



Northeastern University
Bouvé College of Health Sciences
**Physical Therapy, Movement
and Rehabilitation Science**

2021 Annual Research Report

Overview

	2019	2020	2021
Books	1	0	0
Book Chapters	10	2	2
Peer Reviewed Publications	76	77	74
Conference Abstract Presentations	21	14	56
Other Presentations	71	46	42
Webinars	1	1	0
Grants submitted; total dollars requested	\$6,133,363	\$16,397,765	\$17,431,912
Funded grants; total costs	\$1,878,990	\$2,041,287	\$2,063,371

Peer Reviewed Publications

1. Ai, M., Morris, T. P., Ordway, C., Quinoñez, E., D'Agostino, F., Whitfield-Gabrieli, S., **Hillman, C. H.**, Pindus, D. M., McAuley, E., Mayo, N., de la Colina, A. N., Phillips, S., Kramer, A. F., & Geddes, M. (2021). The Daily Activity Study of Health (DASH): A pilot randomized controlled trial to enhance physical activity in sedentary older adults. *Contemporary Clinical Trials, 106*, 106405. <https://doi.org/https://doi.org/10.1016/j.cct.2021.106405>
2. Artiran, S., **Chukoskie, L.**, Jung, A., Miller, I., & Cosman, P. (2021). HMM-based Detection of Head Nods to Evaluate Conversational Engagement from Head Motion Data. *2021 29th European Signal Processing Conference (EUSIPCO)*, 1301–1305. <https://doi.org/10.23919/EUSIPCO54536.2021.9615999>
3. Bednarczyk, V., & **Markowski, A.** (2021). *Temporomandibular Joint Anterior Disc Displacement Without Reduction. 1*(4), 287–288. <https://doi.org/10.2519/josptcases.2021.10555>
4. Chaddock-Heyman, L., Weng, T. B., Kienzler, C., Weisshappel, R., Drollette, E. S., **Raine, L. B.**, Westfall, D. R., Kao, S. C., Baniqued, P., Castelli, D. M., **Hillman, C. H.**, & Kramer, A. F. (2020). Brain Network Modularity Predicts Improvements in Cognitive and Scholastic Performance in Children Involved in a Physical Activity Intervention. *Frontiers in Human Neuroscience, 14*. <https://doi.org/10.3389/fnhum.2020.00346>
5. Chaddock-Heyman, L., Weng, T. B., Loui, P., Kienzler, C., Weisshappel, R., Drollette, E. S., **Raine, L. B.**, Westfall, D., Kao, S. C., Pindus, D. M., Baniqued, P., Castelli, D. M., **Hillman, C. H.**, & Kramer, A. F. (2021). Brain network modularity predicts changes in cortical thickness in children involved in a physical activity intervention. *Psychophysiology, 58*(10), 346. <https://doi.org/10.1111/psyp.13890>
6. Chueh, T.-Y., Hsieh, S.-S., Tsai, Y.-J., Yu, C.-L., Hung, C.-L., Benzing, V., Schmidt, M., Chang, Y.-K., **Hillman, C. H.**, & Hung, T.-M. (2022). Effects of a single bout of moderate-to-vigorous physical activity on executive functions in children with attention-deficit/hyperactivity disorder: A systematic review and meta-analysis. *Psychology of Sport and Exercise, 58*, 102097. <https://doi.org/https://doi.org/10.1016/j.psychsport.2021.102097>
7. Chui, K. K., Tudini, F., **Corkery, M. B.**, & Yen, S.-C. (2021). Power Training in Older Adults With Hip Osteoarthritis and Total Hip Arthroplasty. *Topics in Geriatric Rehabilitation, 37*(1).
8. Clites, T. R., **Shepherd, M. K.**, Ingraham, K. A., Wontorcik, L., & Rouse, E. J. (2021). Understanding patient preference in prosthetic ankle stiffness. *Journal of NeuroEngineering and Rehabilitation, 18*(1), 128. <https://doi.org/10.1186/s12984-021-00916-1>
9. **Corkery, M. B.**, Hensley, C. P., Danilovich, M. K., Davila, V. S., & Chui, K. K. (2021). Power Training in Older Adults With Knee Osteoarthritis. *Topics in Geriatric Rehabilitation, 37*(1).
10. DaSilva, M. M., Chandran, V. D., Dixon, P. C., Loh, J. M., **Dennerlein, J. T.**, Schiffman, J. M., & Pal, S. (2021). Muscle co-contractions are greater in older adults during walking at self-selected speeds over uneven compared to even surfaces. *Journal of Biomechanics, 128*, 110718. <https://doi.org/https://doi.org/10.1016/j.jbiomech.2021.110718>
11. **Dennerlein, J. T.**, Eyllon, M., Garverich, S., Weinstein, D., Manjourides, J., Vallas, S. P., & Lincoln, A. K. (2021). Associations Between Work-Related Factors and

- Psychological Distress Among Construction Workers. *Journal of Occupational and Environmental Medicine*, 63(12).
12. Donahue, P. T., Grove, G., Stillman, C., Kang, C., Burns, J., **Hillman, C. H.**, Kramer, A. F., McAuley, E., Vidoni, E., & Erickson, K. I. (2021). Estimating the financial costs associated with a phase III, multi-site exercise intervention trial: Investigating Gains in Neurocognition in an Intervention Trial of Exercise (IGNITE). *Contemporary Clinical Trials*, 105, 106401. <https://doi.org/10.1016/j.cct.2021.106401>
 13. **Dorsey, K. L.**, & Lazarus, N. (2021). Lifetime of Liquid Metal Wires for Stretchable Devices. *Advanced Materials Technologies*, 6(4). <https://doi.org/10.1002/admt.202001100>
 14. Esteban-Cornejo, I., Stillman, C. M., Rodriguez-Ayllon, M., Kramer, A. F., **Hillman, C. H.**, Catena, A., Erickson, K. I., & Ortega, F. B. (2021). Physical fitness, hippocampal functional connectivity and academic performance in children with overweight/obesity: The ActiveBrains project. *Brain, Behavior, and Immunity*, 91, 284–295. <https://doi.org/10.1016/j.bbi.2020.10.006>
 15. Esteban-Cornejo, I., Stillman, C. M., Rodriguez-Ayllon, M., Kramer, A. F., **Hillman, C. H.**, Catena, A., Erickson, K. I., & Ortega, F. B. (2021). Physical fitness, hippocampal functional connectivity and academic performance in children with overweight/obesity: The ActiveBrains project. *Brain, Behavior, and Immunity*, 91, 284–295. <https://doi.org/https://doi.org/10.1016/j.bbi.2020.10.006>
 16. Faghihpirayesh, R., **Yarossi, M.**, Imbiriba, T., Brooks, D. H., **Tunik, E.**, & Erdoğan, D. (2021). Efficient TMS-Based Motor Cortex Mapping Using Gaussian Process Active Learning. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 29, 1679–1689. <https://doi.org/10.1109/TNSRE.2021.3105644>
 17. Fluet, G., Qiu, Q., Patel, J., Mont, A., Cronce, A., **Yarossi, M.**, Merians, A., & Adamovich, S. (2021). Virtual Rehabilitation of the Paretic Hand and Arm in Persons With Stroke: Translation From Laboratory to Rehabilitation Centers and the Patient's Home. *Frontiers in Neurology*, 12. <https://doi.org/10.3389/fneur.2021.623261>
 18. Furmanek, M. P., Mangalam, M., Lockwood, K., Smith, A., **Yarossi, M.**, & **Tunik, E.** (2021). Effects of Sensory Feedback and Collider Size on Reach-to-Grasp Coordination in Haptic-Free Virtual Reality. *Frontiers in Virtual Reality*, 2. <https://doi.org/10.3389/frvir.2021.648529>
 19. Giacomini, B. A., Yamato, T. P., **Lopes, A. D.**, & Hespanhol, L. (2021). What is the foot strike pattern distribution in children and adolescents during running? A cross-sectional study. *Brazilian Journal of Physical Therapy*, 25(3), 336–343. <https://doi.org/https://doi.org/10.1016/j.bjpt.2020.10.001>
 20. Han, M., Zandigohar, M., Furmanek, M. P., **Yarossi, M.**, Schirner, G., & Erdoğan, D. (2021). Classifications of Dynamic EMG in Hand Gesture and Unsupervised Grasp Motion Segmentation. *2021 43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC)*, 359–364. <https://doi.org/10.1109/EMBC46164.2021.9630739>
 21. **Hayward, L.**, Alawadhi, A., & Fretias, F. (2021). Listening to Student Voices as a Step toward Strengthening Inclusive and Intercultural Teaching Approaches Inclusive and Intercultural Teaching Approaches. *Teaching and Learning Together in Higher Education*, 32 (1).

