomotor rehabilitation and recovery following human spinal cord injury. Rehabilitation Science Seminar for the Department of Physical Therapy and Interdisciplinary Training in Rehabilitation and Neuromuscular Plasticity Training program. University of Florida. November 2014.
14. **Fox EJ.** The use of games and virtual reality for rehabilitation. Virtual Environments for Health Science Applications. Digital Worlds Institute. University of Florida. March 2012, 2014.
15. **Fox EJ.** Rehabilitation Research across Health Professions. The US Healthcare System. College of Public Health and Health Professions. University of Florida. 2011-2014.
16. **Fox EJ.** Walking Recovery post Incomplete Spinal Cord Injury: Underlying Control Mechanisms. University of Florida Clinical Translational Science Institute. Gainesville, FL. June 2011.
17. **Fox EJ.** SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Mechanisms of walking recovery following locomotor training in adults with incomplete spinal cord injury. Clinical Translational Science Institute. University of Florida. June 2011.
18. **Fox EJ.** Locomotor Recovery after Pediatric Spinal Cord Injury. Florida Department of Health, Brain and Spinal Cord Injury Program. Annual Meeting. St. Augustine, FL. July 2010.
19. Behrman AL, **Fox EJ.** Recovery of Walking in Children after Spinal Cord Injury: Kids STEP Study. Brooks Rehabilitation and Research Center. Jacksonville, FL. May 2009.
20. **Fox E** and Day K. The Spinal Cord in Smart! Rehabilitation Research for the Recovery of Walking after Adult and Pediatric Spinal Cord Injury. Brooks Rehabilitation Hospital. Spinal Cord Injury Support Group. Jacksonville, FL. September 2008.
21. **Fox E.** Locomotor Recovery in a Child with Severe, Chronic SCI. College of Public Health and Health Professions. University of Florida. Gainesville, FL. July 2008.

22. Behrman AL, **Fox EJ**, Heilman J. Walking Recovery after SCI: The Kids STEP Study. Pediatric Spinal Cord Injury: Issues in Management, Rehabilitation, and Research Conference. Tampa General Hospital. Tampa, FL. April 2008.
23. Behrman AL, Spierre L, **Fox E**. Latest Evidence Based Practice with the SCI Population and Applying this Information to the Clinic. Brooks Rehabilitation Hospital. Jacksonville, FL. 2007.
24. **Fox E**. Principles of Motor Control and Task Analysis Applied to the Treatment of the Neurologic Patient. Northern District Meeting of the Florida Physical Therapy Association. 2004.
25. **Fox E**. Kinesiology & Motor Behavior. University of North Florida, College of Education and Human Services. Jacksonville, FL. 2003-2004.

## **ABSTRACTS**

1. Nair J, Welch J, Argento P, Lurk C, Hou T, Lu Q, Mitchell G, Fox EJ. Genetic biomarkers of therapeutic acute intermittent hypoxia-induced respiratory motor plasticity in humans. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
2. Bansal K, Clark D, Monaldi M, Fox EJ, Rose DK. Objective measurement of perceived walking challenge differentiates between home and community ambulation levels post-stroke. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
3. Butera Ka, George SZ, Patel J, Bishop Md, Coombes S, Fox EJ. Altered walking performance is associated with higher perceived low back pain intensity and disability. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
4. Brunetti G, Hawkins KA, Cavka KL, Snyder H, Olarewaju T, Fox EJ. Trunk strength is associated with maximal respiratory pressure generation in individuals with spinal cord injury. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
5. Conroy C, Wauneka CN, Vistamehr A, Clark D, Fox EJ. The influence of AFO use on prefrontal activation during complex walking tasks in adults post-stroke. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
6. DeMark LA, Dunn J, Kettles M, Snyder H, Brunetti G, Cavka K, Conroy C, Wauneka CN, McIver B, Tonuzi G, Fox EJ. Locomotor training using adaptive robotics in adults with spinal cord injury: Preliminary feasibility and outcomes. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
7. Hawkins KA, DeMark L, Snyder HJ, Vistamehr A, Conroy C, Wauneka C, Tonuzi G, Fuller DD, Clark DJ, Fox EJ. Feasibility of transcutaneous spinal direct current stimulation combined with locomotor training after spinal cord injury. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
8. Cavka KL, Vose AK, Freeborn P, Wauneka CN, Tonuzi G, Fuller DD, Redding A, Yorkgitis B, Zhang J, Crandall M, Fox EJ. Effects of intramuscular stimulation on diaphragm activation and respiratory function allowing acute spinal cord injury. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
9. DeMark LA, Fox EJ, Manes MR, Blunt K, Rose DK. Concurrent validity of the 3-meter backward walk test with other mobility outcomes in individuals post-stroke. American Physical Therapy Association Combined Sections Meeting. San Antonio, Tx. February 2022.
10. Welch JF, Argento PJ, Nair J, Mitchell GS, Fox EJ. Co2 effects on intermittent hypoxia-induced respiratory motor plasticity in humans: In-progress study. Experimental Biology. May 2021.
11. Hawkins KA, Fuller DD, Clark DJ, Fox EJ. Effects of transcutaneous spinal direct current stimulation applied during walking rehabilitation on spinal reflex modulation, spasticity and walking speed. Society for Neuroscience 2021. Chicago, IL. Nov 2021.

