

DAN DING, PhD

BIOGRAPHICAL

Work

Research Scientist
Human Engineering Research Laboratories
VA Pittsburgh Healthcare System
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Associate Professor
Dept. of Rehabilitation Science and Technology
School of Health and Rehabilitation Science
University of Pittsburgh
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EDUCATION

- 11/2001—08/2004 Postdoctoral Fellow
Field: Rehabilitation Engineering
Department of Rehabilitation Science and Technology
School of Health and Rehabilitation Science
University of Pittsburgh
- 10/1998---10/2001 Doctor of Philosophy
Dissertation: Grasp Planning and Analysis of a Multi-Fingered Robotic Hand
Department of Mechanical and Automation Engineering
The Chinese University of Hong Kong, China
GPA 4.0/4.0
- 09/1991---08/1995 Bachelor of Engineering
Department of Mechanical Engineering
Harbin Institute of Technology, China
GPA 87/100
- 09/1993—08/1997 Bachelor of Arts
Department of English
Harbin Institute of Technology, China
GPA 85/100

APPOINTMENTS AND POSITIONS

- 05/2015---Present Tenured Associate Professor
Department of Rehabilitation Science and Technology
School of Health and Rehabilitation Sciences
University of Pittsburgh
- 02/2016---Present Research Biomedical Engineer

VA Pittsburgh Healthcare System
Pittsburgh, PA

- 12/2013---Present Associate Professor (Secondary appointment)
Department of BioEngineering
School of Engineering
University of Pittsburgh
Pittsburgh, PA
- 12/2013---Present Associate Professor (Secondary appointment)
McGowan Institute for Regenerative Medicine
School of Medicine
University of Pittsburgh
Pittsburgh, PA
- 12/2013---04/2015 Associate Professor (Tenure-Track)
Department of Rehabilitation Science and Technology
School of Health and Rehabilitation Sciences
University of Pittsburgh
- 01/2008---11/2013 Assistant Professor (Tenure-Track)
Department of Rehabilitation Science and Technology
School of Health and Rehabilitation Sciences
University of Pittsburgh
Pittsburgh, PA
- 01/2008---11/2013 Assistant Professor (Secondary appointment)
Department of BioEngineering
School of Engineering
University of Pittsburgh
Pittsburgh, PA
- 01/2008---11/2013 Assistant Professor (Secondary appointment)
McGowan Institute for Regenerative Medicine
School of Medicine
University of Pittsburgh
Pittsburgh, PA
- 11/2001---01/2016 Research Scientist
Human Engineering Research Laboratories (HERL)
VA Pittsburgh Healthcare System
Pittsburgh, PA
- 10/2010---05/2015 Testbed System Leader
Home and Community Health and Wellness Testbed
National Science Foundation's Engineering Research Center (ERC)
on Quality of Life Technology (QoLT)
Pittsburgh, PA
- 06/2006---05/2015 Education Co-Director
National Science Foundation's Engineering Research Center (ERC)

on Quality of Life Technology (QoLT)
Pittsburgh, PA

- 09/2004---12/2007 Assistant Professor (Non-Tenure)
Department of Rehabilitation Science and Technology
School of Health and Rehabilitation Sciences
University of Pittsburgh
Pittsburgh, PA
- 11/2001---08/2004 Postdoctoral Fellow
Department of Rehabilitation Science and Technology
School of Health and Rehabilitation Sciences
University of Pittsburgh
Pittsburgh, PA
- 10/1998---10/2001 Research/Teaching Assistant
Department of Mechanical and Automation Engineering
The Chinese University of Hong Kong
Hong Kong, China
- 09/1995---09/1998 Research Assistant
Robotics Institute
Harbin Institute of Technology
Harbin, China

RESEARCH INTEREST

Wearable and mHealth technology for rehabilitation applications
Assistive robotics and systems
Instrumented environments and ambient assistive living

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

- 2002-present Member of Institute of Electrical and Electronics Engineers (IEEE)
Member of IEEE Engineering in Medicine and Biology Society
- 2002-present Member of Rehabilitation Engineering and Assistive Technology Society of
North America (RESNA)

HONORS AND AWARDS

- 2014 Outstanding Alumni Award, Dept. of Mechanical and Automation Engineering, The
Chinese University of Hong Kong, China
- 2005 Paralyzed Veterans of America (PVA) Research Fellowship, PVA Research Foundation
- 2004 Mary Switzer Fellowship, National Institute of Disability Research and Rehabilitation,
Department of Education
- 2002 Honorary Mention for Outstanding Dissertation, the Chinese University of Hong
Kong, China
- 2000 Travel Award, IEEE International Conference on Robotics and Automation
- 2000 Travel Award, IEEE/RSJ International Conf. on Intelligent Robot and System
- 1999 Travel Award, IEEE/RSJ International Conf. on Intelligent Robot and System
- 1998-2001 Graduate Student Fellowship, the Chinese University of Hong Kong, China

PAPER AWARDS

* *Denotes student papers advised by Dr. Ding*

- * Winner of the Student Scientific Paper Competition
Tsang KL, Yong HJ, Rimmer J, and Ding D, Measuring heart rate in manual wheelchair users during exercise and free-living activity with the latest Fitbit Surge Monitor, Proceedings of the Annual RESNA Conference, *Washington DC*, July 11-14, 2016.
 - * Winner of the Student Scientific Paper Competition
Tsang KL, Hiremath S, and Ding D, Measuring energy expenditure in manual wheelchair users with Actigraph Monitor, Proceedings of the Annual RESNA Conference, *Denver, CO*, June 10-14, 2015.
 - * Honorable Mention of the Student Scientific Paper Competition
Tsang KL, Hiremath S and Ding D, Evaluating the energy expenditure prediction models for manual wheelchair users with spinal cord injuries, Proceedings of the Annual RESNA Conference, *Indianapolis, IN*, June 11-15, 2014.
 - * Finalist of the Student Scientific Paper Competition
Hiremath S, Ding D, Copper R, Hannan M, and Okonkwo Christopher, Validation of a gyroscope based wheel rotation monitor for manual wheelchair users, Proceedings of the Annual RESNA Conference, *Seattle, WA*, June 20-24, 2013.
 - * Ernest Bors Award for Scientific Development
Hiremath S and Ding D, Evaluation of activity monitors in manual wheelchair users with paraplegia. Journal of Spinal Cord Medicine, 34(1): 110-7, 2011.
 - * Winner of the PVA Student Scientific Paper Competition
Hiremath S and Ding D, Predicting energy expenditure of manual wheelchair users using a wearable device, Proceedings of the Annual RESNA Conference, *Toronto, Canada*, June 5-8, 2011.
 - * Winner of the PVA Student Scientific Paper Competition
Hiremath S and Ding D, Evaluation of activity monitors in estimating energy expenditure in manual wheelchair users, Proceedings of the Annual RESNA Conference, *Las Vegas, NV*, June 27-29, 2010.
 - * Honorable Mention of the PVA Student Scientific Paper Competition,
Chacon A, Hiremath S, and Ding D, Evaluation of the RT3 tri-axial accelerometer to measure physical activity in manual wheelchair users with spinal cord injury, Proceedings of the Annual RESNA Conference, *Las Vegas, NV*, June 27-29, 2010.
- Winner of the PVA Student Scientific Paper Competition
Wang H, Salatin B, Grindle GG, Ding D, and Cooper RA, Real-time slip detection and traction control of electrical powered wheelchairs, Proceedings of the Annual RESNA Conference, *St. Louise MI*, June 23-27, 2009.
- * Winner of the PVA Student Scientific Paper Competition
Souza A, Ding D, Cooper RM, Cooper RA, Kelleher AR, and Boninger ML, Impact and usage of pushrim activated power assist wheelchair among individuals with tetraplegia, Proceedings of the Annual RESNA Conference, *Arlington VA*, June 26-30, 2008.
 - * Honorable Mention of the PVA Student Scientific Paper Competition
Hiremath S, Ding D, and Koontz AM, Estimating temporal parameters of wheelchair propulsion based on hand acceleration, Proceedings of the Annual RESNA Conference, *Arlington VA*, June 26-30, 2008.

