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Sheng-Che Yen, PT, Ph.D.

301 Robinson Hall
Department of Physical Therapy, Movement and Rehabilitation Sciences
Northeastern University
360 Huntington Avenue
Boston MA 02115
Office: 617-373-5980
s.yen@northeastern.edu

Education/Employment History

- Education History

Rehabilitation Institute of Chicago/Northwestern University, Chicago, IL
2010-2012 Postdoctoral Training in Robotic Rehabilitation

New York University, New York, NY
2004-2010 Research in Physical Therapy/Pathokinesiology
Doctor of Philosophy, 2010

New York University, New York, NY
2000-2002 Pathokinesiology
Master of Arts, 2002

Chung Shan Medical University, Taichung, Taiwan
1993-1997 Physical Therapy
Bachelor of Science, 1997

- Employment History

Associate Clinical Professor
Department of Physical Therapy, Movement and Rehabilitation Sciences
Northeastern University
Boston, MA
2018-present

Assistant Professor
Department of Physical Therapy, Movement and Rehabilitation Sciences
Northeastern University
Boston, MA
2012-2018

Research Associate
Sensory Motor Performance Program
Rehabilitation Institute of Chicago
Chicago, IL
2010-2012

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Postdoctoral Fellow
Feinberg School of Medicine: Physical Medicine & Rehabilitation,
Northwestern University
Chicago, IL
2010-2012

Staff Physical Therapist
TLC Rehabilitation Physical Therapy
Brooklyn, NY
2008-2009

Graduate Assistant
Department of Physical Therapy
New York University
New York, NY
2004-2008

Staff Physical Therapist
Wen-Lin Group Practice Clinic
Taipei, Taiwan
2003

Graduate Assistant
Department of Physical Therapy
New York University
New York, NY
2000-2002

Staff Physical Therapist
Bo Qun Rehabilitation Clinic
Yungho, Taipei, Taiwan
2000

Political Warfare Officer
Military Service
Taiwan
1997-1999

Licensure Information

Physical Therapist License, New York, USA
#027740
2005-Present

Physical Therapist License, Taiwan
1997-Present

Scholarship/Research/Creative Activity

• Peer Reviewed Journal Publications

1. Farjadian AB, Nabian M, Hartman A, **Yen SC**, Nasseroleslami B. Visuomotor control of ankle joint using position vs. force. *The European Journal of Neuroscience*, 2019; 50: 3235-3250.
2. Qian S, **Yen SC**, Folmar E, Chou CA. Self-expressive subspace clustering to recognize motion dynamics for chronic ankle instability. *IJSE Transactions on Healthcare Systems Engineering*, 2019; 1-14.
3. **Yen SC**, Chui KK, Wang YC, Corkery MB, Nabian M, Farjadian AB. An examination of muscle force control in individuals with a functionally unstable ankle. *Human Movement Science*. 2019; 64: 221-229.
4. Wang YC, Sindhu BS, Kapellusch J, **Yen SC**, Lehman L. Global rating of change: perspectives of patients with lumbar impairments and of their physical therapists. *Physiotherapy Theory and Practice*. 2019; 35: 851-859.
5. Wang YC, Bohannon RW, Kapellusch J, Washburn D, Li X, **Yen SC**, Rahman MH. Between-side differences in hand-grip strength across the age span: Findings from 2011–2014 NHANES and 2011 NIH Toolbox studies. *Laterality: Asymmetries of Body, Brain and Cognition*. 2019; 17:1-10.
6. Bohannon RW, Wang YC, **Yen SC**, Grogan KA. Handgrip strength: A comparison of values obtained from the NHANES and NIH Toolbox studies. *American Journal of Occupational Therapy*. (Accepted)
7. **Yen SC**, Folmar EJ, Friend KA[†], Wang YC, Chui KK. Effects of kinesiotaping and athletic taping on ankle kinematics during walking in individuals with chronic ankle instability: A pilot study. *Gait and Posture*. 2018; 66: 118-123.
8. **Yen SC**, Olsavsky L[†], Cloonan C[†], Llanos A[†], Dwyer K[†], Nabian M[†], Farjadian AB. An examination of lower limb asymmetry in ankle isometric force control. *Human Movement Science*. 2018; 57: 40-49.
9. Kostraba B, Wu YN, Kao PC, Stark C, **Yen SC**, Roh J. Muscle activation pattern during self-propelled treadmill walking. *Journal of Physical Therapy Science*, 2018; 30: 1069-1072.
10. Wang, Y.C., Bohannon, R.W., Li, X., Yen, S.C., Sindhu, B. and Kapellusch, J., 2018. Summary of grip strength measurements obtained in the 2011-2012 and 2013-2014 National Health and Nutrition Examination Surveys. *Journal of Hand Therapy*. 2018 (Epub ahead of print)
11. Wang YC, Bhagwant S, Leigh L, Li X, **Yen SC**, Kapellush J. Rasch analysis of the Activities-Specific Balance Confidence Scale in patients seeking