12. Vose AK, Welch J, Cavka K, Brunetti G, DeMark LA, Wauneka CN, Nair J, Snyder H, Mitchell GS, Fox EJ. Acute Intermittent Hypoxia and Respiratory Strength Training to Improve Respiratory Function in Individuals with Chronic Spinal Cord Injury: Preliminary Outcomes. Society for Neuroscience 2021. Chicago, IL. Nov 2021.
13. Butera KA, Fox EJ, Bishop M, Coombes S, Beneciuk J, George S. Lower pain sensitivity and higher physical performance contribute to low risk STarT Back Tool classification. American Physical Therapy Association Combined Sections Meeting. Virtual online meeting. February 2021.
14. Bansal K, Monaldi M, Clark DJ, Fox EJ, Rose DK. Validation of speed-based classification of community ambulation post-stroke: GPS uncovers real-world performance. American Physical Therapy Association Combined Sections Meeting. Virtual online meeting. February 2021.
15. Demark L, Conroy C, Hawkins K, Snyder H, Wauneka C, Magnuson D, Fox EJ. Effects of Lower Extremity Stretching on Motor Output and Locomotion in Individuals with SCI. American Physical Therapy Association Combined Sections Meeting. Virtual online meeting. February 2021.
16. Bansal K, Monaldi M, Waid-Ebbs K, Clark D, Fox EJ, Rose DK. The relationship between social health-related quality of life and community ambulation post-stroke. American Physical Therapy Association Combined Sections Meeting. Virtual online meeting. February 2021.
17. Vistamehr A, Conroy C, Freeborn P, Brunetti G, Neptune R, Fox E. The influence of articulated AFOs on mediolateral balance and forward propulsion during walking post stroke. American Society of Biomechanics Annual Conference. Virtual online meeting. August 2020.
18. Wauneka CN, Freeborn P, Fox EJ. ECG artifact subtraction from intramuscular diaphragm EMGs in humans with acute spinal cord injuries. American Society of Biomechanics Annual Conference. Virtual online meeting. August 2020.
19. Patel J, Butera K, Vistamehr A, Freeborn P, Fox EJ. Correlations between clinical pain measures and lower extremity kinematics among individuals with low back pain. American Society of Biomechanics Annual Conference. Virtual online meeting. August 2020.
20. Bansal K, Patel J, Vistamehr A, Conroy C, Fox EJ, Clark D, Rose DK. The Effect of Forward Versus Backward Locomotor Training on Forward Propulsion during Forward Walking Post-Stroke. American Physical Therapy Association Combined Sections Meeting. Boulder, CO. February 2020
21. Conroy CL, Brunetti G, Freeborn PA, Barmpoutis A, Fox EJ. Custom Virtual Reality System with Real-Time Therapist Interactions to Enhance Home Exercise Performance and Adherence. American Physical Therapy Association Combined Sections Meeting. Boulder, CO. February 2020
22. Clark D, Seidler R, Woods A, Rose DK, Fox EJ. Precision Rehabilitation to Enhance Neural Control of Complex Walking. American Physical Therapy Association Combined Sections Meeting. Boulder, CO. February 2020
23. Hawkins K, Demark L, Vistamehr A, Tonuzi G, Fuller DD, Clark D, Fox EJ. Transcutaneous Spinal Direct Current Stimulation with Locomotor Training to Alter Spinal Excitability Post-Spinal Cord Injury American Physical Therapy Association Combined Sections Meeting. Boulder, CO. February 2020
24. Sutor TW, Cavka K, Ahmed S, Fuller DD, Mitchell GS, Fox EJ. Effects of acute intermittent hypoxia on maximal respiratory ability after spinal cord injury. American College of Sports Medicine. June 2019.
25. Hawkins KA, DeMark L, Vistamehr A, Tonuzi G, Fuller DD, Clark DJ, Fox EJ. The effect of combined transcutaneous direct current stimulation and locomotor training on spinal excitability in an individual with chronic spinal cord injury. World Congress of the International Society of Posture and Gait Research. Edinburgh, Scotland. July 2019.
26. Hawkins KA, Demark L, Vistamehr A, Tonuzi G, Fuller DD, Clark DJ, Fox EJ. Transcutaneous spinal direct current stimulation and locomotor training: Effect on spinal excitability in an individual with chronic SCI. 25th Annual Kentucky Spinal Cord and Head Injury Research Trust Symposium. Louisville, KY. May 2019.