* Honorable Mention of the PVA Student Scientific Paper Competition

Ambur V, Ding D, Smailagic A, Siewiorek D, French B, Koontz AM, Accelerometry-based classification of wheelchair propulsion patterns using machine learning techniques, Proceedings of the Annual RESNA Conference, Arlington VA, June 26-30, 2008.

PUBLICATIONS

* Denotes student papers with Ding listed as corresponding author

Peer-Reviewed Journal Publications

1. *Wang J, **Ding D**, Teodorski E, Mahajan HP, and Cooper R. Use of assistive technology for cognition among people with traumatic brain injury: a survey study, *Military Medicine*, 2016 (in print).
2. *Tsang K, Hiremath S, Cryzter T, Dicianno B, **Ding D**, Validity of activity monitors in wheelchair users: a systematic review, *Journal of Rehabilitation Research and Development*, 2016 (in print)
3. Mhatre A, Duvall J, **Ding D**, Cooper R, and Pearlman J. Design and focus group evaluation of a bed-integrated weight management system for wheelchair users, *Assistive Technology*, 2016 (in print).
4. Hiremath S, Intellie S, Kelleher A, Cooper R, **Ding D**. Estimation of energy expenditure of wheelchair users using a physical activity monitoring system, *Archives of Physical Medicine and Rehabilitation*, 97(7): 1146-1153, 2016.
5. Ka HW, Ding D, Cooper RA, Three dimensional computer vision-based alternative control method for assistive robotic manipulator, *SOJ Robotics and Automation*, 2016.
6. *Tsang K, Hiremath S, Cooper RA, **Ding D**, Evaluation of custom energy expenditure models for SenseWear armband in manual wheelchair users, *Journal of Rehabilitation Research and Development*, 52(7): 793 – 804, 2015.
7. Ka HW, **Ding D**, S Ravishankar, Computer access technologies for controlling assistive robotic manipulators: potential and challenges. *Austin Journal of Robotics and Automation*, 2(1), 2015.
8. Koontz A, **Ding D**, Jan YK, Groot S, and Hansen A, Wheeled Mobility, Editorial, *Biomed Research International*, 2015.
9. *Hiremath S, Instille SS, Kelleher A, Cooper RA, and **Ding D**, Detection of physical activity using a physical activity monitor system in manual wheelchair users, *Medical Engineering and Physics*, vol. 37, no. 1, pp. 68-76, 2015.
10. **Ding D**, Rodriguez SP, Cooper RA, and Riviere CN, Improving target acquisition for computer users with athetosis, *Assistive Technology*, vol. 27, no. 1, pp. 52-58, 2015.
11. Kasemsuppakorn P, Karimi H, **Ding D**, and Ojeda AM, Understanding route choices for wheelchair navigation, *Disability and Rehabilitation: Assistive Technology*, vol. 10, no. 3, pp. 198-210, 2015.
12. *Ojeda M and **Ding D**, Temporal parameters estimation for wheelchair propulsion using wearable sensors, *Biomed Research International*, 2014.

13. Soleh A, Parmanto B, Branch R., and **Ding D**, A persuasive and social mHealth application for physical activity: usability and feasibility, *JMIR MHEALTH and UHEALTH*, vol. 2, no. 2, 2014.
14. *Hiremath S., **Ding D**, Farrington J, Vyas N, and Cooper RA, Physical activity classification utilizing SenseWear activity monitor in manual wheelchair users with spinal cord injury, *Spinal Cord*, vol. 51, no. 9, pp. 705-709, 2013.
15. *Hiremath S, **Ding D**, and Cooper RA, Development and evaluation of a gyroscope based wheel rotation monitor for manual wheelchair users, *Journal of Spinal Cord Medicine*, vol. 36, no. 4, pp. 347-56, 2013.
16. Mahajan H, Dicianno BE, **Ding D**, and Cooper RA, The Assessment of wheelchair driving performance in a virtual reality based simulator, *Journal of Spinal Cord Medicine*, vol. 36, no. 4, pp. 322-32, 2013.
17. Wang H, Candiotti J, Motoki S, Chung CS, Grindle GG, **Ding D**, Cooper RA, Development of an advanced mobile base for personal mobility and manipulation appliance generation II robotic Wheelchair, *Journal of Spinal Cord Medicine*, vol. 36, no. 4, pp. 333-346, 2013.
18. Wang H, Xu J, Kelleher AR, **Ding D**, Grindle GG, Vazquez J, Salatin B, Cooper RA, Performance Evaluation of the Personal Mobility and Manipulation Appliance (PerMMA), *Medical Engineering and Physics*, vol. 35, no. 11, pp. 1613-9, 2013.
19. *Hiremath S, **Ding D**, and Farrington J, Predicting energy expenditure of manual wheelchair users with spinal cord injury using a multisensor-based activity monitor, *Archives of Physical Medicine and Rehabilitation*, vol. 93, no. 11, pp. 1937-1943, 2012.
20. **Ding D**, Cooper RA, Pasquina PF, and Fici-Pasquina L, Sensor technology for smart homes, *Maturitas*, Vol. 69, No. 2, pp. 131-6, 2011.
21. *Hiremath S and **Ding D**, Evaluation of activity monitors in manual wheelchair users with paraplegia, *Journal of Spinal Cord Medicine*, Vol. 34, No. 1, pp. 110-7, 2011.
22. Karmarkar A, Collins DM, Kelleher A, **Ding D**, Oyster M, and Cooper RA, Manual wheelchair-related mobility characteristics of older adults in nursing homes, *Disability and Rehabilitation: Assistive Technology*, Vol. 5, No. 6, pp. 428-37, 2011.
23. Cooper RA, Koontz AM, **Ding D**, Kelleher AR, Rice I, Cooper RM, Manual wheeled mobility: current and future developments from the human engineering research laboratories, *Disability and Rehabilitation*, Vol. 32, No. 26, pp. 2210-21, 2010.
24. Liu HY, Cooper RM, Cooper R, Smailagic A, Siewiorek D, **Ding D**, Chung FC, Seating virtual coach: a smart reminder for power seat function usage, *Technology and Disability*, Vol. 22, No. 1-2, pp. 53-60, 2010.
25. **Ding D**, Liu HY, Cooper RM, Cooper RA, Smailagic A, Siewiorek D, Virtual coach technology for supporting self-care, *PM&R Clinics of North America*, Vol. 21, No. 1, pp. 179-94, 2010.
26. Wang H, Salatin B, Grindle GG, **Ding D**, Cooper RA, Real-time model based electrical powered wheelchair control, *Medical Engineering and Physics*, Vol. 31, No. 10, pp. 1244-54, 2009.