- outpatient rehabilitation. *Journal of Orthopaedic & Sports Physical Therapy*. 2018 (Epub ahead of print)
12. Wang YC, Bhagwant S, Kapellush J, Leigh L, **Yen SC**. Therapists' and patients' perspectives of the Global Rating of Change in patients with lumbar impairments. *Physiotherapy Theory and Practice*. 2018 (Epub ahead of print)
 13. Farjadian AB, Nabian M[†], Hartman AM, **Yen SC***. Vi-RABT: A platform-based robot for ankle & balance assessment and training. *Journal of Medical and Biological Engineering*. 2017 doi.org/10.1007/s40846-017-0332-3 (Epub ahead of print).
 14. **Yen SC**, Chui KK, Corkery MB, Allen E, Cloonan C. Hip-ankle coordination during gait in individuals with chronic ankle instability. *Gait and Posture*. 2017; 53:193-200.
 15. Wang YC, Wickstrom R, **Yen SC**, Grogan KA. Assessing manual dexterity: Comparing the WorkAbility Rate of Manipulation Test (WRMT) with the Minnesota Manual Dexterity Test (MMDT). *Journal of Hand Therapy*. (In Press, Epub ahead of print)
 16. **Yen SC**, Corkery MB, Donohoe A[†], Grogan M[†], Wu YN. Feedback and feedforward control during walking in people with chronic ankle instability. *Journal of Orthopaedic & Sports Physical Therapy*. 2016;46:775-83.
 17. Wu M, Landry JM, Kim J, Schmit BD, **Yen SC**, McDonald J, Zhang Y. Repeat exposure of leg swing perturbation during treadmill training induced long term retention of increased step length in human SCI: a randomized controlled study. *American Journal of Physical Medicine and Rehabilitation*. 2016; 95(12):911-920.
 18. Tudini F, Chui K, Grimes J, Laufer R, Kim S, Yen SC, et al. Cervical spine manual therapy for aging and older Adults. *Topics in Geriatric Rehabilitation*. 2016; 32(2): 88-105. (guest editor with Chui KK)
 19. **Yen SC**, Gutierrez GM, Wang YC, Murphy P[†]. Alteration of ankle kinematics and muscle activity during heel contact when walking with external loading. *European Journal of Applied Physiology*. 2015: 115(8):1683-92.
 20. **Yen SC**, Schmit BD, Wu M. Using swing resistance and assistance to improve gait symmetry in individuals post-stroke. *Human Movement Science*. 2015;42: 212-24.
 21. Hasson CJ, Manczurowsky J[†], **Yen SC***. A reinforcement learning approach to gait training improves retention. *Frontiers in Human Neuroscience*. 2015;9:459.