27. Fox EJ, Cavka K, Freeborn PA, Tonuzi G, Kerwin A, Croft C, Yorkgitis B, Sunshine M, Martin, D, Fuller D. Diaphragm stimulation enhances respiratory function after cervical spinal cord injury. *Experimental Biology, Emerging Therapeutics for Respiratory Dysfunction*. Orlando, FL, April 2019.
28. Fox EJ, Cavka K, Freeborn PA, Tonuzi G, Kerwin A, Croft C, Martin, D, Fuller D. Diaphragm stimulation to increase respiratory function and recovery after cervical spinal cord injury. *NIH NINDS SCI 2020: Launching a Decade for Disruption in Spinal Cord Injury Research*. Bethesda, MD. February 2019.
29. Fox EJ, Cavka K, D'Alessandro A, Freeborn PA, Tonuzi G, Faison T, Kerwin A, Croft C, Yorkgitis B, Sunshine M, Martin, D, Fuller D. Intramuscular diaphragm stimulation to enhance respiratory function after cervical spinal cord injury. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
30. Freeborn PA, Cavka K, D'Alessandro A, Tonuzi G, Milliron KG, Faison T, Fuller DD, Martin D, Fox EJ. Diaphragm pacing and respiratory outcomes in a patient with cervical Spinal Cord Injury. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
31. Rose DK, DeMark L, Vistamehr A, Conroy C, Freeborn PA, Fox EJ, Clark DJ. Backward Walking Training Improves Forward Gait Speed and Balance Confidence Post-Stroke. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
32. Brunetti G, DeMark L, Bayliss J, Blunt K, Fulcher C, Fox EJ, Clark DJ, Rose DK. Backward Walking Training for Individuals with Chronic Stroke. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
33. Chatterjee SA, Fox EJ, Rose DK, Daly J, Christou E, Hawkins KA, McGuirk T, Butera KA, Otzel DM, Skinner J, Clark DJ. Prefrontal activity during walking post-stroke: Insights from the CRUNCH framework. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
34. Bansal K, Freeborn PA, Conroy C, Fox EJ, Clark D, Rose DK. Is Faster Really Better? Implications of Fastest Comfortable Speed on Gait Asymmetry Post-Stroke. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
35. Levac D, Glegg SM, Fox EJ, Pradhan S, Espy D, Deutsch JE. Virtual reality/active video gaming use and learning needs among physical and occupational therapists practicing in the US. Levac D, Glegg SM, Fox EJ, Pradhan S, Espy D, Deutsch JE. *American Physical Therapy Association Combined Sections Meeting*. Washington DC. January 2019.
36. Butera KA, Bishop MD, Fox EJ, Coombes SA, Fillingim RB, George SZ. Sensory and psychological factors contributing to motor outcomes for high-risk healthy individuals experiencing exercise-induced muscle injury. *IASP 17<sup>th</sup> World Congress on Pain*. Boston, MA. September 2018.
37. Vistamehr A, Balasubramanian CK, Clark DJ, Conroy C, Neptune RR, Fox EJ. Dynamic balance control during obstacle negotiation in individuals with post-stroke hemiparesis. *Society for the Neural Control of Movement*. Santa Fe, NM. May 2018
38. Sutor T, Doughty K, Ahmed S, Fuller D, Mitchell G, Fox EJ. The effects of intermittent hypoxia on respiratory function in humans with spinal cord injury: a pilot study. *American Spinal Injury Association Scientific Meeting*. Rochester, MN. May 2018.
39. Freeborn PA, Doughty K, D'Alessandro A, Jacobs G, Milliron KG, Fuller DD, Fox EJ. Respiratory Criteria to determine readiness to wean from diaphragm pacing in patients with cervical spinal cord injuries. *American Physical Therapy Association Combined Sections Meeting*. New Orleans, LA. February 2018.
40. Balasubramanian CK, Clark DJ, Hawkins KS, Alqhanti F, Fox EJ. Backward walking speed shows potential to serve as an indicator of mobility impairments in community-dwelling stroke survivors. *American Physical Therapy Association Combined Sections Meeting*. New Orleans, LA. February 2018.
41. Chatterjee SA, Albert CM, Fox EJ, Daly JJ, Rose DK, Christou EA, Hawkins KA, Otzel DM, Butera KA, Clark DJ. Increased prefrontal cortical activity during typical walking is associated with greater dual-task costs after stroke. *American Physical Therapy Association Combined Sections Meeting*. New Orleans, LA. February 2018.

42. Rose DK, DeMark L, Patten C, Vistamehr A, Fox EJ, Conroy C, Howarth J, Clark DJ. Backward Walking Training to Target Forward Walking Speed, Dynamic Balance and Balance Confidence Post-Stroke: A Case Series Report. American Physical Therapy Association Combined Sections Meeting. New Orleans, LA. February 2018.
43. DeMark L, Fox EJ, Conroy C, Vistamehr A, Rose DK. Initial Construct Validity of the 3-Meter Backward Walk Test in Individuals with Chronic Stroke. American Physical Therapy Association Combined Sections Meeting. New Orleans, LA. February 2018.
44. Conroy C, Vistamehr A, DeMark L, Rose DK, Fox EJ. Lower limb kinematics following gait rehabilitation: knee hyperextension associated with gains in hip extension in adults post-stroke. American Physical Therapy Association Combined Sections Meeting. New Orleans LA. February 2018.
45. Vistamehr A, Balasubramanian CK, Clark DJ, Conroy C, Neptune R, Fox EJ. Regulation of whole-body angular momentum and muscle activation during walking adaptability post-stroke. American Society of Biomechanics. Boulder, Colorado. August 2017
46. Hatcher C, Conroy C, Baldwin F, Fox EJ. Knee mechanics and muscle activation timing in athletes with complex knee injuries. American Society of Biomechanics. Boulder, Colorado. August 2017
47. Balasubramanian CK, Clark D, Fox EJ, Romero S. Development of a clinical assessment tool for walking adaptability post-stroke: Preliminary results. ISPGR World Congress. Fort Lauderdale, FL. June 2017.
48. Hawkins KA, Vistamehr A, Balasubramanian CK, Conroy C, Rose DK, Clark DJ, Fox EJ. Backward walking impairments in post-stroke community ambulators. University of Florida Department of Physical Therapy Annual NIH T32 Neuromuscular Plasticity Symposium. Gainesville, FL. March 2017.
49. Sutor T, Fuller D, Streeter KA, Freeborn P, Fox EJ. Locomotor-Respiratory Coupling During Walking in Adults with Incomplete Spinal Cord Injury. University of Florida Department of Physical Therapy Annual NIH T32 Neuromuscular Plasticity Symposium. Gainesville, FL. March 2017.
50. Chatterjee S, Rose D, Porges E, Fox E, Daly J, Christou E, Otzel D, Butera K, and Clark DJ. Quantifying the perceived challenge of walking after stroke by measuring sympathetic activation: a pilot study. APTA Combined Sections Meeting, San Antonio, TX, February 2017.
51. Fox EJ, D'Alessandro A, Sutor T, Kerwin A, Weiss H, Jacobs G, Maher K, Hoefnagel M, Mitchell G, Fuller F. Acute intermittent hypoxia: Effects on diaphragm activation and respiratory function in an individual with spinal cord injury. APTA Combined Sections Meeting. San Antonio, TX. February 2017.
52. Conroy C, Howarth J, Vistamehr A, Neptune R, Fox EJ. Re-assessing the use of ankle-foot orthoses in individuals with chronic stroke impairments: Is the initially-prescribed orthotic still warranted? APTA Combined Sections Meeting. San Antonio, TX. February 2017.
53. Baldwin F, Hatcher C, Conroy C, Fox E. Improving Limb Symmetry and Recovery Following Anterior Cruciate Ligament Reconstruction Surgery: Use of a Modified Wobble Board. APTA Combined Sections Meeting. San Antonio, TX. February 2017.
54. Fox EJ, D'Alessandro A, Sutor T, Kerwin A, Weiss H, Jacobs G, Maher K, Hoefnagel M, Mitchell GS, Fuller DD. The effects of acute intermittent hypoxia on diaphragm activation and respiratory function in an individual with spinal cord injury. Society for Neuroscience. San Diego, CA. November 2016.
55. Sutor T, Tester N, Butera K, Streeter K, Fuller DD, Fox EJ. Locomotor-respiratory coupling after spinal cord injury and the effects of locomotor rehabilitation. Society for Neuroscience. San Diego, CA. November 2016.
56. Hawkins KA, Fox EJ, Daly JJ, Rose DK, Christou EA, Otzel DM, Butera KA, Chatterjee SA, Clark DJ. Executive control of walking in adults with mobility deficits quantified by fNIRS neuroimaging. Society for Neuroscience. San Diego, CA. November 2016.
57. Vistamehr A, Balasubramanian CK, Clark DJ, Conroy C, Neptune RR, Fox EJ. Regulation of whole-body angular momentum during a variety of walking adaptability tasks in individuals with post-stroke hemiparesis. American Society of Biomechanics. Durham, NC. August 2016.