27. **Ding D**, Leister L, Cooper RA, Cooper R, Kelleher A, Fitzgerald S, and Boninger M, Usage of tilt-in-space, recline, and seat elevation functions in natural environment of wheelchair users, *JRRD*, Vol. 45, No. 7, pp. 973-84, 2008.
28. **Ding D**, Souza A, Fitzgerald S, Cooper RA, Cooper R, Kelleher A, and Boninger M, Impact of pushrim activated power assist wheelchairs among individuals with tetraplegia, *American Journal of Physical Medicine and Rehabilitation*, Vol. 87, No. 10, pp. 821-29, 2008.
29. Cooper RA, Tolerico M, Kaminski BA, Spaeth D, **Ding D**, Cooper R, Quantifying wheelchair activity of children: a pilot study, *American Journal of Physical Medicine and Rehabilitation*, Vol. 87, No. 12, pp. 977-83, 2008.
30. Cooper RA, Dicianno BE, Brewer B, LoPresti E, **Ding D**, Simpson RC, Grindle GG, Wang H, A perspective on intelligent devices and environments in medical rehabilitation, *Medical Engineering and Physics*, Vol. 30, No. 10, pp. 1387-98, 2008.
31. *Tolerico ML, **Ding D**, Cooper RA, Spaeth DM, Fitzgerald SG, Cooper R, Kelleher A, Boninger ML, Assessing the mobility characteristics and activity levels of manual wheelchair users, *JRRD*, Vol. 44, No. 4, pp. 561-72, 2007.
32. Cooper RA, Cooper R, Tolerico M, Guo S, **Ding D**, Pearlman J, Advances in electric powered wheelchairs, *Topics in Spinal Cord Injury Rehabilitation*, Vol. 11, No. 4, pp. 15-29, 2006.
33. Cooper RA, Boninger ML, Spaeth DM, **Ding D**, Guo S, Koontz AM, et al., Engineering better wheelchairs to enhance community participation, *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, Vol. 14, No. 4, pp. 438-55, 2006.
34. **Ding D**, and Cooper RA, Electric powered wheelchairs - A review of the current technology and state of electric powered wheelchairs, *IEEE Control Systems Magazine*, Vol. 25, No. 2, pp. 22-34, 2005.
35. Cooper RA, **Ding D**, Simpson RC, Fitzgerald SG et al. Virtual reality and computer enhanced training applied to wheeled mobility: an overview of work in Pittsburgh. *Assistive Technology*, Vol. 17, No. 2, pp. 159-70, 2005.
36. Simpson RC, LoPresti E, Hayashi S, Guo S, **Ding D**, et al. A prototype power assist wheelchair that provides for obstacle avoidance for those with visual impairments. *Journal of Neuroengineering and Rehabilitation*, Vol. 2, No. 30, 2005.
37. **Ding D**, Cooper RA, Guo SF, Corfman TA, Analysis of driving backwards in an electric-powered wheelchair, *IEEE Transactions on Control Systems Technology*, Vol. 12, No. 6, pp. 934-43, 2004.
38. **Ding D**, Cooper RA, Kaminski BA, Kanaly JR, Allegretti A, Chaves E, and Hubbard S, Integrated control of assistive devices, *Assistive Technology*, Vol. 15, No. 2, pp. 89-97, 2003.
39. Guo SF, Cooper RA, Corfman TA, and **Ding D**, Influence of wheelchair front caster wheel on the reverse driving stability, *Assistive Technology*, Vol. 15, No. 2, pp. 98-104, 2003.
40. Liu YH, Lam ML, and **Ding D**, A complete and efficient algorithm for searching 3-D form-closure grasps in discrete domain, *IEEE Transactions on Robotics*, Vol. 20, No. 5, pp. 805-16, 2004.

41. **Ding D**, Liu YH, Wang SG, Computation of 3D form-closure grasps, *IEEE Transactions on Robotics and Automation*, Vol. 17, No. 4, pp. 515-22, 2001.
42. **Ding D**, Liu YH, Wang MY, Wang SG, Automatic selection of fixturing surfaces and fixturing points for polyhedral workpieces, *IEEE Transactions on Robotics and Automation*, Vol. 17, No. 6, pp. 833-41, 2001.
43. **Ding D**, Liu YH, Wang SG, The synthesis of 3D form-closure grasps, *Robotica*, Vol. 18, No. 1, pp. 51-58, 2000.

Peer Reviewed Abstracts and Conference Proceedings

1. *Langdon B, Wang HW, **Ding D**, Analysis of assistive robotic manipulator (ARM) performance based on a task taxonomy, *Proceedings of the Annual RESNA Conference*, Washington DC, 2016 (accepted).
2. *Ka HW, Chung CS, **Ding D**, James K, Cooper RA, Assistive robotic manipulation performance evaluation between manual and semi-autonomous control, *Proceedings of the Annual RESNA Conference*, Washington DC, 2016 (accepted).
3. Chung CS, Wang HW, **Ding D**, Cooper RA, Feasibility analysis of daily activities using assistive robotic manipulators, *Proceedings of the Annual RESNA Conference*, Washington DC, 2016 (accepted).
4. Wang HW, Chung CS, Petruskie B, **Ding D**, Kelleher A, Cooper R, Cooper RA, Design and development of an assistive robotic manipulation evaluation tool (ARMET), *Proceedings of the Annual RESNA Conference*, Washington DC, 2016 (accepted).
5. *Tsang K, Yong HJ, Rimmer J, and **Ding D**, Measuring heart rate in manual wheelchair users during exercise and free-living activity with the latest Fitbit Surge Monitor. *Proceedings of the Annual RESNA Conference*, Washington DC, 2016 (accepted).
6. *James K, Wongsirikul N, Hiremath S, Tsang K, and **Ding D**. Usability of physical activity monitoring and sharing system for manual wheelchair users, *Proceedings of the Annual RESNA Conference*, Washington DC, 2016 (accepted).
7. Hiremath, S.V., Intille, S.S., Kelleher, A., Cooper, R.A., **Ding D**. Physical activity monitor system to quantify wheelchair-based activities in individuals with spinal cord injury. NIH Rehabilitation Research Day, 2016.
8. Toto, PE, Lee, M, **Ding D**, & Holm, M, Observation-based performance to evaluate technology: Performance Assessment of Self-Care Skills. *The Gerontological Society of America Annual Scientific Meeting*, Orlando, FL. November 18-22, 2015.
9. *Tsang KL, Hiremath S, and **Ding D**, Measuring energy expenditure in manual wheelchair users with Actigraph Monitor, *Proceedings of the Annual RESNA Conference*, Denver, CO, June 10-14, 2015.
10. *Liu HY, Crytzer T, Kelleher A, Woff J, and **Ding D**, Qualitative study on customer experience in wheelchair provision process: preliminary findings for developing an mobile app for consumers to navigate the wheelchair provision process, *Proceedings of the Annual RESNA Conference*, Denver, CO, June 10-14, 2015.