22. **Yen SC**, Corkery MB, Chui KK, Manjourides J, Wang Y-C, Resnik LJ. Risk Adjustment for lumbar dysfunction: Comparison of linear mixed models with and without inclusion of between-clinic variation as a random effect. *Physical Therapy*. 2015; 95(12):1692-702. (invited paper)
23. **Yen SC**, Chui KK, Markowski A, Fitzpatrick DF, Wang YC, Corkery MB. Lumbar spine manual therapy for aging and older adults. *Topics in Geriatric Rehabilitation*. 2015;31(3):199-202. (guest editor with Chui KK)
24. Wormley ME, Grimes JK, Romney W, **Yen SC**, Chui KK. Neurophysiological effects of manual therapy in aging and older Adults. *Topics in Geriatric Rehabilitation*. 2015;31(3):173-9. (guest editor with Chui KK)
25. Laufer R, Kim S, Grimes J, Vaughan V, **Yen SC**, Chui KK. Ankle and foot manual therapy for aging and older adults. *Topics in Geriatric Rehabilitation*. 2015;31(3):211-6. (guest editor with Chui KK)
26. Chui KK, **Yen SC**, Wormley ME, Grimes J. Shoulder manual therapy for aging and older adults—Part 1: Subacromial impingement syndrome. *Topics in Geriatric Rehabilitation*. 2015;31(3):217-24. (guest editor with Chui KK)
27. Chui KK, **Yen SC**, Wormley ME, Grimes J. Shoulder Manual Therapy for Aging and Older Adults—Part 2: Adhesive Capsulitis. *Topics in Geriatric Rehabilitation*. 2015;31(3):225-31. (guest editor with Chui KK)
28. **Yen SC**, Landry JM, Wu M. Augmented multisensory feedback enhances locomotor adaptation in humans with incomplete spinal cord injury. *Human Movement Science*. 2014;35:80-93.
29. Wu M, Landry JM, Kim J, Schmit BD, **Yen SC**, MacDonald J. Robotic resistance/assistance training improves locomotor function in individuals poststroke: a randomized controlled study. *Archives of Physical Medicine and Rehabilitation*. 2014;95(5):799-806.
30. Wang YC, Deutscher D, Yen SC, Werneke MW, Mioduski JE. The self-report fecal incontinence and constipation questionnaire in patients with pelvic-floor dysfunction seeking outpatient rehabilitation. *Physical Therapy*. 2014;94(2):273-88.
31. Corkery MB, O'Rourke B, Viola S, **Yen SC****, Rigby J, Singer K, et al. An exploratory examination of the association between altered lumbar motor control, joint mobility and low back pain in athletes. *Asian Journal of Sports Medicine*. 2014;5(4).

32. **Yen SC**, Landry JM, Wu M. Size of kinematic error affects retention of locomotor adaptation in human spinal cord injury. *Journal of Rehabilitation Research & Development*. 2013;50(9):1187-200.
 33. Wang YC, Hart DL, Deutscher D, **Yen SC**, Mioduski JE. Psychometric properties and practicability of the self-report Urinary Incontinence Questionnaire in patients with pelvic-floor dysfunction seeking outpatient rehabilitation. *Physical Therapy*. 2013;93(8):1116-29.
 34. **Yen SC**, Schmit BD, Landry JM, Roth H, Wu M. Locomotor adaptation to resistance during treadmill training transfers to overground walking in human SCI. *Experimental Brain Research*. 2012;216(3):473-82.
 35. **Yen SC**, Gutierrez GM, Ling W, Magill R, McDonough A. Coordination variability during load carriage walking: Can it contribute to low back pain? *Human Movement Science*. 2012;31(5):1286-301.
 36. Wu M, Landry JM, Schmit BD, Hornby TG, **Yen SC**. Robotic resistance treadmill training improves locomotor function in human spinal cord injury: a pilot study. *Archives of Physical Medicine and Rehabilitation*. 2012;93(5):782-9.
 37. **Yen SC**, Ling W, Magill R, McDonough A, Gutierrez GM. Temporal relationship between trunk and thigh contributes to balance control in load carriage walking. *Gait & Posture*. 2011;34(3):402-8.
- *Peer-Reviewed Conference Papers*
38. Marghi YM[†], Farjadian AB, **Yen SC***, Erdogniz D. EEG-guided robotic mirror therapy system for lower limb rehabilitation. *Conference Proceedings IEEE Medicine and Biology Society 2017*; 1917-21 (**Finalist, best student paper competition**).
 39. Franchi G[†], Viereck U[†], Platt R, **Yen SC***, Hasson CJ. An arm for a leg: Adapting a robotic arm for gait rehabilitation. *Conference Proceedings IEEE Medicine and Biology Society 2015*; 3929-32
 40. Murphy P[†], Adolf G[†], Daly S[†], Bolton M[†], Maurice O[†], Bonia T[†], Mavroidis C, **Yen SC***. Test of a customized compliant ankle rehabilitation device in unpowered Mode. *Conference Proceedings IEEE Medicine and Biology Society 2014*; 3057-60.
 41. Adolf G[†], Bolton M[†], Bonia T[†], Daly S[†], Maurice O[†], Murphy P[†], Mavroidis C, **Yen SC***. Development of a robotic device to improve chronic ankle instability through controlled perturbation. *Proceedings of IEEE Northeast Bioengineering Conference 2014*; 1-2

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42. Wu M, Landry J, **Yen SC**, Schmit B, Hornby G, Rafferty M. A novel cable-driven robotic training improves locomotor function in individuals post-stroke. *Conference Proceedings IEEE Medicine and Biology Society 2011*; 8342-59.