58. Brunetti G, Spigel P, Fox E, Doughty K. Utilization of treadmill to improve gait performance in a patient with late stage Parkinson's disease. APTA IV STEP Summer Institute on Prevention, Prediction, Plasticity, and Participation. Columbus, OH. July 2016.
59. Roberts M, Trimble S, Argetsinger L, Fox EJ, Suter S. Outcomes of activity-based locomotor training in 3 children with spinal cord injuries acquired before age 1-year. APTA IV STEP Summer Institute on Prevention, Prediction, Plasticity, and Participation. Columbus, OH. July 2016.
60. Sutor TW, Tester NJ, Fuller D, Streeter K, Butera KA, Fox EJ. Locomotor-Respiratory coupling after incomplete spinal cord injury in humans. University of Florida Department of Physical Therapy Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2016.
61. Hawkins K, Fox EJ, Daly J, Rose D, Christou EA, Nadeau S, Otzel D, Butera K, Chatterjee S, Clark D. Functional neuroimaging during walking quantifies demand for executive locomotor control. University of Florida Department of Physical Therapy Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2016.
62. Foster H, Conroy C, Freeborn P, Fox E. Combined locomotor and dynamic trunk training to improve ataxia, balance, and walking function in a 17-year old with traumatic brain injury. APTA Combined Sections Meeting. Anaheim, CA. February 2016.
63. Freeborn P, Gerena R, Conroy C, Vistamehr A, Foster H, VanDeventer P, Aceros J, Fox E. A low-cost instrumented walker to assess the effects of upper-limb loading on gait characteristics and muscle activation. APTA Combined Sections Meeting. Anaheim, CA. February 2016.
64. Butera KA, Fox EJ, George SZ. Integrating nervous system pain processing and resultant motor behavior: a conceptual model. APTA Section on Research Pain Retreat, Smithfield, RI. July 2015.
65. Howarth J, Studer R, Fox E, Balasubramanian CK. Intensive gait intervention using partial body weight support and a treadmill as an adjuvant therapy in non-ambulatory individuals with acute stroke. World Congress of Physical Therapy. Singapore, China. May 2015.
66. Butera KA, Tester NJ, Coloso N, Fox EJ. Restoring gait adaptability in adults with incomplete spinal cord injuries: a pilot study. University of Florida Department of Physical Therapy Annual Neuromuscular Plasticity Symposium, Gainesville, FL. March 2015.
67. Clark DJ, Fox EJ, Rose DK, Christou EA, Nadeau, Ring SA, Daly JJ. fNIRS neuroimaging during walking reveals high demand for executive locomotor control after stroke. Society for Neuroscience, FL Chapter. Gainesville, FL. March 2015.
68. D'Alessandro A, Thomas A, Kerwin A, Fuller D, Streeter K, Fox EJ. Rehabilitation to promote respiratory recovery following complete cervical spinal cord injury and intramuscular diaphragm stimulation. APTA Combined Sections Meeting. Indianapolis, IN. February 2015.
69. Foster H, Demark L, Balasubramanian CK, Rose DK, Fox EJ. Decreased gait variability following an intense backward walking program in an individual with chronic incomplete spinal cord injury. APTA Combined Sections Meeting. Indianapolis, IN. February 2015.
70. Van den Broek C, Spigel P, Fox EJ. Locomotor recovery after thoracic spinal arteriovenous malformation. APTA Combined Sections Meeting. Indianapolis IN. February 2015.
71. Garces CM, Spigel P, Fox EJ. Dual task training and the effects on walking function and dual task ability in a young adult with a severe traumatic brain injury. APTA Combined Sections Meeting. Indianapolis, IN. February 2015.
72. Servold S, Spigel P, Fox EJ. Clinical decision-making regarding the use of an ankle-foot orthosis in late stages of stroke recovery. APTA Combined Sections Meeting. Indianapolis, IN. February 2015.
73. Padilla A, Osborne J, Balasubramanian C, Fox EJ. A customized assessment to specifically identify balance impairments in an ambulatory independent living older adult. APTA Combined Sections Meeting. Indianapolis, IN. February 2015.
74. Garces CM, Spigel P, Fox EJ. Dual task training and the effects on walking function and dual task ability in a young adult with a severe traumatic brain injury. Brain Injury Summit. Vail, CO. January 2015.

