

**Physical Therapy, Movement, and Rehabilitation Sciences
2017-2018 Annual Research Report**

Completed June 8, 2018

Research Productivity for 2017-8

<u>Overview</u>	<u>17/18</u>	<u>16/17</u>
Books	2	2
Book Chapters	7	5
Peer-Reviewed Publications -in press	14	0
Peer-Reviewed Publications	94	35
Abstracts	36	6
Presentations	55	80
Webinars	3	6
Grants submitted dollars requested:	\$41,259,526	\$7,448,718
Funded grants active direct costs:	\$7,060,766	\$3,262,717

The 2017/2018 was a very productive year for the department. Compared to the 2016/2017 academic year, while the number of books and book chapters essentially remained the same, collectively the number of peer reviewed publications increased 209% from 35 to 108. With respect to grants submitted, the total amount requested during 2017/2018 was \$41,259,526 compared to \$7,448,718 in 2016/2017. The funds received in USD for 2017/2018 was \$7,060,766 compared to \$3,262,717 in 2016/2017 an increase of %116.

Books Published

1. **Day LJ**, Pilcher J. Digital Author component. In: Shier D, Butler J, Lewis R. *Hole's Human Anatomy and Physiology*. 15th ed. New York, NY: McGraw-Hill Companies, Inc.; 2019.
2. Stewart JH, **Dennerlin J**, Harowitz M. *Occupational Safety Calculations: A Professional Reference* 3rd ed. Millennium Associates; 2017.

Book Chapters Published

1. **Corkery M, Fitzpatrick D**, Hensley C, **Markowski A**. Lumbar Spine Interventions for the Aging and Older Adult In: Lewis CB, Chui K, eds. *Geriatric Rehabilitation*. Baltimore, MD: Wolters Kluwer, 2017.
2. **Greenwood K**, Powers M. Acute Care Making your Mind up Assessment In Lewis CB, ed. *Geriatric Rehabilitation*. Baltimore, MD: Wolters Kluwer, 2017.
3. **Hillman CH**, Castelli DM. Future directions: rigorous research design and authentic application of neuroscience. In: Meeusen R, Schaefer S, Tomporowski P, Bailey R, eds. *Physical Activity and Educational Achievement: Insights from Exercise Neuroscience*. London & New York: Routledge, Taylor & Francis Group; 2017.
4. **Iversen MD**. Arthritis patient education and adherence. In: Hochberg M, Silman A, Smolen J, Weinblatt M, Weisman MM, eds. *Rheumatology*. 7th ed. St. Louis, MO: Elsevier; 2017.
5. Chui K, Tudini F, **Yen SC**, Grey D, Lewis C. Musculoskeletal system. 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. In: Edelman CL Mandle CL, Kudzma EC, ed. *Health Promotion Throughout the Lifespan*. 9th ed. St. Louis, MO: Elsevier; 2017.
7. Chui K, Tudini F, **Yen SC**. Emerging populations in health. In: Edelman CL, Mandle CL, Kudzma EC, ed. *Health Promotion Throughout the Lifespan*. 9th ed. St. Louis, MO: Elsevier; 2017.

Peer-Reviewed Journal Articles- In Press

1. **Hayward LM**, English M. What's the task value? Understanding doctor of physical therapy student motivation for learning and valuing evidence-based practice. *J Phys Ther Educ*. 2018.
2. Singh AS, Saliassi E, van den Berg V, Uijtdewilligen L, de Groot RHM, Jolles J, Andersen LB, Bailey R, Chang Y-K, Diamond A, Ericsson I, Etnier J, Fedewa AL, **Hillman CH**, McMorris T, Pesce C, Puehse U, Tomporowski PD, Chinapaw MJM. Effects of physical activity interventions on cognitive and academic performance in children and adolescents: a novel combination of a systematic review and recommendations from an expert panel. *British Journal of Sports Medicine*.
3. Esteban-Cornejo I, Catena A, **Hillman CH**, Kramer AF, Erickson KI, Ortega FB. Commentary: At least eighty percent of brain grey matter is modifiable by physical activity: a review study. *Frontiers in Human Neuroscience*.

4. Raine LB, Drollette ES, Kao SC, Westfall D, Chaddock-Heymen L, Kramer AF, Khan NA, **Hillman CH**. Visceral adipose tissue is differentially associated with achievement and cognitive function in children. *Medicine & Science in Sports & Exercise*.
5. **Hillman CH**, McAuley E, Erickson KI, Liu-Ambrose T, Kramer AF. On mindful and mindless physical activity and executive function: a response to Diamond and Ling (2016). *Developmental Cognitive Neuroscience*.
6. Felez-Nobrega M, **Hillman CH**, Dowd KP, Cirera E, Puig-Ribera A. ActivPALTM determined sedentary behaviour, physical activity and academic achievement. *Journal of Sports Sciences*. doi: 10.1080/02640414.2018.1451212.
7. Raine LB, Kao SC, Pindus D, Westfall DR, Shigeta TT, Logan N, Cadenas-Sanchez C, Li J, Drollette ES, Pontifex, M B, Khan NA, Kramer AF, **Hillman CH**. A largescale re-analysis of childhood fitness and inhibitory control. *Journal of Cognitive Enhancement*.
8. Daugherty AN, Zwilling C, Paul EJ, Sherpa N, Allen C, Kramer AF, **Hillman CH** Cohen NJ, Barbey AK. Multi-modal fitness and cognitive training to enhance fluid intelligence. *Intelligence*.
9. Chojnacki, MR, Raine, LB, Drollette ES, Scudder, MR, Kramer AF, **Hillman CH**, Khan, N. A. The negative influence of adiposity extends to intraindividual variability in cognitive control among preadolescent children. *Obesity*. doi: 10.1002/oby.22053.
10. Syväoja HJ, Kankaanpää A, Kallio J, Hakonen H, Kulmala J, **Hillman CH**, Pesonen AK, Tammelin TH. The relation of physical activity, sedentary behaviors and academic achievement are mediated by fitness and bedtime. *Journal of Physical Activity and Health*. doi:10.1123/jpah.2017-0135.
11. Felez-Nobrega M, Foster JL, Puig-Ribera A, **Hillman CH**. Measuring working memory in the Spanish population: validation of a multiple shortened complex span task. *Psychological Assessment*. <http://dx.doi.org/10.1037/pas0000484>.
12. **Kiami S, Donlon P**. Usability and efficacy of digital case studies in the neurologic physical therapy curriculum to promote clinical reasoning skills. *Journal of Allied Health*.
13. **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 for Health Journal*.
14. **Levac D**, Lu AS. Does narrative feedback enhance children’s motor learning in a virtual environment? *Journal of Motor Behavior*.
15. **Levac D**, Glegg S, Coluhoun H, Miller P. How do perspectives of experienced and inexperienced clinicians differ about the use of active video games in practice? *International Journal of Child Health and Human Development*.
16. Huang YH, Sinclair RR, Lee J, McFadden A, Cheung J, **Murphy, LA**. Does talking the talk matter? Effects of supervisor safety communication and safety climate on long-haul truckers’ safety performance. *Accident Analysis and Prevention*.