22. **Hayward, L.**, Sellheim, D. O., Scholl, J., & Joyce, C. (2021). Defining Key Elements for Effective Physical Therapist–Physical Therapist Assistant Working Relationships: A Qualitative Study. *Journal of Physical Therapy Education*, 35(1), 19–26. <https://doi.org/10.1097/jte.000000000000172>
23. Hsieh, S. S., Chueh, T. Y., Huang, C. J., Kao, S. C., **Hillman, C. H.**, Chang, Y. K., & Hung, T. M. (2021). Systematic review of the acute and chronic effects of high-intensity interval training on executive function across the lifespan. *Journal of Sports Sciences*, 39(1), 10–22. <https://doi.org/10.1080/02640414.2020.1803630>
24. Hsieh, S.-S., Chueh, T.-Y., Huang, C.-J., Kao, S.-C., **Hillman, C. H.**, Chang, Y.-K., & Hung, T.-M. (2021). Systematic review of the acute and chronic effects of high-intensity interval training on executive function across the lifespan. *Journal of Sports Sciences*, 39(1), 10–22. <https://doi.org/10.1080/02640414.2020.1803630>
25. Hsieh, S.-S., **Raine, L. B.**, Ortega, F. B., & **Hillman, C. H.** (2022). The Role of Chronic Physical Activity in Alleviating the Detrimental Relationship of Childhood Obesity on Brain and Cognition. *Journal of Cognitive Enhancement*, 6(2), 248–271. <https://doi.org/10.1007/s41465-021-00230-7>
26. Huang, C., Chen, Q., Petrovic, V., Rissolo, D., & **Chukoskie, L.** (2021). Interactive Game-Based Exploration of an Underwater Paleontological Site. *2021 7th International Conference of the Immersive Learning Research Network (ILRN)*, 1–5. <https://doi.org/10.23919/iLRN52045.2021.9459364>
27. Hwang, J., **Hillman, C. H.**, Lee, I.-M., Fernandez, A. M., & Lu, A. S. (2020). Comparison of Inhibitory Control After Acute Bouts of Exergaming Between Children with Obesity and Their Normal-Weight Peers. *Games for Health Journal*, 10(1), 63–71. <https://doi.org/10.1089/g4h.2020.0018>
28. Ishihara, T., Drollette, E. S., Ludyga, S., **Hillman, C. H.**, & Kamijo, K. (2021). The effects of acute aerobic exercise on executive function: A systematic review and meta-analysis of individual participant data. In *Neuroscience and Biobehavioral Reviews* (Vol. 128, pp. 258–269). Pergamon. <https://doi.org/10.1016/j.neubiorev.2021.06.026>
29. Ishihara, T., Drollette, E. S., Ludyga, S., **Hillman, C. H.**, & Kamijo, K. (2021). The effects of acute aerobic exercise on executive function: A systematic review and meta-analysis of individual participant data. *Neuroscience & Biobehavioral Reviews*, 128, 258–269. <https://doi.org/https://doi.org/10.1016/j.neubiorev.2021.06.026>
30. Kao, S.-C., Wang, C.-H., Kamijo, K., Khan, N., & **Hillman, C.** (2021). Acute effects of highly intense interval and moderate continuous exercise on the modulation of neural oscillation during working memory. *International Journal of Psychophysiology*, 160, 10–17. <https://doi.org/10.1016/j.ijpsycho.2020.12.003>
31. Kline, C. E., **Hillman, C. H.**, Bloodgood Sheppard, B., Tennant, B., Conroy, D. E., Macko, R. F., Marquez, D. X., Petruzzello, S. J., Powell, K. E., & Erickson, K. I. (2021). Physical activity and sleep: An updated umbrella review of the 2018 Physical Activity Guidelines Advisory Committee report. *Sleep Medicine Reviews*, 58, 101489. <https://doi.org/https://doi.org/10.1016/j.smrv.2021.101489>
32. Koh MH, Yen SC, Leung LY, Gans S, Sullivan K, Adibnia Y, Pavel M, and **Hasson CJ.** (2021). Exploiting telerobotics for sensorimotor rehabilitation: A locomotor embodiment. *Journal of NeuroEngineering and Rehabilitation*, 18:66. PMID: 33882949 PMCID: PMC8059234

33. Liang, D., **Yarossi, M.**, Jacobs-Skolik, S. L., Furmanek, M. P., Brooks, D., Erdogmus, D., & **Tunik, E.** (2021). Synergistic Activation Patterns of Hand Muscles in Left-and Right-Hand Dominant Individuals. *Journal of Human Kinetics*, 76(1), 89–100. <https://doi.org/doi:10.2478/hukin-2021-0002>
34. Lin, C.-C., Hsieh, S.-S., Chang, Y.-K., Huang, C.-J., **Hillman, C. H.**, & Hung, T.-M. (2021). Up-regulation of proactive control is associated with beneficial effects of a childhood gymnastics program on response preparation and working memory. *Brain and Cognition*, 149, 105695. <https://doi.org/https://doi.org/10.1016/j.bandc.2021.105695>
35. Liu, R., Hannon, B. A., Robinson, K. N., **Raine, L. B.**, Hammond, B. R., Renzi-Hammond, L. M., Cohen, N. J., Kramer, A. F., **Hillman, C. H.**, Teran-Garcia, M., & Khan, N. A. (2021). Single Nucleotide Polymorphisms in CD36 Are Associated with Macular Pigment among Children. *Journal of Nutrition*, 151(9), 2533–2540. <https://doi.org/10.1093/jn/nxab153>
36. Logan, N. E., **Raine, L. B.**, Drollette, E. S., Castelli, D. M., Khan, N. A., Kramer, A. F., & **Hillman, C. H.** (2021). The differential relationship of an afterschool physical activity intervention on brain function and cognition in children with obesity and their normal weight peers. *Pediatric Obesity*, 16(2), e12708. <https://doi.org/10.1111/ijpo.12708>
37. Lonsdale, C., Sanders, T., Parker, P., Noetel, M., Hartwig, T., Vasconcellos, D., Lee, J., Antczak, D., Kirwan, M., Morgan, P., Salmon, J., Moodie, M., McKay, H., Bennie, A., Plotnikoff, R. C., Cinelli, R., Greene, D., Peralta, L., Cliff, D., **Hillman, C.** ... Lubans, D. R. (2021). Effect of a Scalable School-Based Intervention on Cardiorespiratory Fitness in Children: A Cluster Randomized Clinical Trial. *JAMA Pediatrics*, 175(7), 680–688. <https://doi.org/10.1001/jamapediatrics.2021.0417>
38. Lubans, D. R., Smith, J. J., Eather, N., Leahy, A. A., Morgan, P. J., Lonsdale, C., Plotnikoff, R. C., Nilsson, M., Kennedy, S. G., Holliday, E. G., Weaver, N., Noetel, M., Shigeta, T. T., Mavilidi, M. F., Valkenborghs, S. R., Gyawali, P., Walker, F. R., Costigan, S. A., & **Hillman, C. H.** (2021). Time-efficient intervention to improve older adolescents' cardiorespiratory fitness: Findings from the a € Burn 2 Learn' cluster randomised controlled trial. *British Journal of Sports Medicine*, 55(13), 751–758. <https://doi.org/10.1136/bjsports-2020-103277>
39. Mangalam, M., **Yarossi, M.**, Furmanek, M. P., & Tunik, E. (2021). Control of aperture closure during reach-to-grasp movements in immersive haptic-free virtual reality. *Experimental Brain Research*, 239(5), 1651–1665. <https://doi.org/10.1007/s00221-021-06079-8>
40. Markkanen, P., Peters, S. E., Grant, M., **Dennerlein, J. T.**, Wagner, G. R., Burke, L., Wallace, L., & Sorensen, G. (2021). Development and application of an innovative instrument to assess work environment factors for injury prevention in the food service industry. *Work*, 68, 641–651. <https://doi.org/10.3233/WOR-203399>
41. Martins de Oliveira, G., Araujo Kretli Mota, G., Sain Vallio, C., Dias **Lopes, A.**, & Hespanhol, L. (2021). What are the facilitators and barriers to develop a running-related injury prevention program? A qualitative study. *Physiotherapy Theory and Practice*. <https://doi.org/10.1080/09593985.2021.1967538>
42. Matsuno, M., Auzenne, D., & **Chukoskie, L.** (2021). “All bets are off”: Flexible engagement with music-listening technologies by autistic adults. *Psychology of Music*, 49(6), 1573–1588. <https://doi.org/10.1177/0305735620971037>

