

University of Florida  
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### Current Positions

**Senior Associate Chair**, J. Crayton Pruitt Family Department of Biomedical Engineering, U. of Florida. 8/17-pres.

**Robert W. Adenbaum Professor in Engineering Innovation**, J. Crayton Pruitt Family Department of Biomedical Engineering, U. of Florida. 6/17-pres.

**Professor**, Department of Mechanical Engineering, U. of Florida. 6/17-pres.

### Past Positions

**Visiting Scholar**, Department of Mechanical Engineering, U. of South Florida. 9/15-7/16

**Adjunct Professor**, Dept. of Physical Medicine & Rehabilitation, U. of Michigan. 9/12-5/17

**Professor**, School of Kinesiology, U. of Michigan. 9/11-5/17

**Professor**, Dept. of Biomedical Engineering, U. of Michigan. 9/11-5/17

**Associate Dean for Research**, School of Kinesiology, U. of Michigan. 3/10-6/13

**Visiting Scholar**, Institute for Neural Computation, UC San Diego. 1/08-6/08

**Adjunct Associate Professor**, Dept. of Physical Medicine & Rehabilitation, U. of Michigan. 9/07-8/12

**Associate Professor**, Dept. of Biomedical Engineering, U. of Michigan. 9/06-8/11

**Associate Professor**, School of Kinesiology, U. of Michigan. 9/06-8/11

**Graduate Program Chair**, School of Kinesiology, U. of Michigan. 9/06-6/09

**Faculty Member**, Neuroscience Graduate Program, U. of Michigan. 3/06-5/17

**Adjunct Assistant Professor**, Dept. of Physical Medicine & Rehabilitation, U. of Michigan. 5/05-8/07

**Assistant Professor**, Dept. of Biomedical Engineering, U. of Michigan. 9/01-8/06

**Assistant Professor**, School of Kinesiology, U. of Michigan. 9/01-8/06

**Post-Doctoral Fellow**, Dept. of Electrical Engineering, U. of Washington. 5/00-8/01

**Post-Doctoral Fellow**, Dept. of Neurology, UCLA. 10/98-4/00

**Visiting Scholar**, Division of Neurophysiology, Panum Institute, U. of Copenhagen. 4/97-5/97

### Education

<b>Ph.D.</b>	University of California, Berkeley	1998	Human Biodynamics
<b>M.S.</b>	University of Miami	1994	Exercise Physiology
<b>B.S.</b>	University of Central Florida	1992	Mathematics Education

### Administrative Highlights

University of Florida

- Senior Associate Chair, J. Crayton Pruitt Family Department of Biomedical Engineering, U. of Florida (08/17-pres.)
  - Leads academic team (Associate Chair for Graduate Studies, Associate Chair for Undergraduate Studies, Undergraduate Coordinator, and Graduate Academic Advisor, and Undergraduate Academic Advisor) to provide overall long-range management, strategic vision and coordination of department academic programs
  - Responsible for establishing and maintaining department academic program requirements, policies, procedures, and course offerings
  - Provides oversight and leadership of ABET and SACS accreditation
  - Serves as the Chair's representative in her absence

## University of Michigan

- Rehabilitation Robotics Faculty Group Leader, University of Michigan (01/2010-05/2017)
  - Obtained funding from Provost for 4 new Rehabilitation Robotics faculty cluster hires across four departments (>\$3.5 million)
  - Organized multiple retreats and meetings to bring together 4 new hires and 7 current faculty to form Faculty Group of 11 tenure-line faculty
  - Secured additional funding from School of Kinesiology, College of Engineering, School of Medicine, Rackham Graduate School, and Vice President of Research for Rehabilitation for a Rehabilitation Robotics Seminar Series and website
  - External funding for collaborative projects among group members was over \$2 million
- Associate Dean for Research, School of Kinesiology, University of Michigan (03/2010-06/2013)
  - Oversaw research activities for school (~\$7 million annual research expenditures)
  - Developed and implemented research activity procedures and policies
  - Facilitated and approved grant and contract proposal submissions (~70 proposals per year)
  - Supervised two staff members (Contract and Grant Specialist, and Research Engineer)
  - Assisted with large, cross campus, multidisciplinary awards
    - Sport, Health, Activity Research and Policy (SHARP) Center for Girls and Women with ~\$1 million award from Women's Sports Foundation
    - Adidas/University of Michigan partnership to provide biomechanics and human performance expertise to the company
  - Responsible for faculty and school adherence to policies of Human Subject Institutional Review Board, University Committee for Use of Animals in Research and Education, Conflict of Interest/Commitment and Office of Technology Transfer
  - Established and documented research productivity metrics for assessing performance
  - Promoted research marketing (media relations, press releases, web site)
  - Worked with other Associate Deans for Research across campus to represent school's interests and develop collaborative research activities
  - Mentored junior faculty on their research programs
  - Developed and implemented policy for postdoctoral research fellows
  - Served in Dean's place at Provost meetings when Dean was traveling
- Graduate Program Chair, School of Kinesiology, University of Michigan (09/2006-06/2009)
  - Graduate enrollment increased from 38 to 58 students
  - Funding for doctoral students increased to 100%
  - Doctoral student yield increased from 53% to 86%
  - Implemented new Graduate Program Newsletter to increase visibility of program
  - Created an online process for review of graduate applications
  - Established system to track graduate student funding and achievements
  - Revised student orientation to improve graduate student success and sense of community
  - Created new required course on Professional Skills for Research Scientists
  - Supervised one staff member (Graduate Program Coordinator)
- General School Leadership, University of Michigan
  - Served on hiring committees for >10 staff positions including Chief Administrative Officer
  - Chaired 5 faculty search committees
  - Graduate Program Committee, 2002-2006
  - Executive Committee, 2009
  - New Building Committee to obtain administrative approval, funding, and planning for additional space, 2011-2014
- General University Leadership, University of Michigan
  - Model Spinal Cord Injury Care System Advisory Board, 2003-2012
  - Faculty Senate Assembly, 2009-2011
  - Advisory Committee for Recreational Sports, 2009-2013
  - Global Health Visioning Committee, 2011

- Provost's Faculty Advisory Committee, 2011-2013
- SHARP Center for Girls and Women Internal Advisory Group, 2011-2013
- Responsible Conduct for Research and Scholarship Task Force, 2011-2013
- Global Challenges Advisory Committee, 2012-2015
  - Chair of Committee, 2013-2015
- CIC Academic Leadership Program Fellow, 2012-2013
- Administrative Services Transformation Advisory Committee, 2013-2014

## **Research Highlights**

- Director of Human Neuromechanics Laboratory (09/2001-present)
  - Research focus is on biomechanics and neural control of human locomotion in health and disability, including work on robotic orthoses and prostheses, and mobile brain imaging
  - Secured more than \$13 million in external funds from 12 agencies to support my research
    - Government funding agencies – National Institutes of Health, National Science Foundation, Army Research Laboratory, Office of Naval Research, U.S. Army Medical Research and Materiel Command
    - Private funding agencies – Christopher Reeve Paralysis Foundation, Paralyzed Veterans of American Spinal Cord Research Foundation, Rick Hansen Man-In-Motion Foundation, American Heart Association
  - Experience working on large multidisciplinary, multi-university research projects
    - Army Research Laboratory Collaborative Technology Alliance on Cognition and Neuroergonomics has \$56 million funding for >8 universities and multiple industry partners
    - U.S. Army Medical Research and Materiel Command bionic lower limb prosthesis project had \$8.7 million funding for three universities (U. Michigan, MIT, U. Washington)
    - Office of Naval Research brain imaging project had \$3.4 million funding for 4 universities (UCSD, U. Michigan, Columbia U., Wake Forest U.)
  - Experience consulting and working with industry partners
    - Adicep Technologies, Inc.: projects on robotic knee exoskeletons
    - Lockheed Martin Corp.: projects on robotic exoskeletons
    - Ekso Bionics: projects on robotic exoskeletons
    - Qusp: projects on neurotechnology
    - Cognionics: projects on mobile EEG
  - Published >85 research papers in peer-reviewed journals
  - h-index of 41 (Google Scholar)
  - Supervised 11 doctoral students to graduation and currently supervising 5 more
  - Supervised 10 post-doctoral scholars
  - Given more than 80 international and national invited research presentations

## **Journal Papers (Peer Reviewed)**

89. Oliveira AS, Schlink B, Hairston WD, Konig P, and **Ferris DP** (2017) Restricted vision increases sensorimotor cortex involvement in human walking. *Journal of Neurophysiology*, in press.
88. Young AJ, Gannon H, and **Ferris DP** (2017) A biomechanical comparison of proportional electromyography control to biological torque control using a powered hip exoskeleton. *Frontiers in Bioengineering and Biotechnology*, 5:37.
87. Schlink BR, Peterson SM, Hairston WD, Konig P, Kerick SE, and **Ferris DP** (2017) Independent component analysis and source localization on mobile EEG data can identify increased levels of acute stress. *Frontiers in Human Neuroscience*, 11:310.
86. Melnik A, Hairston WD, **Ferris DP**, and Konig P (2017) EEG correlates of sensorimotor processing: independent components involved in sensory and motor processing. *Scientific Reports*, 7:4461.

85. Oliveira AS, Schlink B, Hairston WD, Konig P, and **Ferris DP** (2017) A channel rejection method for attenuating motion-related artefacts in EEG recordings during cyclical head motion. *Frontiers in Neuroscience*, 11:225.
84. Melnik A, Legkov P, Izdebski K, Kärcher S, Hairston WD, **Ferris DP**, and Konig P (2017) Subjects, systems, sessions: to what extent do these factors influence EEG data? *Frontiers in Human Neuroscience*, 11:150.
83. **Ferris DP** and Schlink B (2017) Robotic devices to enhance human performance. *Kinesiology Review*, 6:70-77.
82. Young A and **Ferris DP** (2017) State-of-the-art and future directions for robotic lower limb exoskeletons. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 25:171-182.
81. Koller J, Gates D, **Ferris DP**, and Remy CD (2017) Confidence in the curve: establishing instantaneous cost mapping techniques using bilateral ankle exoskeletons. *Journal of Applied Physiology*, 122:242-252.
80. Wahn B, **Ferris DP**, Hairston WD, and Konig P (2017) Pupil sizes scale with attentional load and task experience in a multiple object tracking task. *PLoS One*, 11(12): e0168087.
79. Young AJ, Foss J, Gannon H, and **Ferris DP** (2017) Influence of power delivery timing on the energetics and biomechanics of humans wearing a hip exoskeleton. *Frontiers in Bioengineering and Biotechnology*, 5:4.
78. Cherry MS, Kota S, Young A, and **Ferris DP** (2016) Running with an elastic lower limb exoskeleton. *Journal of Applied Biomechanics*, 32:269-77.
77. Oliveira A, Schlink B, Hairston D, Konig P, and **Ferris DP** (2016) Proposing metrics for benchmarking novel EEG technologies towards real-world measurements. *Frontiers in Human Neuroscience*, 10:188.
76. Oliveira A, Schlink B, Hairston D, Konig P, and **Ferris DP** (2016) Induction and separation of motion artifacts in EEG data using a mobile phantom head device. *Journal of Neural Engineering*, 13(3):036014.
75. Huang S, Wensman JP, and **Ferris DP** (2016) Locomotor adaptation by transtibial amputees walking with an experimental powered prosthesis under continuous myoelectric control. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 24:573-581.
74. Jacobs D and **Ferris DP** (2016) Evaluation of a low-cost pneumatic plantar pressure insole for predicting ground contact kinetics. *Journal of Applied Biomechanics*, 32:215-20.
73. Kline JE, Huang HJ, Snyder KL, and **Ferris DP** (2016) Cortical spectral activity and connectivity during active and viewed arm and leg movement. *Frontiers in Neuroscience*, 10:91.
72. Bradford JC, Lukas J, and **Ferris DP** (2016) Electrocranial activity distinguishes between uphill and level walking in humans. *Journal of Neurophysiology*, 115:958-966.
71. Snyder KL, Kline JE, Huang HJ, and **Ferris DP** (2015) Independent component analysis of gait-related movement artifact recorded using EEG electrodes during treadmill walking. *Frontiers in Human Neuroscience*, 9:639.
70. Koller JR, Jacobs DA, **Ferris DP**, and Remy CD (2015) Adaptive gain for proportional myoelectric control of a robotic ankle exoskeleton. *Journal of Neuroengineering and Rehabilitation*, 12:97.
69. Jacobs D and **Ferris DP** (2015) Estimation of ground contact forces and ankle moment in multiple human locomotion tasks. *Journal of Neuroengineering and Rehabilitation*, 12:90.
68. Kline JE, Huang HJ, Snyder KL, and **Ferris DP** (2015) Isolating gait-related movement artifacts in electroencephalography during human walking. *Journal of Neural Engineering*, 12(4):046022.
67. Voloshina A and **Ferris DP** (2015) Biomechanics and energetics of running on uneven terrain. *Journal of Experimental Biology*, 218:711-9.
66. Gramann K, Jung T, **Ferris DP**, Lin C, Makeig S (2014) Towards a new cognitive neuroscience: Modeling natural brain dynamics. *Frontiers in Human Neuroscience*, 8:444.
65. Kline JE, Poggensee K, and **Ferris DP** (2014) Your brain on speed: cognitive performance of a spatial working memory task is not affected by walking speed. *Frontiers in Human Neuroscience*, 8:288.
64. Huang S, Wensman JP and **Ferris DP** (2014) An experimental powered lower limb prosthesis using proportional myoelectric control. *ASME Journal of Medical Devices*, 8:024501.