Peer-Reviewed Journal Articles

1. **Day LJ**. A flipped classroom effects performance, retention and higher-level thinking in gross anatomy for lower performing students. *Anatomical Sciences Education*. 2018 [epub ahead of print] doi: 10.1002/ase.1772.
2. **Dennerlein JT**. Chronic low back pain: a successful intervention for desk-bound workers. *Occup Environ Med*. 2018 May; 75(5):319-320. doi: 10.1136/oemed-2017-104981.
3. Coppola SM, Lin MYC, Schilkowsky J, Arezes PM, **Dennerlein JT**. Tablet form factors and swipe gesture designs affect thumb biomechanics and performance during two-handed use. *Appl Ergon*. 2018 May; 69:40-46. doi: 10.1016/j.apergo.2017.12.015.
4. Hu B, Dixon PC, Jacobs JV, **Dennerlein JT**, Schiffman JM. Machine learning algorithms based on signals from a single wearable inertial sensor can detect surface- and age-related differences in walking. *J Biomech*. 2018; 71:37-42. doi: 10.1016/j.jbiomech.2018.01.005.
5. Dixon PC, Schütte KH, Vanwanseele B, Jacobs JV, **Dennerlein JT**, Schiffman JM. Gait adaptations of older adults on an uneven brick surface can be predicted by age-related physiological changes in strength. *Gait Posture*. 2018; 61:257-262. doi: 10.1016/j.gaitpost.2018.01.027.
6. Kim JH, **Dennerlein JT**, Johnson PW. The effect of a multi-axis suspension on whole body vibration exposures and physical stress in the neck and low back in agricultural tractor applications. *Appl Ergon*. 2018; 68:80-89. doi: 10.1016/j.apergo.2017.10.021.
7. Manjourides J, Sparer EH, Okechukwu CA, **Dennerlein JT**. The effect of workforce mobility on intervention effectiveness estimates. *Ann Work Expo Health*. 2018; 12; 62(3):259-268. doi: 10.1093/annweh/wxx112.
8. Sorensen G, Sparer E, Williams JAR, Gundersen D, Boden LI, **Dennerlein JT**, Hashimoto D, Katz JN, McLellan DL, Okechukwu CA, Pronk NP, Revette A, Wagner GR. Measuring best practices for workplace safety, health, and well-being: the workplace integrated safety and health assessment. *J Occup Environ Med*. 2018 May; 60(5):430-439. doi: 10.1097/JOM.0000000000001286.
9. Epstein S, Tran BN, Capone AC, Ruan QZ, Fukudome EY, Ricci JA, Testa MA, **Dennerlein JT**, Lee BT, Singhal D. The current state of surgical ergonomics education in U.S. surgical training: a survey study. *Ann Surg*. 2018 Jan 29. doi: 10.1097/SLA.0000000000002592. [Epub ahead of print]
10. Epstein S, Sparer EH, Tran BN, Ruan QZ, **Dennerlein JT**, Singhal D, Lee BT. Prevalence of work-related musculoskeletal disorders among surgeons and interventionalists: a systematic review and meta-analysis. *JAMA Surg*. 2018 Feb 21; 153(2):e174947. doi: 10.1001/jamasurg.2017.4947.
11. Pulido JA, Barrero LH, Mathiassen SE, **Dennerlein JT**. Correctness of self-reported task durations: a systematic review. *Ann Work Expo Health*. 2017 Dec 15; 62(1):1-16. doi:10.1093/annweh/wxx094.
12. Huysmans MA, Eijkelhof BHW, Garza JLB, Coenen P, Blatter BM, Johnson PW, van Dieën JH, van der Beek AJ, **Dennerlein JT**. Predicting forearm physical exposures during computer work using self-reports, software-recorded computer usage patterns, and anthropometric and workstation measurements. *Ann Work Expo Health*. 2017 Dec 15; 62(1):124-137. doi: 10.1093/annweh/wxx092.

13. Faber GS, Koopman AS, Kingma I, Chang CC, **Dennerlein JT**, van Dieën JH. Continuous ambulatory hand force monitoring during manual materials handling using instrumented force shoes and an inertial motion capture suit. *J Biomech.* 2018 Mar 21; 70:235-241. doi:10.1016/j.jbiomech.2017.10.006.
14. van der Beek AJ, **Dennerlein JT**, Huysmans MA, Mathiassen SE, Burdorf A, van Mechelen W, van Dieën JH, Frings-Dresen MH, Holtermann A, Janwantanakul P, van der Molen HF, Rempel D, Straker L, Walker-Bone K, Coenen P. A research framework for the development and implementation of interventions preventing work-related musculoskeletal disorders. *Scand J Work Environ Health.* 2017 Nov 1; 43(6):526-539. doi: 10.5271/sjweh.3671.
15. Grant MP, Okechukwu CA, Hopcia K, Sorensen G, **Dennerlein JT**. An Inspection tool and process to identify modifiable aspects of acute care hospital patient care units to prevent work-related musculoskeletal disorders. *Workplace Health Safety.* 2018 Mar; 66(3):144-158. doi: 10.1177/2165079917718852.
16. Marin LS, Rodriguez AC, Rey-Becerra E, Piedrahita H, Barrero LH, **Dennerlein JT**, Johnson PW. Assessment of whole-body vibration exposure in mining earth-moving equipment and other vehicles used in surface mining. *Ann Work Expo Health.* 2017 Jul 1; 61(6):669-680. doi: 10.1093/annweh/wxx043.
17. Hurtado DA, Kim SS, Subramanian SV, **Dennerlein JT**, Christiani DC, Hashimoto DM, Sorensen G. Nurses' but not supervisors' safety practices are linked with job satisfaction. *J Nurs Manag.* 2017 Oct; 25(7):491-497. doi: 10.1111/jonm.12484.
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19. Lin MY, Barbir A, **Dennerlein JT**. Evaluating biomechanics of user-selected sitting and standing computer workstation. *Appl Ergon.* 2017 Nov; 65:382-388. doi: 10.1016/j.apergo.2017.04.006.
20. Comper MLC, **Dennerlein JT**, Evangelista GDS, Rodrigues da Silva P, Padula RS. Effectiveness of job rotation for preventing work-related musculoskeletal diseases: a cluster randomised controlled trial. *Occup Environ Med.* 2017 Aug; 74(8):543-544. doi: 10.1136/oemed-2016-104077.
21. Colebourn J, **Golub-Victor A**, Paez, A. Developing overhand throwing skills for a child with autism: a collaborative approach in school-based therapy. *Pediatric Physical Therapy.* 2017; 29(3):262-269.
22. **Greenwood, K.** Ewell, S. Faculty development through simulation-based education in physical therapist education. *Advances in Simulation.* 2018; 3(1). <https://doi.org/10.1186/s41077-017-0060-3>.
23. **Hasson CJ.** An interactive simulator for imposing virtual musculoskeletal dynamics. *IEEE Transactions on Biomedical Engineering.* DOI: 10.1109/TBME.2017.2703298.
24. Goodman SE and **Hasson CJ.** Elucidating sensorimotor control principles with myoelectric musculoskeletal models. *Frontiers in Human Neuroscience.* 2017; 11:531.
25. **Hayward LM,** Ventura S, Schudt H, Donlon P. Student pedagogical teams: engaging with faculty in the scholarship of teaching and learning. *College Teaching.* 2018; 66(1):37-47.