75. Streeter KA, Gonzalez-Rothi EJ, Fitzpatrick G, Armstrong G, Reier PJ, Fox EJ, Fuller D. Electrical stimulation of the diaphragm following spinal cord injury in rats. Society for Neuroscience. Washington DC. November 2014.
76. Balasubramanian CK, Clark DJ, Fox EJ, Stagliano L, Demark L, Velozo CA. Comprehensive examination of walking recovery post-stroke: application of a guided approach for item bank development. American Congress of Rehabilitation Medicine. Ontario, Canada. November 2014.
77. D'Alessandro A, Thomas A, Sulph T, Fox EJ. Rehabilitation to promote respiratory recovery following complete cervical spinal cord injury and intramuscular diaphragm stimulation. Academy of Spinal Cord Injury Professionals. St. Louis, MS. August 2014.
78. Balasubramanian CK, Clark DJ, Fox EJ, Stagliano L, Demark L, Velozo CA. Developing an item bank for the examination of gait adaptability post-stroke using a mixed-methods framework. International Society for Gait and Posture Research. Vancouver, Canada. June 2014.
79. Faw T, Fox E, Kerwin A, McParland J, Hoh D, Lane M, Smith B, Reier P, Fuller D. Diaphragm pacing and respiratory outcomes in two individuals with cervical spinal cord injury. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
80. Balasubramanian C, Saracino D, Fox EJ. Impairments contributing to gait variability in community-dwelling chronic stroke survivors. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
81. Van Rees M, Kulkarni S, Defranco M, Rademaker M, Fox EJ. Feasibility and effects of training with the Xbox Kinect on dual tasking and balance in a patient with Parkinson's disease. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
82. Rogozinski R, Cvitanov R, Fox EJ. Walking recovery in a patient with idiopathic lumbosacral plexopathy: The use of FES and locomotor training. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
83. Foster H, DeMark L, Spigel P, Rose DK, Fox EJ. Backward walking to improve balance and mobility in a person with chronic spinal cord injury. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
84. D'Alessandro A, Spigel P, Fox EJ. Overground locomotor training to restore walking in an individual with acute spinal cord injury. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
85. Petrosky M, Spigel P, Fox EJ. An intense running program to retrain gait and mobility in a 23-year old woman post stroke. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
86. Goepf C, Spigel P, Fox EJ. Functional recovery in a patient with limb apraxia: It's just like riding a bike. APTA Combined Sections Meeting. Las Vegas, NV. February 2014.
87. Fox EJ, Nair J, Kerwin A, D'Alessandro AM, McParland J, Faw T, Hoh DJ, Reier PJ, Fuller DD. Diaphragm pacing after cervical spinal cord injury—Weaning outcomes and possible neuroanatomical substrate. International Symposium on Neural Regeneration. Pacific Grove, CA. December 2013.
88. Moon H, Kim C, Kwon M, Chen Y, Fox EJ, Christou EA. Altered oscillations in EMG variability explain impaired ankle movement control in children during high-gain visual feedback condition. Society for Neuroscience. San Diego, CA. November 2013.
89. Fox EJ, Tester NJ, Trimble S, Kautz SA, Howland DR, Behrman AL. Children with severe incomplete spinal cord injury exhibit greater lower extremity muscle activation during locomotor tasks compared with tests of voluntary, isolated joint movements. APTA Combined Sections Meeting. San Diego, CA. January 2013.
90. Fox EJ, Kwon M, Chen YT, Costanzo MA, Mora H, Forster BA, Christou EA. Impaired accuracy during goal-directed movements in children is explained by altered activation of the tibialis anterior muscle. APTA Combined Sections Meeting. San Diego, CA. January 2013.
91. Nair J, Fox EJ, Trimble SA, Senesac C, Tester NJ, Spiess M, Howland DR, Behrman AL. Walking function and musculoskeletal development 5-7 years post-locomotor training in a child with incomplete spinal cord injury. APTA Combined Sections Meeting. San Diego, CA. January 2013.
92. Christou EA, Fox EJ, Onushko T, Baweja HS, Kim C, Kwon M, Chen YT, Larkin KA. Training protocols that minimize motor output variability enhance motor learning in older adults. APTA Combined Sections Meeting. San Diego, CA. January 2013.