63. Lau TM, Gwin JT and **Ferris DP** (2014) Walking reduces electrocortical sensorimotor network connectivity compared to standing. *Journal of Neuroengineering and Rehabilitation*, 11:14
62. Gramann K, **Ferris DP**, Gwin JT, and Makeig S (2014) Imaging natural cognition in action. *International Journal of Psychophysiology*, 91:22-29.
61. Sipp A, Gwin JT, Makeig S and **Ferris DP** (2013) Loss of balance during balance-beam walking elicits a broadly distributed theta-band electrocortical response. *Journal of Neurophysiology*, 110: 2050-2060.
60. Voloshina A, Kuo AD, Daley MA, and **Ferris DP** (2013) Biomechanics and energetics of walking on uneven terrain. *Journal of Experimental Biology*, 216: 3963-3970.
59. Alcaide-Aguirre RE, Morgenroth DC, and **Ferris DP** (2013) Motor performance and learning with lower extremity myoelectric control in amputees. *Journal of Rehabilitation Research and Development*, 50: 687–698.
58. Gordon KE, Kinnaird C and **Ferris DP** (2013) Locomotor adaptation to soleus EMG-controlled antagonistic exoskeleton. *Journal of Neurophysiology*, 109:1804-1814.
57. Gwin JT and **Ferris DP** (2012) Beta- and gamma-range human lower limb corticomuscular coherence. *Frontiers in Human Neuroscience*, 6:258.
56. Lau TM, Gwin JT and **Ferris DP** (2012) How many electrodes are really needed for EEG-based mobile brain imaging? *Journal of Behavioral and Brain Science*, 2:387-393.
55. Huang S and **Ferris DP** (2012) Muscle activation patterns during walking from transtibial amputees recorded within the residual limb-prosthetic interface. *Journal of Neuroengineering and Rehabilitation*, 9:55.
54. Lau TM, Gwin JT, McDowell K and **Ferris DP** (2012) Weighted phase lag index stability as an artifact resistant measure to detect cognitive EEG activity during locomotion. *Journal of Neuroengineering and Rehabilitation*, 9:47.
53. Gwin JT and **Ferris DP** (2012) An EEG-based study of discrete isometric and isotonic human lower limb muscle contractions. *Journal of Neuroengineering and Rehabilitation*, 9:35.
52. Gramann K, Gwin JT, **Ferris DP**, Oie K, Jung TP, Lin CT, Liao LD and Makeig S (2011) Cognition in action: imaging brain/body dynamics in mobile humans. *Reviews in the Neurosciences*, 22:593-608.
51. Lewis CL and **Ferris DP** (2011) Invariant hip moment patterns when walking with a robotic hip exoskeleton. *Journal of Biomechanics*, 44:789-793.
50. Gwin J, Gramann K, Makeig S and **Ferris DP** (2011) Electrocortical activity is coupled to gait cycle phase during treadmill walking. *Neuroimage*, 54:1289-1296.
49. Huang HJ and **Ferris DP** (2010) Neural mechanisms for upper and lower limb neural coupling. *Journal of Neuroengineering and Rehabilitation*, 7:59.
48. Gramann K, Gwin J, Bigdely-Shamlo N, **Ferris DP** and Makeig S (2010) Visual evoked responses during standing and walking. *Frontiers in Human Neuroscience*, 4:202.
47. Domingo A and **Ferris DP** (2010) The effects of error augmentation on learning to walk on a narrow balance beam. *Experimental Brain Research*, 206:359-370.
46. Kao PC, Lewis CL and **Ferris DP** (2010) Short-term locomotor adaptation to a robotic ankle exoskeleton does not alter soleus Hoffmann reflex amplitude. *Journal of Neuroengineering and Rehabilitation*, 7:33.
45. Gwin JT, Gramann K, Makeig S and **Ferris DP** (2010) Removal of movement artifact from high-density EEG recorded during walking and running. *Journal of Neurophysiology*, 103:3526-3534.
44. Kao PC, Lewis CL and **Ferris DP** (2010) Joint kinetic response during unexpectedly reduced plantar flexor torque provided by a robotic ankle exoskeleton during walking. *Journal of Biomechanics*, 43:1401-1407.
43. Kao PC, Lewis CL and **Ferris DP** (2010) Invariant ankle moment patterns when walking with and without a robotic ankle exoskeleton. *Journal of Biomechanics*, 43:203-209.
42. Domingo A and **Ferris DP** (2009) Effects of physical assistance on learning balance during narrow beam walking. *Gait and Posture*, 30:464-468.
41. Simon AM, Kelly BM and **Ferris DP** (2009) Sense of effort determines lower limb force production during dynamic movement in individuals with post-stroke hemiparesis. *Neurorehabilitation and Neural Repair*, 23:811-818.

40. Huang HJ and **Ferris DP** (2009) Upper limb effort does not increase maximal voluntary muscle activation in individuals with incomplete spinal cord injury. *Clinical Neurophysiology*, 120:1741-1749.
39. Huang HJ and **Ferris DP** (2009) Excitatory neural coupling between upper and lower limbs is bidirectional and ipsilateral. *Medicine and Science in Sports and Exercise*, 41:1778-1789.
38. Klimstra MD, Thomas E, Stoloff RH, **Ferris DP** and Zehr EP (2009) Neuromechanical considerations for incorporating rhythmic arm movement in the rehabilitation of walking. *Chaos*, 19:026102.
37. Sawicki GS, Lewis CL and **Ferris DP** (2009) It pays to have a spring in your step. *Exercise and Sport Sciences Reviews*, 37:130-138.
36. Sawicki GS and **Ferris DP** (2009) A pneumatically powered knee-ankle-foot orthosis (KAFO) with myoelectric activation and inhibition. *Journal of Neuroengineering and Rehabilitation*, 6:23.
35. Kinnaird CR and **Ferris DP** (2009) Medial gastrocnemius myoelectric control of a robotic ankle exoskeleton for human walking. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 17:31-37.
34. Kao P-C and **Ferris DP** (2009) Motor adaptation during dorsiflexion-assisted walking with a powered orthosis. *Gait and Posture*, 29:230-236.
33. Gordon KE, **Ferris DP** and Kuo AD (2009) Metabolic and mechanical energy costs of reducing vertical center of mass movement during gait. *Archives of Physical Medicine and Rehabilitation*, 90:136-144.
32. Collins SH, Adamczyk PG, **Ferris DP** and Kuo AD (2009) A simple method for calibrating force plates and treadmills using an instrumented pole. *Gait and Posture*, 29:59-64.
31. Sawicki GS and **Ferris DP** (2009) Mechanics and energetics of incline walking with robotic ankle exoskeletons. *Journal of Experimental Biology*, 212:32-41.
30. Sawicki GS and **Ferris DP** (2009) Powered ankle exoskeletons reveal the metabolic cost of plantar flexor mechanical work during walking with longer steps at constant step frequency. *Journal of Experimental Biology*, 212:21-31.
29. Lewis CL and **Ferris DP** (2008) Walking with increased ankle pushoff decreases hip moments. *Journal of Biomechanics*, 41:2082-2089.
28. Sawicki GS and **Ferris DP** (2008) Mechanics and energetics of level walking with powered ankle exoskeletons. *Journal of Experimental Biology*, 211:1402-1413.
27. Simon AM and **Ferris DP** (2008) Lower limb force production and bilateral force asymmetries are based on sense of effort. *Experimental Brain Research*, 187:129-138.
26. Pelc E, Daley MA, and **Ferris DP** (2008) Resonant hopping of a robot controlled by an artificial neural oscillator. *Bioinspiration and Biomimetics*, 3(2):26001.
25. Cain S, Gordon KE and **Ferris DP** (2007) Human motor adaptation during walking with a powered ankle-foot orthosis depends on control method. *Journal of Neuroengineering and Rehabilitation*, 4:48.
24. **Ferris DP**, Sawicki GS and Daley MA (2007) A physiologist's perspective on robotic exoskeletons for human locomotion. *International Journal of Humanoid Robotics*, 4:507-528.
23. Domingo A, Sawicki GS and **Ferris DP** (2007) Kinematics and muscle activity of individuals with incomplete spinal cord injury during treadmill stepping with and without manual assistance. *Journal of Neuroengineering and Rehabilitation*, 4:32.
22. Zehr EP, Balter JE, **Ferris DP**, Hundza SR, Loadman P and Stoloff RH (2007) Neural control of rhythmic arm and leg movement is conserved across human locomotor tasks. *Journal of Physiology*, 582: 209-227.
21. Gordon KE and **Ferris DP** (2007) Learning to walk with a robotic ankle exoskeleton. *Journal of Biomechanics*, 40:2636-2644.
20. Stoloff RH, Zehr EP and **Ferris DP** (2007) Recumbent stepping has similar but simpler neural control compared to walking. *Experimental Brain Research*, 178:427-438.
19. Simon AM, Gillespie RB and **Ferris DP** (2007) Symmetry-based resistance as a novel means of lower limb rehabilitation. *Journal of Biomechanics*, 40:1286-1292.
18. **Ferris DP**, Huang HJ and Kao P-C (2006) Moving the arms to activate the legs. *Exercise and Sport Sciences Reviews*, 34:113-120.

17. Gordon KE, Sawicki GS and **Ferris DP** (2006) Mechanical performance of artificial pneumatic muscles to power an ankle-foot orthosis. *Journal of Biomechanics*, 39:1832-1841.
16. **Ferris DP**, Gordon KE, Sawicki GS and Peethambaran A (2006) An improved powered ankle-foot orthosis using proportional myoelectric control. *Gait and Posture*, 23:425-428.
15. Sawicki GS, Domingo A and **Ferris DP** (2006) The effects of powered ankle foot orthoses on muscle activation and joint kinematics during walking by individuals with incomplete spinal cord injury. *Journal of Neuroengineering and Rehabilitation*, 3(1):3.
14. **Ferris DP**, Bohra ZA, Lukos JR and Kinnaird CR (2006) Neuromechanical adaptation to hopping with an elastic ankle-foot orthosis. *Journal of Applied Physiology*, 100:163-170.
13. **Ferris DP**, Sawicki GS and Domingo A (2005) Powered lower limb orthoses for gait rehabilitation. *Topics in Spinal Cord Injury Rehabilitation*, 11:34-49.
12. **Ferris DP**, Czerniecki JM and Hannaford B (2005) An ankle-foot orthosis powered by artificial pneumatic muscles. *Journal of Applied Biomechanics*, 21:189-197.
11. Kao P-C and **Ferris DP** (2005) The effect of movement frequency on interlimb coupling during recumbent stepping. *Motor Control*, 9:144-163.
10. Gordon KE and **Ferris DP** (2004) Proportional myoelectric control of a virtual object to investigate human efferent control. *Experimental Brain Research*, 159:478-486.
9. Huang HJ and **Ferris DP** (2004) Neural coupling between upper and lower limbs during recumbent stepping. *Journal of Applied Physiology*, 97:1299-1308.
8. **Ferris DP**, Gordon KE, Beres JA and Harkema SH (2004) Muscle activation during unilateral stepping occurs in the nonstepping limb of humans with clinically complete spinal cord injury. *Spinal Cord*, 42:14-23.
7. **Ferris DP**, Aagaard P, Simonsen EB, Farley CT, and Dyhre-Poulsen P (2001) Soleus H-reflex gain in humans walking and running under simulated reduced gravity. *Journal of Physiology*, 530:167-180.
6. **Ferris DP**, Liang K and Farley CT (1999) Runners adjust leg stiffness for their first step on a new running surface. *Journal of Biomechanics*, 32:787-794.
5. **Ferris DP**, Louie M and Farley CT (1998) Running in the real world: adjusting leg stiffness for different surfaces. *Proceedings of the Royal Society of London: Biological Sciences*, 265:989-994.
4. Farley CT and **Ferris DP** (1998) Biomechanics of walking and running: from center of mass movement to muscle action. *Exercise and Sport Sciences Reviews*, 26:253-285.
3. **Ferris DP** and Farley CT (1997) Interaction of leg stiffness and surface stiffness during human hopping. *Journal of Applied Physiology*, 82:15-22.
2. Kram R, Domingo A and **Ferris DP** (1997) Effect of reduced gravity on the preferred walk-run transition speed. *Journal of Experimental Biology*, 200:821-826.
1. **Ferris DP**, Signorile JF and Caruso JF (1995) The relationship between physical and physiological variables and volleyball spiking velocity. *Journal of Strength and Conditioning Research*, 9:32-36.

