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


Book Chapters Published


Peer-Reviewed Journal Articles- In Press


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.*


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*.


Peer-Reviewed Journal Articles


84. Schettino LF, Adamovich SV, **Tunik E.** Coordination of the pincer grasp and transport following a haptic perturbation of the index finger. *J Neurophysiol*. 2017;117(6); 2292-2297.


**Published Abstracts**


Presentations

International


**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.


**Local**

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


**Funding**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Title</th>
<th>Direct Costs</th>
<th>Faculty</th>
<th>Status</th>
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<tbody>
<tr>
<td>Tufts CTSI</td>
<td>Cyberphysical therapy for enhanced neuromotor recovery in stroke survivors.</td>
<td>$45,000</td>
<td>Hasson</td>
<td>Pending</td>
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<tr>
<td>NSF Faculty Early Career Development Program</td>
<td>Optimizing Interactive Neuromuscular Dynamics for Improved Motor Function</td>
<td>$503,255</td>
<td>Hasson</td>
<td>Unfunded</td>
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<tr>
<td>NIH R01 Research Project Grant</td>
<td>Optimizing Interactive Neuromuscular Dynamics for Improved Dexterous Motor Function in Older Adults</td>
<td>$1,258,331; Total direct cost: $1,744,029</td>
<td>Hasson</td>
<td>Pending</td>
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<tr>
<td>NSF CISE Research Infrastructure</td>
<td>CRI: II-New development of a Testbed for the Convergence of Human Augmentation,</td>
<td>$1,000,000 Direct Cost: $785,550;</td>
<td>Hasson</td>
<td>Pending</td>
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<tr>
<td>Institution</td>
<td>Project Title</td>
<td>Funding Amount</td>
<td>Principal Investigator</td>
<td>Status</td>
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<tr>
<td>Northeastern University: Mentored TIER 1 Seed Grant</td>
<td>Cyberphysical Therapy for Enhanced Neuromotor Recovery in Stroke Survivors</td>
<td>$50,000</td>
<td>Hasson</td>
<td>Funded</td>
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<tr>
<td>Corporation for National and Community Service. Community Conversations Research</td>
<td>Partnering to Address Vital Community Concerns: Advancing Knowledge about the Impact of Intergenerational Service-Learning on Elder Isolation and Loneliness.</td>
<td>$100,000</td>
<td>Hayward</td>
<td>Pending</td>
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<td>Deborah Monroe Noonan Memorial Research Fund</td>
<td>Development and Evaluation of a model TOPSoccer program for children with autism.</td>
<td>$80,000</td>
<td>Hayward</td>
<td>Unfunded</td>
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<tr>
<td>NEU - Tier 1</td>
<td>Advancing Knowledge of the Impact of Service-Learning on Community Stakeholders</td>
<td>$50,000</td>
<td>Hayward</td>
<td>Unfunded</td>
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<td>NEU City and Community Service Grant</td>
<td>Improvement of the Adaptive Skating Program at Franciscan Children's Hospital</td>
<td>$1,500</td>
<td>Hayward</td>
<td>Unfunded</td>
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<tr>
<td>The Village Church Outreach grants program.</td>
<td>An Interdisciplinary Approach for Educating and Sustaining Communication and Mobility in Children with Disabilities.</td>
<td>$2,000</td>
<td>Hayward</td>
<td>Funded</td>
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<td>The Wellesley Hills Junior Women's Club</td>
<td>TopSoccer and basketball adaptive sports program funding for children with Autism</td>
<td>$2,000</td>
<td>Hayward</td>
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<tr>
<td>NU Provost Mutual Mentoring Grant</td>
<td>Evaluation of Service-Learning Partnerships Local and Abroad using the SOFAR Framework</td>
<td>$3,000</td>
<td>Hayward</td>
<td>Funded</td>
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<td>National Institute of Child Health and Human Development (HD094054)</td>
<td>Sympathetic nervous system mediation of acute exercise effects on childhood brain and cognition</td>
<td>$2,839,220 (2018-2022; $70,9805/year)</td>
<td>Hillman</td>
<td>Funded</td>
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<td>Organization/Program</td>