93. Fox EJ, Tester NJ, Trimble S, Howland DR, Behrman AL. Lower extremity muscle activation is greater during locomotor tasks compared with tests of voluntary isolated joint movements in children with severe, incomplete spinal cord injury. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
94. Fox EJ, Flynn S, Barmpoutis A, Howland DR, Behrman AL. Exciting kids to walk: Game technology to enhance locomotor training in children with spinal cord injury. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
95. Behrman AL, Trimble S, Fox EJ, Howland DR. Recovery and Restoration Paradigm to Improve Function in Children with SCI. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
96. Howland DR, Fox EJ, Trimble S, Tester N, Kleim J, Rose D, Stickles. Locomotor training promotes walking in young children with severe, chronic spinal cord injuries despite disparate etiologies and prior walking experiences. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
97. Trimble S, Jayakrishnan N, Fox EJ, Tester N, Senesac C, Spiess M, Rademaker M. Functional and musculoskeletal outcomes from age 5 to adolescence following walking recovery in a child with severe, incomplete spinal cord injury. Howard H. Steel Conference-Pediatric Spinal Cord Injuries & Dysfunction. Lake Buena Vista, FL. November 2012.
98. Chen YT, Kwon M, Reid JC, Fox EJ, Christou EA. Prediction of movement endpoint is impaired in older adults due to greater motor output variability. Society for Neuroscience. New Orleans, LA. October 2012.
99. Kwon M, Chen YT, Reid JC, Fox EJ, Christou EA. Impaired endpoint accuracy of goal-directed movements in older adults is related to greater time variability and altered antagonist muscle activity. Society for Neuroscience. New Orleans, LA. October 2012.
100. Christou EA, Onushko T, Baweja HS, Fox EJ. Practice-induced improvements in movement control are associated with changes in multi-motor unit activity. Society for Neuroscience. New Orleans, LA. October 2012.
101. Fox EJ, Kwon M, Chen YT, Costanzo MA, Mora H, Sowalsky K, Christou EA. Altered agonist muscle activation explains impaired endpoint accuracy during goal-direct movements of the ankle in children. Society for Neuroscience. New Orleans, LA. October 2012.
102. Christou EA, Fox EJ, Onushko T, Baweja HS, Kwon MH, Chen YT, Kim C, Larkin K. Training Strategies to Enhance Motor Learning in Older Adults. KAHPERD International Sport Science Congress, Mokpo, Korea, 2012.
103. Christou EA, Baweja HS, Fox EJ, Onushko T, Kwon MH, Chen YT, Kim C, Larkin K. Aging, visual feedback and the control of fine motor tasks. Science of Human Movement and Sports Psychology. Seoul National University, Seoul, Korea 2012.
104. Fox EJ, Baweja HS, Kim C, Vaillancourt DE, Christou EA. The effects of visual feedback and aging on force oscillations within 0-1 Hz. American Society of Biomechanics. Gainesville, FL. August 2012.
105. Chen YT, Kwon M, Reid JC, Fox EJ, Christou EA. Older adults exhibit an impaired ability to predict movement accuracy due to greater motor output variability. American Society of Biomechanics. Gainesville, FL. August 2012.
106. Kwon M, Chen YT, Reid JC, Fox EJ, Christou EA. Impaired endpoint accuracy in older adults is associated with greater time variability. American Society of Biomechanics. Gainesville, FL. August 2012.
107. Fox EJ, Flynn S, Barmpoutis A, Howland DR, Behrman AL. Exciting kids to walk: Enhancing walking recovery through game technology. 8<sup>th</sup> Annual Games for Health Conference. Boston, MA. June 2012.
108. Fox EJ, Baweja HS, Kim C, Vaillancourt DE, Christou EA. Modulation of force within 0-1 Hz: Age-associated differences and the effect of magnified visual feedback. 7th Annual Neuromuscular Plasticity Symposium, University of Florida. March 2012.

109. Kwon M, Chen YT, Reid JC, Fox EJ, Christou EA. Age-associated differences in endpoint accuracy are associated with greater timing variability. 7th Annual Neuromuscular Plasticity Symposium, University of Florida. March 2012.
110. Chen YT, Kwon M, Reid JC, Fox EJ, Christou EA. Older adults exhibit an impaired ability to predict movement endpoint accuracy. 7th Annual Neuromuscular Plasticity Symposium, University of Florida. March 2012.
111. Christou EA, Baweja HS, Chen YT, Fox EJ, Kim C, Kwon M, Larkin KA, Onushko TL. Magnified visual feedback alters the neural activation of muscles and impairs motor control and learning in older adults. Vision Sciences Society, Naples, FL. May 2012.
112. 99. Kwon M, Chen YT, Reid JC, Fox EJ, Christou EA. Impaired endpoint accuracy in older adults is associated with greater time variability. American Society of Biomechanics, Gainesville, FL. August 2012.
113. Fox EJ, Baweja HS, Kim C, Vaillancourt DE, Christou EA. The effects of visual feedback and aging on force oscillations within 0-1 Hz. American Society of Biomechanics, Gainesville, FL. August 2012.
114. EJ Fox, SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Mechanisms of walking recovery following locomotor training in adults with incomplete spinal cord injury. American Physical Therapy Association, Combined Sections Meeting. Chicago, IL. February 2012.
115. AL Behrman, EJ Fox, SA Trimble, S Suter, C Senesac, N Tester, J Kleim, DR Howland. Kids STEP Study: Locomotor training outcomes and use of select long tracts as predictive biomarkers of responsiveness after chronic, incomplete spinal cord injury. American Physical Therapy Association, Combined Sections Meeting. Chicago, IL. February 2012.
116. EJ Fox, SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Mechanisms of walking recovery following locomotor training in adults with incomplete spinal cord injury. Society for Neuroscience. Washington DC. November 2011.
117. DR Howland, EF Fox, S Trimble, NJ Tester, SP Suter, M Spiess, AL Behrman. Robust walking response to locomotor training despite disparate SCI etiologies, ages, and chronicity in pediatrics. Society for Neuroscience. Washington DC. November 2011.
118. EJ Fox, SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Gait Recovery post Incomplete Spinal Cord Injury: Underlying Control Mechanisms. National Predoctoral Clinical Research Training Program Meeting. Washington University, St. Louis, MO. May 2011.
119. EJ Fox, SA Kautz, KV Day, SP Suter, DJ Clark, DR Howland, AL Behrman. Mechanisms of Walking Recovery in Adults with Incomplete Spinal Cord Injury. Neuromuscular Plasticity Symposium. University of Florida. March 2011.
120. EJ Fox, NJ Tester, D Clark, DR Howland, SA Kautz, AL Behrman. Preserved and new mechanisms of locomotor control are evident after chronic, severe pediatric spinal cord injury. Spine Care Conference on Innovation and Practice in Childhood Spinal Conditions. Sydney, Australia. March 2011.
121. AL Behrman, S Trimble, EJ Fox, NJ Tester, SS Suter, M Spiess, DR Howland. Activity-based Locomotor Training: A promising paradigm shift in pediatric SCI rehabilitation. Spine Care Conference on Innovation and Practice in Childhood Spinal Conditions. Sydney, Australia. March 2011.
122. D R Howland, EJ Fox, NJ Tester, S Trimble, C Senesac, L Spierre, J Johns, J Kleim, P Reier, AL Behrman. Kids Step Study: Locomotor training outcomes and use of select long tracts as predictive biomarkers of responsiveness. Spine Care Conference on Innovation and Practice in Childhood Spinal Conditions. Sydney, Australia. March 2011.
123. S Trimble, EJ Fox, JN Tester, SP Suter, M Spiess, C Senesac, L Spierre, J Johns, J Kleim, P Reier, DR Howland, AL Behrman. Walking for the first time: Locomotor training promotes development of trunk control and stepping in 3 year old paralyzed since 5 months of age. Spine Care Conference on Innovation and Practice in Childhood Spinal Conditions. Sydney, Australia. March 2011.