### Journal Manuscripts in Review

3. Jacobs DA, Koller JR, Steele KM, and **Ferris DP** (in review) Motor modules during adaptation to walking in a powered ankle exoskeleton. *Journal of Neuroengineering and Rehabilitation*
2. Voloshina A and **Ferris DP** (in review) An uneven terrain treadmill. *Journal of Applied Biomechanics*.
1. Voloshina AS, Kuo AD, **Ferris DP**, and Remy CD (in review) The cost of walking on uneven terrain: a model-based analysis. *PLoS One*.

### Journal Manuscripts in Preparation

1. Huang S, Wensman J, and **Ferris DP** (in preparation) Lower limb amputee user experience walking with a transtibial powered prosthesis with continuous proportional myoelectric control. *Prosthetics and Orthotics International*.

### Selected Engineering Conference Papers (Peer Reviewed)

11. Izdebski K, Oliveira AS, Schlink BR, Legkov P, Kärcher S, Hairston WD, **Ferris DP**, and König P (2016) Usability of EEG systems: user experience study. *Proceedings of the 9th ACM International Conference on Pervasive Technologies Related to Assistive Environments*, Corfu Island, Greece, (4 pages).
10. Koller J, Gates D, **Ferris DP**, and Remy CD (2016) 'Body-in-the-loop' optimization of assistive robotic devices: a validation study. *Robotics: Science and Systems*, Ann Arbor, MI. (10 pages).
9. Snyder R, Vindiola M, Vettel JM and **Ferris DP** (2013) Cortical connectivity during uneven terrain walking. *Proceedings of the 6th International IEEE EMBS Conference on Neural Engineering*, San Diego, CA, pp. 231-234.
8. Gwin JT and **Ferris DP** (2011) High-density EEG and independent component analysis mixture models distinguish knee contractions from ankle contractions. *Proceedings of the 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Boston, MA, pp. 4195-4198.
7. Cherry MS, Kota S and **Ferris DP** (2009) An elastic exoskeleton for assisting human running. *Proceedings of the International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE)*, August 30-September 2, San Diego, CA, USA, DETC2009-87355 (12 pages).
6. Simon AM, Kelly BM and **Ferris DP** (2009) Preliminary trial of symmetry-based resistance in individuals with post-stroke hemiparesis. *Proceedings of the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Minneapolis, MN, pp. 5294-5299.
5. Reinkensmeyer DJ, Akoner OM, **Ferris DP** and Gordon KE (2009) Slacking by the human motor system: computational models and implications for robotic orthoses. *Proceedings of the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Minneapolis, MN, pp. 2129-2132.
4. **Ferris DP** and Lewis CL (2009) Robotic lower limb exoskeletons using proportional myoelectric control. *Proceedings of the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Minneapolis, MN, pp. 2119-2124.
3. Cherry MS, Choi DJ, Deng KJ, Kota S and **Ferris DP** (2006) Design and fabrication of an elastic knee orthosis - preliminary results. *Proceedings of the International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE)*, September 10-13, Philadelphia, PA, USA, DETC2006-99622 (9 pages).
2. Sawicki GS, Gordon KE and **Ferris DP** (2005) Powered lower limb orthoses: applications in motor adaptation and rehabilitation. *IEEE Proceedings of the International Conference on Rehabilitation Robotics*, pp. 206-211.
1. Danek KA, Gillespie RB, Aldridge JW, **Ferris DP** and Grizzle JW (2005) A dual input device for self-assisted control of a virtual pendulum. *IEEE Proceedings of the International Conference on Rehabilitation Robotics*, pp. 313-318.

### Publications (Non-Peer Reviewed)

2. **Ferris DP** (2009) The exoskeletons are here. *Journal of Neuroengineering and Rehabilitation*, 6:17.
1. **Ferris DP** (2008) Case Study: an ankle-foot orthosis powered by artificial pneumatic muscles. In *Wearable Robots: Biomechatronic Exoskeletons*, ed. Pons JL. (Wiley, John & Sons) pp. 349-355.

### Invited Book Review

1. **Ferris, DP** (2003) Neurotechnology for Biomimetic Robots, ed. J. Ayers, J.L. Davis, and A. Rudolph. *The Quarterly Review of Biology*, 78(3):380.

## **Extramural Grants Completed**

- 28.** *Controller for Robotic Exoskeleton*  
Principal Investigator: Daniel Ferris (0% effort)  
Agency: Lockheed Martin  
Period: 12/08/15 – 12/31/16  
Amount: \$8,000 Total Costs  
Aim: To build a hip exoskeleton with series elastic actuators
- 27.** *Biomechanics and Neural Control of Movement*  
Principal Investigator: Daniel Ferris (2% effort)  
Agency: National Institutes of Health (R13 NS096934)  
Period: 06/15/16 – 5/31/17  
Amount: \$16,000 Total Costs  
Aim: To provide travel funds to graduate students and postdoctoral scholars to attend a meeting
- 26.** *Electrical Neuroimaging of Brain Processes during Human Gait*  
Principal Investigator: Daniel Ferris (25% effort)  
Agency: National Institutes of Health (R01 NS073649)  
Period: 09/01/11 – 7/31/16  
Amount: \$1,313,866 Total Costs  
Aim: To quantify electrocortical dynamics involved in the control of human walking
- 25.** *Hip Exoskeleton with Series Elastic Actuators*  
Principal Investigator: Daniel Ferris (1% effort)  
Agency: Lockheed Martin  
Period: 01/01/16 – 06/30/16  
Amount: \$24,000 Total Costs  
Aim: To develop and test a robotic hip exoskeleton
- 24.** *Intelligent Prosthetic Knee-Ankle-Foot System with Coordinated Joint Action*  
Principal Investigator: Art Kuo, UM (Daniel Ferris, Co-I, 17% effort)  
Agency: U.S. Army Medical Research and Materiel Command (W81XW-08-DRMRP-ATTDA)  
Period: 09/21/09 – 09/20/15  
Amount: \$8,712,373 Total Costs (UM portion \$3,463,351 Total Costs; Ferris subcontract \$799,383 Total Costs)  
Aim: To develop a bionic lower limb prosthesis
- 23.** *The Preparation of Leadership Personnel to Implement the Research to Practice Model in Adapted Physical Education and Pediatric Physical Therapy.*  
Principal Investigator: Dale Ulrich, UM (Daniel Ferris, Mentor, 0% effort)  
Agency: Department of Education / U.S. Office of Special Education Programs (H325D110003)  
Period: 10/01/11 – 09/30/15  
Amount: \$977,302 Total Costs  
Aim: To support pre-doctoral and post-doctoral training
- 22.** *Review of Robotic Exoskeleton Technologies*  
Principal Investigator: Daniel Ferris (10% effort)  
Agency: Army Research Laboratory  
Period: 09/24/14 – 06/30/15  
Amount: \$69,539 Total Costs  
Aim: To produce an expert analysis of current and future robotic exoskeleton technologies that could benefit the U.S. Dept. of Defense

- 21. *STTR Phase II: Integrated Powered Knee-Ankle Prosthetic System***  
Principal Investigator: Kurt Amundson, Ekso Bionics (Daniel Ferris, Co-Investigator, 10% effort)  
Agency: National Science Foundation (IIP-1026872)  
Period: 09/15/10 – 02/28/15  
Amount: \$1,000,000 Total Costs (Ferris subcontract \$348,380 Total Costs)  
Aim: To develop ankle actuation for robotic orthoses and prostheses
- 20. *Metabolic Advantage of Robotic Hip Assistance***  
Principal Investigator: Daniel Ferris (10% effort)  
Agency: Lockheed Martin  
Period: 11/01/14 – 12/31/14  
Amount: \$32,519 Total Costs  
Aim: To develop and test a robotic hip exoskeleton on human walking
- 19. *Control for Robotic Exoskeleton***  
Principal Investigator: Daniel Ferris (10% effort)  
Agency: Lockheed Martin  
Period: 04/15/14 – 11/30/14  
Amount: \$94,068 Total Costs  
Aim: To develop and test a myoelectric controller for a lower limb robotic exoskeleton
- 18. *Compliant Nonlinear Quasi-Passive Knee Orthotic (SBIR Phase II)***  
Principal Investigator: John Rokosz, Adicep Technologies (Daniel Ferris, Consultant, 2% effort)  
Agency: National Science Foundation (IIP-1152605)  
Period: 03/01/12 – 02/28/14  
Amount: \$499,999 Total Costs (Ferris subcontract \$10,000 Total Costs)  
Aim: To develop a novel non-linear torsion orthotic knee brace
- 17. *Wearable Robotic Knee Osteoarthritis Active Living Assistant - KOAALA (SBIR Phase I)***  
Principal Investigator: John Rokosz, Adicep Technologies (Daniel Ferris, Consultant, 2% effort)  
Agency: National Science Foundation (IIP-1248325)  
Period: 01/01/13 – 06/30/13  
Amount: \$150,000 Total Costs (Ferris subcontract \$5,000 Total Costs)  
Aim: To develop an orthotic knee brace to prevent knee damage and record movement data
- 16. *Mobile Brain Imaging: Monitoring the Brain Dynamics of Motivated Action***  
Principal Investigator: Scott Makeig, UCSD (Daniel Ferris, Co-I, 10% effort)  
Agency: Office of Naval Research (N000140811215)  
Period: 11/1/08 – 10/31/12  
Amount: \$3,402,119 Total Costs (Ferris subcontract \$261,169 Total Costs)  
Aim: To develop EEG based functional brain imaging for use during human movement
- 15. *The Preparation of Leadership Personnel to Implement the Research to Practice Model in Adapted Physical Education and Physical Therapy.***  
Principal Investigator: Dale Ulrich, UM (Daniel Ferris, Mentor, 0% effort)  
Agency: Department of Education / U.S. Office of Special Education Programs (H32D070081)  
Period: 08/01/07 – 07/31/12  
Amount: \$1,535,015 Total Costs  
Aim: To support pre-doctoral and post-doctoral training.