Books – as co-editor

1. Chui K, Jorge M, **Yen SC**, Lusardi M. *Orthotics and Prosthetics in Rehabilitation* (4th ed). St. Louis, MO: Elsevier, 2019
2. Chang RL, **Yen SC**, Chang YC. *Biostatistics*. Kao Li, 2003. (In Chinese)

Books – as chapter contributor

3. Chui K, Tudini F, Chen T, **Yen SC**. Impaired joint mobility. In R. Wong (Eds). *Guccioni's Geriatric physical therapy*. St. Louis, MO: Elsevier, 2019.
4. Chui K, **Yen SC**. Examination of sensory function. In O'Sullivan SB, Schmitz TJ, Fulk GD (Eds). *Physical Rehabilitation* (7th ed). Philadelphia: FA Davis, 2019
5. Chui K, Tudini F, **Yen SC**, Grey D, Lewis C. Musculoskeletal system (pp. 23-76). In Lewis C, Chui K, Grey D, Huber G (Eds). *Physical Therapy for the Older Adult: An Evidence Based Approach to Examination and Intervention*. Baltimore, MD: Wolters Kluwer Health, 2017.
6. Chui K, Tudini F, **Yen SC**. Exercise (pp. 272-307). in Edelman CL Mandle CL, & Kudzma EC. *Health Promotion Throughout the Lifespan* (9th ed). St. Louis, MO: Elsevier, 2017.
7. Chui K, Tudini F, **Yen SC**. Emerging populations in health (pp. 23-46). in Edelman CL Mandle CL, & Kudzma EC. *Health Promotion Throughout the Lifespan* (9th ed.). St. Louis, MO: Elsevier, 2017.

Peer-Reviewed Presentations/Abstracts

1. Corkery MB, Loweree B, Bindert K, Chen B, Babigian J, Kuczmiec A, **Yen SC**. Effects of gastrocnemius stretching and self-myofascial release on electromyographic activity and ankle range of motion in runners. Presentation at The World Confederation for Physical Therapy (WCPT) Congress, Geneva, Switzerland, May 2019. Published in the WCPT Congress 2019 Proceedings. <https://www.abstractstosubmit.com/wcpt2019/archive/#/home>
2. **Yen SC**, Chui K, Corkery M, Wang YC, Nabian M, Farjadian A. Ankle Muscle Force Control in Individuals with Chronic Ankle Instability. *J Orthop Sports Phys Ther* 2019;49(1):CSM151, Presented at the Academy of Orthopaedic Physical Therapy Annual Meeting, Washington DC, January 2019.
3. Corkery M, Avilov A, Asis B, Kim R, O'Brien M, Pinto A, Stearns E, Parente J, **Yen SC**. A comparison of diaphragm muscle thickness in different body

position using ultrasound imaging. American Academy of Orthopedic Manual Physical Therapists, National Conference. Orlando FL, October 2019