43. Mavilidi, M. F., Mason, C., Leahy, A. A., Kennedy, S. G., Eather, N., **Hillman, C. H.**, Morgan, P. J., Lonsdale, C., Wade, L., Riley, N., Heemskerk, C., & Lubans, D. R. (2021). Effect of a Time-Efficient Physical Activity Intervention on Senior School Students' On-Task Behaviour and Subjective Vitality: the 'Burn 2 Learn' Cluster Randomised Controlled Trial. *Educational Psychology Review*, *33*(1), 299–323. <https://doi.org/10.1007/s10648-020-09537-x>
44. Migueles, J. H., Cadenas-Sanchez, C., Esteban-Cornejo, I., Mora-Gonzalez, J., Rodriguez-Ayllon, M., Solis-Urra, P., Erickson, K. I., Kramer, A. F., **Hillman, C. H.**, Catena, A., & Ortega, F. B. (2021). Associations of sleep with gray matter volume and their implications for academic achievement, executive function and intelligence in children with overweight/obesity. *Pediatric Obesity*, *16*(2), e12707. <https://doi.org/10.1111/ijpo.12707>
45. Migueles, J. H., Martinez-Nicolas, A., Cadenas-Sanchez, C., Esteban-Cornejo, I., Muntaner-Mas, A., Mora-Gonzalez, J., Rodriguez-Ayllon, M., Madrid, J. A., Rol, M. A., **Hillman, C. H.**, Catena, A., & Ortega, F. B. (2021). Activity-rest circadian pattern and academic achievement, executive function, and intelligence in children with obesity. *Scandinavian Journal of Medicine and Science in Sports*, *31*(3), 653–664. <https://doi.org/10.1111/sms.13862>
46. Morris, T. P., Ai, M., Chaddock-Heyman, L., McAuley, E., **Hillman, C. H.**, & Kramer, A. F. (2021). Relationships Between Enriching Early-Life Experiences and Cognitive Function Later in Life Are Mediated by Educational Attainment. *Journal of Cognitive Enhancement*, *5*(4), 449–458. <https://doi.org/10.1007/s41465-021-00208-5>
47. Morris, T. P., Chaddock-Heyman, L., Ai, M., Anteraper, S. A., Castañón, A. N., Whitfield-Gabrieli, S., **Hillman, C. H.**, McAuley, E., & Kramer, A. F. (2021). Enriching activities during childhood are associated with variations in functional connectivity patterns later in life. *Neurobiology of Aging*, *104*, 92–101. <https://doi.org/10.1016/j.neurobiolaging.2021.04.002>
48. Nemeskal, C. S., Watrous, J., **Raine, L.**, & **Hillman, C.** (2021). The Relationship Between Sleep and Cognitive and Physical Health. *International Journal of High School Research*, *3*(5), 6–10. <https://doi.org/10.36838/v3i5.2>
49. Oliveira, G. M., **Lopes, A. D.**, & Hespanhol, L. (2021). Are there really many runners out there? Is the proportion of runners increasing over time? A population-based 12-year repeated cross-sectional study with 625,460 Brazilians. *Journal of Science and Medicine in Sport*, *24*(6), 585–591. <https://doi.org/https://doi.org/10.1016/j.jsams.2020.11.014>
50. Peters, S. E., Grogan, H., Henderson, G. M., Gómez, M. A. L., Maldonado, M. M., Sanhueza, I. S., & **Dennerlein, J. T.** (2021). Working conditions influencing drivers' safety and well-being in the transportation industry: “on board” program. *International Journal of Environmental Research and Public Health*, *18*(19). <https://doi.org/10.3390/ijerph181910173>
51. Pimenta, R. M., Hespanhol, L., & **Lopes, A. D.** (2021). Brazilian version of the OSTRC Questionnaire on health problems (OSTRC-BR): translation, cross-cultural adaptation and measurement properties. *Brazilian Journal of Physical Therapy*, *25*(6), 785–793. <https://doi.org/10.1016/J.BJPT.2021.06.010>
52. Pinkes, N., Fagiani, Z., Wong, E., Jimison, H., Pavel, M., **Yarossi, M.**, & **Tunik, E.** (2021). Investigating a classical neuropsychological test in a real world context. *2021*

- 43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC), 1566–1569. <https://doi.org/10.1109/EMBC46164.2021.9630190>
53. Pronk, N. P., McLellan, D. L., **Dennerlein, J. T.**, Anderson, P., Karapanos, M., Nagler, E., Schmidt, D., Spoonheim, J., Wallace, L. M., & Sorensen, G. (2021). Building Capacity for Integrated Occupational Safety, Health, and Well-Being Initiatives Using Guidelines for Total Worker Health® Approaches. *Journal of Occupational and Environmental Medicine*, 63(5).
https://journals.lww.com/joem/Fulltext/2021/05000/Building_Capacity_for_Integrated_Occupational.9.aspx
54. Quraishi, H. A., **Shepherd, M. K.**, McManus, L., Harlaar, J., Plettenburg, D. H., & Rouse, E. J. (2021). A passive mechanism for decoupling energy storage and return in ankle-foot prostheses: A case study in recycling collision energy. *Wearable Technologies*, 2, e9. <https://doi.org/DOI: 10.1017/wtc.2021.7>
55. **Raine, L. B.**, McDonald, K., Shigeta, T. T., Hsieh, S. S., Hunt, J., Chiarlitti, N. A., Lim, M., Gebhardt, K., Collins, N., De Lisio, M., Mullen, S. P., Kramer, A. F., & **Hillman, C.** (2021). Sympathetic Nervous System and Exercise Affects Cognition in Youth (SNEACY): study protocol for a randomized crossover trial. *Trials*, 22(1), 1–10. <https://doi.org/10.1186/s13063-021-05096-w>
56. Rampersad, S., Roig-Solvas, B., **Yarossi, M.**, Dorval, A., & Brooks, D. (2021). An efficient algorithm for electrode optimization of transcranial temporal interference stimulation. *Brain Stimulation*, 14(6), 1619. <https://doi.org/https://doi.org/10.1016/j.brs.2021.10.100>
57. Rethorn ZD, **Maxwell JL**, Bezner JR, Davenport TE, Bradford EH, Ingman MS, Magnusson, DM. What are DPT program practices and attitudes related to health promotion and wellness? Results of a national survey. *Physical Therapy*. Phys Ther. 2021; 101(1): 1–11
58. Saint, S. E., Hammond, B. R., Khan, N. A., **Hillman, C. H.**, & Renzi-Hammond, L. M. (2021). Temporal vision is related to cognitive function in preadolescent children. *Applied Neuropsychology: Child*, 10(4), 319–326. <https://doi.org/10.1080/21622965.2019.1699096>
59. Samra, Y. A., Kira, D., Rajpurohit, P., Mohamed, R., Owen, L. A., Shakoor, A., Kim, I. K., Deangelis, M. M., Sheibani, N., Al-Shabrawey, M., & Tawfik, A. (2021). Implication of n-methyl-D-aspartate receptor in homocysteine-induced age-related macular degeneration. *International Journal of Molecular Sciences*, 22(17). <https://doi.org/10.3390/ijms22179356>
60. Sanchez, A., Tallman, S. D., Winburn, A. P., & **Stefanik, J.** (2021). The effects of orthopedic pathological conditions and systemic diseases on the prevalence of hip osteoarthritis in Modern African- and European-Americans. *Homo : Internationale Zeitschrift Fur Die Vergleichende Forschung Am Menschen*, 72(3), 183–203. <https://doi.org/10.1127/homo/2021/1329>
61. Shigeta, T. T., Leahy, A. A., Smith, J. J., Eather, N., Lubans, D. R., & **Hillman, C. H.** (2021). Cardiorespiratory and muscular fitness associations with older adolescent cognitive control. *Journal of Sport and Health Science*, 10(1), 82–90. <https://doi.org/10.1016/j.jshs.2020.05.004>
62. Shigeta, T. T., Morris, T. P., Henry, D. H., Kucyi, A., Bex, P., Kramer, A. F., & **Hillman, C. H.** (2021). Acute exercise effects on inhibitory control and the pupillary response in