14. *The University of Michigan Medical Rehabilitation Research Training Program*  
Principal Investigator: Denise Tate, UM (Daniel Ferris, Mentor, 0% effort)  
Agency: National Institutes of Health (T32 HD007422)  
Period: 05/01/06 – 01/30/12  
Amount: \$1,572,758 Total Costs  
Aim: To support post-doctoral training in rehabilitation research
13. *Compliant Nonlinear Quasi-Passive Orthotic Joint (SBIR Phase I)*  
Principal Investigator: John Rokosz, Adicep Technologies (Daniel Ferris, Consultant, 2% effort)  
Agency: National Science Foundation (IIP-1046005)  
Period: 01/01/11 – 06/30/11  
Amount: \$147,000 Total Costs (Ferris subcontract \$5,000 Total Costs)  
Aim: To develop a novel non-linear torsion orthotic knee joint
12. *Robotic Orthoses for Gait Rehabilitation*  
Principal Investigator: Daniel Ferris (21% effort)  
Agency: National Institutes of Health (R21 NS062119)  
Period: 02/01/08 – 07/31/10  
Amount: \$351,688 Total Costs  
Aim: To determine if individuals with incomplete spinal cord injury improve their energetics, biomechanics, and neural control from practice walking with powered ankle-foot orthoses
11. *High-Density Electroencephalography System*  
Principal Investigator: Daniel Ferris (0% effort)  
Agency: Army Research Laboratory (W911NF-09-1-0139)  
Period: 04/15/09 – 04/14/10  
Amount: \$179,000 Total Costs  
Aim: Equipment grant to purchase a high-density electroencephalography system
10. *CAREER: Biomechanics and Energetics of Human Locomotion with Powered Exoskeletons*  
Principal Investigator: Daniel Ferris (15% effort)  
Agency: National Science Foundation (BES-0347479)  
Period: 04/01/04 – 03/30/09  
Amount: \$426,218 Total Costs  
Aim: To determine if powered lower limb exoskeletons can reduce the metabolic cost of walking
9. *Motor Adaptation during Human Locomotion*  
Principal Investigator: Daniel Ferris (40% effort)  
Agency: National Institutes of Health (R01 NS45486)  
Period: 09/01/02 – 07/31/07  
Amount: \$1,233,622 Total Costs  
Aim: To determine how healthy subjects adapt to walking with powered ankle-foot orthoses
8. *Control of Balance during Human Walking*  
Principal Investigator: Arthur D. Kuo, UM (Daniel Ferris, Co-Investigator, 10% effort)  
Agency: National Institutes of Health (R21 DC006466)  
Period: 1/15/04 – 12/31/06  
Amount: \$392,141 Total Costs  
Aim: To determine how humans balance their bodies during walking
7. *Efficacy of Coupled Rhythmic Arm and Leg Movement as an Alternative to Body Weight Supported Walking Training for Recovery of Walking after Incomplete Spinal Cord Injury*  
Principal Investigator: E. Paul Zehr, U. of Victoria (Daniel Ferris, Co-Investigator, 5% effort)

Agency: Rick Hansen Man In Motion Foundation

Period: 07/01/05 – 6/30/06

Amount: \$27,813 Total Costs

Aim: To compare reflex modulation in spinal cord injury subjects during rhythmic movements

**6. *Network Collaboration for CRPF Grantees***

Principal Investigator: Daniel Ferris (5% effort)

Agency: Christopher Reeve Paralysis Foundation

Period: 07/15/04 – 12/15/04

Amount: \$5,000 Total Costs

Aim: To compare reflex modulation patterns for walking and recumbent stepping

**5. *Recumbent Stepping for Gait Rehabilitation after Spinal Cord Injury***

Principal Investigator: Daniel Ferris (20% effort)

Agency: Paralyzed Veterans of America Spinal Cord Research Foundation (2293-01)

Period: 10/01/03 – 03/31/06

Amount: \$150,000 Total Costs

Aim: To assess the feasibility of using self-assisted recumbent stepping as gait rehabilitation therapy after spinal cord injury

**4. *A Powered Lower Limb Exoskeleton to Assist Locomotor Training***

Principal Investigator: Daniel Ferris (20% effort)

Agency: Christopher Reeve Paralysis Foundation

Period: 12/15/01 – 12/15/04

Amount: \$150,000 Total Costs

Aim: To build a pneumatically-powered orthosis for locomotor training after spinal cord injury

**3. *Motor Adaptation during Human Locomotion***

Principal Investigator: Daniel Ferris (100% effort)

Agency: National Institutes of Health (F32 AR08602)

Period: 05/01/00 – 06/30/01

Amount: \$65,212 Total Costs

Aim: To assess the feasibility of using myoelectrically controlled orthoses to study gait adaptation

**2. *H-Reflex Modulation During Human Locomotion***

Principal Investigator: Poul Dyhre-Poulsen, Univ. of Copenhagen (Daniel Ferris, Co-Investigator)

Agency: Danish Sports Research Council

Period: 1997

Amount: \$5,667 Total Costs

Aim: To examine H-reflex gain during simulated reduced gravity locomotion

**1. *The Biomechanics of Reduced Gravity Locomotion***

Principal Investigator: Daniel Ferris (50% effort)

Agency: NASA (NGT-51416)

Period: 09/01/95 – 08/30/98

Amount: \$66,000 Total Costs

Aim: To examine the effects of reduced gravity on human locomotion

### **Extramural Grants (Active)**

3. *Conference on Biomechanics and Neural Control of Movement*  
Principal Investigator: Daniel Ferris (0% effort)  
Agency: National Science Foundation  
Period: 07/01/16 – 06/30/18  
Amount: \$23,250 Total Costs  
Aim: To support publication of meeting consensus review papers from a conference
2. *NRI: Wearable eMbots to Induce Recovery of Function*  
Principal Investigator: Brent Gillespie (Daniel Ferris, Co-Investigator, 2% effort)  
Agency: National Institutes of Health  
Period: 09/01/14 – 08/31/17  
Amount: \$840,171 Total Costs  
Aim: To develop and test novel self-teleoperated rehabilitation exoskeletons
1. *Cognition and Neuroergonomics Collaborative Technology Alliance (CTA)*  
Principal Investigator: Tim Lee, DCS Corporation (Daniel Ferris, Co-I, 20% effort)  
Agency: Army Research Laboratory (W911NF-10-2-0022)  
Period: 07/01/10 – 06/30/20  
Amount: \$56,000,000 Total Costs (Ferris subcontract \$~7,000,000 Total Costs)  
Aim: To advance technologies for real world mobile brain imaging

### **Extramural Grants (Pending)**

3. *Evaluating and Improving Assistive Robotic Devices Continuously and in Real-time*  
Principal Investigator: C. David Remy (D. Ferris Consultant, 2% effort)  
Agency: National Institutes of Health (R03 HD092639-01A)  
Period: 04/01/2018-03/31/2020  
Amount: \$155,000 Total Costs  
Aim: The major goal of the project is to develop algorithms for predicting the metabolic cost of human movement using a range of physiological sensors.
2. *Supraspinal Control of Human Locomotor Adaptation (MFSR study section meeting Oct 12, 2017)*  
Principal Investigator: Daniel Ferris (25% effort)  
Agency: National Institutes of Health (R01 NS104772A1)  
Period: 04/01/2018-03/31/2023  
Amount: \$2,592,923 Total Costs  
Aim: The major goal of the project is to use high-density electroencephalography to document how the brain controls gait adaptation.
1. *Supraspinal Control of Human Locomotor Adaptation (14<sup>th</sup> percentile, pending council review)*  
Principal Investigator: Daniel Ferris (25% effort)  
Agency: National Institutes of Health (R01 NS104772)  
Period: 12/01/2017-11/30/2022  
Amount: \$2,530,197 Total Costs  
Aim: The major goal of the project is to use high-density electroencephalography to document how the brain controls gait adaptation.

## **Extramural Training Grants for my Doctoral and Post-Doctoral Trainees (Funded)**

7. *MICHR Postdoctoral Translational Scholars Program* (post-doctoral fellowship)  
Principal Investigator: Daniel Jacobs, PhD (Daniel Ferris, mentor)  
Agency: NIH CTSA  
Period: 06/01/15 – 05/31/17  
Amount: \$100,000 Total Costs  
Aim: To examine metabolic benefit of robotic assistance on individuals with multiple sclerosis
6. *Postdoctoral Research Fellowship in Intersections of Biology and Mathematical and Physical Sciences* (post-doctoral fellowship)  
Principal Investigator: Kristine Snyder, PhD (Daniel Ferris, mentor)  
Agency: National Science Foundation  
Period: 06/01/12 – 05/30/14  
Amount: \$123,000 Total Costs  
Aim: To assess effective connectivity for brain networks in human locomotor activities
5. *Postdoctoral Research Fellowship in Biological Informatics* (post-doctoral fellowship)  
Principal Investigator: Monica Daley, PhD (Daniel Ferris, mentor)  
Agency: National Science Foundation (BIO-0630664)  
Period: 10/01/06 – 09/31/08  
Amount: \$120,000 Total Costs  
Aim: To build a neuromechanical computer simulation of a running biped
4. *Self-Assisted Neurological Rehabilitation* (pre-doctoral fellowship)  
Principal Investigator: Helen Huang (Daniel Ferris, mentor)  
Agency: National Institutes of Health (F31 NS056504)  
Period: 06/09/06 – 06/08/09  
Amount: \$100,152 Total Costs  
Aim: To assess neural interlimb coupling during recumbent stepping
3. *Upper Limb Control of Robotic Lower Limb Assistance during Walking* (post-doctoral fellowship)  
Principal Investigator: Cara Lewis, PT, PhD (Daniel Ferris, mentor)  
Agency: National Institutes of Health (F32 HD055010)  
Period: 07/09/07– 07/08/09  
Amount: \$96,472 Total Costs  
Aim: To build and test an upper limb controller for robotic lower limb assistance
2. *Effects of Physical Assistance on Walking Balance* (pre-doctoral fellowship)  
Principal Investigator: Antoinette Domingo, PT (Daniel Ferris, mentor)  
Agency: National Institutes of Health (F31 HD056588)  
Period: 06/01/07– 05/30/09  
Amount: \$56,884 Total Costs  
Aim: To determine how physical assistance affects motor learning of walking balance
1. *Symmetry-Based Resistance for Stroke Rehabilitation* (pre-doctoral fellowship)  
Principal Investigator: Ann Simon (Daniel Ferris, mentor)  
Agency: American Heart Association  
Period: 09/01/07– 10/31/08  
Amount: \$51,139 Total Costs  
Aim: To test a novel lower limb exercise for improving functional ability in post-stroke subjects

## **Intramural Grants Funded (Completed)**

6. *A Novel Electroencephalography System that is Free from Motion Artifacts*  
Principal Investigator: Daniel Ferris (0% effort), Euisik Yoon Co-PI  
Agency: University of Michigan Provost  
Period: 09/01/15 – 5/31/2017  
Amount: \$100,000 Total Costs  
Aim: The focus of the project is to develop a novel EEG system that can perform artifact subtraction in real-time.
  
5. *Faculty Cluster Hire in Rehabilitation Robotics*  
Principal Investigator: Daniel Ferris (0% effort)  
Agency: University of Michigan Provost  
Period: 2010 – 2017  
Amount: minimum \$3,600,000 Total Costs  
Aim: This award provides \$2 million in start-up funds for four new faculty hires across four departments (Movement Science, Mechanical Engineering, Biomedical Engineering, Physical Medicine and Rehabilitation) in three schools and colleges. It also provides each department with \$100,000 per faculty member per year for salary and benefits for as long as the faculty member is at the University of Michigan.
  
4. *Powered Lower Limb Orthoses for Stroke Rehabilitation*  
Principal Investigator: Daniel Ferris (0% effort)  
Agency: University of Michigan OVP and Rackham Graduate School  
Period: 05/01/07 – 8/31/07  
Amount: \$4,000 Total Costs  
Aim: To collect pilot data on stroke subjects wearing powered orthoses for gait rehabilitation
  
3. *Apparatus and Preliminary Data for an Interdisciplinary Project in Self-Teleoperated Stabilization*  
Principal Investigator: Jessy Grizzle, UM (Daniel Ferris, Co-Investigator, 5% effort)  
Agency: University of Michigan Office of the Vice President for Research  
Period: 5/1/03 – 4/30/04  
Amount: \$10,000 Total Costs  
Aim: To build a tele-operated device for studying control of human standing
  
2. *Artificial Neural Oscillator Control of Functional Electrical Stimulation during Gait Rehabilitation after Spinal Cord Injury*  
Principal Investigator: Daniel Ferris (5% effort)  
Agency: University of Michigan Rackham Graduate School  
Period: 1/1/02 – 12/31/02  
Amount: \$14,944 Total Costs  
Aim: To test the efficacy of artificial neural oscillators as adaptive controllers
  
1. *Powered Lower Limb Orthoses for Gait Rehabilitation*  
Principal Investigator: Daniel Ferris (5% effort)  
Agency: University of Michigan Office of the Vice President for Research  
Period: 10/1/01 – 9/30/02  
Amount: \$12,000 Total Costs  
Aim: To build a pneumatically powered knee-ankle-foot orthosis

## **Scholarships, Fellowships, and Honors**

Florida Academic Scholar Scholarship, 1989-1992  
National Merit Scholar Scholarship, 1989-1992  
Department of Exercise and Sport Sciences Fellowship, 1992-1994  
University of California Regents Fellowship, 1994-1995  
Department of Defense Graduate Fellowship Honorable Mention, 1994  
NSF Graduate Fellowship Honorable Mention, 1995  
NASA Graduate Student Researcher's Program Fellowship, 1995-1998  
APS Graduate Student Award Finalist, Integrative Biology of Exercise, 1996  
NIH Institutional Post-Doctoral Research Fellowship, 1998-2000  
NIH Individual Post-Doctoral Research Fellowship, 2000-2001  
International Society of Biomechanics Promising Young Scientist Runner-Up, 2003  
NSF CAREER Award, 2003  
Invited Participant for "Summit of Experts in Biomechanics" sponsored by U.S. National Committee of Biomechanics, 2007 (one of 50 attendees)  
2<sup>nd</sup> Place, Best Oral Presentation, American Spinal Injury Association Annual Meeting, 2008  
Invited Participant for Neuromechanical Engineering Workshop sponsored by National Science Foundation, 2009 (one of 35 attendees)  
Fellow, National Academy of Kinesiology, 2015  
Fellow, American Institute of Medical and Biological Engineering, 2017