11. *Liu HY, Crytzer T, Kelleher A, Woff J, and **Ding D**, Consumer experience in wheelchair service delivery process: preliminary findings from an interview study, *International Seating Symposium*, Nashville, TN, 2015.
12. *Velez J, Ka H, and **Ding D**, Toward developing a framework for standardizing the functional assessment and performance evaluation of assistive robotic manipulators (ARMs), *International Annual Conference of the Human Factors and Ergonomics Society*, Los Angeles, CA, Oct 26-30, 2015.
13. *Hiremath S, Intille SS, Cooper R, and **Ding D**, Quantifying energy expenditure of wheelchair based physical activities in free-living environments, *Wireless Health 2014*, Bethesda, MD, Oct 29-31, 2014.
14. Wang HW, Grindle GG, Chung CS, Candiotti J, Jeannis H, **Ding D**, and Cooper RA, User participatory design: a design framework for assistive robotic devices, *The 2nd International Conference on Universal Village*, Boston, MA, June 16-17, 2014.
15. Hefley B, **Ding D**, Rosenbaum A, Michaels M, Hazelbach K et al. Commercializing smart kitchen technologies: technology transfer pathways from the lab to the home. *Technology Transfer Conference*, Baltimore, MD, Oct 23-25, 2014.
16. *Wang J, Mahajan HP, Toto P, McKean A, McCue M, and **Ding D**, A preliminary comparison of two prompting methods in cooking tasks among people with traumatic brain injury, *International Conference on Smart Homes and Health Telematics*, Denver, CO, June 25-27, 2014,
17. **Ding D**, Telson J, Krishnaswamy K, Ka H, and Cooper R, Focus group evaluation on an overhead kitchen robot appliance, *Proceedings of the Annual RESNA Conference*, Indianapolis, IN, June 11-15, 2014.
18. *Tsang KL, Hiremath S and **Ding D**, Evaluating the Energy Expenditure Prediction Models for Manual Wheelchair Users with Spinal Cord Injuries, *Proceedings of the Annual RESNA Conference*, Indianapolis, IN, June 11-15, 2014.
19. Goldberg M, Schmeler M, **Ding D**, and Schein R, Development of an online assistive technology certificate program for rehabilitation professionals, *Proceedings of the Annual RESNA Conference*, Seattle, WA, June 20-24, 2013.
20. *Telson J, **Ding D**, McCartney M, Cooper RA, Preliminary design of an overhead kitchen robot appliance, *Proceedings of the Annual RESNA Conference*, Seattle, WA, June 20-24, 2013.
21. *Wang J, **Ding D**, Mahajan, HP, Filippone AB, Toto PE, and McCue MP, Evaluation difference types of prompts in guiding kitchen tasks for people with traumatic brain injury: a pilot study, *Proceedings of the Annual RESNA Conference*, Seattle, WA, June 20-24, 2013.
22. *Harshal MP, **Ding D**, Wang J, Ni SX, and Telson J, Towards developing a 'cueing kitchen' for people with traumatic brain injury, *Proceedings of the Annual RESNA Conference*, Seattle, WA, June 20-24, 2013.

23. *Hiremath, S.V., **Ding, D**, Okonkwo, C., Hannan, M., and Cooper, R.A., Validation of a gyroscope based wheel rotation monitor for manual wheelchair users, *Proceedings of the Annual RESNA Conference*, Seattle, WA, June 20-24, 2013.
24. *Ojeda M and **Ding D**, Estimating hand-rim force of wheelchair propulsion using portable sensors, *Proceedings of the Annual RESNA Conference*, Seattle, WA, June 20-24, 2013.
25. *Santos A, Wang J, Mahajan H, and **Ding D**, An interactive assistive application for people with cognitive impairments, *SACNAS*, San Antonio, TX, Oct 3-6, 2013.
26. *Ojeda M and **Ding D**, Manual wheelchair user activity classification in natural environments, *International Seating Symposium (ISS)*, Nashville, TN, March 5-9, 2013.
27. *Hiremath SV and **Ding D**. Evaluation of a Physical Activity Monitoring System for Manual Wheelchair Users. *International Seating Symposium (ISS)*, Nashville, TN, March 5-9, 2013.
28. **Ding D**, Soleh A, Hiremath S, and Parmanto B, Physical activity monitoring and sharing platform for manual wheelchair users, *IEEE EMBS, San Diego*, August 28-Sept 1, 2012.
29. **Ding D**, Hiremath S, Soleh A, Parmanto B, Development of a physical activity monitoring and sharing platform for manual wheelchair users, *North American Federation of Adapted Physical Activity 2012 Conference*, Birmingham, AL, Oct 11-13, 2012.
30. *Hiremath S, **Ding D**, Tolfrey V, Malone LA, Lenton J, Sindall P, and Cooper RA, Validation and testing of a wheel rotation datalogger for quantifying activity in manual wheelchair users, *North American Federation of Adapted Physical Activity 2012 Conference*, Birmingham, AL, Oct 11-13, 2012.
31. Soleh A, Bambang P, **Ding D**, Hiremath S, PersonA: a sharing platform for physical activity promotion, *Medicine 2.0 2012 Conference, Boston, MA*, Sept 15-16, 2012.
32. *Hiremath S and **Ding D**, Quantifying physical activity using an Actigraph in manual wheelchair users with SCI, *Proceedings of the Annual RESNA Conference, Baltimore, MD*, June 28-July 3, 2012.
33. *Ojeda M, Lin JT, and **Ding D**, Estimating stroke number and cadence of wheelchair propulsion using portable sensors, *Proceedings of the Annual RESNA Conference, Baltimore, MD*, June 28-July 3, 2012.
34. Coyle E, Bates W, Collins EG, Wang HW, **Ding D**, and Cooper RA, A real-time implementation of vision-based terrain classification, *Florida Conference on Recent Advances in Robotics*, Boca Raton, FL, May 10-11, 2012.
35. Soleh A, Parmantao B, Hiremath S, Ding D, Facebook as telehealth tool: a persuasive social network for health intervention and rehabilitation in wheelchair users with spinal cord injury, *the 2011 American Telemedicine Association (ATA) Fall Forum, Anchorage AK*, Sept. 19-21 2011.
36. *Hiremath S and **Ding D**, Regression equations for RT3 activity monitors to estimate energy expenditure in manual wheelchair users, *IEEE EMBS, Boston, MA*, August 30-Sept 3, 2011.

37. **Ding D**, Hiremath S, Chung Y, Cooper RA, Detection of wheelchair user activities using wearable sensors, *HCI International 2011, Orlando, FL*, July 9-14, 2011.
38. *Hiremath S and **Ding D**, Predicting energy expenditure of manual wheelchair users using a wearable device, *Proceedings of the Annual RESNA Conference, Toronto, Canada*, June 5-8, 2011.
39. *Lin JT, **Ding D**, Hiremath S, Koontz A, and Cooper RA, Cross-slope and surface type influence on manual wheelchair propulsion symmetry, *Proceedings of the Annual RESNA Conference, Toronto, Canada*, June 5-8, 2011.
40. *Wang HW, **Ding D**, and Cooper RA, How driving parameters affect an electrical powered wheelchair's slip on different terrains? *Proceedings of the Annual RESNA Conference, Toronto, Canada*, June 5-8, 2011.
41. Goldberg M, Cooper RA, **Ding D**, and Koontz A, Using experiential learning to inspire, educate, and empower underrepresented undergraduates in STEM. *Proceedings of the 2011 ASEE Annual Conference and Exposition, Vancouver, Canada*, June 26-29, 2011.
42. *Hiremath S and **Ding D**, Physical Activity Classification in Manual Wheelchair Users with SCI Utilizing Activity Monitors. *2010 BMES Annual Meeting, Austin, TX*, Oct 6-9, 2010.
43. **Ding D**, Giuggio J, Chung Y, Vazquez Lopez JJ, Sharma V, and Cooper RA, Creating enriched environments through a modular wall system. *The 4th International Convention for Rehabilitation Engineering & Assistive Technology*, ShangHai, China, July 21-23, 2010.
44. Rodriguez SP, **Ding D**, and Riviere CN, Algorithms for target prediction for computer users with athetosis. *IEEE EMBS, Buenos Aires, Argentina*, August 31-Sept 4, 2010.
45. *Xu JJ, Grindle GG, Salatin B, Vazuquez JJ, **Ding D**, and Cooper RA, Enhanced bi-manual manipulation assistance with the personal mobility and manipulation appliance (PerMMA). *IEEE/RSJ International Conference on Intelligent Robots and Systems, Taipei, TaiWan*, Oct 18-22, 2010.
46. *Hiremath S and **Ding D**, Evaluation of activity monitors in estimating energy expenditure in manual wheelchair users, *Proceedings of the Annual RESNA Conference, Las Vegas, NV*, June 27-29, 2010.
47. *Chung Y, Hiremath S, and **Ding D**, Activity classification of manual wheelchair users with wearable sensors, *Proceedings of the Annual RESNA Conference, Las Vegas, NV*, June 27-29, 2010.
48. *Lin JT, **Ding D**, Hiremath S, Koontz A, and Cooper RA, Impact of cross slope and surface type on wheelchair propulsion, *Proceedings of the Annual RESNA Conference, Las Vegas, NV*, June 27-29, 2010.
49. *Chacon A, Hiremath S, and **Ding D**, Evaluation of the RT3 Tri-axial accelerometer to measure physical activity in manual wheelchair users with spinal cord injury, *Proceedings of the Annual RESNA Conference, Las Vegas, NV*, June 27-29, 2010.
50. Wang HW, Salatin B, Grindle G, Bachman E, **Ding D**, and Cooper RA, Real-time forwarding tipping detection and prevention of a front wheel drive electric powered wheelchair, *Proceedings of the Annual RESNA Conference, Las Vegas, NV*, June 27-29, 2010.