4. Corkery M, Avilov A, Asis B, Kim R, O'Brien M, Pinto A, Stearns E, Parente J, **Yen SC**. A Comparison of the Effects of Diaphragmatic Breathing Instruction on Diaphragm Muscle Contractility in Different Exercise Positions using Ultrasound. APTA of MA, Annual Conference & Exposition, Norwood, MA. October 26th 2019 (**APTA of MA Special Recognition**).
5. Wang I, Lehman L, Kapellusch J, Sindhu B, Li X, **Yen SC**. Psychometric evaluation and clinical interpretation of the Upper Extremity Functional Index (UEFI). *Arch Phys Med Rehab*. 2019;100(10): e111.
6. Wang I, Kapellusch J, Li X, **Yen SC**, Rahman MH, Liu CJ. Shoulder UE Rehabits: Co-calibrate Three upper extremity functional questionnaires in outpatients with shoulder injuries. *Arch Phys Med Rehab*. 2019;100(10): e120.
7. Wang I, **Yen SC**. Trend of lipid profile values obtained in the 2011-2016 National Health and Nutrition Examination Surveys (NHANES). *Arch Phys Med Rehab*. 2019;100(10): e137.
8. Corkery MB, Hensley C, Cesario C, **Yen SC**, Chui K, Courtney C. A Survey to Investigate the Use of Thrust Joint Manipulation by Student Physical Therapists during Clinical Education Experiences Presented at the American Academy of Orthopedic Manual Physical Therapy. *Journal of Manual & Manipulative Therapy*, Reno, NV. Nov 9-11, 2018.
9. Folmar EJ, Thomas A, **Yen SC**. A comparison of kinesiology and athletic taping on ankle range of motion. AOFAS Annual Meeting 2018. Boston, MA, July 11-14, 2018.
10. Corkery M, Kapuza K[†], Le H[†], Murphy K[†], Friend K[†], **Yen SC***. The immediate effects of gastrocnemius stretching with and without self-myofascial release on ankle kinematics. February 22-24. APTA Combined Sections Meeting, New Orleans, LA, February, 2018.
11. **Yen SC**, Chui KK, Corkery MB, Allen E[†], Cloonan C[†]. An examination of hip-ankle coordination during walking in individuals with chronic ankle instability. APTA NEXT 2017, Boston, MA, June 21-26, 2017 (**APTA Special Recognition**).
12. Wang YC, Sindhu B, **Yen SC**, Lehman L. Global rating of change ratings derived from the therapists' and patients' perspectives in patients with lumbar impairments seeking outpatient rehabilitation. *Archives of Physical Medicine and Rehabilitation*. 2017;98(10): e71-e72.

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13. Wang YC, Sindhu B, **Yen SC**, Lehman L. Development of a crosswalk between the Shoulder CAT, DASH, and the UEFI. *Archives of Physical Medicine and Rehabilitation*;98(10): e51.
14. Wang YC, Bohannon R, **Yen SC**, Handgrip strength: A comparison of hand grip strength between NHANES vs NIH Toolbox studies *Archives of Physical Medicine and Rehabilitation*. 2017;98(10): e25.
15. Wang YC. **Yen SC**, Lehman L. Rasch analysis of the Activities-Specific Balance Confidence Scale in patients seeking outpatient rehabilitation. *Archives of Physical Medicine and Rehabilitation*. 2017;98(10): e98-e99.
16. Wang YC. **Yen SC**. Hand grip strength: A population-based study of norms and age trajectories for 18- to 85-year-olds. *Archives of Physical Medicine and Rehabilitation*. 2017;98(10): e72.
17. Corkery M, **Yen SC**, Hazel K[†], Cesario C, Chui K. The use of clinical prediction rules in clinical reasoning during student physical therapist outpatient clinical education experiences, American Academy of Orthopedic Manual Physical Therapists, National Conference. Salt Lake City UT. October 2017.
18. Corkery M, Kapuza K[†], Le H[†], Murphy K[†], **Yen SC***. A comparison of the immediate effects of gastrocnemius stretching with and without self-myofascial release on ankle dorsiflexion range of motion. Annual Conference & Exposition, Norwood, MA. November 2017.
19. **Yen SC**, Poletti MC[†], Fajardian A. Enhancement of ankle position and force controls contributes to balance improvement." Neuroscience 2016. San Diego, CA, November 12-16, 2016.
20. Corkery MB, Cohen E, Esposito M, Newton R, Rogazzo M, Rudnick C, Salanitro B, Santilli R, **Yen SC**. Trunk kinematics and motor control in athletes with and without patellofemoral pain during a lateral step-down test. IFOMT 2016, Glasgow, July 4-8, 2016.
21. Folmar EJ, Thomas A, **Yen SC***. A comparison of kinesiology tape to athletic taping on ankle and knee kinematics. APTA of MA Annual Conference 2016. Norwood, MA, November 5, 2016.
22. Wang Y, **Yen SC**, Sindhu B, Lehman L, Li X. Big data of computerized adaptive test generated outcomes measures in out-patient rehabilitation. 2nd Annual Biomedical and Health Informatics Consortium Conference, MSOE Alumni Partnership Center (APC), Milwaukee, WI, September 26-27, 2016.