## **Invited Presentations (Local - 55)**

VA Center for Excellence in Limb Loss Prevention and Prosthetic Engineering, Seattle VA, Aug 2000  
Daniel Laboratory, Department of Zoology, University of Washington, Oct 2000  
Center for Ergonomics, Department of Industrial and Operations Engineering, University of Michigan, Oct 2001  
Department of Biomedical Engineering, University of Michigan, Dec 2001  
Department of Physical Medicine and Rehabilitation Residents Lecture Series, University of Michigan, Apr 2002  
Orthopaedic Research Laboratories, Department of Surgery, University of Michigan, May 2002  
MedRehab Physical Therapy, University of Michigan Health System, May 2003  
Department of Biomedical Engineering, University of Michigan, Oct 2003  
Health Sciences Scholars Program, University of Michigan, Mar 2005  
Health Sciences Scholars Program, University of Michigan, Jan 2006  
Department of Biomedical Engineering, University of Michigan, Oct 2006  
Investing in Ability Week, University of Michigan, Oct 2006  
Undergraduate Research Opportunity Program, University of Michigan, Nov 2006  
Department of Physical Medicine and Rehabilitation Residents Lecture Series, University of Michigan, Nov 2006  
Health Sciences Scholars Program, University of Michigan, Mar 2007  
Health Sciences Scholars Program, University of Michigan, Oct 2008  
Women in Science and Engineering, University of Michigan, Nov 2008  
Campus Day (Featured Faculty Lecture), University of Michigan, Nov 2008  
UM Chapter of the Biomedical Engineering Society, University of Michigan, Apr 2009  
Amazin' Blue Preview Lecture Series, University of Michigan, Apr 2009  
Department of Neurology Residents Lecture Series, University of Michigan, May 2009  
Department of Neurology Residents Lecture Series, University of Michigan, June 2009  
M-STEM Academy, College of Engineering, University of Michigan, July 2009  
Middle School FIRST Robotics Teams, Women In Science and Engineering, University of Michigan, Oct 2009  
Campus Day (Featured Faculty Lecture), University of Michigan, Nov 2009  
Health Sciences Scholars Program, University of Michigan, Mar 2010

Department of Biomedical Engineering, University of Michigan, Mar 2010  
Amazin' Blue Preview Lecture Series, University of Michigan, Apr 2010  
TEDxUofM, University of Michigan, Apr 2010  
Department of Physical Medicine and Rehabilitation Residents Lecture Series, University of Michigan,  
May 2010  
Health and Biomedical Engineering for Girls Summer Camp, Women In Science and Engineering,  
University of Michigan, July 2010  
Biopsychology Seminar Series, Department of Psychology, University of Michigan, Sept 2010  
Health Sciences Scholars Program, University of Michigan, Apr 2011  
Department of Physical Medicine and Rehabilitation Post-Doctoral Training Seminar, University of  
Michigan, Mar 2011  
Amazin' Blue Preview Lecture Series, University of Michigan, Apr 2011  
Center for Exercise Research, School of Kinesiology, University of Michigan, Apr 2011  
Department of Neurology Residents Lecture Series, University of Michigan, June 2011  
Health and Biomedical Engineering for Girls Summer Camp, Women in Science and Engineering,  
University of Michigan, July 2011  
Neuroscience Retreat, University of Michigan, Oct 2011  
Health Sciences Scholars Program, University of Michigan, Feb 2012  
Amazin' Blue Preview Lecture Series, University of Michigan, Apr 2012  
Health and Biomedical Engineering for Girls Summer Camp, Women in Science and Engineering,  
University of Michigan, June 2012  
Camp Michigania, University of Michigan, July 2012  
Society 2030 Annual Meeting, University of Michigan, Sept 2012 (Keynote)  
Health Sciences Scholars Program, University of Michigan, Mar 2013  
Department of Physical Medicine and Rehabilitation Residents Lecture Series, University of Michigan,  
April 2013  
Camp Michigania, University of Michigan, July 2013  
Department of Biomedical Engineering, University of Michigan, Sept 2013  
Department of Physical Medicine and Rehabilitation Grand Rounds, University of Michigan, Oct 2013  
Department of Physical Medicine and Rehabilitation Residents Lecture Series, University of Michigan,  
April 2014  
Saturday Morning Physics, University of Michigan, Dec 2014  
Huron High School, Ann Arbor, Mar 2015  
Camp Michigania, University of Michigan, June 2015  
Udall Center for Parkinson's Disease Research Symposium, University of Michigan, September 2016  
Slauson Middle School, Ann Arbor, Dec 2016

### **Invited Presentations (National - 69)**

Brain Research Institute, UCLA, Nov 1997  
Department of Exercise Science, UC Davis, Feb 1998  
Department of Exercise and Sport Science, Oregon State University, Apr 1998  
Department of Exercise Science and Physical Education, Arizona State University, Feb 1999  
Department of Exercise and Movement Science, University of Oregon, Mar 1999  
Department of Exercise and Sport Sciences, University of Florida, Jan 2000  
Motor and Locomotion Control group, University of Southern California, Feb 2000  
Division of Kinesiology, University of Michigan, Mar 2000  
School of Biomedical Engineering & Sciences, Virginia Tech-Wake Forest University, April 2003  
Department of Kinesiology, University of Toledo, May 2003 (Keynote for Graduate Research Day)  
School of Applied Physiology, Georgia Institute of Technology, Aug 2004  
Department of Mechanical Engineering, Drexel University, Oct 2004  
National Rehabilitation Hospital, Washington DC, Jan 2005  
Department of Biokinesiology and Physical Therapy, University of Southern California, Feb 2005

Department of Kinesiology, Arizona State University, Feb 2005  
Department of Integrative Physiology, University of Colorado at Boulder, Mar 2005  
Institute for Neural Computation, UC San Diego, Dec 2006  
Summit of Experts in Biomechanics, U.S. Nat. Committee on Biomechanics, Keystone, CO, June 2007  
Department of Biomedical Engineering, Wake Forest University, Dec 2007  
Engineering, Neuroscience & Health Seminar Series, University of Southern California, Apr 2008  
Swartz Center for Computational Neuroscience, UC San Diego, June 2008  
Dynamics of Biomechanical Processes Symposium, 45<sup>th</sup> Annual Technical Meeting of the Society of Engineering Science, University of Illinois at Urbana-Champaign, Oct 2008 (Keynote)  
Workshop on Robotic Lower Limb Exoskeletons, IEEE RAS / EMBS International Conference on Biomedical Robotics and Biomechatronics, Scottsdale, AZ, Oct 2008  
Southeastern Meeting of the American Society of Biomechanics, Gainesville, FL, Apr 2009 (Keynote)  
Symposium on Robotic Lower Limb Exoskeletons, 56<sup>th</sup> Annual Meeting of the American College of Sports Medicine, Seattle, WA, May 2009  
33<sup>rd</sup> Annual Meeting of the American Society of Biomechanics, State College, PA, Aug 2009 (Tutorial)  
31<sup>st</sup> Annual Meeting of the IEEE Engineering in Medicine and Biology Society, Minneapolis, MN, Sept 2009 (Symposium Co-Chair)  
Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, NE, Nov 2009  
36<sup>th</sup> Annual Meeting of the American Academy of Orthotists and Prosthetists, Chicago, IL, Feb 2010  
Department of Biomedical Engineering, University of North Carolina, Chapel Hill, NC, May 2010  
Department of Biomedical Engineering, North Carolina State University, Raleigh, NC, May 2010  
Beyond Brain Machine Interface, Army Research Office and IEEE EMBS Workshop, Long Beach, CA, June 2010  
Howard Hughes Medical Institute Summer Lecture Series, Claremont Colleges, Claremont, CA, June 2010  
Dynamic Walking 2010 Conference, Boston, MA, July 2010  
34<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Providence, RI, Aug 2010 (Symposium Chair and Speaker)  
Brain Rehabilitation Research Center, North Florida/South Georgia Veterans Health System, Gainesville, FL, Aug 2010  
Department of Kinesiology and Nutrition, University of Illinois, Chicago, IL, Oct 2010  
Department of Physical Therapy, University of Utah, Salt Lake City, UT, Nov 2010  
Human Research & Engineering Directorate, Army Research Laboratory, Aberdeen, MD, Feb 2011  
American Physical Therapy Association Combined Sections Meeting, Chicago, IL, Feb 2012 (Panel)  
Department of Biomedical Engineering, Cleveland Clinic, Cleveland, OH, Mar 2012  
Department of Ocean and Mechanical Engineering, Florida Atlantic University, Boca Raton, FL, Mar 2012  
Center for Sensorimotor Neural Engineering, University of Washington, Seattle, WA, Oct 2012  
Action Club, Northeastern University, Boston, MA, Oct 2012  
Department of Bioengineering, University of Texas at Dallas, Richardson, TX, Jan 2013  
Division of Physical Therapy, Washington University, St. Louis, MO, Feb 2013  
Human Centered Robotics Conference, University of Cincinnati, OH, Nov 2013  
Department of Human Physiology, University of Oregon, Eugene, OR, Jan 2014  
2<sup>nd</sup> Piper Health Solutions Workshop on Rehabilitation Robotics, Arizona State University, Tempe, AZ, Feb 2014  
Symposium: Designing for the Future: Remote Rehabilitation and Integration of New Technologies in Spaceflight. National Space Biomedical Research Institute, Houston, TX, May 2014  
7<sup>th</sup> World Congress of Biomechanics, Boston, MA, July 2014  
Camp Michigania East, New York, August 2014  
Department of Integrative Physiology, University of Colorado, Boulder, Sept 2014  
Human Augmentation and Army Vision 2025, US Army NSRDEC Workshop, Dec 2014 (Keynote)  
1<sup>st</sup> Chittenden Symposium on Mobility, Technology and the Future of Health, University of Illinois, Urbana-Champaign, IL, Jan 2015 (Keynote)  
Department of Bioengineering, University of Pennsylvania, PA, Feb 2015

The Michigan Seminars in Florida, West Palm Beach, FL, Feb 2015  
Department of Mechanical Engineering, University of Texas, Austin, TX, June 2015  
Neurotalk, University of Florida, Gainesville, FL, Dec 2015  
Department of Biomedical Engineering, Marquette University, Milwaukee, WI, Dec 2015  
Department of Biomedical Engineering, University of Florida, Gainesville, FL, Jan 2016  
Neuroengineering and Medicine, UC Davis, CA, Jan 2016  
Kavli Summer Institute for Cognitive Neuroscience, UC Santa Barbara, CA, June 2016  
American Society of Biomechanics Annual Meeting, Raleigh, NC, Aug 2016 (tutorial)  
National Academy of Kinesiology Annual Meeting, Albuquerque, NM, Oct 2016  
Department of Health and Exercise Science, Colorado State University, Ft. Collins, CO, Mar 2017  
Army Research Laboratory, Aberdeen Proving Ground, MD, Mar 2017  
Department of Kinesiology, Penn State University, State College, PA, Apr 2017  
International Society of Posture and Gait Research World Congress, Ft. Lauderdale, FL, June 2017  
American Society of Mechanical Engineers' International Mechanical Engineering Congress and  
Exposition, Tampa, FL, November, 2017