26. **Hayward LM**, Li L. Sustaining and improving an international service-learning partnership: an evidenced-based service delivery framework that include the voice of the global partner *Physiotherapy Research International*. 2017; 33(6):475-489. DOI: 10.1080/09593985.2017.1318425.
27. Raine, LB, Biggan, JR, Baym CL, Saliba BJ, Cohen NJ, Hillman **CH**. Adolescent changes in aerobic fitness are related to changes in academic achievement. *Pediatric Exercise Science*.2018; 30:106-114. doi: 10.1123/pes.2015-0225.
- 28.Saint SE, Renzi-Hammond LM, Khan NA, **Hillman CH**, Frick JE, Hammond BR. Association between macular carotenoids and cognitive function in preadolescent children. *Nutrients*. 2018; 10:193. doi:10.3390/nu10020193.
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32. Chaddock-Heyman L, Weng TB, Kienzler C, Erickson KI, Voss MW, Drollette ES, Raine LB, Kao S C, **Hillman CH**, Kramer AF. Scholastic performance and functional connectivity of brain networks in children. *PLOS ONE*.2018.
33. Walk A, Raine LB, Kramer AF, Cohen NJ, Khan NA, **Hillman CH**. Differential effects of carbohydrates on behavioral and neuroelectric indices of selective attention in preadolescent children. *Frontiers in Human Neuroscience*. 2017. <https://doi.org/10.3389/fnhum.2017.00614>.
- 34.Ward N, Paul EJ, Watson PD, Cooke GE, **Hillman CH**, Cohen NJ, Kramer AF, Barbey AK. Enhanced learning through multimodal training: evidence from a comprehensive cognitive, physical fitness, and neuroscience Intervention. *Scientific Reports*.2017; 7, 5808. doi:10.1038/s41598-017-06237-5
- 35.Walk AM, Khan NA, Barnett SM, Raine LB, Kramer AF, Cohen NJ, Moulton CJ, Renzi-Hammond L M, Hammond BR, **Hillman CH**. From neuro-pigments to neural efficiency: the relationship between retinal carotenoids and behavioral and neuroelectric indices of cognitive control in childhood. *International Journal of Psychophysiology*.2017;118:1-8. <https://doi.org/10.1016/j.ijpsycho.2017.05.005>.
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50. **Hillman CH**, Erickson KI, Hatfield BD. Run for your life! Childhood physical activity effects on brain and cognition. *Kinesiology Review*. 2017; 6, 12-21.
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52. Kao SC, Westfall DR, Parks AC, Pontifex MB, **Hillman C. H**. Muscular and aerobic fitness, working memory, and academic achievement in children. *Medicine & Science in Sports & Exercise*. 2017; 49: 500-508
53. Westfall DR, Kao S, Scudder MR, Pontifex MB, **Hillman CH**. The association of aerobic fitness on congruency sequence effects in preadolescent children. *Brain & Cognition*. 2017; 113:85-92. <http://dx.doi.org/10.1016/j.bandc.2016.12.005>.
54. Lee AC, Harvey WF, Price LL, Han X, Driban JB, **Iversen MD**, Desai SA, Knopp HE, Wang CC. Dose-response effects of tai chi and physical therapy exercise interventions in symptomatic knee osteoarthritis. *Phys Med & Rehabil*. 2018; [10.1016/j.pmrj.2018.01.003](https://doi.org/10.1016/j.pmrj.2018.01.003).
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83. Patel J Qiu Q, Yarossi M, Merians A, Massood S, **Tunik E**, Adamovich A, Fluet G. Exploring the impact of visual and movement based priming on a motor intervention in the acute phase post-stroke in persons with severe hemiparesis of the upper extremity. *Disabil Rehabil*. 2017;39(15):1515-1523.
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85. Yarossi M, Adamovich SV, **Tunik E**. Facilitation of ipsilateral corticospinal excitability during mirror visual feedback requires target directed actions. *Frontiers Human Neuroscience*. 2017;11:242.
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94. Wang YC, Bhagwant S, Kapellusch J, Leigh L, **Yen SC**. Therapists' and patients' perspectives of the Global Rating of Change in patients with lumbar impairments. *Physiotherapy Theory and Practice*. doi: 10.1080/09593985.2018.1458930. (Epub ahead of print 2018)

Published Abstracts

1. **Day LJ, Markowski A, Watkins M**. Using real-time ultrasound imaging to enhance students' learning of anatomical knowledge in physical therapy education. *Federation of American Societies for Experimental Biology Journal (FASEB)*. 2018.
2. Poletti M, Rihm J, Egan C, **Day LJ**. Efficacy of gross anatomy cadaver online video learning modules in first-Year physical therapy students. *Federation of American Societies for Experimental Biology Journal (FASEB)*. 2018.
3. Sterlin L, **Day LJ**, Analysis of dissection methods to facilitate student understanding of knee ligaments. *Federation of American Societies for Experimental Biology Journal (FASEB)*. 2018.