124. Emily J Fox, Nicole J Tester, Steve A Kautz, Dena R Howland, Andrea L Behrman. Modular Control is Similar across Locomotor Tasks in Children with Incomplete Spinal Cord Injury. American Physical Therapy Association, Combined Sections Meeting. New Orleans, LA. February 2011.
125. Shelley A Trimble, Emily J Fox, Sarah Suter, Nicole Tester, Kristin Day, Martina Speiss, Claudia Senesac, Louise Spierre, Jeffrey S Johns, Dena R Howland, Andrea L Behrman. Locomotor Training: From Non-Ambulatory, 3 Years Post-Transverse Myelitis Onset at 6 Months, to Stepping and Initiation Overground. American Physical Therapy Association, Combined Sections Meeting. New Orleans, LA. February 2011.
126. Emily J Fox, Nicole J Tester, Frank P Bergschneider, Steve A Kautz, Dena R Howland, Andrea L Behrman. Neuromuscular Control across Locomotor Tasks in Children with Spinal Cord Injury. Society for Neuroscience. San Diego, CA. Nov 2010.
127. Andrea L Behrman, Emily J Fox, Shelley Trimble, Nicole J Tester, Chetan P Phadke Preeti M Nair, Claudia R Senesac, Dena R Howland. On-going Recovery and Musculoskeletal Health Four Years after Locomotor Training in a Child with Severe, Incomplete Cervical Spinal Cord Injury. Society for Neuroscience. San Diego, CA. Nov 2010.
128. Dena R Howland, Emily J Fox, Nicole J Tester, Shelley Trimble, Claudia Senesac, Louise Spierre, Jeff Johns, Jeff Kleim, Paul Reier, Andrea L Behrman. Responses to Locomotor Training and Identification of Functional Long Tracks in Children with Severe, Chronic Spinal Cord Injury. Society for Neuroscience. San Diego, CA. Nov 2010.
129. Emily J Fox, Nicole J Tester, Frank P Bergschneider, Steve A Kautz, Dena R Howland, Andrea L Behrman. Neuromuscular Control is Similar across Locomotor Tasks in Children with Spinal Cord Injury. National Predoctoral Clinical Research Training Meeting. Washington University. St. Louis, MO. May 2010.
130. Emily J Fox, Nicole J Tester, Frank P Bergschneider, Steve A Kautz, Dena R Howland, Andrea L Behrman. Support for the Common Core Hypothesis: Neural Control of Rhythmic Locomotor Tasks. 5<sup>th</sup> Annual Neuromuscular Plasticity Symposium. University of Florida. Gainesville, FL. March 2010.
131. Emily J Fox, Steve A Kautz, David S Clark, Kristin V Day, Sarah P Suter, Andrea L Behrman. The Effect of Incomplete Spinal Cord Injury on the Modular Control of Walking. Combined Sections Meeting of the American Physical Therapy Association. San Diego, CA. February 2010.
132. Andrea L. Behrman. Emily J Fox, Nicole J Tester, Shelley Trimble, Claudia R Senesac, Robert Dauser, Louise Spierre, Jeff Johns, Floyd Thompson, Jeffrey Kleim, Paul Reier, Dena R Howland. Differential Response to Locomotor Training and Associated Neural Substrates in Children with Severe, Chronic Spinal Cord Injury. Howard H. Steel Conference, Pediatric Spinal Cord Injuries and Dysfunction. Lake Buena Vista, FL. December 2009.
133. Emily J Fox, Steve A Kautz, David S Clark, Kristin V Day, Sarah P Suter, Andrea L Behrman. Reduced Modular Control Accounts for Muscle Activation During Walking in Persons with Incomplete Spinal Cord Injury. Proceedings of the XIX Conference of the International Society for Posture and Gait Research. Bologna, Italy. June 2009.
134. Fox EJ, Kautz SA, Clark DS, Day KV, Suter SP, Behrman AL. Modular Control of Walking is Reduced after Incomplete Spinal Cord Injury. College of Public Health & Health Professions Research Day. Gainesville, FL. April 2009.
135. Fox E, Tester N, Subramanian S, Kautz S, Howland D, Behrman A. Patterns of Motor Recovery in a Child with Severe Incomplete SCI. Combined Sections Meeting of the American Physical Therapy Association, Las Vegas, NV. February 2009.
136. Fox EJ, Tester NJ, Kautz SA, Howland DR, Behrman AL. Common Synergies Explain Locomotor Recovery in a Child with Incomplete SCI. 4<sup>th</sup> Annual Neuromuscular Plasticity Symposium. University of Florida, Gainesville, FL. December 2008.
137. Behrman A, Fox E, Tester NJ, Nair P, Phadke, C, Peterson DM, Sudhyadhom A. Senesac C, Dauser R, Spierre L, Johns J, Thompson F, Kleim J, Reier P, Howland D. Differential response to locomotor training

after severe, chronic pediatric spinal cord injury and associated neural substrates. Society for Neuroscience. Washington, DC. November 2008.