51. *Salatin B, Rice I, Teodorski E, **Ding D**, and Cooper RA, A Survey of outdoor electric powered wheelchair driving, *Proceedings of the Annual RESNA Conference, Las Vegas, NV*, June 27-29, 2010.
52. Cooper RA, Cooper RM, Liu H, Gindle GG, **Ding D**, Xu J, Chung C, Introduction to the appropriate provision of wheelchairs, *World Congress on Neurorehabilitation, Vienna, Austria*, March 21-25, 2010.
53. *Hiremath S, and **Ding D**. Evaluation of activity monitors to estimate energy expenditure in manual wheelchair users, *IEEE EMBS, Minneapolis, MN*, Sept 2-6, 2009.
54. Wang H, Salatin B, Grindle GG, **Ding D**, Cooper RA, Real-time slip detection and traction control of electrical powered wheelchairs, *Proceedings of the Rehabilitation Engineering and Assistive Technology Society of North America Conference, New Orleans, LA*, June 23-27, 2009.
55. *Salatin B, Wang H, Grindle GG, **Ding D**, Cooper RA, Electric powered wheelchair driving strategies over difficult outdoor terrain: a focus group study, *Proceedings of the Rehabilitation Engineering and Assistive Technology Society of North America Conference, New Orleans, LA*, June 23-27, 2009.
56. **Ding D**, Hiremath S*, and Cooper RA, Using SenseWear armband to evaluate energy expenditure in manual wheelchair users with SCI, *4th International State-of-the-art Congress "Rehabilitation: Mobility, Exercise & Sports, Amsterdam, Netherlands*, April 7-9, 2009.
57. *Souza A, Ding D, Cooper RM, Cooper RA, Kelleher AR, Boninger ML, Impact and use of pushrim power assist wheelchairs among individuals with tetraplegia, *Proceedings of the International Seating Symposium*, p. 119, Orlando, FL, March 12-19, 2009.
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60. *Souza A, **Ding D**, Cooper RM, Cooper RA, Kelleher AR, Boninger ML, Impact and usage of pushrim activated power assist wheelchair among individuals with tetraplegia, *Proceedings of the Annual RESNA Conference, Arlington VA*, June 26-30, 2008.
61. *Hiremath S, **Ding D**, Koontz AM, Estimating temporal parameters of wheelchair propulsion based on hand acceleration, *Proceedings of the Annual RESNA Conference, Arlington VA*, June 26-30, 2008.
62. *Sibenaller S, **Ding D**, Dicianno BE, Cooper RA, Riviere C, Kinematic characteristics of athetoid movement during target acquisition, *Proceedings of the Annual RESNA Conference, Arlington VA*, June 26-30, 2008.
63. *Ambur V, **Ding D**, Smailagic A, Siewiorek D, French B, Koontz AM, Accelerometry-based classification of wheelchair propulsion patterns using machine learning techniques, *Proceedings of the Annual RESNA Conference, Arlington VA*, June 26-30, 2008.

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65. Koontz AM, **Ding D**, Hershberger M, Cooper RA, A Model Undergraduate research program in rehabilitation engineering, *Proceedings of the Annual RESNA Conference*, Arlington VA, June 26-30, 2008.
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68. **Ding D**, Cooper RA, Cooper R, Kelleher A, Monitoring seat feature usage among wheelchair users, *IEEE EMBS*, Lyon, France, August 23-26, 2007.
69. Vázquez López J, Sibenallar S, **Ding D**, Riviere C, Toward filtering athtoid motion with neural network in people with Cerebral Palsy, *IEEE EMBS*, Lyon, France, August 23-26, 2007.
70. **Ding D**, and Cooper RA, Incorporating participatory action design into research and education, *2007 International Conference on Engineering Education*, Coimbra, Portugal, Sept. 3-7, 2007.
71. **Ding D**, Leister E, Cooper R, Kelleher A, Cooper RA, Fitzgerald SG, Boninger ML, Power seat features usage among wheelchair users in community living conditions, *Proceedings of Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) conference*, Phoenix, Arizona, June 15-19, 2007.
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73. *Sibenallar S, **Ding D**, Diccianno B, Cooper RA, Development of a customized algorithms for an isometric joystick for individuals with dystonia and chorea, *Proceedings of Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) conference*, Phoenix, Arizona, June 15-19, 2007.
74. **Ding D**, Cooper RA, Measurement of activity patterns among wheelchair users via GPS and wheel rotation logging devices, *Proceedings of Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) conference*, Atlanta, Georgia, June 22-26, 2006.
75. *Souza A, **Ding D**, Cooper R, Cooper RA, Keller A, Fitzgerald S, Boninger ML, Usage of pushrim activated power assist wheelchairs among people with tegrapplegia, *Proceedings of Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) conference*, Atlanta, Georgia, June 22-26, 2006.
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Engineering and Assistive Technology Society of North America (RESNA) conference, Atlanta, Georgia, June 22-26, 2006.

78. *Tolerico M, **Ding D**, Cooper RA, Fitzgerald S, Cooper R, Kelleher A, Spaeth DM, Boninger ML, Assessing the activity levels of manual wheelchair users, *Proceedings of Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) conference*, Atlanta, Georgia, June 22-26, 2006.
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92. **Ding D**, Cooper RA, Guo SF, and Corfman TA, Robust velocity control simulation of a powered wheelchair, *Proceedings of Rehabilitation Engineering & Assistive Technology Society of North America Annual Conference*, Atlanta, GA, June 19-23, 2003.
93. **Ding D**, Cooper RA, Guo SF and Corfman TA, Interpreting joystick signals for wheelchair navigation, *Proceedings of Rehabilitation Engineering & Assistive Technology Society of North America Annual Conference*, Atlanta, GA, June 19-23, 2003.
94. Simpson R, Guo S, **Ding D**, Smart power assistance module for manual wheelchairs, *Proceedings of Rehabilitation Engineering & Assistive Technology Society of North America Annual Conference*, Atlanta, GA, June 19-23, 2003.
95. Hoover A, Cooper RA, **Ding D**, et al., Comparing driving habits of wheelchair users: manual vs. power, *Proceedings of Rehabilitation Engineering & Assistive Technology Society of North America Annual Conference*, Atlanta, GA, June 19-23, 2003.
96. **Ding D**, Cooper RA, Guo SF, and Corfman TA, Disturbances induced by wheelchair caster when driving backwards, *Proceedings of Rehabilitation Engineering & Assistive Technology Society of North America Annual Conference*, Minneapolis, MN, June 27-July 1, 2002.
97. **Ding D**, Liu YH, and Wang MY, Fixture layout design for curved workpieces, *Proceedings of IEEE International Conference on Robotics and Automation*, pp. 2906-2911. Washington DC, 2002.
98. **Ding D**, Liu YH, and Wang SG, Computing 3D optimal form-closure grasps, *Proceedings of IEEE International Conference on Robotics and Automation*, pp. 3573-3578. San Francisco, CA, 2002.
99. **Ding D**, Liu YH, and Wang SG, The synthesis of 3D form-closure grasps, *Proceedings of IEEE International Conference on Robotics and Automation*, pp. 3579-3584. San Francisco, CA, 2002.
100. Xiang GL, Liu YH, **Ding D**, and Shen YT, An internet based pulse palpation system for Chinese Medicine, *Proceedings of IEEE/RSJ International Conference on Intelligent Robot and System*, pp. 1481-1486, 2002.
101. **Ding D**, Liu YH, and Wang MY, On computing immobilizing grasps of 3-D curved objects, *Proceedings of IEEE International Symposium on Computational Intelligence in Robotics and Automation*, pp. 11-16. Alberta, Canada, 2001.