4. O'Neil-Pirozzi TM, Musler JL, Carney M, **Day LJ**, Hamel P, Kirwin J. A model experiential education program for first year health professions students to begin developing interprofessional competencies. *Nexus Summit*. 2017.
5. Lunardini F, Sternad D, **Hasson CJ**. Probing motor priorities with electrical manipulation of neural noise scaling. *Society for Neuroscience 47th Annual Meeting*. 2017.
6. Kondiboyina V, Raine LB, Kramer AF, Khan N, **Hillman CH**, Shefelbine SJ. Effects of exercise on bone health in kids aged 8-9 years. *American Society of Bone and Mineral Research*. 2018.
7. Raine LB, Kao SC, Pindus D, Westfall DR, Shigeta TT, Logan N, Cadenas-Sanchez C, Li J, Drollette ES, Pontifex MB, Khan NA, Kramer AF, **Hillman CH**. A large scale re-analysis of childhood fitness and inhibitory control. *Psychophysiology*. 2018.
8. Westfall DR, Kao SC, Drollette ES, Raine LB, Kramer AF, **Hillman CH**. Higher aerobic fitness is associated with upper alpha event-related desynchronization. *Psychophysiology*. 2018.
9. Logan N, Raine LB, Kramer AF, **Hillman CH**. Differential relationships of fitness and adiposity on cognitive function. *Psychophysiology*. 2018.
10. Pindus DM, Drollette ES, Raine LB, Khan NA, Westfall DR, Kao SC, John D, Kramer AF, **Hillman CH**. The relations of objectively measured physical activity levels and bouts to neuroelectric measures of attentional control in preadolescents. *Psychophysiology*. 2018.
11. Syväoja HJ, Kankaanpää A, Joensuu L, Kallio J, Hakonen H, **Hillman CH**, Tammelin TH. The longitudinal associations between physical fitness, motor skills and academic achievement. *International Society for Physical Activity and Health*. 2018.
12. Felez-Nobrega M, **Hillman CH**, Dowd KP, Puig-Ribera A. The relation of objectively-determined sedentary behavior and physical activity to fluid intelligence in college students. *International Society for Physical Activity and Health*. 2018.
13. Meadows CC, **Hillman CH**, Drollette ES. Cycling as a means of improving inhibitory control and maintaining brain function and academic performance in 9- to 10-year old children. *Journal of Sport & Exercise Psychology*. 2018.
14. Awick E, **Hillman CH**, Trihn L, Kramer AF, McAuley EM. Dose-response effects of acute aerobic exercise on cognitive function in breast cancer survivors. *Annals of Behavioral Medicine*. 2018.
15. Szabo-Reed AN, Willis EA, Lee J, **Hillman CH**, Washburn RA, Donnelly JE. The impact of moderate-to-vigorous physical activity and time-on-task on academic achievement in elementary-aged students. *Annals of Behavioral Medicine*. 2018.
16. Kao SC, Drollette ES, **Hillman CH**. The effects of acute high-intensity interval exercise and moderate-intensity continuous exercise on memory and cognitive control. *Psychophysiology*. 2017.

17. Raine LB, Walk A, Kramer AF, Cohen NJ, Khan NA, **Hillman CH**. Differential effects of carbohydrates on behavioral and neuroelectric indices of selective attention in preadolescent children. *Psychophysiology*.2017.
18. Drollette ES, Pontifex MB, Raine LB, Scudder MR, Moore RD, Kao SC, Castelli DM, Khan NA, Kramer AF, Hillman **CH**. Effects of the FITKids randomized controlled trial on cognitive control and conflict monitoring in children. *Medicine & Science in Sports & Exercise*. 2017.
19. Shigeta TT, Raine LB, Drollette ES, Kao SC, Westfall DR, Scudder MR, Kramer AF, Khan NA, **Hillman CH**. Visceral adipose tissue is negatively and selectively associated with cognition among obese children. *Medicine & Science in Sports & Exercise*.2017.
20. Felez-Nobrega M, Cirera-Viñolas E, **Hillman CH**, Puig-Ribera A. Interactive associations between sitting time and physical activity with cognition and academic achievement in young-adults. *Medicine & Science in Sports & Exercise*. 2017.
21. Kao SC, Westfall DR, Gurd B, **Hillman CH**. Acute high-intensity interval training and moderate-intensity continuous exercises differentially facilitate cognitive control. *Medicine & Science in Sports & Exercise*. 2017.
22. Raine LB, Khan NK, Drollette ES, Pontifex MB, Kramer AF, **Hillman CH**. Obesity, visceral adipose tissue, and cognition in childhood. *Medicine & Science in Sports & Exercise*.2017.
23. Westfall DR, Barnett S, Covello AR, Bottin J, Perrier E, Khan NK, **Hillman, CH**. The Influence of hydration on childhood cognitive control. *Medicine & Science in Sports & Exercise*. 2017.
24. Bugge A, Möller S, Tarp J, Lima RA, **Hillman CH**, Gejl AK, Klakk H, Wedderkopp N. Influence of a 6 year school-based physical activity intervention on scholastic performance – The CHAMPS study-DK. *Medicine & Science in Sports & Exercise*. 2017.
25. Westfall DR, Hassevoort K, Barnett S, Covello AR, Bottin J, Perrier E, Cohen NJ, **Hillman CH**, Khan NK. Effects of hydration on relational memory among preadolescent children. *Journal of the Federation of American Societies for Experimental Biology*. 2017.
26. Balbinot AR, Curran MR, Drollette ES, Raine LB, Walk AD, Biggan JR, Kramer AF, Cohen NJ, Holscher HD, **Hillman CH**, Khan NA. Differences in timing of developmental milestones across vaginally vs. cesarean-section delivered infants: a retrospective study. *Journal of the Federation of American Societies for Experimental Biology*. 2017.
27. Curran MR, Drollette ES, Raine LB, Balbinot AR, Walk AM, Biggan JR, Kramer AF, Cohen NJ, Holscher HD, **Hillman CH**, Khan NA. Influence of birth-weight-for-gestational-age on neuroelectric function in preadolescence. *Journal of the Federation of American Societies for Experimental Biology*. 2017.
28. Fanning J, Roberts SA, **Hillman CH**, Mullen SP, Ritterband L, McAuely E. Impact of modular social cognitive smartphone app on physical activity in adults. A randomized factorial trial. *Annals of Behavioral Medicine*.2017.

Kiami S, Sky R. Awareness, attitudes and beliefs about fall risk and evidence-based falls prevention programs among community dwelling older adults. *J of Neuro Phys Ther; Abstract on-line at www.JNPT.org.2018.*

30. **Levac D**, Jovanovic B. Is children's motor learning of a postural reaching task enhanced by practice in a virtual environment? *Proceedings of the 2017 International Conference on Virtual Rehabilitation*. 2017.DOI: 10.1109/ICVR.2017.8007489.