- young adults. *International Journal of Psychophysiology*, 170, 218–228.
<https://doi.org/10.1016/j.ijpsycho.2021.08.006>
63. Shigeta, T. T., Leahy, A. A., Smith, J. J., Eather, N., Lubans, D. R., & **Hillman, C. H.** (2021). Cardiorespiratory and muscular fitness associations with older adolescent cognitive control. *Journal of Sport and Health Science*, 10(1), 82–90.
<https://doi.org/https://doi.org/10.1016/j.jshs.2020.05.004>
 64. Snider, J., Spence, R. J., Engler, A.-M., Moran, R., Hacker, S., **Chukoskie, L.**, Townsend, J., & Hill, L. (2021). Distraction “Hangover”: Characterization of the Delayed Return to Baseline Driving Risk After Distracting Behaviors. In *Human Factors* (Vol. 00, Issue 0).
 65. Sorensen, G., **Dennerlein, J. T.**, Peters, S. E., Sabbath, E. L., Kelly, E. L., & Wagner, G. R. (2021). The future of research on work, safety, health and wellbeing: A guiding conceptual framework. *Social Science & Medicine*, 269, 113593.
<https://doi.org/https://doi.org/10.1016/j.socscimed.2020.113593>
 66. Syväoja, H. J., Kankaanpää, A., Hakonen, H., Inkinen, V., Kulmala, J., Joensuu, L., Räsänen, P., **Hillman, C. H.**, & Tammelin, T. H. (2021). How physical activity, fitness, and motor skills contribute to math performance: Working memory as a mediating factor. *Scandinavian Journal of Medicine and Science in Sports*, 31(12), 2310–2321.
<https://doi.org/10.1111/sms.14049>
 67. Tarp, J., Gejl, A. K., **Hillman, C. H.**, Wedderkopp, N., & Bugge, A. (2021). Does additional physical education improve exam performance at the end of compulsory education? A secondary analysis from a natural experiment: The champs-study dk. *Children*, 8(1). <https://doi.org/10.3390/children8010057>
 68. Tepencelik, O. N., Wei, W., **Chukoskie, L.**, Cosman, P. C., & Dey, S. (2021). Body and Head Orientation Estimation with Privacy Preserving LiDAR Sensors. *2021 29th European Signal Processing Conference (EUSIPCO)*, 766–770.
<https://doi.org/10.23919/EUSIPCO54536.2021.9616111>
 69. Vallio, C. S., Oliveira, G. M. de, Mota, G. A. K., **Lopes, A. D.**, & Hespanhol, L. (2021). RunIn3: the development process of a running-related injury prevention programme. *BMJ Open Sport and Exercise Medicine*, 7(3), e001051. <https://doi.org/10.1136/bmjsem-2021-001051>
 70. Wang, Y., Xiong, H., Liu, S., Jung, A., Stone, T., & **Chukoskie, L.** (2021). Simulation Agent-Based Model to Demonstrate the Transmission of COVID-19 and Effectiveness of Different Public Health Strategies. *Frontiers in Computer Science*, 3.
<https://doi.org/10.3389/fcomp.2021.642321>
 71. Willis, N. B., Muñoz, C. X., Mysonhimer, A. R., Edwards, C. G., Wolf, P. G., **Hillman, C. H.**, Burd, N. A., Holscher, H. D., & Khan, N. A. (2021). Hydration Biomarkers Are Related to the Differential Abundance of Fecal Microbiota and Plasma Lipopolysaccharide-Binding Protein in Adults. *Annals of Nutrition and Metabolism*, 77(suppl 4)(4), 37–45. <https://doi.org/10.1159/000520478>
 72. Yangüez, M., Bediou, B., **Hillman, C. H.**, Bavelier, D., & Chanal, J. (2021). The Indirect Role of Executive Functions on the Relationship between Cardiorespiratory Fitness and School Grades. *Medicine and Science in Sports and Exercise*, 53(8), 1656–1665.
<https://doi.org/10.1249/MSS.0000000000002630>
 73. **Yarossi, M.**, Mangalam, M., Naufel, S., & Tunik, E. (2021). Virtual Reality as a Context for Adaptation. *Frontiers in Virtual Reality*, 2. <https://doi.org/10.3389/frvir.2021.733076>

74. Zandigohar, M., Han, M., Sharif, M., Gunay, S. Y., Furmanek, M. P., **Yarossi, M.**, Bonato, P., Onal, C., Padir, T., Erdogmus, D., & Schirner, G. (2021). *Multimodal Fusion of EMG and Vision for Human Grasp Intent Inference in Prosthetic Hand Control*. <http://arxiv.org/abs/2104.03893>

Book Chapters

1. Castelli, D.M., **Hillman, C.H.**, Raine, L., Drollette, E.S. (2021). Ten years later: what we learned about after-school programming from the Fitness Improves Thinking in Kids (FITKids) clinical trial. In Marttinen R., Centeio E., & Quarmby T. (Eds.), *Before- and After-School Physical Activity Programs: Frameworks, Critical Issues, and Underserved Populations* (pp. 83-95). Routledge: Abingdon, United Kingdom. ISBN: 978-0-367-50936-1.
2. Suarez, N.A., Rosbdy, E, Bakke, D.V., Chiba, A.A., **Chukoskie, L.** (2021). Hands on Learning in a Hands-off World: Project Based Learning as a Method of Student Engagement and Support During the COVID-1 Crisis. In Cheong, C., Coldwell-Neilson, J., MacCallum, K., Luo, T., & Scime, A. (Eds.), *Covid-19 and Education: Learning and Teaching in a Pandemic-Constrained Environment* (pp.22-242). Informing Science Press, Santa Rosa, CA. ISBN: 1681100630

Conference Abstracts and Presentations

1. Pavel M, Caves K, Jarvis L, **Hasson CJ**, Kos M, Jimison H. (2021). Unobtrusive, continuous LIDAR-based measurement of gait characteristics at home. In: Engineering in Medicine and Biology Society (EMBC). *43rd Annual International Conference of the IEEE*.
2. Manczurowsky J and **Hasson CJ**. (2021) Control of manipulative forces on the leg during walker ambulation is hard for human trainers. *Society for Neuroscience 50th Annual Meeting*, November 8-11 (Virtual Conference due to Covid-19).
3. Manczurowsky J, Shumock K, Badadhe M, Cheeran H, and **Hasson CJ**. (2021). Proportional Myoelectric Control: Can We Adapt to Overcome Limitations of Cheap Sensors. *Society for the Neural Control of Movement Conference*, April 20 - 22 (Virtual Conference due to Covid-19).
4. Badadhe M, Manczurowsky J, Shumock K, Cheeran H, and **Hasson CJ**. (2021). A user-friendly, smartphone-deployable, interactive musculoskeletal model for experiential learning. *Society for Neuroscience Global Connectome*, January 11-19 (Virtual Conference due to Covid-19).
5. Yen S.C., Wang X, Wang I, **Corkery M**, Chui K, and Chou CA. 2021. Locomotor Training and Home Exercise Program to Improve Gait: Who May Benefit? *Archives of Physical Medicine and Rehabilitation*, 2021;102(10), p.e61. Presented at the American Congress of Rehabilitative Medicine (ACRM) Annual Conference September 2021.
6. **Lopes AD**, Schumacher N. Estimation of the economic burden of running-related injuries - A feasibility study. *American Physical Therapy Association, Combined Section Meeting*, 2021.

7. **Kiami S**, Larrieux S, Baco M, Recane E. (2021). Interprofessional Simulation to Promote Transcultural Healthcare. *Simulation in Healthcare; Journal of the Society for Simulation in Healthcare*, Vol. 16 (2), e-25.
8. **Stefanik JJ**, Felson DT, Lewis CL, Rabasa G, Guermazi A, Roemer FW, Nevitt MC, Lewis CE, Segal NA. ACR. Relation of knee extensor power to worsening cartilage damage in the knee: The MOST Study. *ACR/ARP Annual Meeting, November 2021* (Poster Presentation).
9. Corrigan DP, Felson DT, Neogi T, Lewis CL, Torner JC, Nevitt MC, Lewis CE, **Stefanik JJ**. *ACR/ARP Annual Meeting, November 2021* (Poster Presentation).
10. James K, Neogi T, Corrigan P, White D, LaValley M, Nevitt M, Torner JC, Lewis CE, **Stefanik JJ**. The relation of strength training participation to changes in physical function over 7 years: The MOST Study. *New England American College of Sports Medicine Fall Conference, October 2021* (Oral Presentation-Winner of Doctoral Student Research Award as well as the President's Cup).
11. Lee S, Neogi T, Eigenbrot S, **Stefanik JJ**, Costello KE, Kumar D. Mechanical temporal summation is associated with greater muscle co-contraction during walking in knee osteoarthritis. *Osteoarthritis Research Society International Annual Congress, April 2021* (Poster Presentation).
12. Corrigan DP, Felson DT, Lewis CL, Gross KD, Nevitt M, Lewis CE, Torner JC, **Stefanik JJ**. Influence of peak impact force magnitude and symmetry on the progression from unilateral to bilateral knee pain: The MOST Study. *Osteoarthritis Research Society International Annual Congress, April 2021* (Poster Presentation).
13. Roemer FW, Felson DT, **Stefanik JJ**, Rabasa G, Crema MD, Wang N, Neogi T, Lynch JA, Nevitt MC, Torner JC, Lewis CE, Guermazi A. Heterogeneity of cartilage involvement in knees with radiographic disease severity Kellgren-Lawrence 2 and 3: The MOST Study. *Osteoarthritis Research Society International Annual Congress, April 2021* (Poster Presentation).
14. Roemer FW, Felson DT, **Stefanik JJ**, Rabasa G, Wang N, Crema MD, Neogi T, Lynch JA, Nevitt MC, Torner JC, Lewis CE, Guermazi A. Subregional anatomical prevalence of cartilage damage in knees with radiographic disease severity Kellgren-Lawrence 2 and 3: The MOST Study. *Osteoarthritis Research Society International Annual Congress, April 2021* (Poster Presentation).
15. **Stefanik JJ**, Felson DT, Rabasa G, Guermazi A, Roemer FW, Lynch J, Lewis CE, Torner JC, Lewis CL. Relation of hip abductor strength to worsening cartilage damage in the knee: The MOST Study. *Osteoarthritis Research Society International Annual Congress, April 2021* (Poster Presentation).
16. James K, Neogi T, Corrigan P, White D, LaValley M, Nevitt M, Torner JC, Lewis CE, **Stefanik JJ**. The relation of strength training participation to changes in physical function over 7 years: The MOST Study. *Osteoarthritis Research Society International Annual Congress, April 2021* (Oral Presentation).
17. Corrigan DP, Neogi T, Frey-Law L, Segal NA, Nevitt M, Lewis CE, **Stefanik JJ**. Relation of Pain Sensitization to Physical Function and Strength: The MOST Study. *American Physical Therapy Association Combined Sections Meeting, February 2021* (Oral Presentation).
18. **Corkery MB**, Keil A, Nelson E, Kareha S, Schick M, Collie M. Advances in Imaging Referral: Generating a New Pulse in Autonomous Physical Therapist Practice. Imaging