102. **Ding D**, Liu YH, and Wang MY, Automatic selection of fixturing surfaces and fixturing points for polyhedral objects, *Proceedings of IEEE/RSJ International Conference on Intelligent Robot and System*, pp. 1147-1152, 2001.
103. **Ding D**, Liu YH, Zhang JY, and Knoll A, Computation of fingertip positions for a form-closure grasp” *Proceedings of IEEE International Conference on Robotics and Automation*, pp. 2217-2222, 2001.
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105. **Ding D**, Liu YH, and Wang SG, An efficient algorithm for computing 3D form-closure grasps, *Proceedings of IEEE/RSJ International Conference on Intelligent Robot and System*, pp. 1223-1227. Takamatsu, Japan, 2000.
106. Liu YH, **Ding D**, and Wang SG, Towards construction of 3D frictional form-closure grasps: a formulation, *Proceedings of IEEE/RSJ International Conference on Intelligent Robot and System*, pp. 279-284. Kyongju, South Korea, 1999.
107. Liu YH, **Ding D**, and Wang SG, “Constructing 3D frictional form-closure grasps of polyhedral objects”, *Proceedings of IEEE International Conference on Robotics and Automation*, pp. 279-284, 1999.

Book Chapters

1. Hefley B, **Ding D**, Rosenbaum A, Michaels M, Hazelbach K, Berry S, Somma J, et al. (In press). Technology Transfer Pathways from the Lab to the Home: The Case of the Smart Kitchen, in Link, A., Markman, G., Phan, P. and Siegel, D. (eds.), *Research in Translation* (Phan, P. (Series ed.), Johns Hopkins University Research Series in Entrepreneurship), Edward Elgar.
2. Cooper RA, McCue M, Schein RM, Cooper RM, Sporer ML, Dodson MB, Reinsfelder AM, Yeager AF, Jinks A, LoPresti E, McClure L, Wang H, Collinger JL, Hiremath S, **Ding D**, and Lewis A, Assistive Technology for People with Traumatic Brain Injuries. In *Brain Injury Medicine*, Second Edition. New York: Demos Publishing, in press.
3. **Ding D**, Simpson R, Matsuoka Y, and LoPresti E, Rehabilitation Robotics, in *An Introduction to Rehabilitation Engineering*, Taylor & Francis Press, 2007.
4. Koontz AM, **Ding D**, Spaeth DM, Schmeler MR, Cooper RA, Prescription of Wheelchairs and Seating Systems (Chapter 18), in *Physical Medicine and Rehabilitation 3rd Edition*, Elsevier Limited, UK, pp. 381-411, 2006.
5. Cooper RA, **Ding D**, Kwarciak AM, et al., Wheelchair Engineering, in *Wiley Encyclopedia of Biomedical Engineering*, John Wiley and Sons Inc., 2006.
6. Cooper RA, **Ding D**, Cooper R, et al., Overview of Rehabilitation Engineering, in *Wiley Encyclopedia of Biomedical Engineering*, John Wiley and Sons Inc., 2006.
7. Liu YH, **Ding D**, Lam LM, 3-D Grasp Analysis and Synthesis using the Ray-Shooting Technique, in *Robotics Welding, Intelligence and Automation, Lecture Notes in Control and Information Sciences*, Springer-Verlag Press, pp. 80-109, 2004.

Non-Peer Reviewed Articles

1. **Ding D**, Activity Monitors for Wheelchair Users, PN Magazine, January 2011 (invited)

GRANTS

Research Grants

Role Grant Number Source of Funds	Title of Project	Project Period	Total Amount
PI #H133A130025 National Institute of Disability and Rehabilitation Research Disability and Rehabilitation Research Project	Self-Management Assistance Through Technology – Virtual Coaches for Wheelchair Users	10/1/13-9/30/18	\$2,372,506
PI 1I01RX000971-01A2 VA RR&D Merit Review	Field-Based Assessment of Energy Expenditure in Spinal Cord Injury	4/1/15-3/31/18	\$825,000
Project PI #H133E120005 National Institute of Disability and Rehabilitation Research RERC on Recreational Technologies Benefiting Individuals with Disabilities	Free-Living Physical Activity Assessment of Wheelchair Users Using Off-the-Shelf Activity Monitors	10/1/12-9/30/17	\$454,870
PI Competitive Pilot Proposal Fund Human Engineering Research Laboratories	Development of an Assistive Robotic Kitchen Appliance	9/1/14-8/31/15	\$25,000
PI #SC090323 Department of Defense (DoD) Congressional Directed Medical Research Programs	Physical Activity Measurement in Manual Wheelchair Users with SCI	10/1/10 – 9/30/14	\$736,852
Site PI (Co-PI) #09008002 Department of Defense (DoD) Telemedicine & Advanced Technology Research Center	Terrain-Dependent Driver Assistance for Electric Powered Wheelchairs	4/15/10 – 9/15/12	\$250,000
Project PI #H133E070024 National Institute of Disability and Rehabilitation Research RERC on SCI	Development of Measurement Tools for Propulsion Training in the Natural Environment	4/1/10 – 9/30/12	\$248,740
Project PI #H133E070029 National Institute of Disability and Rehabilitation Research RERC on Recreational	Utility of Common Activity Monitors in Measuring Energy Expenditure in Manual Wheelchair Users with SCI	10/1/07 – 9/30/12	\$287,273