31. Furmanek MP, Yarossi M, Schettino LF, Adamovich SV, **Tunik E**. The role of superior parietal-occipital cortex in human reach-to-grasp movement: TMS study. *Society for Neural Control of Movement*. 2018.

32. Manuweera T, Yarossi M, Adamovich SV, **Tunik E**. Effect of target-directed movements on Mirror visual feedback processing in ipsilateral brain areas. *Society for Neuroscience Abstracts*. 2017.

33. Alokayli A, Yarossi M, **Tunik E**, Adamovich SV. The effect of volitional movement on paired associative stimulation-induced cortical excitability. *2nd Moscow International Conference Noninvasive Brain Stimulation and Functional Brain Mapping*. 2017.

34. Patel J, Yarossi M, Qiu Q, Adamovich SV, **Tunik E**, Merians A, Fluet G. Early virtual reality based hand training post-stroke elicits better than expected outcomes. *Society for Neuroscience Abstracts*. 2017.

35. Yarossi M, Dannhauer D, Erdogmus D, Brooks D, **Tunik E**. Comparison of muscle synergies derived from of voluntary movement and those derived from multi-muscle TMS mapping using subject-specific FEA models of induced currents. *Progress in Motor Control XI*. 2017.

36. Alokayli A, Yarossi M, **Tunik E**, Adamovich SV. The effect of volitional movement on paired associative stimulation-induced cortical plasticity. *Society for Neuroscience Abstracts*. 2017

Presentations

International

1. **Greenwood K**. An exploration of physical therapy faculty development with simulation. *International Meeting for Simulation in Healthcare*. LA, California. 2018.

2. **Greenwood K**. Understanding the faculty framework for simulation in physical therapy. *International Meeting for Simulation in Healthcare*. LA, California. 2018.

3. **Hasson CJ**, Goodman SG. Adaptation to artificial spasticity induced by a neuromuscular simulator. *Neural Control of Movement 27th Annual Conference*, Dublin, Ireland. 2017.

4. **Hillman CH**. The role of childhood physical activity on brain, cognition, and academic achievement. *Symposium of the European Initiative for Exercise is Medicine*. Lisbon, Portugal. 2017. (Keynote).

5. **Hillman CH**. The role of physical exercise and fitness on brain, cognition, and academic performance. *Active Brains for All: Exercise, Cognition, and Mental Health International Symposium*. Granada, Spain, 2017. (Keynote).

6. van Mastrigt N, Naili JE, Broström EW, Harlaar J, **Iversen MD**. Inter-rater reliability of movement quality during single limb mini-squat test in adults with knee osteoarthritis. *European Society for Movement Analysis Conference*. Trondheim, Norway. 2017.
7. **Iversen MD**. Innovative didactic and experiential learning strategies in physiotherapy. *University of Mundiapolis*. Cassablanca, Morocco. 2017. (Invited).
8. **Levac D**, Jovanovic B. Is children's motor learning of a postural reaching task enhanced by practice in a virtual environment? *Proceedings of the International Conference on Virtual Rehabilitation*. 2017. DOI: 10.1109/ICVR.2017.8007489*
9. Glegg S, **Levac D**. Enhancing clinical implementation of virtual reality: an evidence-based perspective and call to action. *Proceedings of the International Conference on Virtual Rehabilitation*. 2017. DOI: 10.1109/ICVR.2017.8007488*
10. Mills RS, **Levac D**, Sveistrup H. The effects of a one-week intensive physiotherapy programme on kinematics and postural muscle activity in children and adolescents with cerebral palsy. *Movementis Conference*, Oxford, UK: 2017.
11. Mills RS, **Levac D**, Sveistrup H. Kinematics and postural muscular activity during continuous oscillating platform movement in children and adolescents with cerebral palsy. *Movementis Conference*, Oxford, UK. 2017.
12. **Murphy LA**, Robertson MM, Huang YH, Jeffries S, Dainoff M. Results of a macroergonomic analysis integrating safety climate in the long-haul trucking industry. *12th International Symposium on Human Factors in Organizational Design & Management and the 48th Annual Conference of the Association of Canadian Ergonomists*, Banff, Alberta, Canada. 2017.
13. Robertson MM, Tubbs D, **Murphy LA**. Readiness for change: Factors that impact organizational capacity for safety initiatives. *12th International Symposium on Human Factors in Organizational Design & Management and the 48th Annual Conference of the Association of Canadian Ergonomist*. Banff, Alberta, Canada. 2017.
14. Schettino LF, Barnes J, Laws M, McKeown L, Steinberg N, **Tunik E**. Seamless prismatic-circular precision grasp reorganization in a naturalistic shape perturbation paradigm. *International Society for Neural Control of Movement*. Dublin Ireland. 2017.

National

1. Fitzgerald C, Riley E, **Cesario C**, Steinbarger K. What is the current utilization of social media in physical therapy clinical education? Can a social media knowledge transfer system that supports physical therapist educators nationally be beneficial? *APTA Combined Sections Meeting*, New Orleans, LA. 2018.
2. **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*. Salt Lake City, UT. 2017.
3. Sterlin L, **Day LJ**. Analysis of dissection methods to facilitate student understanding of knee ligaments. *Federation of American Societies for Experimental Biology Journal (FASEB)*, San Diego, CA. 2018.