138. Fox E, Tester N, Nair P, Phadke C, Peterson DM, Suchyachom A, Senesac C, Dauser R, Spierre L, Johns J, Thompson FJ, Kleim J, Reier P, Howland D, Behrman A. Insights on Responses to Locomotor Training: Beyond Motor Scores in Three Children with Severe Chronic SCI. Christopher and Dana Reeve Foundation Spinal Cord Symposium. Atlanta, GA. May 2008.
139. Fox EJ, Tester NJ, Kautz SA, Subramanian S, Howland DR, Behrman AB. Two Muscle Synergies Account for Pattern of Motor Recovery in a Child with SCI. Annual meeting of the Neural Control of Movement Society. Naples FL. May 2008.
140. Fox EJ, Tester NJ, Kautz SA, Subramanian S, Howland DR, Behrman AB. Two Synergies Explain Walking Pattern Recovered in a Child with Spinal Cord Injury. College of Public Health and Health Professions Research Day. Gainesville, FL. April 2008.
141. Fox EJ, Tester NJ, Kautz SA, Subramanian S, Howland DR, Behrman AB. It Takes Two: Two Muscle Synergies Account for Pattern of Walking Recovery. 3<sup>rd</sup> Annual Neuromuscular Plasticity Symposium. University of Florida. Gainesville, FL. January 2008.
142. Fox EJ, Tester NJ, Kleim JA, Thompson FJ, Reier PJ, Senesac C, Johns JS, Spierre L, Howland DR, Behrman AL. Neural Substrates for the Restoration of Walking After Spinal Cord Injury. College of Public Health and Health Professions. 2007.
143. Plummer-D'Amato P, Behrman AL, Saracino D, Martin J, Fox, E, Kautz S, Duncan PW. Functionally Significant Recovery of Walking Speed after Stroke in Patients with Moderate and Severe Impairment. International Stroke Conference, Sponsored by the American Heart Association, San Francisco, CA, February 2007.
144. Day JA, Fox E, Lowe J, Swales HB, Behrman AL. Treadmill Training with Partial Body Weight Support (BWS) on a Treadmill in a Non-Ambulatory Child with Spastic Tetraplegic Cerebral Palsy. Combined Sections Meeting of the APTA. February 2003.
145. Flynn SM, Thigpen MT, Fox E, Creel GL, Behrman AL. Recovery of Walking: Activity-dependent Plasticity in an Individual with a Chronic Incomplete Spinal Cord Injury. *Journal of Sport & Exercise Psychology, supplement*. 1999: 21, S43.
146. Thigpen MT, Flynn SM, Creel GL, Fox E, Behrman AL. Case study: spatial temporal analysis of gait in an individual with an acute complete spinal cord injury before and after step training. *Journal of Sport & Exercise Psychology, supplement*. 1999: 21, S112.
147. Trimble MH, Behrman AL, Flynn S, Thigpen MT, Fox EJ, Thompson FJ. Treadmill Walking: A permissive condition for H-Reflex modulation in incomplete SCI subjects. *Neurology Report*. 1998: 22(5), 182.

**PROFESSIONAL MEMBERSHIP & SERVICE**

American Spinal Injury Association, Member	2013-present
Christopher & Dana Reeve Foundation NeuroRecovery Network Pediatrics Committee member	2009-2013
Society for Neuroscience	2010-present
Society for the Neural Control of Movement	2008-2009; 2018-2020

<b>American Physical Therapy Association</b>	1992-present
<b>Academy of Neurologic Physical Therapy</b>	1995-present
-Research Committee	2016-present
Chair-elect	2021-present
-Guideline Development Group: Clinical practice guidelines for the rehabilitation of locomotion in chronic stroke, spinal cord and brain injury	
Role: literature appraiser	2016-2019
-Guideline Development Group: Clinical practice guidelines for the rehabilitation of locomotion in chronic stroke, spinal cord and brain injury	
Role: methodologist	2019-present
-Editorial Board, <i>Journal of Neurologic Physical Therapy</i>	2021-present
American Board of Physical Therapy Specialties Specialization Academy of Content Experts (SACE)	2004-2008; 2014-2016
American Board of Physical Therapy Specialties Neurology Standard Setting Committee	2006, 2007
Chair, Gainesville Sub-district Northern District Florida Physical Therapy Association	1998-2000
District Representative, FPTA Membership Committee	2000-2001
Treasurer, Northern District Florida Physical Therapy Association	2000-2002
<b>Journal Scientific Review</b>	
Journal of Physiology	
Experimental Brain Research	
Exercise and Sport Sciences Reviews	
Journal of Neurophysiology	
Journal of Applied Physiology	
Games for Health Journal	
Physiological Reports-Perceptual and Motor Skills	
Journal of Neurologic Physical Therapy	
Journal of Rehabilitation Research and Development	
Journal of Neurotrauma	
Frontiers in Physiology	
Virtual Reality	
PLOS One	
Journal of NeuroEngineering and Rehabilitation	
Journal of Electromyography and Kinesiology	
Experimental Neurology	

**National Conferences Scientific Review**

American Physical Therapy Association, Academy of Neurologic Physical Therapy  
International Conference on Virtual Rehabilitation

**National Funding Agencies Scientific Peer Review**

Department of Defense, CDMRP

**UNIVERSITY/COLLEGE/DEPARTMENT SERVICE**

Department-level

2020-present Chair, Task Force for training and Education, Inclusion Diversity Equity and Access Committee  
2015-present Neurologic Curriculum Committee  
2018-2019 Member, Faculty Search Committee  
2018-2019 Member, Task Force for Teaching Innovation  
2017-2019 Member, Faculty Search Committee, Teaching Scholar  
2016-2019 Member, PhD in Rehabilitation Science Visibility & Marketing  
2016-2018 Member, Faculty Search Committee, Brooks-PHHP Collaboration Director  
2015-2017 Member, Faculty Search Committee, Neurologic Rehabilitation  
2015-2017 Member, Dean's Citation Award Committee  
2014-2015 Chair, Strategic Planning Communication Task Force  
2012-2014 Research Mentor, UF Neurologic Physical Therapy Residency Program  
2012-2014 Faculty Advisor, Professional Issues and Student Development  
2012-2014 Curriculum Task Force, Emergency procedures and Basic Skills curriculum