Technologies Benefiting Individuals with Disabilities			
Testbed Systems Leader #EEC 0540865 National Science Foundation Quality of Life Technology Engineering Research Center	Home and Community Health and Wellness – Cueing Kitchen	6/1/10 – 5/31/15	\$265,549
Site PI PA NanoMaterials Commercialization Center	Flexible Sensing Films for Healthcare Using Carbon Nanotubes and Nanometallic Inks	2/1/09 – 1/31/10	\$62,439
PI University of Pittsburgh Central Research and Development funds	Personalized Wheelchair Navigation	6/1/08 – 6/30/10	\$16,000
PI #2486 Paralyzed Veterans of America Design and Development	Development of a Wheelchair Propulsion Monitoring Device	2/1/07 – 12/31/09	\$150,000
PI #1R41 HD049922-01 NIH STTR Phase I	Datalogger Development for Wheelchair Mobility Outcomes	6/1/05 – 5/31/06	\$100,000
PI #2264-01 Paralyzed Veterans of America Fellowship	Enhanced Remote Data Logging for Electric Powered Wheelchairs (Phase II)	7/1/05 – 6/30/06	\$49,915
PI University of Pittsburgh Competitive Medical Research Fund (CMRF)	An Experimental Testbed for Optimized Wheelchair Control	9/1/05 – 8/31/06	\$25,000
PI #H133F040006 NIDRR Switzer Fellowship Award	Enhanced Remote Data Logging for Electric Powered Wheelchairs (Phase I)	9/1/04 – 8/30/05	\$45,000
Co-I #B6591R VA RR&D Service Merit Review Program	Powered Seating Function Usage among Veterans – Compliance and Coaching	5/1/09 – 4/30/13	\$1,052,500
Co-I #A6035R VA RR&D Service Merit Review Program	Computer-Based and Virtual Assessments of Power Wheelchair Mobility	7/1/09 – 6/30/12	\$446,500
Co-I #H133E070024 National Institute of Disability and Rehabilitation Research RERC on SCI	Effects of Handrim Technology on Upper Extremity Musculoskeletal Injury	10/1/07 – 3/31/10	\$248,740
Co-I #1R21 HD050717 National Institute of Health R21	Nonlinear Filtering of Athetoid Movement	9/20/06 – 8/31/09	\$325,474

Co-I Pittsburgh Life Science Green House	Quality of Life Technology Project	5/10/06 – 8/31/08	\$150,000
Co-I #1R03 HD048465 National Institute of Health R03	Advanced 3D Control Techniques for Powered Wheelchairs	9/1/05 – 8/30/08	\$222,364
Co-I #B3096R VA RR&D Service Merit Review Program	Isometric Controls with Personalized Algorithms for Driving Electric Powered Wheelchairs	4/1/04 – 3/31/07	\$323,100
Co-I #H133A020502 NIDRR Traumatic Brain Injury Center	Personalized Personal Mobility for Persons with Traumatic Brain Injury	12/1/02 – 11/30/07	\$356,000
Co-I #1R43 EY14490-01 NIH SBIR Phase II	Smart Power Assistance Module for Manual Wheelchairs	9/30/02 – 8/31/05	\$450,000

Training Grants

Role Grant Number Source of Funds	Title of Project	Project Period	Total Amount
PI #H133P140012 Dept. of Education National Institute of Disability and Rehabilitation Research	Advanced Rehabilitation Research Training: Career Advancement for Engineers in the Science of Rehabilitation (CAESOR)	10/1/14- 9/30/19	\$750,000
PI #EEC1358903 National Science Foundation	Quality of Life Research Experience for Undergraduates Veterans Supplement	4/1/14- 3/31/17	\$20,000
PI # EEC 1358903 National Science Foundation Research Experience for Undergraduates Program	Research Experiences of Undergraduates in Quality of Life Technology	3/1/14 – 2/28/17	\$345,739
Co-PI #DGE1144584 National Science Foundation IGERT Program	IGERT: Interdisciplinary Research Training in Rehabilitation Science and Engineering	7/1/12 – 6/30/17	\$2,993,020
PI #HRD1128797 National Science Foundation Research in Disability Education Program	The Quality of Life Technology Model for Graduating and Transitioning Postsecondary Students with Disabilities in STEM	1/1/12- 12/31/13	\$199,850
PI #H129E100001 Dept. of Education Rehabilitation Services Administration	Rehabilitation Long-Term Training – Rehabilitation Technology	10/1/10 – 9/30/15	\$500,000

PI #H133P090010 Dept. of Education National Institute of Disability and Rehabilitation Research	Advanced Rehabilitation Research Training: Career Advancement for Engineers in the Science of Rehabilitation (CAESOR)	10/1/09 – 9/30/14	\$749,823
PI # EEC 1063017 National Science Foundation Research Experience for Undergraduates Program	Research Experiences of Undergraduates in Quality of Life Technology	5/1/11 – 4/30/14	\$356,700
Co-PI #DRL1010507 National Science Foundation Informal Science Education Program	Human +	10/1/10 – 2/28/13	\$143,186
Education Co-Director #EEC 0540865 National Science Foundation Quality of Life Technology Engineering Research Center	Education, Outreach, and Diversity Program	6/1/06 – 5/1/15	~\$2,800,000
Co-PI #EEC 0755184 National Science Foundation Research Experience for Undergraduates Program	Research Experiences of Undergraduates in Quality of Life Technology	5/1/08 – 4/30/10	\$238,500
Co-PI #EEC 0540865 National Science Foundation Engineering Research Center Supplement	Research Experiences of Undergraduates in Quality of Life Technology	6/1/07 – 5/31/08	\$63,000

Center Grants

Role Grant Number Source of Funds	Title of Project	Project Period	Total Amount
Co-I (Project PI) #B9250C VA RR&D Service Center of Excellence	Center of Excellence on Wheelchairs and Associated Rehabilitation Engineering	7/1/14 – 6/30/19	\$4,750,000
Co-I (Project PI) #H133E120005 Dept. of Education National Institute of Disability and Rehabilitation Research	Rehabilitation Engineering Research Center on Recreational Technologies and Exercised Physiology Benefiting Individuals with Disabilities	10/1/12- 9/30/17	\$4,500,000
Co-I (Project PI) #B6789C VA RR&D Service Center of Excellence	Center of Excellence on Wheelchairs and Associated Rehabilitation Engineering	7/1/09 – 6/30/14	\$4,750,000
Co-I (Project PI) #H133E070024	Rehabilitation Engineering Research Center on Spinal	10/1/07- 9/30/12	\$4,500,000

Dept. of Education National Institute of Disability and Rehabilitation Research	Cord Injury		
Co-I (Project PI) #H133E070029 Dept. of Education National Institute of Disability and Rehabilitation Research	Rehabilitation Engineering Research Center on Recreational Technologies and Exercised Physiology Benefiting Individuals with Disabilities	10/1/07- 9/30/12	\$4,500,000
Co-I (Testbed Systems Leader, Project PI, and Education Co-Director) #EEC 0540865 National Science Foundation Engineering Research Center	Quality of Life Technology Engineering Research Center	6/1/06 – 5/01/15	\$15,000,000
Co-I (Project PI) #B3142C VA RR&D Service Center of Excellence	Center of Excellence on Wheelchairs and Associated Rehabilitation Engineering	7/1/04- 6/30/09	\$4,750,000

TEACHING

Course Instructor

Spring 2015	HRS 3709 Introduction to Rehabilitation Robotics	3 credits
Fall 2012-present	HRS 3002 Method of Inquiry for Rehabilitation Sciences I	1 credit
“		
Fall 2008-present	HRS 2901 Introduction to Research Methodology	3 credits
Spring 2008	HRS 2714 Quality of Life Technology Seminar Series	1 credit
Spring 2006	HRS 3709 Mobility and Manipulation	3 credits
Spring 2003, 2005	HRS 3708 Integrated Control of Assistive Devices	1 credit

Guest Lecturer

Spring 2010, 2011	CDN 1612 Social & Cultural Determinants of Food Behavior	3 credits
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Independent Study

Spring 2016	Louis Nikolis, “Mobile app development for new wheelchair users”, Undergraduate Program in Rehabilitation Science, University of Pittsburgh
Spring 2012	Lindsey Brown, “Accelerometry-Based Measurement Tool for Wheelchair Propulsion Monitoring”, Undergraduate Program in Rehabilitation Science, University of Pittsburgh
Spring 2008	Ben Salatin, “Assistive Robotic Manipulators”, Department of Rehabilitation Science and Technology, University of Pittsburgh