### **Invited Presentations (International - 17)**

School of Health Sciences, Deakin University, Melbourne, Australia, Feb 1999  
12<sup>th</sup> World Congress for the International Society of Prosthetics and Orthotics, Vancouver, BC, Aug  
2007  
5<sup>th</sup> Scientific Meeting of the Neurorehabilitation and Reconstructive Neurosurgery Committee of the  
World Federation of Neurosurgical Societies, Taipei, Taiwan, Sept 2007  
Department of Physical Therapy, National Taiwan University, Taipei, Taiwan, Sept 2007  
International Workshop on Biomimetic Complex System Design, Korea Advanced Institute of Science  
and Technology (KAIST), Daejeon, South Korea, June 2008  
Mexican National Congress on Biomechanics, Tecnológico de Monterrey, Leon, Mexico, June 2008  
(Keynote)  
Division for Applied Robot Technology, Korea Institute of Industrial Technology (KITECH), Chungnam,  
South Korea, Sept 2009  
NeuroHike, 40<sup>th</sup> Meeting of the Alberta Motor Control Group, Kananaskis Provincial Park, Alberta,  
Canada, Sept 2010 (Keynote)  
Shanghai Jiao Tong University-University of Michigan 1<sup>st</sup> Bilateral Symposium on Biomedical  
Engineering, Shanghai, China, Jan 2011  
Institute of Bioengineering, University College London, Sept 2011  
Department of Health Sciences and Technology, Swiss Federal Institute of Technology (ETH Zurich),  
Switzerland, Dec 2011  
ORTHOPÄDIE + REHA-TECHNIK Conference, Leipzig, Germany, May 2012  
International Functional Electrical Stimulation Society Conference, Banff, Alberta, Canada, Sept 2012  
1<sup>st</sup> International Workshop of Brain/Body Imaging, Delmenhorst, Germany, Sept 2013  
20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Hamburg, Germany, June 2014  
Human Performance Laboratory, University of Calgary, Canada, Oct 2015  
Neural Controlled Man-Machine Interface Workshop, Reykjavík, Iceland, Oct 2016

### **Presentations at Scientific Meetings (unsolicited submissions as first & presenting author - 22)**

1993 American College of Sports Medicine, Seattle, WA (podium)  
1995 American Society of Biomechanics, Palo Alto, CA (podium)  
1996 American Physiological Society & American College of Sports Medicine Intersociety Meeting,  
"Integrative Biology of Exercise", Vancouver, B.C. (poster)  
1997 Neural Control of Movement, Cancun, Mexico (poster)  
1997 Bay Area Biomechanics Meeting, Hopkins Marine Station, Monterey, CA (podium)  
1998 North American Congress on Biomechanics, Waterloo, Canada (poster)

1998 Society For Neuroscience, Los Angeles, CA (poster)  
 1998 Society For Neuroscience Satellite Meeting on Motor Control, Tucson, AZ (poster)  
 1999 Society For Neuroscience, Miami, FL (poster)  
 2000 Society For Neuroscience, New Orleans, LA (poster)  
 2001 National Center for Medical Rehabilitation Research Symposium, "Medical Rehab on the Move: Spotlight on BioEngineering", National Institutes of Health, Bethesda, MD (poster)  
 2001 American Society of Biomechanics, San Diego, CA (poster)  
 2002 World Congress of Biomechanics, Calgary, Alberta, Canada (podium)  
 2003 International Society of Biomechanics Bi-Annual Congress, Dunedin, New Zealand (podium)  
 2004 Christopher Reeve Paralysis Foundation Spinal Cord Symposium, Oak Brook, IL (poster)  
 2004 Neural Control of Movement, Sitges, Spain (panel)  
 2005 Neural Control of Movement, Key Biscayne, FL (panel chair)  
 2006 World Congress of Biomechanics, Munich, Germany (podium)  
 2008 American Spinal Injury Association, San Diego, CA (podium, awards session)  
 2010 Joint Meeting of the Gait and Clinical Movement Analysis Society and the European Society of Movement Analysis in Adults and Children, Miami, FL (tutorial)  
 2017 Neural Control of Movement, Dublin, Ireland (tutorial)  
 2017 International Society of Biomechanics Meeting, Brisbane, Australia

### **Teaching Experience**

***HUMAN BIODYNAMICS 103 Musculoskeletal Biomechanics***, UC Berkeley. Spring 1995 (~40 students). Undergraduate laboratory course on human movement biomechanics.

***INTEGRATIVE BIOLOGY 132L Mammalian Physiology***, UC Berkeley. Spring 1996 (~40 students). Undergraduate laboratory course on principles of cellular and systemic physiology.

***HUMAN BIODYNAMICS 101 Muscle Biology and Plasticity***, UC Berkeley. Fall 1997 (~40 students). Undergraduate lecture and laboratory course on muscle physiology.

***KINESIOLOGY 533 / BIOMEDICAL ENGINEERING 533 Neuromechanics***, U. of Michigan. Fall 2001 (7 students), Fall 2003 (25 students), Fall 2005 (16 students), Winter 2007 (12 students), Winter 2010 (18 students). Graduate lecture and computer laboratory course on neuromechanical control of movement.

***KINESIOLOGY 600 Graduate Seminar in Movement Science***, U. of Michigan. Winter 2003 (11 students). Graduate course where students present their own research.

***KINESIOLOGY 616 Professional Skills for Research Scientists***, U. of Michigan. Winter 2009 (22 students), Winter 2011 (15 students), Winter 2012 (6 students), Winter 2014 (16 students). Graduate course on professional skills necessary for success (grant writing and review, manuscript writing and review, research ethics, career skills).

***MOVEMENT SCIENCE 100 First Year Seminar – Movement Science of Batman***, U. of Michigan. Fall 2010 (14 students), Fall 2011 (16 students). Freshmen seminar course on the physiology and biomechanics of the superhero Batman.

***MOVEMENT SCIENCE 110 Introduction to Movement Science – Biomechanics Module***, U. of Michigan. Winter 2013 (90 students). Fall 2016 (120 students). First year introduction of the major.

***MOVEMENT SCIENCE 219 Scientific Writing***, U. of Michigan. Fall 2013 (16 students). Sophomore level science writing course.

***MOVEMENT SCIENCE 330 Biomechanics of Human Movement***, U. of Michigan. Winter 2002 (25 students), Fall 2002 (36 students), Winter 2003 (40 students), Winter 2004 (59 students), Winter 2005 (73 students), Winter 2006 (91 students), Fall 2006 (41 students), Winter 2015 (63 students). Undergraduate lecture and laboratory course on musculoskeletal biomechanics.

***MOVEMENT SCIENCE 435 Biomechanics of Human Locomotion***, U. of Michigan. Fall 2004 (19 students), Fall 2008 (14 students). Fall 2009 (13 students). Fall 2014 (21 students) Problem-based learning course on human locomotion.

**Invited Lectures**, U. of Michigan. Undergraduate and graduate courses in Biomedical Eng., Industrial & Operations Eng., Mechanical Eng., Program in Biomedical Sciences, and Kinesiology. Resident lectures for Physical Medicine and Rehabilitation, and Neurology.

## **Service**

### *University of Michigan Committee and Supervisory Duties*

Member of Kinesiology Graduate Committee, 2002-2009  
Member of Kinesiology Computer Disk Space Committee, 2002-2007  
Member of Advisory Board for UM Model Spinal Cord Injury Care System, 2003-2012  
Member of Biomechanics Committee for Biomedical Engineering Undergraduate Curriculum, 2003  
Temporary Supervisor of Kinesiology IT Staff, Summer 2003  
Chair of Athletic Training Faculty Search Committee (Kinesiology), 2003-2004  
Co-Chair of Biomechanics Faculty Search Committee (Kinesiology), 2005-2006  
Faculty Advisor, UM Men's Club Volleyball Team, 2005-2007  
Chair of Kinesiology Graduate Committee, 2006-2009  
Member of UM Sport Injury Prevention Center Director Search Committee (Orthopaedics), 2007  
Faculty Advisor, UM Women's Club Volleyball Team, 2008-2012  
CIC Kinesiology Diversity Summit Participant, 2008  
Member of Kinesiology Executive Committee, 2009  
Member of the UM Faculty Senate Assembly, 2009-2011  
Member of UM Advisory Committee for Recreational Sports, 2009-2013  
Chair of Biomechanics Faculty Search Committee (Kinesiology), 2010-2012  
Member of UM Recreational Sports Facilities Planning Task Force, 2010  
Member of UM Global Health Visioning Committee, 2011  
Member of UM Provost's Faculty Advisory Committee, 2011-2013  
Chair of Health Management Research Center Director Faculty Search Committee (Kinesiology), 2011-2012  
Member of Kinesiology New Building Committee, 2011-2014  
Member of Associate Director of Recreational Sports Search Committee, 2012  
Member of Postdoctoral Advisory Group for the University, 2010-2013  
Member of Global Challenges Third Century Program Committee, 2012-2015  
Chair of Committee, 2013-2015  
Member of SHARP Center for Girls and Women Internal Advisory Board, 2011-2013  
Member of Administrative Services Transformation Advisory Committee, 2012-2014  
Member of Biomechanics Faculty Search Committee (Kinesiology), 2014

### *Professional Societies*

Member, American Society of Biomechanics (ASB), 1995-present  
Annual Meeting Program Chair, 2018  
Membership Committee, 2002-2005  
Abstract Reviewer for Annual Meeting, 2003, 2013  
Nominating Committee, 2006 & 2010  
Annual Meeting Program Committee, 2006  
Awards Committee, 2007, 2015, 2017  
Member, American Physiological Society (APS), 1996-present  
Member, Neural Control of Movement Society (NCM), 1997-present  
Member, Society for Neuroscience (SFN), 1997-present  
Member, International Society of Biomechanics (ISB), 2007-present  
Member, Biomedical Engineering Society, 2015-present

Awards Chair, 9<sup>th</sup> International Conference on Rehabilitation Robotics (ICORR), 2005  
Program Committee, IEEE BioRob Conference, 2008  
Chair, Biomechanics and Neural Control of Movement 2016 conference

*Grant Applications Reviewer* (13 agencies and institutes)

American Society of Biomechanics  
Army Research Laboratory  
Department of Veterans Affairs  
Michael Smith Foundation for Health Research  
Luxembourg National Research Fund  
National Institutes of Health  
Natural Sciences and Engineering Research Council of Canada  
National Science Foundation  
Nazarbayev University  
University of Michigan Office of Vice Provost for Research  
University of Mons, Belgium  
U.S. Civilian Research and Development Foundation  
U.S. Army Medical Research and Materiel Command

*Manuscript Reviewer* (63 journals spanning biology, engineering, and medicine)

*Archives of Physical Medicine and Rehabilitation*  
*Autonomous Robots*  
*Bioinspiration and Biomimetics*  
*Biology Letters*  
*Brain Research*  
*Canadian Journal of Applied Physiology*  
*Cerebral Cortex*  
*Clinical Biomechanics*  
*Clinical Neurophysiology*  
*Computers in Biology and Medicine*  
*European Journal of Applied Physiology*  
*European Journal of Neuroscience*  
*Exercise and Sport Sciences Reviews*  
*Experimental Brain Research*  
*Frontiers in Human Neuroscience*  
*Frontiers in Neurorobotics*  
*Gait and Posture*  
*Human Factors*  
*Human Movement Science*  
*IEEE Transactions on Biomedical Engineering*  
*IEEE Transactions on Haptics*  
*IEEE Transactions on Human-Machine Systems*  
*IEEE Transactions on Neural Systems and Rehabilitation Engineering*  
*IEEE Transactions on Robotics*  
*IEEE Transactions on Mechatronics*  
*IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans*  
*IET Control Theory & Applications*  
*International Journal of Robotics Research*  
*Journal of the American Medical Association*  
*Journal of Applied Biomechanics*  
*Journal of Applied Physiology*  
*Journal of Athletic Training*  
*Journal of Biomechanical Engineering*

*Journal of Biomechanics*  
*Journal of Experimental Biology*  
*Journal of Hand Therapy*  
*Journal of Morphology*  
*Journal of Motor Behavior*  
*Journal of Neural Engineering*  
*Journal of Neuroengineering and Rehabilitation*  
*Journal of Neurologic Physical Therapy*  
*Journal of Neurophysiology*  
*Journal of Neuroscience*  
*Journal of Physical Activity and Health*  
*Journal of Rehabilitation Research and Development*  
*Journal of the Royal Society Interface*  
*Journal of Theoretical Biology*  
*Mechatronics*  
*Medicine and Science in Sports and Exercise*  
*Nature Medicine*  
*Neurorehabilitation and Neural Repair*  
*Philosophical Transactions of the Royal Society: Biological Sciences*  
*Physical Therapy*  
*PLoS Computational Biology*  
*PLoS ONE*  
*Prosthetics and Orthotics International*  
*Proceedings of the Royal Society of London: Biological Sciences*  
*Scandinavian Journal of Medicine & Science in Sports*  
*Science*  
*Science Robotics*  
*Science Translational Medicine*  
*Scientific Reports*  
*Stroke*

**Editorial Boards (4 journals)**

Associate Editor, *Journal of Neuroengineering and Rehabilitation*, 2007-2017  
Associate Editor, *Exercise and Sport Sciences Reviews*, 2008-2015  
Editorial Board Member, *Journal of Neurologic Physical Therapy*, 2010-2017  
Associate Editor, *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 2014-2017  
Editor-In-Chief, *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 2018-2020