<td>Description</td>
<td>Amount</td>
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<tr>
<td>National Health and Medical Research Council (NHMRC, APP1120518)</td>
<td>Reducing cardiovascular disease risk factors among older adolescents attending schools in disadvantaged communities: The ‘Burn to Learn’ cluster RCT”</td>
<td>$636,911AUD or $420,361 USD (2017-2019) $210,180/yr</td>
<td>Hillman</td>
<td>Funded</td>
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<tr>
<td>NIH, National Institute of Child Health and Human Development</td>
<td>Enhancing Children's Cognitive Function and Achievement through Carotenoid Consumption</td>
<td>NU Subaward: $514,001</td>
<td>Hillman</td>
<td>Pending</td>
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<tr>
<td>USDA (USDA-NIFA-AFRI-006346)</td>
<td>Integrated childhood obesity and nutritional neuroscience in schools (ICONS) study</td>
<td>NU Subaward: $19,198</td>
<td>Hillman</td>
<td>Unfunded</td>
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<tr>
<td>NIH, National Institute of Diabetes and Digestive and Kidney Diseases</td>
<td>Recess policy implications for health behaviors, obesity, and cognition in childhood</td>
<td>NU Subaward: $296,847</td>
<td>Hillman</td>
<td>Unfunded</td>
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<td>Reumatikerförbundet</td>
<td>Utveckling och utvärdering av ett frågeformulär för fysisk aktivitet hos barn med reumatisk sjukdom samt faktorer relaterade till den fysiska aktivitetsnivån.</td>
<td>100,000 SEK or $11,363 USD 2018-2020. $5,681/yr</td>
<td>Iversen</td>
<td>Funded</td>
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<td>Norrbacka-Eugenius</td>
<td>Evaluation of a physical activity scale for children with disabilities (ASCeND) among children with juvenile idiopathic arthritis and correlates with physical activity levels</td>
<td>50,000 SEK or $5,681 USD</td>
<td>Iversen</td>
<td>Funded</td>
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<td>US Fulbright Research Scholar Program: European Division.</td>
<td>Development and Psychometric Testing of Novel Patient-Oriented Outcome Measures in Arthritis</td>
<td>82,100 SEK or $9,330 USD $4,665/yr</td>
<td>Iversen</td>
<td>Funded</td>
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<tr>
<td>Reumatikerförbundet,</td>
<td>Utveckling och utvärdering av ett frågeformulär för fysisk aktivitet hos barn med reumatisk</td>
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<td>Iversen</td>
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<tr>
<td>Funding Source</td>
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<td>NIAMS-MCRC: P60 AR047782</td>
<td>Counseling for Persons at Risk to Develop Rheumatoid Arthritis</td>
<td>$787,723</td>
<td>$157,544/yr</td>
<td>Iversen, Funded</td>
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<td>American Shoulder and Elbow Surgeons</td>
<td>Reliability, Validity, and Responsiveness of a Modified Shoulder and Elbow Outcome Measure (Pedi-ASES) in Children With Shoulder and Elbow Dysfunction.</td>
<td>$20,000 2018-2019,</td>
<td></td>
<td>Iversen, Submitted</td>
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<tr>
<td>NIAMS Multidisciplinary Clinical Research Center, Methodology CORE. NIH/NIAMS P60 AR047782</td>
<td>Research center grant for research dedicated to methodologically rigorous, clinically relevant translational research on rheumatic and musculoskeletal conditions.</td>
<td>?</td>
<td></td>
<td>Iversen, Funded</td>
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<td>NEU Interprofessional Simulation Faculty Development</td>
<td>Interprofessional Simulation</td>
<td>$2,500</td>
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<td>Kiami, Funded</td>
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<td>Interdisciplinary Tier 1 Grant Mentored Award</td>
<td>Exploring neurophysiological mechanisms of learning and transfer in virtual environments for children with cerebral palsy.</td>
<td>$50,000</td>
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<td>Levac, Pending</td>
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<tr>
<td>K01HD093838 Mentored Research Scientist Career Development (K01) award National Institutes of Health</td>
<td>Enhancing transfer of motor skill learning from virtual to physical environments in children with cerebral palsy.</td>
<td>Direct Cost: $117,254/yr</td>