- Special Interest Group Educational program at APTA *Combined Sections Meeting, Academy of Orthopaedic Physical Therapy, February 2021.*
19. **Corkery MB**, Hensley C, Cesario CM, Yen SC, Chui KK, Courtney CA. Use of Musculoskeletal Clinical Prediction Rules By Student Physical Therapists in the United States. APTA *Combined Sections Meeting, Academy of Physical Therapy Education, February 2021.*
 20. **Donlan, P, Kiami S.** “Designing Simulation Learning Experiences to Prepare Students for Clinical Education.” Education Leadership Conference, Atlanta, Georgia, 2021.
 21. Torres E, **Kiami S**, Brooks S. Culturally Agile Clinicians: Promoting Cultural Humility from the Classroom to Clinical Practice. *Educational Session. APTA Regional Conference, November 2021.*
 22. Silberman N, Cunningham J, Gorman S, **Kiami S**, Miale S, Pearce T, Rucker J. Enhance your Simulation Skills: Learning to Debrief with the Advocacy-Inquiry Model. *Educational Session. APTA Education Leadership Conference, October 2021.*
 23. **Kiami S**, Larrieux S. Video-Based Simulation to Promote Cultural Agility Among Doctor of Physical Therapy Students. Platform Presentation. World Conference of Physiotherapy, April, 2021.
 24. **Maxwell J**, Clark C, Braille D, Thompson D, Cesario C. The impact of a sports-performance DPT concentration on post-graduate outcomes. *World Congress of Physiotherapy. April 2021. Virtual.*
 25. Clark S., Malik R, Masterman E, Mastone M, **Maxwell J**. Sleep and Injury Incidence Among Division I Collegiate Athletes. *American Physical Therapy Association, Combined Sections Meeting. Feb. 2021. Virtual.*
 26. Bdadhe, M., Manczurowsky, J., Shumock, K., **Cheerman, H.**, Hasson, C. “A User-Friendly, Smartphone-Deployable, Interactive Musculoskeletal Model for Experiential Learning. *Society for Neuroscience Conference. Poster Presentation. Jan 2021.*
 27. **Fitzpatrick, D**, Golub Victor, A, Bloom, A, Keefe, M - “Assessing Fall Risk in Community -Dwelling Adults with Intellectual Disabilities: A Scoping Review” *World Conference of Physical Therapy, Dubai, 2021.*
 28. Golub-Victor, A., Copabianco, A., Chan, A., Jaworska, A. Hwawon, C., Jangeun, G., Maciaga, C., Nieves S., Ruane C., **Fitzpatrick, D.**, “A Novel Assessment of Physical Therapy Student Confidence in Care of Adults with Intellectual Disabilities”, *APTA CSM 2021*
 29. Hayward L, **Markowski A**, Watkins M, Manske R, Beneck G, Maitland M. Expert Clinical Reasoning and Decision-Making that Incorporates Musculoskeletal Ultrasound Imaging into Physical Therapists’ Diagnostic Strategies *Education Leadership conference (ELC) Atlanta, GA October, 22-24 2021*
 30. *Lubans, D., Smith, J., Eather, N., Leahy, A., Morgan, Lonsdale, C., Plotnikoff, R., Nilsson, Kennedy, Holliday, Weaver, Noetel, Shigeta, T. Mavilidi, Valkenborghs, Gyawali, Walker, Costigan, **Hillman, C. H.** (2021). Time-efficient physical activity intervention for older adolescents: the ‘Burn 2 Learn’ cluster randomised controlled trial. *Sports Medicine Australia e-Conference.* *Awarded Asics Best Overall Paper and Best Paper Award in Physical Activity and Health Promotion
 31. Mora-Gonzalez, J., Ortega, F. B., Cadenas-Sanchez, C., Esteban-Cornejo, I., Migueles, J. H., Solis-Urra, P., Verdejo-Román, J., Rodriguez-Ayllon, M., Molina-Garcia, P., Ruiz, J. R., Martinez-Vizcaino, V., **Hillman, C. H.**, Erickson, K. I., Kramer, A. F., Labayen, I., &

- Catena, A. (2021). Role of cardiorespiratory fitness on the effects of the ActiveBrains exercise randomized controlled trial on brain health outcomes in children with overweight/obesity. *International Congress: "Promoting Brain Health Through Exercise Across the Lifespan"*. Granada, Spain.
32. Migueles, J. H., Martinez-Nicolas, A., Cadenas-Sanchez, C., Esteban-Cornejo, I., Muntaner-Mas, A., Mora-Gonzalez, J., Rodriguez-Ayllon, M., Madrid, J., Rol, M., **Hillman, C. H.**, Catena, A., & Ortega, F. B. (2021). Activity-rest circadian pattern and academic achievement, executive function and intelligence in children with obesity (2021). *International Congress: "Promoting Brain Health Through Exercise Across the Lifespan"*. Granada, Spain.
33. Logan, N. E., Westfall, D. R., Raine, L. B., Anteraper, S. A., Chaddock-Heyman, L., Whitfield-Gabrieli, S., Kramer, A. F., & **Hillman, C. H.** (2021). The differential effects of adiposity on functional connectivity in preadolescent children. *Society for Neuroscience*.
34. McDonald, K., Morris, T., Anteraper, S., Voss, M., Whitfield-Gabrieli, S., Erickson, K. I., **Hillman, C. H.**, McAuley, E., & Kramer, A. F. (2021). Data-driven MRI analysis reveals fitness-sensitive functional change in default mode network following exercise intervention leads to increased cognitive performance. *Society for Neuroscience*.
35. Esteban-Cornejo, I., Stillman, C. M., Rodriguez-Ayllon, M., Kramer, A. F., **Hillman, C. H.**, Catena, A., Erickson, K. I., & Ortega, F. B. (2021). Physical fitness, hippocampal functional connectivity and academic performance in children with overweight/obesity: The ActiveBrains Project. *Flux Society*.
36. Willis, N. B., Munoz, C. X., Krug, A. R., Thompson, S. V., Edwards, C. G., **Hillman, C. H.**, Burd, N. A., Holscher, H. D., & Khan, N. A. (2021). Copeptin is related to mucolytic gut bacteria and gut barrier function. *13th Annual Hydration for Health Conference*.
37. Morris, T. P., Whitfield-Gabrieli, S., **Hillman, C. H.**, McAuley, E., & Kramer, A. F. (2021). Brain-based metrics are better predictors of adherence to exercise interventions than psychosocial and behavioral measures and provide mechanistic insights. *The University of British Columbia Virtual Brain Health Symposium*.
38. Torres-Lopez, L. V., Cadenas-Sanchez, C., Migueles, J. H., Esteban-Cornejo, I., Molina-Garcia, P., **Hillman, C. H.**, Catena, A., & Ortega, F. B. (2021). Sleep-related breathing disorders are related to poorer academic performance in children with overweight/obesity, yet not with brain volumes. *ISBNPA x Change Initiative Virtual Conference*. June 8-10, 2021.
39. Mora-Gonzalez, J., Esteban-Cornejo, I., Solis-Urra, P., Cadenas-Sanchez, C., Rodriguez-Ayllon, M., **Hillman, C. H.**, Kramer, A., & Ortega, F. B. (2021). A 4.5-month physical exercise program induces brain activation changes in children with overweight/obesity: The ActiveBrains project. *ISBNPA x Change Initiative Virtual Conference*. June 8-10, 2021.
40. Eklund, N., Donofry, S. D., Gallo, M., Grove, G., Stillman, C., Burns, J., Vidoni, E., McAuley, E., **Hillman, C. H.**, Kramer, A. F., & Erickson, K. I. (2021). Associations between hormone replacement therapy and cardiorespiratory fitness with verbal and visual memory performance in post-menopausal women. *North American Menopause Society*.