**External Reviewer for Promotion and/or Tenure (25 cases)**

Department of Integrative Physiology, University of Iowa  
Department of Physical Therapy, University of Florida  
Department of Mechanical Engineering, University of British Columbia (2)  
Department of Applied Physiology, Georgia Institute of Technology (3)  
Department of Kinesiology, University of Massachusetts Amherst  
Department of Applied Physiology and Wellness, Southern Methodist University (2)  
Department of Physical Medicine & Rehabilitation, Northwestern University  
Department of Engineering, College of Technology and Innovation, Arizona State University  
Department of Physical Therapy, Northeastern University  
Department of Kinesiology and Health, Georgia State University  
Department of Kinesiology and Health Education, University of Texas, Austin  
Program in Physical Therapy, Washington University in St. Louis  
Department of Bioengineering, University of Illinois, Chicago  
Division of Physical Therapy, Medical University of South Carolina

School of Applied Sciences and Engineering, Harvard University  
Department of Applied Physiology & Kinesiology, University of Florida  
Department of Exercise and Sport Sciences, University of Utah  
Department of Physical Therapy and Athletic Training, Boston University  
Department of Kinesiology and Sport Sciences, University of Miami, FL  
School for Engineering of Matter, Transport and Energy, Arizona State University  
Department of Health and Exercise Science, Colorado State University

### **Popular Press Coverage**

Results from Ferris et al. (2004) *Spinal Cord*, 42:14-23, were covered in a University of Michigan press release and featured on many public news outlets including:

MSNBC, Reuters, Science Daily, BruneiDirect.com, EurekaAlert, Forbes, HealthScout, National Spinal Cord Injury Association, Innovations Report, Indian Express, Spinal Cord Injury Zone

The results were also the focus of two interviews: "Stateside with Charity Nebbe", Michigan Public Radio (01/30/2004), "Health Report" for the Australian Broadcast Corporation radio service (04/05/2004).

Results from Gordon and Ferris (2007) *Journal of Biomechanics*, 40:2636-2644, were covered in a University of Michigan press release and featured on many public news outlets including:

Engadget.com, EurekaAlert.org, Iran Daily (Iran), Live Science, Machine Design, Medical News Today, Pharma-Lexicon.com, The Michigan Daily, New Scientist Tech, PhysOrg.com, Physiatry Practice Management Resources, ScienceBlog.com, Science Daily, ScientificBlogging.com, The Spinal Cord Injury Zone, Technology.com, Virtual Medical Worlds Monthly, and Yubanet.com.

Results from Sawicki and Ferris (2008) *Journal of Experimental Biology*, 211:1402-1413, were covered in a University of Michigan press release and featured on multiple public news outlets including:

MSNBC, LiveScience.com, Medical News Today, Scenta (United Kingdom), The Hindu (India), Mangalorean.com (India), Science Centric (Bulgaria), Daily News & Analysis (India), EurekaAlert.org, Media Newswire, Science Daily, Med India (India), RxPG News, Thaindian News (Thailand), NewsPost India (India), MSN India (India), Genetic Engineering & BioTechnology News, Inside Journal of Experimental Biology, PhysOrg.com, & Virtual Medical Centre (Australia)

Results from Gwin et al. (2010) *Journal of Neurophysiology*, 103:3526-3534, and Gwin et al. (2011) *Neuroimage*, were covered in a University of Michigan press release, a Michigan Alumnus Magazine article, Michigan Daily, and featured on numerous public news outlets including:

R&D Magazine, PhysOrg.com, Medical Xpress, HighBeam, Softpedia, Polskieradio (Poland), and KolpaniaWiedzy (Poland)

Results from Sipp et al. (2013) *Journal of Neurophysiology*, 110:2050-2060, were covered in a University of Michigan press release, and featured on numerous public news outlets including:

PhysOrg.com, Science Daily, Computer Magazine.com, *Real Simple* magazine, LiveScience.com, HighBeam, and Southwestern Airlines *Spirit* magazine.

Results from Kline et al. (2014) *Frontiers in Human Neuroscience*, 8:288, were covered in a University of Michigan press release, and featured on multiple public news outlets.

General coverage of my laboratory research projects has been featured in *Applied Neurology* (December 2006), *Today in PT* (March 2007), *The O&P Edge* (March 2009), and *Canadian Running* (February 2010). I was featured in a professor profile piece in *The Michigan Daily* (March 30, 2010) and provided a video interview for Engineering TV (August 27, 2007; <http://www.engineeringtv.com/video/Artificial-Muscles-2>). The BIG TEN Network filmed and presented a story on my research on myoelectric control of robotic lower limb prostheses that aired at various

football and basketball game showings (<http://www.youtube.com/watch?v=SS1MFoz1Cp0>).

I have been interviewed for my professional perspective on issues related to spinal cord injury, prosthetics, and sports physiology in the *Detroit Free Press* (October 12, 2004; March 20, 2009), *ScienceNOW Daily News* (May 20, 2008 and November 4, 2009), *WeightWatchers.com* (March 2010), *Men's Health* (July 29, 2011), and the *Wall Street Journal* (September 25, 2013). I was interviewed about running biomechanics on difference surfaces by *Competitor.com* (June 1, 2012), *Outside* magazine (October 24, 2013), and *Nautilus* magazine (July 7, 2016); and about Oscar Pistorius and his running biomechanics by the *Edmonton Journal* (July 17, 2012). I was interviewed about robotic exoskeletons for *MIT Technology Review* (April 15, 2014), *Wired* (May 16, 2014; June 22, 2017), and *Science* (October 15, 2015). I was interviewed about balance training for *Vogue* (March 31, 2016).

## **Mentoring Experience**

*Junior Faculty* (7 Assistant Professors, 2 Assistant Research Scientists)

**Scott McLean, Ph.D.** (2007-2015) Assistant Professor, School of Kinesiology, University of Michigan

**Chris Mendias, Ph.D.** (2009-2011) Research Assistant Professor, School of Kinesiology, University of Michigan

**Jane Huggins, Ph.D.** (2010-2015) Assistant Professor, Department of Physical Medicine and Rehabilitation, University of Michigan

**Amy Sipp, Ph.D.** (2010-2012) Assistant Research Scientist, School of Kinesiology, University of Michigan

**Helen Huang, Ph.D.** (2012-2015) Assistant Research Scientist, School of Kinesiology, University of Michigan

**Cindy Chestek, Ph.D.** (2012-2013) Assistant Professor, Department of Biomedical Engineering, University of Michigan

**Deanna Gates, Ph.D.** (2012-2017) Assistant Professor, School of Kinesiology, University of Michigan

**Chandramouli Krishnan, Ph.D., P.T.** (2012-2017) Assistant Professor, Department of Physical Medicine and Rehabilitation, University of Michigan

**Tim Bruns, Ph.D.** (2013-2014) Assistant Professor, Department of Biomedical Engineering, University of Michigan

*Post-Doctoral Scholars* (10 mentees have moved on to other positions, 1 mentee currently in lab)

**Monica Daley, Ph.D.** (2006-2008) National Science Foundation Bioinformatics Post-Doctoral Research Fellow; currently a tenured faculty member at the Royal Veterinary College in London, England

**Cara Lewis, Ph.D., P.T.** (2006-2009) National Institutes of Health NRSA Post-Doctoral Fellow, National Institutes of Health T32 NRSA Post-Doctoral Fellow; currently an Associate Professor of Physical Therapy at Boston University

**Amy Sipp, Ph.D.** (2008-2010) National Institutes of Health T32 NRSA Post-Doctoral Fellow; currently working for U.S. Patent Office in Detroit, Michigan

**Troy Lau, Ph.D.** (2011) currently a Group Leader at Draper Laboratory, Boston, MA

**Kristine Snyder, Ph.D.** (2012-2015) National Science Foundation Post-Doctoral Research Fellow; currently an Assistant Professor at University of Minnesota, Duluth

**J. Cortney Bradford, Ph.D.** (2012-2015) Post-Doctoral Researcher; currently a Research Scientist at Aberdeen Proving Ground, Army Research Laboratory

**Daniel Jacobs, Ph.D.** (2013-2016) Post-Doctoral Researcher, U-M MICHR Postdoctoral Translational Scholar; currently an Assistant Professor at Temple University

**Anderson Oliveira, Ph.D.** (2014-2015) Post-Doctoral Researcher; currently an Assistant Professor at Aalborg University, Denmark

**Aaron Young, Ph.D.** (2014-2016) Post-Doctoral Researcher; currently an Assistant Professor at Georgia Institute of Technology

**Andrew Nordin, Ph.D.** (2015-2017) Post-Doctoral Researcher; currently an Assistant Research Scientist at University of Florida

**Yann Thibaudier, Ph.D.** (2017-) Post-Doctoral Researcher

*Doctoral Students* (11 mentees graduated, 6 mentees currently in laboratory)

**Keith Gordon, Ph.D.** (Kinesiology, 2001-2005) was a postdoctoral fellow at Rehabilitation Institute of Chicago and Northwestern University Department of Physical Medicine and Rehabilitation, Chicago, IL; currently an Assistant Professor at Northwestern University Department of Physical Therapy and Human Movement Sciences and Research Health Scientist at Edward Hines Jr. Veterans Affairs Hospital, Chicago, IL

**Greg Sawicki, Ph.D.** (Kinesiology & Mechanical Engineering dual Ph.D. degree, 2002-2007) Rackham Pre-Doctoral Fellow; was a post-doctoral fellow at Brown University Department of Ecology and Evolutionary Biology 2007-2009; currently an Associate Professor in the School of Mechanical Engineering at Georgia Institute of Technology

**Ann (Barkowitz) Simon, Ph.D.** (Biomedical Engineering, 2005-2008) National Science Foundation Graduate Research Fellow, American Heart Associate Pre-Doctoral Fellow, Rackham Merit Fellow; was a post-doctoral fellow at the Rehabilitation Institute of Chicago, IL; currently a Research Engineer at the Center for Bionic Medicine, Rehabilitation Institute of Chicago, IL

**Pei-Chun Kao, P.T., Ph.D.** (Kinesiology, 2004-2009) was a post-doctoral fellow at the University of Delaware Department of Physical Therapy; currently an Assistant Professor in the Department of Physical Therapy at University of Massachusetts, Lowell

**Helen Huang, Ph.D.** (Biomedical Engineering, 2004-2009) National Institutes of Health NRSA Pre-Doctoral Fellow; currently an Assistant Professor in the Department of Mechanical and Aerospace Engineering at University of Central Florida, Orlando, FL

**Antoinette Domingo, P.T.** (Kinesiology, 2003-2009) Rackham Merit Fellow, Rackham Pre-Doctoral Fellow, National Institutes of Health NRSA Pre-Doctoral Fellow, Foundation for Physical Therapy PODS II Scholar; was a postdoctoral researchers at the University of British Columbia; currently an Assistant Professor of Physical Therapy at San Diego State University

**Stephen Cain** (Biomedical Engineering, 2005-2008) National Science Foundation Graduate Research Fellow; currently an Assistant Research Scientist at the University of Michigan

**Michael Cherry** (Mechanical Engineering, 2005-2009) National Science Foundation Graduate Research Fellow (co-advised with Prof. Kota from Dept. of Mechanical Engineering); currently working as a Senior Engineer for Raytheon in Tucson, AZ

**Joseph Gwin** (Kinesiology & Mechanical Engineering dual Ph.D. degree, 2008-2012) National Defense Science and Engineering Graduate Fellow; currently Vice President for Research and Development at BioSensics, Boston, MA

**Stephanie Huang** (Biomedical Engineering, 2009-2014) currently a post-doctoral researcher at North Carolina State University

**Sasha Voloshina** (Kinesiology & Mechanical Engineering dual Ph.D. degree, 2008-2014) Rackham Merit Fellow, National Science Foundation Graduate Research Fellow Honorable Mention, American Kinesiology Association Writing Scholar; currently a postdoctoral researcher at the Technical University of Darmstadt in Germany

**Julia Kline** (Biomedical Engineering, 2009-2015) Rackham Merit Fellow, National Science Foundation Graduate Research Fellow; currently a Research Scientist for fitbit in San Francisco, CA

**Ramses Alcaide** (Neuroscience, 2010-2013) Rackham Merit Fellow, National Science Foundation Graduate Research Fellow, Ford Foundation Pre-Doctoral Fellow; currently Chief Executive Officer at Neurable, Washington, DC