4. **Day LJ, Markowski A, Watkins M.** Using Real-time Ultrasound Imaging to Enhance Students' Learning of Anatomical Knowledge in Physical Therapy Education. *Federation of American Societies for Experimental Biology Journal (FASEB)*. San Diego, CA. 2018.
5. Poletti M, Rihm J, Egan C, **Day LJ.** Efficacy of gross anatomy cadaver online video learning modules in first-year physical therapy students. *Federation of American Societies for Experimental Biology Journal (FASEB)*, San Diego, CA. 2018.
6. **Day LJ.** Technology for the anatomy class and lab. *Human Anatomy and Physiology Society (HAPS)*. Salt Lake City, UT. 2017.
7. O'Neil-Pirozzi TM, Musler JL, Carney M, **Day LJ,** Hamel P, Kirwin J. A model experiential education program for first year health professions students to begin developing interprofessional competencies. *Nexus Summit*, Minneapolis, MN. 2017.
8. **Fitzpatrick D, Greenwood K,** Bibi K, Sherman A, Lembo K. Essential competencies in the care of older adults: assessment of physical therapist students' confidence. *APTA NEXT Convention*. Boston, MA. 2017.
9. **Golub-Victor A, Greenwood K,** Allen E, Duffy K, McEvoy C, Philbrick K, The impact of simulation on student confidence in an interprofessional training program. *APTA Combined Sections Meeting*, New Orleans, LA. 2018.
10. **Golub-Victor A, Fitzpatrick D,** Dodman M, Mazzone L, Ross B. Special Olympics healthy athletes ® and fall Risk in people with ID: an innovative community-campus partnership. *APTA Combined Sections Meeting*, New Orleans, LA. 2018.
11. **Greenwood KC, Clark SB, Nolan DC.** Exploring the utility of video playback technology and standard learning measures to enhance mentorship within a sports residency simulation. *APTA Combined Sections Meeting*, New Orleans, LA. 2018.
12. **Greenwood K,** Rapport M, Martin K, Pinto-Zipp G, Johannson M, Sanders B. Entry-level competencies from APTA academies: resources to guide curriculum. *APTA Combined Sections Meeting*. New Orleans, LA 2018.
13. Rosenfeldt A, Lubbeck K, **Greenwood KC,** Brown J, **Iversen MD.** Predicting student preparedness for acute care clinical placements: a multi program examination of the of the acute care confidence survey. *APTA Combined Sections Meeting*, New Orleans, LA. 2018.
14. Kirwin, J. **Greenwood K,** Brown T, Matta T, Rico J, Romesh N, DiVall M. Interprofessional curbside consults (ICC) to improve student achievement of learning outcomes. *AACP Annual Meeting, Pharmacy Education*. Nashville, Tennessee. 2017.
15. **Greenwood K, Markowski A.** Teaching oral health screening using interprofessional faculty debriefing simulation model. *Second Interprofessional Simulation Conference*. Atlanta, Georgia. 2017.
16. **Greenwood K,** Hake M, Mitchell L, Milton E, Sanders B. A dissemination of current and future use of the core competencies of entry-level practice in acute care physical therapy. *APTA Education Leadership Conference*. Columbus, Ohio. 2017.
17. **Greenwood K,** Rosenfeld A, Lubbek K, Brown J, **Iversen M.** Exploring factors that lead to increased preparedness among DPT students for acute care clinical placements. *APTA Education Section Education Leadership Conference*. Columbus Ohio, October 2017.
18. **Hayward LM, Schneider J, Ghandi S, Per S, Hayward J.** An Innovative Framework for Deepening Reciprocity and Sustaining Academic-International Service-Learning Partnerships. *IARSCLE Meeting*. New Orleans, LA, July, 2018.

19. **Hayward LM.** Understanding doctor of physical therapy students' motivation to value and apply evidence-based practice. *APTA Combined Sections Meeting*. San Antonio, TX, 2017.
20. Hack L, **Hayward LM**, Bello-Hass V, Gordon S, Laufer Y, Swisher L, Fell D, Maring J, Wainwright S, Plack M, Kelly S, McInnis P. Proposal connecting educational research to theory and concept: lessons from JOPT. *APTA Combined Sections Meeting*. San Antonio, TX, 2017.
21. **Iversen MD**, von Heideken J, Gerdhem P. Rapidly Increasing Incidence in Scoliosis Surgery Over 14 year in a Nationwide Sample. *APTA Combined Sections Meeting*, New Orleans, LA.2018.
22. **Iversen MD**, Ciano L, Daigneault C, Regan ES, Simoneau M, Allen K. *Patient reported outcomes and performance measures in adults with symptomatic osteoarthritis: Development of a composite score.* APTA Combined Sections Meeting, New Orleans, LA. February 2018.
23. Van Mastrigt N, Naili JE, Broström EW, Harlaar J, **Iversen MD**. Inter-rater reliability of movement quality during single limb mini-squat test in adults with knee osteoarthritis. *European Society for Movement Analysis Conference*. Trondheim, Norway. 2017.
24. **Kiami S**, Sky R. Awareness, attitudes & beliefs about fall risk and evidence-based falls prevention programs among community dwelling older adults. *APTA Combined Sections Meeting*. New Orleans, LA. 2018.
25. O'Neil M, Deutsch J, Westcott McCoy S, **Levac D**. Clinical reasoning: video games and virtual reality in pediatric physical therapy practice. *APTA Combined Sections Meeting*. New Orleans, LA.2018.
26. **Markowski A, Watkins M, Day LJ.** Using real-time ultrasound imaging to enhance students' learning manual skills to include accurate palpation and effective joint distraction in physical therapy education. *APTA NEXT Conference and Exposition*, Boston, MA. 2017.
27. **Markowski A, Watkins M.** The benefits of using real-time ultrasound to teach knee traction in physical therapist education. *Journal of Manual and Manipulative Therapy Annual Conference*, Salt Lake City, UT. 2017.
28. **Markowski A, Watkins M, Day L.** Using real-time ultrasound imaging to enhance students' learning manual skills to include accurate palpation and effective joint distraction in physical therapy education. *NEXT APTA Conference*, Boston MA. 2017.
29. Montemagni E, **Maxwell J.** An intra-institution learning collaboration: the Springfield College DPT and dance repertoire alliance. *APTA Combined Sections Meeting*, New Orleans, LA. 2018.
30. Yragui NL, Demsky CA, **Murphy LA.** A mixed methods perspective on violence prevention climate in healthcare. *Annual meeting of the Society for Industrial and Organizational Psychology*, Chicago, IL, 2018.
31. **Murphy LA**, Huang YH, Lee J, Robertson MM, Jeffries S, Dainoff M. A sociotechnical systems approach to examining safety climate in the trucking industry: results of an in-depth investigation. *Work, Stress and Health Conference*, Minneapolis, MN, 2017.

Local

1. **Cesario C**, Hubbard J, Marella L, Knisely S, **Folmar EJ.** Assessing the reliability of Hudl technique software with SPORTSMETRICS™ valgus digitizer software in the identification of "high risk" female soccer players. *Female Athlete Conference, Boston Children's Hospital*, Wellesley, MA.2017.