41. Ai, M., Morris, T. P., Chaddock-Heyman, L., Loui, P., Whitfield-Gabrieli, S., **Hillman, C. H.**, McAuley, E., Kramer, A. F. (2021). Musical experience relates to functional connectivity in older adults. *The Gerontological Society of America*.
42. Pindus, D. M., Shigeta, T., Leahy, A. A., Mavilidi, M., Ninomyia, A. S., **Hillman, C. H.**, & Lubans, D. R. (2021). Physical activity intensity is selectively related to better executive functions in adolescent girls not boys: accelerometry study. *Medicine & Science in Sports & Exercise*.
43. **Nolan DC**, Lopes A, Weinstein M. "Running the Show: Exploring Leadership Roles of the Sports Physical Therapist At large Running Events." American Academy of Sports Physical Therapy Annual Meeting & Scientific Conference. Indianapolis, IN. September 25, 2021.
44. **Hayward L**, Markwoski A, Watkins M. Maitland M, Beneck G, Manske R. Expert Clinical Reasoning and Decision-Making that Incorporates Musculoskeletal Ultrasound Imaging into Physical Therapists' Diagnostic strategies. APTA. Educational Leadership Conference. Atlanta, Georgia October, 22-24 2021.
45. Maitland M, **Hayward L**, Markwoski A, Watkins M., Beneck G, Manske R. A case-study in translating advances in practice to the classroom: diagnostic musculoskeletal ultrasound imaging. APTA. Educational Leadership Conference. Atlanta, Georgia October, 22-24 2021.
46. **Hayward L**, Scholl J, Sellheim D, Joyce C. A Phenomenological Study of the Essential Characteristics for Effective PT-PTA Teams: Clinical and Educational Implications. APTA. Educational Leadership Conference. Atlanta, Georgia October, 22-24 2021.
47. Scholl J, **Hayward L**, Sellheim D, Joyce C. A Phenomenological Study of the Essential Characteristics for Effective PT-PTA Teams: Clinical and Educational Implications. APTA CSM, Orlando, FL 2021.
48. **Hayward L**, Fragala-Pinkham M. Implementation of an adaptive soccer program for youth with disabilities at an orphanage in Ecuador. APTA CSM, Orlando, FL 2021.
49. **Dennerlein JT**, Peters SE, Martinez-Maldonado M. Integrated Total Worker Health® approach to improve workers' safety, health, and well-being in the transportation industry in Chile: The "Get on Board" Pilot Program. *EX4OSH 2021 Extending Occupational Safety and Health: An International Conference*, Houston, Texas (Remote) December 9-11, 2021.
50. **Dennerlein JT**, Peters SE. Improving COVID-19 Policies and Practices using Total Worker Health® approaches for essential workplaces: A Case Study in the Energy Supply Sector. *EX4OSH 2021 Extending Occupational Safety and Health: An International Conference*, Houston, Texas (Remote) December 9-11, 2021.
51. Audette, J., Mudzi, W., **Cesario, C.**, Odole, A., Nesbit, C., Baldew, S. S. "Professionalism: Can we teach it? Can we access it?", Panel Presentation. World Confederation for Physical Therapy 2021, Virtual (April 9, 2021).
52. Clark, S., Maxwell, J., **Cesario, C.**, "The Impact of a Sports Concentration on Post-Graduate Outcomes". Poster. World Confederation for Physical Therapy 2021, Virtual (April 9, 2021).
53. Corkery, M. Hensley, C., **Cesario, C.** Yen, S., Chui, K., Courtney, CA., Use of Musculoskeletal Clinical Prediction Rules By Student Physical Therapists in the United States. APTA Combined Sections Meeting. Virtual (February 11, 2021).

54. Dehan, J., Riopel, MA, Rindfleisch, A., Livingston, B., Nesbit, C., **Cesario, C.**, Werner, T. APTA Education Leadership Conference. Platform. Emerging Leaders Tackle Hot Topics in Physical Therapy Education Amid COVID. (October 22, 2021).
55. **Watkins, M.**, Maitland M, Hayward L, Beneck G, Manske R. A case-study in translating advances in practice to the classroom: diagnostic musculoskeletal ultrasound imaging. APTA. Educational Leadership Conference. Atlanta, Georgia October, 22-24, 2021.
56. Hayward L, Markowski A, **Watkins M**, Manske R, Beneck G, Maitland M. Expert Clinical Reasoning and Decision-Making that Incorporates Musculoskeletal Ultrasound Imaging into Physical Therapists' Diagnostic Strategies Education Leadership conference (ELC) Atlanta GA October 22-24, 2021.

Other Presentations

1. **Hasson CJ.** "Let's Discuss the Results: Cyberphysical Therapy Study", *Tufts Medical Center Dissemination of Research Results Open House Event (virtual)*, June 24, 2021.
2. **Hasson CJ.** "Making Ideas Come to Life with Simulink". Biomechanics Symposium; Mathworks (virtual), February 25, 2021.
3. **Hasson CJ & Leung L.** "Telerobotics for neuromotor recovery in stroke". *Tufts Medical Center Research Town Hall (virtual)*, February 19, 2021.
4. Petersen T, Alonso J, Corso S, Chen T, Farage N, Kuebler A, Le V, **Corkery MB.** Use of Ultrasound to Assess the First Rib. Northeastern University, Research, Innovation and Scholarship Exposition. Boston, MA. April 15th, 2021.
5. Donlan P., Maxwell J., **Bangs D.** The Art of the Dialogue: Fostering Adherence, Reciprocal communication and Collaborative goal Setting. South Shore Hospital; May 2021.
6. **Bangs, D.**, Cesario C., The Affordable Care Act and Access to Healthcare in the United States. March 2021 (Part of the collaborative lecture series with NEU and Teeside University in the UK)
7. "Challenges and opportunities in designing tunable, soft mechanical sensors," UMass Amherst Robotics Seminar Series – **Kristen Dorsey**
8. "It's a bit of a stretch," Engineering Department Seminar, Hope College – **Kristen Dorsey**
9. "Reconfigurable Sensing," Expert Panelist, NSF-NIH Smart Health Principal Investigators meeting – **Kristen Dorsey**
10. "Challenges and opportunities in designing tunable, soft mechanical sensors," Toyota Research Institute – **Kristen Dorsey**
11. "Challenges and opportunities in designing tunable, soft mechanical sensors", Robotics Institute/Mechanical Engineering/Electrical and Computer Engineering joint seminar, Carnegie Mellon University – **Kristen Dorsey**
12. "Challenges and opportunities in designing tunable, soft mechanical sensors," Robotics Engineering Colloquium, Worcester Polytechnic Institute – **Kristen Dorsey**
13. "Challenges and opportunities in designing tunable, soft mechanical sensors," Electrical and Computer Engineering Seminar, Northeastern University – **Kristen Dorsey**

14. Interviewee, "Soft, Squishy Robots Could Save Lives," Axios
<https://www.axios.com/soft-robotics-engineering-save-lives-ccad1c2-860a-466b-be9d-573020831641.html> – **Kristen Dorsey**
15. **Donlan, P.** – "**Lymphedema: Facts and Challenges.**" Presented to the *Internet of Materials* Group at Northeastern University. Presented a clinical perspective on the topic of lymphedema to a group of faculty engineers interested in innovations that can assist with detecting volumetric changes in limb volume. Presented as a collaborative effort with Kris Dorsey, PhD, of Northeastern University, who is working on developing volumetric sensors for lymphedema garments. December 7, 2021.
16. **Donlan, P.** National Lymphatic Disorders Special Interest Group of the Academy of Oncologic Physical Therapy: APTA. Journal Club Presentation on "**Exploring the Physical Therapy Experience Among People Living with Lymphedema: A Biopsychosocial Approach.**" As lead author of this manuscript, invited to lead journal club analysis and question and answer session, September 30, 2021.
17. **Donlan, P., Maxwell, J. Motivational Interviewing- "The Art of the Dialogue.":** Regional virtual presentation at South Shore Hospital, May 5, 2021. Presented as part of continuing education to inpatient and outpatient practicing physical therapists.
18. Running the Show: Exploring leadership roles of the sports physical therapist at large running events. Specialization SIG. American Academy of Sports Physical Therapy. Nolan D, Weinstein S, **Lopes AD**, 2021
19. Falls Can Be Prevented: Steps to Minimize Risk Among Older Adults in the Homecare Setting. CMK Homecare GrandSolutions to Care; November 17, 2021. – **Sheri Kiami**
20. Evidence Based Physical Therapy Management of Parkinson's Disease. Southcoast Health Hospital Systems; Charlton, MA; September 17, 2021. – **Sheri Kiami**
21. Contemporary Evidence Based Methods to Prevent Falls in the Assisted Living Setting. Massachusetts Assisted Living Association. April 14, 2021. – **Sheri Kiami**
22. Watkins M, **Markowski A**: Oral presentation, Ultrasound Imaging Impact on Physical Therapy Education. AIUM April 2021
23. Watkins M, **Markowski A**, Chorlian A, Faley O, Kang J, Kuppens C. Ultrasound Imaging As an Adjunct Teaching Tool to Enhance Learning Four Shoulder Special Tests APTA Combined Sections Meeting, February 2021
24. **Markowski A**, MacNeil, M, Harvan, A. Panelist, The Center for Integration of Primary Care and Oral Health and the HSDM Initiative to Integrate Oral Health and Medicine presents: Interprofessional Education: The Devil is in the Details May 6th, 2021
25. **Nolan DC**. Hip Examination: Physical Therapist Perspective. Harvard Medical School Sports Medicine 2021. Virtual Conference. May 6, 2021.
26. **Nolan DC**. Management of Bone Stress Injury and Plantar Heel Pain. University of Iowa Running Symposium. Virtual Presentation. February 13, 2021.
27. **Nolan DC**, Borgstrom H. Collaborative Non-Operative Management of Achilles Tendinopathy & Plantar Heel Pain. 2021 Regional Virtual Annual Conference of APTA CT, MA, NH, RI. November 13, 2021.
28. **Nolan DC**, Tenforde A. Tendinopathy in Runners: Cutting Edge Treatments and Evidence-Driven Rehabilitation. 2021 New England American College of Sports Medicine Annual Fall Conference: Progress in Motion. October 21, 2021.
29. **Nolan DC**. Clinical Mentoring. Bay State Physical Therapy Leadership Conference. July 28, 2021.