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<td>Levac, Funded</td>
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<td>1752624 CAREER Award NSF</td>
<td>Mechanisms of motor learning and transfer in virtual and augmented reality</td>
<td>Direct cost: $191,527</td>
<td></td>
<td>Levac, Funded</td>
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<td>Deborah Munroe Noonan Memorial Research Fund</td>
<td>Usability evaluation of the FITBoard (Fun Interactive Therapy Board): A motivating.</td>
<td>$66,318</td>
<td>$33,159/yr</td>
<td>Levac, Funded</td>
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<td>Grant</td>
<td>Description</td>
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<td>Child Health Research Award  Charles H. Hood Foundation</td>
<td><em>Is motor learning enhanced by practice in a virtual environment for children with cerebral palsy?</em></td>
<td>Levac</td>
<td>Funded</td>
<td>$68,173/yr</td>
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<tr>
<td>Tufts Clinical and Translational Science Institute Pilot Studies Grant</td>
<td><em>Influence of virtual environment complexity on motor learning in children with cerebral palsy: Implications for virtual reality use in rehabilitation</em></td>
<td>Levac</td>
<td>Funded</td>
<td>$45,000</td>
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<tr>
<td>NEU - Tier 2 Federally Designated Centers / Major Programs Initiative</td>
<td><em>Modeling muscle and synergy representations in M1</em></td>
<td>Tunik</td>
<td>Funded</td>
<td>$12,000 (split between Bouve, COE, Office of the Provost) $4,000</td>
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<td>Marc Cinique. Mechanism: Private Donation</td>
<td><em>Neuromotor Biomarkers to Improve Earlier Diagnosis of Amyotrophic Lateral Sclerosis</em></td>
<td>Tunik</td>
<td>Funded</td>
<td>$50,000</td>
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<td>NIH - National Institute of Child Health and Human Development. R01</td>
<td><em>Modeling Human M1-Muscle Control via TMS, Deep Learning, and Validation in Macaques</em></td>
<td>Tunik</td>
<td>Submitted</td>
<td>$3,922,063 (Direct Cost: $2,911,617)</td>
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<td>NIH – National Institute of Neurological Disorders and Stroke. R01 (2R01HD058301)</td>
<td><em>Optimizing Hand Rehabilitation Post-Stroke Using Interactive Virtual Environments</em></td>
<td>Tunik</td>
<td>Funded</td>
<td>Sub-award to NU: Total: $706,262; Direct Cost: $449,848) 499,969/yr</td>
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<tr>
<td>NIH – National Institute of Neurological Disorders and Stroke. R01 (NS085122)</td>
<td><em>Planning and Updating in Frontoparietal Networks for Grasping</em></td>
<td>Tunik</td>
<td>Funded</td>
<td>$1,299,108 ($259,821)</td>
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<td>NSF – CBET - BME (1804550)</td>
<td><em>Collaborative Research: Understanding Motor Cortical Organization through Engineering Innovation to TMS-Based Brain Mapping</em></td>
<td>Tunik</td>
<td>Pending</td>
<td>$600,000</td>
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<td>NSF – CMMI - M3X - Mind, Machine, and Motor (1830876)</td>
<td><em>Student / Scientist Workshop: A Satellite session for Progress in Clinical Motor Control I: Neurorehabilitation</em></td>
<td>Tunik</td>
<td>Pending-recommended for funding</td>
<td>$19,770 or $6590/yr</td>
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<tr>
<td>NIH</td>
<td><strong>MirroRobot: Augmented Stroke Rehabilitation through Coupled Mirror and Robot-assisted therapies.</strong></td>
<td>$750,000</td>
<td>Tunik/Yen</td>
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<td></td>
<td>($Direct Cost: $500,000)</td>
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<tr>
<td>AHA</td>
<td><strong>Using mirror visual feedback to guide gait training post stroke</strong></td>
<td>$200,000</td>
<td>Yen</td>
<td>Submitted</td>
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<tr>
<td>NSF</td>
<td><strong>An innovative VR-based clinical decision support paradigm for individuals with cognitive and sensorimotor impairments</strong></td>
<td>$947,163</td>
<td>Yen</td>
<td>Submitted</td>
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</tbody>
</table>

**Awards**

**International**


**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**

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