2. **Clark SB.** ACL and LCL reconstruction with peroneal nerve neuropathy in a competitive baseball player: a case report. *APTA of Massachusetts Annual Conference*, Norwood, MA. 2017
3. **Hasson CJ.** Improving dexterous motor function by reducing neuromotor noise. *Tufts CTSI - NEU Joint Research Summit: Exercise, Aging, and Cognitive Function*. Boston MA. 2017.
4. **Hillman CH.** Childhood physical activity on brain, cognition, and achievement. *Tufts CTSI-NEU Research Summit: Exercise, Aging, and Cognitive Function*. Boston, MA. 2017.
5. **Iversen MD.** Physical activity and rheumatoid arthritis: improving functional outcomes and promoting lifestyle change. *University of Massachusetts Medical Center Grand Rounds*, Worcester, MA. 2018.
6. Yap G, **Levac D.** REACH Robot: Motion capture-based robotic interfaces to enhance engagement and adherence in pediatric rehabilitation. *IEEE MIT Undergraduate Research Technology Conference*. Cambridge, MA. 2017.
7. **Murphy LA,** Dainoff M, Hettinger L, France M, Huang YH, Robertson M, Jeffries S. Safety control structure for commercial trucking. *Seventh MIT STAMP/STPA Workshop*. 2018
8. **Nolan DC.** Management of Hip and Knee Running Related Injury. APTA Massachusetts Annual Conference. Norwood, MA. 2017.
9. **Nolan DC,** Fleming K, Berkson E, Kheterpal A. A Collaborative care approach to meniscal pathology. *APTA Massachusetts Annual Conference*. Norwood, MA. 2017.
10. **Watkins M, Markowski A.** Enhancing physical therapy education with ultrasound imaging to promote physical therapist excellence. *APTA Massachusetts Annual Conference*. Norwood, MA. 2017

Funding

Agency	Title	Direct Costs	Faculty	Status
Tufts CTSI	<i>Cyberphysical therapy for enhanced neuromotor recovery in stroke survivors.</i>	\$45,000	Hasson	Pending
NSF Faculty Early Career Development Program	<i>Optimizing Interactive Neuromuscular Dynamics for Improved Motor Function</i>	\$503,255	Hasson	Unfunded
NIH R01 Research Project Grant	<i>Optimizing Interactive Neuromuscular Dynamics for Improved Dexterous Motor Function in Older Adults</i>	\$1,258,331; Total direct cost: \$1,744,029	Hasson	Pending
NSF CISE Research Infrastructure	<i>CRI: II-New development of a Testbed for the Convergence of Human Augmentation,</i>	\$1,000,000 Direct Cost: \$785,550;	Hasson	Pending

	<i>Movement, Biology and Experimental Robotics</i>			
Northeastern University: Mentored TIER 1 Seed Grant	<i>Cyberphysical Therapy for Enhanced Neuromotor Recovery in Stroke Survivors</i>	\$50,000	Hasson	Funded
Corporation for National and Community Service. Community Conversations Research	<i>Partnering to Address Vital Community Concerns: Advancing Knowledge about the Impact of Intergenerational Service-Learning on Elder Isolation and Loneliness.</i>	\$100,000	Hayward	Pending
Deborah Monroe Noonan Memorial Research Fund	<i>Development and Evaluation of a model TOPSoccer program for children with autism.</i>	\$80,000	Hayward	Unfunded
NEU - Tier 1	<i>Advancing Knowledge of the Impact of Service-Learning on Community Stakeholders</i>	\$50,000	Hayward	Unfunded
NEU City and Community Service Grant	<i>Improvement of the Adaptive Skating Program at Franciscan Children's Hospital</i>	\$1,500	Hayward	Unfunded
The Village Church Outreach grants program.	<i>An Interdisciplinary Approach for Educating and Sustaining Communication and Mobility in Children with Disabilities.</i>	\$2,000	Hayward	Funded
The Wellesley Hills Junior Women's Club	<i>TopSoccer and basketball adaptive sports program funding for children with Autism</i>	\$2,000	Hayward	Funded
NU Provost Mutual Mentoring Grant	<i>Evaluation of Service-Learning Partnerships Local and Abroad using the SOFAR Framework</i>	\$3,000	Hayward	Funded
National Institute of Child Health and Human Development (HD094054)	<i>Sympathetic nervous system mediation of acute exercise effects on childhood brain and cognition</i>	\$2,839,220 (2018-2022; \$70,9805/year)	Hillman	Funded
NIH, National Institute on Aging (R01AG053952)	<i>Investigating Gains in Neurocognition in an Intervention Trial of Exercise</i>	\$21,899,529 (2016–2021). \$4,379905/year	Hillman	Funded

Abbott Nutrition	<i>Retrospectively Studying the Effects of Early Life Nutrient Intake Cognitive Function and Brain Health in Preadolescent Children</i>	\$175,475 (2015 – 2018). \$58,491/yr	Hillman	Funded
NIH, National Institute of Child Health and Human Development	<i>Enhancing Children's Cognitive and Brain Health through Physical Activity Training</i>	\$3,865,723 (2012-2019). \$644,287/yr	Hillman	Funded
National Health and Medical Research Council (NHMRC, APP1120518)	<i>Reducing cardiovascular disease risk factors among older adolescents attending schools in disadvantaged communities: The 'Burn to Learn' cluster RCT</i>	\$636,911 AUD or \$420,361 USD (2017-2019) \$210,180/yr	Hillman	Funded
NIH, National Institute of Child Health and Human Development	<i>Enhancing Children's Cognitive Function and Achievement through Carotenoid Consumption</i>	NU Subaward: \$514,001	Hillman	Pending
Danone	<i>The Effects of Hydration on Brain, Cognition, Memory & Achievement in Childhood</i>	\$534,387 (2014-2018). \$188,359 /yr.	Hillman	Funded
USDA (USDA-NIFA-AFRI-006346)	<i>Integrated childhood obesity and nutritional neuroscience in schools (ICONS) study</i>	NU Subaward: \$19,198	Hillman	Unfunded
NIH, National Institute of Diabetes and Digestive and Kidney Diseases	<i>Recess policy implications for health behaviors, obesity, and cognition in childhood</i>	NU Subaward: \$296,847	Hillman	Unfunded
Reumatikerförbundet	<i>Utveckling och utvärdering av ett frågeformulär för fysisk aktivitet hos barn med reumatisk sjukdom samt faktorer relaterade till den fysiska aktivitetsnivån.</i>	100,000 SEK or \$11,363 USD 2018-2020. \$5,681/yr	Iversen	Funded
Norrbacka-Eugenia	<i>Evaluation of a physical activity scale for children with disabilities (ASCeND) among children with juvenile idiopathic arthritis and correlates with physical activity levels</i>	50,000 SEK or \$5,681 USD	Iversen	Funded
US Fulbright Research Scholar Program: European Division.	<i>Development and Psychometric Testing of Novel Patient-Oriented Outcome Measures in Arthritis</i>	82,100 SEK or \$9,330 USD \$4,665/yr	Iversen	Funded
Reumatikerförbundet,	<i>Utveckling och utvärdering av ett frågeformulär för fysisk aktivitet hos barn med reumatisk</i>	100,000 SEK or \$11,363 USD	Iversen	Pending