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23. **Yen SC**, Corkery M, Donohoe A[†], Grogan M[†]. Feedback and feedforward control during walking in individuals with chronic ankle instability
Neuroscience 2015, Chicago, IL, October 20, 2015.
24. Hasson CJ, **Yen SC**. Gait training through reinforcement," 25th NCM Annual Meeting Society of Neural Control of Movement, Charleston, SC, April 21, 2015.
25. Corkery MB, O' Rourke B[†], Viola S[†], **Yen SC**, Rigby J[†], Singer K[†], Thomas AC. An exploratory examination of the association between altered lumbar motor control, joint mobility and low back pain in athletes. APTA CSM 2015, Indianapolis, IN, February 4-7, 2015.
26. Corkery MB, O' Rourke B[†], Viola S[†], Rigby J[†], Singer K[†], **Yen SC**, Thomas AC. Motor control, joint mobility and low back pain in athletes: are they related? APTA CSM 2015, Indianapolis, IN, February 4-7, 2015.
27. **Yen SC**, Schmit B, Wu, M. Using robotic assistance and resistance to improve gait symmetry in patients post stroke. Neuroscience 2014, Washington DC, November 15-19, 2014.
28. Wang S, Hoyt C, Hasson CJ, **Yen SC**. A Reinforcement Approach for Gait Rehabilitation. Neuroscience 2014, Washington DC, November 15-19, 2014.
29. Murphy P[†], Adolf G[†], Daly S[†], Bolton M[†], Maurice O[†], Bonia T[†], Mavroidis C, **Yen SC***. Test of a customized compliant ankle rehabilitation device in unpowered Mode. 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL, August 26-30, 2014.
30. Hasson CJ, Wang S[†], Hoyt C[†], **Yen SC***. Effectiveness of a reinforcement learning approach for gait training. World Congress of Biomechanics, Boston MA, July 6-11, 2014.
31. Adolf G[†], Bolton M[†], Bonia T[†], Daly S[†], Maurice O[†], Murphy P[†], **Yen SC***, Mavroidis C. Development of a robotic device to improve chronic ankle instability through controlled perturbation. 40th IEEE Northeast Bioengineering Conference. Boston, MA, April 25-27, 2014.
32. **Yen SC**, Landry J, Wu, M. Multisensory feedback enhances retention of locomotor adaptation in human SCI. Neuroscience 2013. San Diego CA, November 9-13, 2013.
33. Wang YC, Hart DL, Deutscher D, **Yen SC**, & Mioduski, J. Psychometric properties and practicability of the self-report Urinary Incontinence

Questionnaire. ISPRM 2013 7th World Congress of International Society of Physical and Rehabilitation Medicine. Beijing, China. June 16-20, 2013.

34. Wu, M, MacDonald J, **Yen SC**, Chen, D, Kim J, Improved walking in human with spinal cord injury through one session of 3D cable-driven robotic treadmill training. Biomedical Engineering Society Annual Meeting. Atlanta GA. October 24-27, 2012.
35. **Yen SC**, Schmit B, MacDonald J, Kim J, Wu, M. Controlled resistance load treadmill training improves overground walking in patients post stroke. Neuroscience 2012. New Orleans CA. October 13-17, 2012.
36. Wu M, Kim J, MacDonald J, Schmit B. Gaebler-Spira D, **Yen SC**. Robotic resistance treadmill training improves overground walking function in children with cerebral palsy. Neuroscience 2012. New Orleans CA. October 13-17, 2012.
37. Wu M, Landry J, **Yen SC**, Schmit B, Hornby G, Rafferty M. A novel cable-driven robotic training improves locomotor function in individuals post-stroke. 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Boston, MA, August 30-September 03, 2011.
38. **Yen SC**, Landry J, Wu M. Size of error affects retention of locomotor adaptation. Annual Meeting of the American Society of Biomechanics. Long Beach CA. August 10-13, 2011.
39. **Yen SC**, Schmit B, Landry J, Roth H, Wu, M. Controlled resistance load treadmill training improves overground walking in human with spinal cord injury. Neuroscience 2010. San Diego CA, November 13-17, 2010.
40. Wu M, Landry J, **Yen SC**, Schmit B, Hornby, TG, Raffety M. Cable-driven robotic gait training improves locomotor function in individuals post-stroke. Neuroscience 2010. San Diego CA, November 13-17, 2010.
41. **Yen SC**, Ling W, Magill R, Mcdonough A. A study of spontaneous adaptation during load carriage walking. Physical Therapy 2010: Annual Conference & Exposition of the American Physical Therapy Association. Boston MA, 2010.
42. **Yen SC**, Bean A, Ling W. A Comparison of temporal-spatial gait parameters in females wearing regular and platform shoes. Physical Therapy 2002: Annual Conference & Exposition of the American Physical Therapy Association. Cincinnati, OH, 2002.