30. Greater New York ACSM Chapter Fall Conference, November 2021: Invited Presentation “Neurocognitive Consequences of Obesity in Childhood: Implications of Physical Activity for Promoting Children’s Brain Health” – **Lauren Raine**
31. **Hayward L**, Al-Awadhi A, Freitas F. Student-Faculty Partnerships: Soliciting Diverse Student Voices for Strengthening Inclusive Curricula in Health Care Conference for Advancing Evidence-Based Learning CALTR Conference, May 4-5, 2021
32. **Hayward L**. Joy Duboff, Jordan Goodman, Laura Barrundia, Amanda McInnis, Maddie Medeiros, Hannah Wegner Moffat, Erin Nee, Ewa Oldziej, Emily Palko, Nimi Patel, June Quigao, Aashna Tilve, Elizabeth Tobio, Kiana Weary. Proposal for a Dance Therapy Program to Increase Physical Activity and Motivation in Children With Disabilities living in Ecuador. NU Research Virtual Expo April, 2021.
33. **Hillman, C. H.** “Childhood physical activity and Excess Adiposity on Childhood Brain and Cognition”. International Congress on Promoting Brain Health Through exercise across the lifespan, Granada Spain, December 2021. *Virtual presentation due to Covid-19.*
34. **Hillman, C. H.** “Childhood physical activity and Brain Network Modularity”. Developmental Science and Neuroscience and Behavior Colloquia, Department of Psychology & Brain Sciences, University of Massachusetts Amherst, October 2021. *Virtual presentation due to Covid-19.*
35. **Hillman, C. H.** “Childhood physical activity effects on brain, cognition, and achievement”. Nutrition & Metabolism Program, School of Medicine, Boston University, Boston, MA, June 2021. *Virtual presentation due to Covid-19.*
36. **Hillman, C. H.** “Physical activity, brain, and cognition in preadolescent children”. Lifestyle interventions and cognitive development session. Canadian Nutrition Society. May 2021. *Virtual presentation due to Covid-19.*
37. ***Hillman, C. H.** “Childhood physical activity effects on brain, cognition, and achievement”. The RQES Lecture at SHAPE America, Salt Lake City, UT, April 2021. SHAPE America. *Virtual due to Covid-19.* *Awarded the 2021 RQES Distinguished Lecture
38. ^Barry, C., Cohen-Osher, M., DiVall, M., **Greenwood, K.**, Hickey, M., Honda, T., Kirwin, J., Miselis, H., Reffel, A., White, S.. *In-Person versus Remote IPE Activity: Is There a Difference?* PAEA Education Forum, Virtual. October 2021.
39. **K. Greenwood**, Osher-Cohen M, DiVall, M. Hickey, Kirwin, J. et al. Going Beyond the Boundaries of the University to Increase Students’ Interprofessional Competence, Virtual Platform presented virtually at American Physical Therapy Association Combined Sections Meeting, 2021.
40. **Dennerlein, J. T.** “Well-Being: What Does it Have to Do With Safety?” Plenary Session Speaker. Safety 2021, American Society of Safety Professionals, Austin Texas 14 September 2021.
41. **Dennerlein, J. T.** “Total Worker Health[®] Approaches: Building Organizational Resilience During the Time of COVID-19.” Education and Research Center Seminar, University of Cincinnati, ERC Seminar, 9 November 2021
42. **Dennerlein, J. T.** “Occupational Safety in Construction: The Association Of Worker Safety Climate With Organizational Safety Management Systems And Safety Incentives Programs.” Department of Environmental Health Seminar, University of Cincinnati, Ohio, 10 November 2021

Other Articles, Publications, or Presentations

1. “The 3 Main Options for Physical Rehabilitation” Harvard Health Letter, May 2021. – **David Nolan**
2. Cesario C., **Bangs D.**, Nowakowski K. Credentialed Clinical Instructor Program. February 2021.
3. **Bangs D.**, Cesario C., Nowakowski K. Credentialed Clinical Instructor Program. November 2021.

Grants/Funding

NIOSH U19 – Jack Dennerlein

Title: *Implementing an Integrated Approach: Weaving Employee Health, Safety, and Well-Being into the Fabric of Your Organization*

PI: Sorensen G.

Role: Co-Investigator

OH008861 | \$1,400,000 Total Cost per year | 2011-2026

MathWorks

Title: *A Simulink-Based Myoelectrically-Driven Musculoskeletal Model for Experiential Learning and Research*

PI: Christopher J. Hasson

Role: PI (Principal Investigator)

Direct: \$24,804 | Duration: 5/1/20 - 4/30/21

NIH R01 (Research Project Grant) – Christopher J. Hasson

Title: *Predictability in Complex Object Control*

PI: Dagmar Sternad

Role: Co-Investigator

1R01HD087089-01 | Direct: \$1,343,325; Total: \$1,835,863 | Duration: 9/24/15 - 6/30/2022

Northeastern Research Vision 2025 – Christopher J. Hasson

Title: *The Institute for Cognizant Robotics*

PI: Taskin Padir

Role: Team Member

Total Cost: \$10,000,000 | Duration: 2018 – 2023

Legler-Benbough Foundation

Title: *Power of NeuroGaming Center @ Qualcomm Institute*

PI: Leanne Chukoskie

Role: PI (Principal Investigator)

Total Cost: \$250,000 | Duration: 7/17-8/21

NIH/NIA – Leanne Chukoskie

Title: *Training Foundation Skills to Enhance Cognition in Older Adults*

PI: Townsend

Role: Co-Investigator
Total Cost: \$1,700,000 | Duration: 9/18-5/21

NSF: Future of Work at the Human-Technology Frontier
Title: *Neurodiversity in tech: using interactive decision theory and augmented reality to enable employment for adults with ASD*

PI: **Leanne Chukoskie**
Role: PI (Principal Investigator)
Total Cost: \$2,586,000 | Duration: 10/19-9/22

Northeastern University Office of the Provost Full-time Faculty Development Fund (FFDF)
Title: *Supervising Students who Identify as LGBTQ while in the Clinical Setting: A Simulation Based Training program for our Clinical Instructors*

PI: **Cesario C, Bangs D, Maxwell J.**
Role: PI (Principal Investigator)
Total Cost: \$7,500 | May 2020, deferred to 2021

Amazon Robotics
Title: *Rapid and soft tactile sensors using conductive buckled beams*

PI: **Kristen Dorsey**
Role: sole PI (Principal Investigator)
Total Cost: \$250,000 | 12/21/21

National Science Foundation
Title: *CAREER: Rigidity tuned elastomer origami tessellations for fast, reconfigurable, and soft mechanoreceptors*

PI: **Kristen Dorsey**
Role: sole PI (Principal Investigator)
Total Cost: \$500,404 | Duration: 2/19/19-1/31/24

Dassault Foundation
Title: *Introducing modern simulation and modeling software alongside the Engineering Mechanics classroom*

PI: **Kristen Dorsey**
Role: sole PI (Principal Investigator)
Total Cost: \$26,568 | Duration: 7/1/20-6/30/21