	<i>sjukdom samt faktorer relaterade till den fysiska aktivitetsnivån.</i>			
NIAMS-MCRC: P60 AR047782	<i>Counseling for Persons at Risk to Develop Rheumatoid Arthritis</i>	\$787,723 \$157544/yr	Iversen	Funded
American Shoulder and Elbow Surgeons	<i>Reliability, Validity, and Responsiveness of a Modified Shoulder and Elbow Outcome Measure (Pedi-ASES) in Children With Shoulder and Elbow Dysfunction.</i>	\$20,000 2018-2019,	Iversen	Submitted
NIAMS Multidisciplinary Clinical Research Center, Methodology CORE. NIH/NIAMS P60 AR047782	<i>Research center grant for research dedicated to methodologically rigorous, clinically relevant translational research on rheumatic and musculoskeletal conditions.</i>	?	Iversen	Funded
NIH R01	<i>Continuous Objective Multimodal Pain Assessment Sensing System (COMPASS).</i>	? (2018-2021).	Iversen	Pending
Northeastern University Tier 1 Grant (2018-2019).	<i>Continuous Objective Multimodal Pain Assessment Sensing System (COMPASS).</i>	?	Iversen	Pending
NIH/NIAMS K23AR071500	<i>Avoidable Acute Care Use among Patients with Lupus.</i>	? co-mentor Mar 5, 2017 - Feb 28, 2022.	Iversen	Funded
NEU Interprofessional Simulation Faculty Development	<i>Interprofessional Simulation</i>	\$2,500	Kiami	Funded
Interdisciplinary Tier 1 Grant Mentored Award	<i>Exploring neurophysiological mechanisms of learning and transfer in virtual environments for children with cerebral palsy.</i>	\$50,000	Levac	Pending
K01HD093838 Mentored Research Scientist Career Development (K01) award National Institutes of Health	<i>Enhancing transfer of motor skill learning from virtual to physical environments in children with cerebral palsy.</i>	Direct Cost: \$117,254/yr	Levac	Funded
1752624 CAREER Award NSF	<i>Mechanisms of motor learning and transfer in virtual and augmented reality</i>	Direct cost: \$191,527	Levac	Funded
Deborah Munroe Noonan Memorial Research Fund	<i>Usability evaluation of the FITBoard (Fun Interactive Therapy Board): A motivating,</i>	\$66,318 \$33,159/yr	Levac	Funded

	<i>movement-based rehabilitation tool for children with disabilities</i>			
Child Health Research Award Charles H. Hood Foundation	<i>Is motor learning enhanced by practice in a virtual environment for children with cerebral palsy?</i>	Direct cost: \$68,173/yr	Levac	Funded
Tufts Clinical and Translational Science Institute Pilot Studies Grant	<i>Influence of virtual environment complexity on motor learning in children with cerebral palsy: Implications for virtual reality use in rehabilitation</i>	\$45,000	Levac	Funded
NEU -Tier 2 Federally Designated Centers / Major Programs Initiative	<i>Modeling muscle and synergy representations in M1</i>	\$12,000 (split between Bouve, COE, Office of the Provost) \$4,000	Tunik	Funded
Marc Cinique. Mechanism: Private Donation	<i>Neuromotor Biomarkers to Improve Earlier Diagnosis of Amyotrophic Lateral Sclerosis</i>	\$50,000	Tunik	Funded
NIH - National Institute of Child Health and Human Development. R01	<i>Modeling Human M1-Muscle Control via TMS, Deep Learning, and Validation in Macaques</i>	\$3,922,063 (Direct Cost: \$2,911,617)	Tunik	Submitted
NIH – National Institute of Neurological Disorders and Stroke. R01 (2R01HD058301)	<i>Optimizing Hand Rehabilitation Post-Stroke Using Interactive Virtual Environments</i>	Sub-award to NU: Total: \$706,262; Direct Cost: \$449,848) 499,969/yr	Tunik	Funded
NIH – National Institute of Neurological Disorders and Stroke. R01 (NS085122)	<i>Planning and Updating in Frontoparietal Networks for Grasping</i>	\$1,299,108 (\$259,821)	Tunik	Funded
NSF – CBET - BME (1804550)	<i>Collaborative Research: Understanding Motor Cortical Organization through Engineering Innovation to TMS-Based Brain Mapping</i>	\$600,000 05/01/2018 – 04/30/2021	Tunik	Pending
NSF – CMMI - M3X - Mind, Machine, and Motor (1830876)	<i>Student / Scientist Workshop: A Satellite session for Progress in Clinical Motor Control I: Neurorehabilitation</i>	\$19,770 or \$6590/yr	Tunik	Pending-recommended for funding

NIH-National Institute of Neurological Disorder and Stroke. R21	<i>MirroRobot: Augmented Stroke Rehabilitation through Coupled Mirror and Robot-assisted therapies.</i>	\$750,000 (Direct Cost: \$500,000)	Tunik/Yen	Pending
AHA	<i>Using mirror visual feedback to guide gait training post stroke</i>	\$200,000	Yen	Submitted
NSF	<i>An innovative VR-based clinical decision support paradigm for individuals with cognitive and sensorimotor impairments</i>	\$947,163	Yen	Submitted

Awards

International

1. Danielle Levac- 2017 Best presentation award, International Conference on Virtual Rehabilitation.

National

1. **Leslie Day** - 2018 Sam Drogo Technology in Classroom Award, Human Anatomy Physiology Society.
2. **Sheri Kiami** -2018 Interprofessional Health Service Policy Award by Academy of Neurologic Physical Therapy Balance and Falls Special Interest Group: Awareness, Attitudes & Beliefs about Fall Risk and Evidence-Based Falls Prevention Programs Among Community Dwelling Older Adults. APTA Combined Sections Meeting.

Local- Northeastern

1. **Diane Fitzpatrick**- 2018 Faculty Excellence in Community Engagement Award, Department of Physical Therapy, Movement and Rehabilitation Sciences
2. **CJ Hasson**- 2018 Bouvé College of Health Sciences Distinguished Educator Award.
3. **Danielle Levac**- 2018 Honor Program Early Research Awards (Supervisor).
4. **Diane Fitzpatrick**-2017 Northeastern University Community Engagement Award.
5. **Lorna Hayward**-2017 Northeastern University Community Engagement Award.
6. **Sheri Kiami**-2017 Appreciated Faculty Member, Recognition by Delta Zeta Sorority

Online/Webinars

1. **Nolan DC.** Management of Lower Extremity Tendinopathy. (Invited Speaker) PhysicalTherapy.Com, February, 2018.

2. **Nolan DC.** Post-Operative Management of Selected Shoulder Conditions. (Invited Speaker). OT.Com. July, 2017.

3. **Nolan DC.** Management of Adhesive Capsulitis: 2017 Update. (Invited Speaker). OT.Com. June, 2017.