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- Patent

1. Murphy P, Cleary M, Gelsinger S, Jessel M, McKanas S, Struble R, Pietrusinski M, **Yen SC**, Kong Q, Mavroidis C. Gait training system and methods. U.S. Application No.14/907,064. Publication number: WO2015017435 A3

Honors and Awards

D.L. Hart International Research Award (with Wang YC), FOTO Inc., 2019

APTA MA Poster Special Recognition (with Corkery MB), APTA of MA Annual Conference, 2019

Clinical Research Award, 2017, APTA MA

Commercialization Innovation Award, 2016, Massachusetts Technology Transfer Center

APTA NEXT Poster Special Recognition, 2017, APTA

Research Grants

Grants

- External

Decoding Multi-Modal Physiological Response Patterns for Assessing Post-Stroke Cognitive Impairment in VR-based Driving

5/1/20 - 4/30/21

Amount awarded: \$30,000

Agency: Tufts CTSI NIH Pilot Studies Program

Role: Co-PI (PI: Chun-An Chou)

Cyberphysical Therapy for Enhanced Neuromotor Recovery in Stroke Survivors

5/1/18 - 10/30/19

Amount awarded: \$45,000

Agency: Tufts CTSI NIH Pilot Studies Program

Role: Co-PI (PI: CJ Hasson)

Virtually-interfaced robotic ankle and balance trainer (vi-RABT)

02/01/16-07/31/16

Amount awarded: \$40,000

Agency: Massachusetts Technology Transfer Center

Role: PI

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- Internal

New Paradigm for Assessment Decision Support of Sensorimotor Impairments through VR-based Multi-modal Data Fusion Approach

07/01/2018-09/30/2019

Amount awarded: \$50,000

Agency: Northeastern University Tier 1 Seed Grant 2019

Role: Co-PI (PI Chun-An Chou)

EEG-guided Robotic Mirror Therapy for Neurorehabilitation

07/01/2016-09/30/2017

Amount awarded: \$50,000

Agency: Northeastern University Tier 1 Seed Grant 2017

Role: PI

A new paradigm for robotic gait rehabilitation based on reinforcement learning

07/01/2014-09/30/2015

Amount awarded: \$50,000

Agency: Northeastern University Tier 1 Seed Grant 2015

Role: Co-PI (PI: CJ Hasson)

Teaching and Advising

- Courses

Spring Semester

HLTH5451 Health Care Research Recitations (Course Instructor), 2013 - 2020

PT5229 Physical Therapy Project 2 (Project Advisor), 2013 – 2020

PT5131 Gross Anatomy, 2020

Fall Semester

PT5227 Physical Therapy Project 1 (Project Advisor, 2013 – 2020; Course Instructor, 2018-2020)

PT5151 Motor Control Lab (Lab Instructor), 2018-2019

Summer Semester

PT5133 Kinesiology (Course Coordinator and Instructor), 2013-2019

PT5134 Kinesiology Lab (Course Coordinator and Instructor), 2013-2019

Service and Professional Development

- Service to the Institution

Department Service

Member, Research Committee, Department of Physical Therapy, Northeastern University. 2012-Present

Member, Search Committee, Department of Physical Therapy, Northeastern University. 2012-2014, 2017-Present

Member, Performance Committee, Department of Physical Therapy, Northeastern University. 2014-2015, 2017-Present

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Member, Graduate Admission Committee, Department of Physical Therapy, Northeastern University. 2016-Present

Member, Professional Committee, Department of Physical Therapy, Northeastern University. 2015-present

Member, Outcome Committee, Department of Physical Therapy, Northeastern University. 2012-2014

College Service

Member, Diversity Committee, Bouve College of Health Science, Northeastern University. 2012-2014

- Service to the Profession

Guest Editor: Topics in Geriatric Rehabilitation (with Chui KK), 2015 Special issue on manual therapy

Ad Hoc Review: Journal of Biomechanical Engineering, IEEE Transactions on Neural System and Rehabilitation, Scandinavian Journal of Medicine and Science in Sports, Gait and Posture, The International Journal of Neuroscience, Journal of Geriatric Physical Therapy, Journal of Gerontology, Journal of Applied Biomechanics, Clinical Biomechanics, Plos One, International Journal of Therapy and Rehabilitation, Physical Therapy in Sport, Journal of Biomechanics, Robotics and Autonomous Systems