Smith College
Jean Picker Faculty Fellowship
PI: **Kristen Dorsey**
Role: sole PI
Total Cost: \$8,045 | Duration: 7/1/20-6/30/21

ADVANCE Faculty Development Office, Mutual Mentorship Award
Title: *Developing a Clinical Faculty Scholars Program*
PI: **Jessica Maxwell**

Role: PI
Total: \$3,000 | Spring 2021

Academy of Orthopaedic Therapy New Investigator Award – **Joshua Stefanik**
Title: *Influence of unilateral knee pain on contralateral knee loading: implications for the development of bilateral knee pain and osteoarthritis*
Role: Co-I, Primary Mentor (Corrigan, PI)
Total costs: \$30,000 | Duration: 12/1/21-11/30/23

NIH/NIAMS R03 AR077698
Title: *Anterior knee pain in older adults and the relation to future patellafemoral osteoarthritis*
PI: **Joshua Stefanik**
Role: PI (Principal Investigator)
Total costs: \$172,910 | Duration: 9/1/21-8/31/23

Northeastern University Tier 1 Award
Title: *Changes in joint and muscle forces following treatment-induced gait alterations in adults with knee osteoarthritis*
PI: **Joshua Stefanik**
Role: PI (Principal Investigator)
Total costs: \$50,000 | Duration: 8/1/21-11/1/22

American College of Sports Medicine Doctoral Student Research Grant – **Joshua Stefanik**
Title: *Effects of walking cadence on knee joint loads, pain, and function*
Role: Primary Mentor (James, PI)
Total costs: \$4,995 | Duration: 7/1/21-9/30/22

NIH Loan Repayment Program – **Joshua Stefanik**
Title: *Reducing knee pain, impact loading, and contralateral disease in individuals with knee osteoarthritis: a biomechanical and epidemiological investigation*
Role: Primary Mentor (Corrigan, PI)
Total costs: \$131,000 | Duration: 9/1/20-8/31/22

NIH/NIAMS K23 AR070913
Title: *The relation of altered pain processing to impact loading and response to a gait retraining intervention in knee osteoarthritis*
PI: **Joshua Stefanik**
Role: PI (Principal Investigator)
Total costs: \$766,500 | Duration: 7/11/17-5/30/22

Rheumatology Research Foundation – **Joshua Stefanik**
Title: *Graduate Student Preceptorship*
Role: Primary Mentor/Preceptor (Corey Lanois, PhD student, Preceptee)
Total costs: \$4,000 | Duration: 9/1/21-8/30/22

Rheumatology Research Foundation – **Joshua Stefanik**

Title: *Graduate Student Preceptorship*
Role: Primary Mentor/Preceptor (Khara James, PhD student, Preceptee)
Total costs: \$4,000 | Duration: 6/1/20-5/31/21
The Wellesley Hill Junior Women's Club
Title: *TopSoccer and basketball program funding*
PI: **Hayward LM**
Role: PI (Principal Investigator)
Total costs: \$1,000 | Duration: 1/2021

NU City and Community Service Grant Proposal
Title: *Improvement of the Adaptive Sports Program - NU Service-Learning Honors students partners with Community Stakeholders.*
PI: **Hayward L.**
Role: PI (Principal Investigator)
Total costs: \$1,000 | Duration 6/21

NIH, National Institute of Child Health and Human Development
Title: *Sympathetic nervous system mediation of acute exercise effects on childhood brain and cognition* (HD094054)
PI: **Charles Hillman**
Role: PI (Principal Investigator)
Total costs: \$2,210,876 | Duration: 2018-2023

NIH, National Institute on Aging- **Charles Hillman**
Title: *Investigating Gains in Neurocognition in an Intervention Trial of Exercise* (R01AG053952)
PI: Kirk Erickson
Role: Co-I
Total costs: \$21,899,529 | September 15, 2016 – December 31, 2022

NIH, National Institute on Aging- **Charles Hillman**
Title: *Investigating Gains in Neurocognition in an Intervention Trial of Exercise (PET Supplement)* (R01AG053952 Supplement),
PI: Kirk Erickson
Role: Site Co-PI
Total costs: \$5,382,304 | September 1, 2019 – December 01, 2022

NIH, National Institute on Aging- **Charles Hillman**
Title: *Antioxidant Imaging Marker of Investigating Gains in Neurocognition in an Intervention Trial of Exercise (AIM-IGNITE)* (R01AG053952)
PI: Phil Lee
Role: Site PI
Total costs: \$283,968 | April 15, 2019 – December 31, 2022

NIH, National Institute on Aging - **Charles Hillman**

Title: *Changing and understanding motivation to increase physical activity among sedentary older adults* (P30AG048785)

PI: Maiya Geddes

Role: co-investigator

Total costs: \$129,421 | July 1, 2019 – June 30, 2021

NIH, National Institute on Aging- **Charles Hillman**

Title: *An integrated two-way communication and near-real-time sensing system to detect and modify daily inactivity among adults over age 60* (P30AG048785)

PI: Dinesh John

Role: co-investigator

Total costs: \$74,940 | June 1, 2020 – May 31, 2022

Northeastern University Tier I Mentorship Grant- **Charles Hillman** -, mentor/co-investigator

Title: *Mentored Award: Physical frailty complicated with cognitive impairment in liver transplant recipients*

PI: Dami Ko

Total costs: \$45,650 | July 1, 2020 – September 30, 2021

NIH, National Institute on Aging- **Charles Hillman**

Title: *Physical Activity and Dementia: Mechanisms of Action*, (R35AG072307)

PI: Kirk Erickson

Role: co-I

Total costs: \$171,228 | 2021-2024

NIH, National Institute of Child Health and Development- **Charles Hillman**

Title: *Enhancing children's cognitive function and achievement through carotenoid consumption* (R01HD097332),

PI: Naiman Khan

Role: co-I

Total costs: \$2,210,047 | Funded, 2022-2026

National Health and Medical Research Council- **Charles Hillman**

Title: *Effectiveness and cost effectiveness of a time-efficient school-based physical activity intervention for older adolescents living with disability* (NHMRC, APP2007095)",

Lead Chief Investigator: David Lubans

Role: Chief Investigator

Total costs: \$4741. | Funded, 2021-2024

Northeastern University 2021 Tier 1

Title: *Extend and Learn: An exploratory pilot study using augmented reality in experiential medical education workforce training*

PI: **Greenwood, K.**

Total costs: \$50,000

Awards

1. Clinical Educator of the Year Award – **Zachary Gabor** 2021 Recipient
2. Faculty Excellence in Community Engagement Award – **Chris Cesario** 2021 Recipient
3. Faculty Innovation in Teaching Award – **Kristen Morse** 2021 recipient
4. Friend of the PTMRS Department Award – **Hannah Poirier** 2021 recipient
5. Part Time Faculty Award for Excellence in Teaching – **Trevor Winnege** 2021 recipient
6. PTMRS Mary Lawson Everyday Excellence Award – **Pam Sarraulte** 2021 recipient
7. Dr. Martin Luther King, Jr. Fellowship, Massachusetts Institute Technology – **Kristen Dorsey** 2021-2022
8. Presidential Award for Mentoring, Smith College – **Kristen Dorsey**
9. American Council of Academic Physical Therapy “Emerging Educator Award – **Pamela Donlan** 2021 nominee
10. Bouve College Excellence in Diversity and Inclusion Faculty Award – **Sheri Miami** 2021 recipient
11. APTA of Massachusetts Clinical Research Award – **Joshua Stefanik** 2021 recipient
12. Special Recognition for Social Responsibility, APTA, CSM: “A Novel Assessment of Physical Therapy Student Confidence in Care of Adults with Intellectual Disabilities” – **Diane Fitzpatrick**
13. AIUM Sonographer/Sonography Student Professional Education and Growth Scholarship supported by the AIUM future fund Awarded \$500 2021 (pending) – **Alycia Markowski**
14. Full-time Non Tenure-Track (FTNTT) Faculty Fellowship to pursue Registered Musculoskeletal Sonographer (RMSK) certification in diagnostic ultrasound imaging 2021-2022 – **Alycia Markowski**
15. AAOMPT Innovation Award. The Innovation Award is an individual award for an AAOMPT member whose achievements have promoted excellence through extraordinary innovation. American Academy of Orthopedic Manual Physical Therapy 2021 – **Alycia Markowski**
16. SHAPE America, RQES Distinguished Lecture- **Charles Hillman**
17. Japan Society for the Promotion of Science (JSPS) Invitational Fellowship for Research in Japan- **Charles Hillman**
18. Katherine McDonald was awarded a Society for Neuroscience Trainee Professional Development Award- **Charles Hillman**
19. American Physical Therapy Association -Acute Care Distinguished Lecture Award, Combined Sections Meeting 2022: “Adapt and fearless: Leadership in acute care physical therapy, education, and practice”- **Kristin Greenwood**