**Grant Hanada** (Biomedical Engineering, 2012-present)

**Jeff Koller** (Mechanical Engineering, 2013-2017) (co-advised with Prof. C. David Remy from Dept. of Mechanical Engineering)

**Steven Peterson** (Biomedical Engineering, 2014-present) National Science Foundation Graduate Research Fellow

**Mhairi MacLean** (Kinesiology, 2015-2017)

**Kimberly Ingraham** (Mechanical Engineering, 2015-2017) (co-advised with Prof. C. David Remy from Dept. of Mechanical Engineering) National Science Foundation Graduate Research Fellow

**Evangelia-Regkina Symeonidou** (International Max Planck Research School for Intelligent Systems, Tübingen, 2017-present)

*Master's Students* (11 mentees graduated)

**Tiffany Viant** (Biomedical Engineering, 2001-2002); currently working as a biomedical engineer at a medical device company in southeast Michigan

**Mekayla Beaver** (Biomedical Engineering, 2002); currently working as a consulting engineer at IDEO in Boston, MA

**Pei-Chun Kao, P.T.** (Kinesiology, 2002-2003); went on to earn her Ph.D. in my lab

**Elena Marin** (Mechanical Engineering, 2002-2003); currently working as an engineer in Washtenaw county

**Helen Huang** (Biomedical Engineering, 2002-2004); went on to earn her Ph.D. in my lab

**Ann Barkowitz** (Biomedical Engineering, 2003-2005); went on to earn her Ph.D. in my lab

**Stephen Cain** (Mechanical Engineering, 2004-2005); currently a post-doctoral researcher at University of Michigan

**Evan Pelc** (Biomedical Engineering, 2006-2007); completed medical school at Michigan State University

**Evelyn Anaka** (Kinesiology, 2009-2014)

**Lisa Perez** (Mechanical Engineering, 2011-2012); works at Johns Hopkins Applied Physics Laboratory

**Andrea Sonnleitner** (Medical Engineering from Upper Austria University of Applied Sciences, Linz, Austria, 2012; visiting scholar) Marshall Plan Scholar; currently working in Europe for a medical device company

*Undergraduate Students* (67 students; \*UROP = Undergraduate Research Opportunity Program)

**Eileen Hidayetoglu** (Elec. Eng., UROP\* & Summer Biomedical Research Fellow, 2001-2003)

**Matt Walker** (Mech. Eng., UROP\*, 2001-2002)

**Ugo Okwumabua** (Mech. Eng., Summer Minority Engineering Research Fellow, 2002- 2003)

**Idy Usoro** (Elec. Eng., Summer Minority Engineering Research Fellow, 2002)

**Sara Johnson** (Mech. Eng., 2002)

**Heather Feldhusen** (Movement Science, 2002)

**John Green** (Movement Science, 2002-2003)

**Tanisha Tate** (Biology, UROP\*, 2002-2003)

**Melissa Thelen** (Indust. & Oper. Eng., 2002-2003)

**Sam Liang** (Elec. Eng., 2002-2003)

**Annie Zuzelski** (Biomed. Eng., Marian Sarah Parker Scholar, 2003)

**Sarah Allen** (Movement Science, 2003)

**Torre Finzel** (Movement Science, 2003)

**Julie van Helden** (Biomed. Eng., Marian Sarah Parker Scholar, 2003)

**Kate Havens** (Biomed. Eng., Marian Sarah Parker Scholar, 2003-2004)

**Theo Van Dam** (Elec. Eng., 2004)

**Alexis Ball** (Elec. Eng., 2004)

**Zaineb Bohra** (Movement Science, 2004-2005)

**Kristin Roberts** (Movement Science, 2004-2005)

**Becca Stoloff** (Mech. Eng., Marian Sarah Parker Scholar, 2004-2007)

**Sarah Lucey** (Movement Science, UROP\*, 2004-2005)

**Jamie Lukos** (Movement Science, 2004-2005)

**Evan Pelc** (Biomed. Eng., Summer Engineering & Physical Sciences Research Fellow, 2005-2006)

**Jose Mainardi** (Mech. Eng., UROP\*, 2005)

**Tom Serbowicz** (Mech. Eng., UROP\*, 2005-2006)

**Sabrina Silver** (Movement Science, 2006-2008)

**Sasha Voloshina** (Biomed. Eng., Marian Sarah Parker Scholar, 2006-2007)

**Allison Fersko** (Movement Science, 2006-2008)

**Kurt Sieloff** (Biomed. Eng., 2007-2009)  
**Alex Duryea** (Biomed. Eng., 2007)  
**Kelly Woznicki** (Movement Science, 2007-2008)  
**Kristin Carroll** (Movement Science, 2008-2010)  
**Dan Tyrrell** (Movement Science, 2008-2009)  
**Elisabeth Rayos** (Movement Science, 2009-2010)  
**Sarah Weiss** (Movement Science, 2009-2012)  
**Daniela Weiss** (Movement Science, 2009-2010)  
**Ryan Bernstein** (Biomed. Eng., 2009-2010)  
**Alberto Alfaro** (Biomed. Eng., 2009-2010)  
**Matt East** (Biomed. Eng., 2009-2010)  
**Karen Bartling** (Movement Science, 2010-2011)  
**Krista Marck** (Neuroscience, 2010-2011)  
**Jillian Lapinski** (Movement Science, 2011-2012)  
**Chris Lesch** (Computer Eng., 2011-2012)  
**Roger Potter** (Mechanical Eng., 2011)  
**Katherine Poggensee** (Math & Movement Science, 2011-2014)  
**Tanay Kulkarni** (Biomed. Eng., 2012)  
**Ryan Wynn** (Movement Science, 2012)  
**Renee Philson** (Biomed. Eng., 2012-2014)  
**Ian Moore** (Biomed. Eng., 2014-2015)  
**Bridget Cook** (Mechanical Eng., 2014-2015)  
**Julia Pudar** (Biomed. Eng., 2014-2015)  
**Kirk Dettloff** (Movement Science, 2013-2015)  
**Taylor Southworth** (Neuroscience, 2014-2015)  
**Sanford Mouch** (Movement Science, 2014-2016)  
**Derek Yi** (Mechanical Engineering, UROP, 2015-2016)  
**Elizabeth Seeley** (Biomedical Engineering, 2015-2016)  
**Emily Furuichi** (Movement Science, 2015-2016)  
**Hannah Gannon** (Biomedical Engineering, 2015-2016)  
**Iris Su** (Electrical Engineering, 2015-2016)  
**Jennifer Spiegel** (Biomedical Engineering, 2015-2016)  
**Jessica Foss** (Biomedical Engineering, 2015-2016)  
**Jordan Scott** (Biomedical Engineering, 2015-2016)  
**Kevin Rabideau** (Computer Science, 2015-2016)  
**Mike Zheng** (Mechanical Engineering, UROP, 2015-2016)  
**Sean Hou** (LSA, 2015-2016)  
**Shaun Marshall** (Mechanical Engineering, 2015-2016)  
**Siyu Zheng** (Biomedical Engineering, 2015-2016)

### **Graduate Student Committees**

*Doctoral Guidance Committee* (15 students)  
**Keith Gordon**, Kinesiology, 2001-2003  
**Jason Scibek**, Kinesiology, 2001-2003  
**Ugo Buzzi**, Kinesiology, 2002-2004  
**Dann Goble**, Kinesiology, 2002-2004  
**Gregory Sawicki**, Kinesiology, 2002-2004  
**Antoinette Domingo**, Kinesiology, 2003-2005  
**Joaquin Anguera**, Kinesiology, 2004-2005  
**Julia Looper**, Kinesiology, 2004-2005  
**Chia-Lin Chang**, Kinesiology, 2004-2005  
**Pei-Chun Kao**, Kinesiology, 2004-2006  
**Joseph Gwin**, Kinesiology, 2008-2010

**Sasha Voloshina**, Kinesiology, 2008-2010  
**Evelyn Anaka**, Kinesiology, 2009-2011  
**Jeff Cowley**, Kinesiology, 2012-2014  
**Dalziel Soto**, Kinesiology, 2013-2014

*Qualifying Examination Committee, Exam Date (33 students)*

**Thomas Withrow**, Biomedical Engineering, 2003  
**Jesse Dean**, Biomedical Engineering, 2003  
**Keith Gordon**, Kinesiology, 2003  
**Jason Scibek**, Kinesiology, 2003  
**Dann Goble**, Kinesiology, 2004  
**Gregory Sawicki**, Kinesiology, 2004  
**Chris Mendias**, Physiology, 2004  
**Greg Gage**, Biomedical Engineering, 2004  
**Jiro Doke**, Mechanical Engineering, 2004  
**Antoinette Domingo**, Kinesiology, 2005  
**Chia-Lin Chang**, Kinesiology, 2005  
**Joaquin Anguera**, Kinesiology, 2005  
**Helen Huang**, Biomedical Engineering, 2005  
**Julia Looper**, Kinesiology, 2005  
**Pei-Chun Kao**, Kinesiology, 2006  
**Annie Simon**, Biomedical Engineering, 2006  
**Manuel Hernandez**, Biomedical Engineering, 2006  
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**Joseph Gwin**, Kinesiology, 2010  
**Sasha Voloshina**, Kinesiology, 2010  
**David Thompson**, Biomedical Engineering, 2010  
**Stephanie Huang**, Biomedical Engineering, 2010  
**Evelyn Anaka**, Kinesiology, 2011  
**Melanie Beaulieu**, Kinesiology, 2011  
**Julia Kline**, Biomedical Engineering, 2012  
**Jeff Cowley**, Kinesiology, 2014  
**Grant Hanada**, Biomedical Engineering, 2014  
**John Bentley**, Biomedical Engineering, 2014  
**Steven Peterson**, Biomedical Engineering, 2015

*Doctoral Dissertation Committee, Defense Date (38 students)*

**Jefferson Streepey**, Kinesiology, 2003  
**Jesse Dean**, Biomedical Engineering, 2005  
**Alaa Ahmed**, Biomedical Engineering, 2005  
**Thomas Withrow**, Biomedical Engineering, 2005  
**Keith Gordon**, Kinesiology, 2005 (Chair)  
**Jun Ho Choi**, Electrical Engineering, 2005  
**Jaebum Son**, Mechanical Engineering, 2006  
**Jiro Doke**, Mechanical Engineering 2006  
**Chia-Lin Chang**, Kinesiology, 2007  
**Gregory Sawicki**, Kinesiology & Mechanical Engineering, 2007 (Chair)  
**David Wagner**, Industrial and Operations Engineering, 2007  
**Ben Morris**, Electrical Engineering, 2007  
**Jesse Norris**, Biomedical Engineering (Wake Forest/Virginia Tech), 2007

**Peter Adamczyk**, Mechanical Engineering, 2008  
**Julia Looper**, Kinesiology, 2008  
**Kari Danek**, Mechanical Engineering, 2008  
**Annie Simon**, Biomedical Engineering, 2008 (Chair)  
**Helen Huang**, Biomedical Engineering, 2009 (Chair)  
**Pei-Chun Kao**, Kinesiology, 2009 (Chair)  
**Antoinette Domingo**, Kinesiology, 2009 (Chair)  
**Shawn O'Connor**, Biomedical Engineering, 2009  
**Michael Cherry**, Mechanical Engineering, 2009 (Co-Chair)  
**Phil Esposito**, Kinesiology, 2011  
**Manuel Hernandez**, Biomedical Engineering, 2012  
**Karl Zelik**, Mechanical Engineering, 2012  
**Joe Gwin**, Kinesiology & Mechanical Engineering, 2012 (Chair)  
**David Thompson**, Biomedical Engineering, 2012 (Co-Chair)  
**Shane Wurdeman**, Biomedical Engineering (U. of Nebraska Omaha), 2013  
**Nathaniel Skinner**, Mechanical Engineering, 2014  
**Stephanie Huang**, Biomedical Engineering, 2014 (Chair)  
**Tzu-Wei Huang**, Mechanical Engineering, 2014  
**Sasha Voloshina**, Kinesiology & Mechanical Engineering, 2014 (Chair)  
**Julia Kline**, Biomedical Engineering, 2015 (Chair)  
**Amy Wu**, Mechanical Engineering, 2015  
**Jeff Koller**, Mechanical Engineering, 2017 (Co-Chair)  
**Jeff Cowley**, Kinesiology, 2017 expected  
**Grant Hanada**, Biomedical Engineering, 2018 expected (Chair)  
**Steven Peterson**, Biomedical Engineering, 2019 expected (Chair)