Post-Doctoral Fellow Supervised/Co-Supervised

08/13 – Present	Hyun Ka PhD in Rehabilitation Science and Technology, University of Pittsburgh
01/14 – 04/15	Hsinyi Liu PhD in Rehabilitation Science and Technology, University of Pittsburgh
02/12 – 01/15	Harshal Mahajan PhD in Rehabilitation Science and Technology, University of Pittsburgh <i>First position:</i> Research Scientist at Georgia Tech University

Dan Ding 6/01/2016

02/11 – 11/11 Kunal Mankodiya
 PhD in Institute for Signal Processing, University of Luebeck, Germany
First position: Research Scientist at Carnegie Mellon University

03/10 – 09/10 Shinyoung Lim
 PhD in Computer Science, Seoul National University, Korea
First position: Research Scientist at the National Rehabilitation Center of South Korea

Graduate Students Supervised

09/15 – Present Akhila Veerubhotla
 Doctor of Philosophy in Rehabilitation Science

09/13 – Present KaLai Tsang
 Doctor of Philosophy in Rehabilitation Science

09/13 – Present Daniel Osaku
 Masters of Science in Rehabilitation Science and Technology

09/15 – Present Petra Hartman
 Masters of Science in Rehabilitation Science and Technology

09/15 – Present Robert McDonough
 Masters of Science in Rehabilitation Science and Technology

09/11 – 08/15 Jing Wang
 Doctor of Philosophy in Rehabilitation Science
PhD Dissertation: Development and Evaluation of an Assistive Prompting System for People with Traumatic Brain Injury

01/12 – 12/14 Joseph Corrigan
 Masters of Science in Rehabilitation Science and Technology
 Scholarly Paper: A Literature Review on Haptic Devices for the Blind

09/12 – 07/14 Vee Wongskirikul
 Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Field-based Usability Study of Physical Activity Monitoring and Sharing System for Manual Wheelchair Users with Spinal Cord Injury.

09/11 – 07/13 Joshua Telson
 Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Preliminary Design and Evaluation of an Overhead Kitchen Robot Appliance
First Position: Mechanical Engineer at 4MOMS LLC, Pittsburgh

01/11 – 04/13 Manoela Ojeda
 Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Toward Monitoring Wheelchair Propulsion in Natural Environment using Wearable Sensors

09/09 – 07/13 Shivayogi Hiremath
 Doctor of Philosophy in Rehabilitation Science
PhD Dissertation: Physical Activity Monitoring System for Manual Wheelchair Users
First Position: Postdoctoral Fellow, Dept. of Physical Medicine and Rehabilitation, University of Pittsburgh

09/09 – 08/11 Jui-Te Lin
 Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Investigation of Terrain Effects on Wheelchair Propulsion and Validity of a Wheelchair Propulsion Monitor

- 09/07 – 08/09 *First Position:* PhD student, Dept. of Applied Physiology, Georgia Institute of Technology
Shivayogi Hiremath
Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Evaluation of Accelerometer-Based Activity Monitors to Assess Energy Expenditure of Manual Wheelchair Users with SCI
First Position: PhD student, Dept. of Rehabilitation Science and Technology, University of Pittsburgh
- 09/06 – 08/08 Sara Sibnaller
Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Investigation of Unintentional Movement in People with Cerebral Palsy to Improve Computer Target Acquisition
First Position: Software engineer at Philips Home Healthcare Solutions, Pittsburgh
- 09/05 – 08/07 Ana Souza
Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Impact and Usage of Pushrim Activated Power Assist Wheelchairs among Individuals with Tetraplegia
First Position: PhD student, Dept. of Rehabilitation Science and Technology, University of Pittsburgh
- 09/04 – 08/06 Liz Leister
Masters of Science in Rehabilitation Science and Technology
Master's Thesis: Investigation of Terrain Effects on Wheelchair Propulsion and Validity of a Wheelchair Propulsion Monitor
First Position: Software engineer at Philips Home Healthcare Solutions, Pittsburgh

Undergraduate Students Supervised

- 01/12 – 12/12 Lindsey Brown
BPhil in Rehabilitation Science, University of Pittsburgh Honors College
The Ohio State University, Doctor of Physical Therapy and a PhD in Rehab Science. 2013

Doctoral Committee

- 2011 – Present Elaine Houston, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
Proposal Defensed “Development of Interfaces for PerMMA and the Performance Evaluation Tool for Upper Limb”
- 2008 – Present Kavita Krishnaswamy, Computer Science, University of Maryland Baltimore County
Proposal Defensed “Increased Autonomy with Robotics for Daily Living”
- 2014 – 2016 Ashley McKeon, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
Dissertation: Physiological predictors of behavioral deregulation in adults with traumatic brain injury: a novel ecological momentary assessment method
- 2011 – 2015 Cheng-Siu Chung, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
Dissertation: An Assistive Interface for Assistive Robotic Manipulators
- 2011 – 2015 YuKuang Wu, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh

- 2008 – 2013 *Dissertation:* Development of a Smartphone Virtual Seating Coach Application for Improving Powered Seat Functions Usage
Hsin-yi Liu, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
- 2008 – 2012 *Dissertation:* Development of a Customized Electronic Reminder to Facilitate Powered Seating Function Usage and Compliance with Clinical Recommendations: Design Process and Clinical Efficacy
Ayubi Soleh, Rehabilitation Science (Health Information Management), University of Pittsburgh
- 2006 – 2012 *Dissertation:* Model, Framework, and Platform of Health Persuasive Social Network
Hongwu Wang, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
- 2005 – 2012 *Dissertation:* Development and Evaluation of an Advanced Real-Time Electric Powered Wheelchair Controller
Harshal Mahajan, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
- 2006 – 2011 *Dissertation:* Development and Validation of Simulators for Power Wheelchair Driving Evaluations
Piyawan Kasemsuppakorn, Information Sciences, University of Pittsburgh
- 2005 – 2009 *Dissertation:* Methodology and Algorithms for Pedestrian Network Construction
Vinod Sharma, Bioengineering, University of Pittsburgh
- 2003 – 2007 *Dissertation:* Design and Evaluation of a Distributed, Shared Control, Navigation Assistance System of Power Wheelchairs
Jonathan Pearlman, Rehabilitation Science (Rehabilitation Science and Technology), University of Pittsburgh
- Dissertation:* Research and Development of an Appropriate Electric Powered Wheelchair for India

Master's Thesis or Scholarly Paper Committee

- 2015 – 2016 Adam Sherman, Rehabilitation Science and Technology, University of Pittsburgh
- 2013 – 2015 Herbert Hill, Rehabilitation Science and Technology, University of Pittsburgh
Scholarly Paper: The Commercialization of Assistive Technologies: Case Studies of Technology Transfer Taking Projecting from the Lab to the Market
- 2012 – 2014 Yu-Ting Cheng, Rehabilitation Science and Technology, University of Pittsburgh
Master's Thesis: Investigation of Physiological Responses during Pulmonary and Exercise Tests and Validity of the WHEEL Perceived Exertion Scale among Adolescents and Adults with Spina Bifida
- 2007 – 2010 Ben Salatin, Rehabilitation Science and Technology, University of Pittsburgh
Master's Thesis: Electric Powered Wheelchair Driving Outdoors: The Identification of Driving Obstacles and Strategies and the Development of an Advanced Controller
- 2004 – 2006 Karl Brown, Rehabilitation Science and Technology, University of Pittsburgh
Master's Thesis: Electric Powered Wheelchair Control with a Variable Compliance Joystick: Improving Control of Mobility Devices for Individuals with MS

2003 – 2005	Michelle Tolerico, Rehabilitation Science and Technology, University of Pittsburgh <i>Master's Thesis:</i> Investigation of the Mobility Characteristics and Activity Levels of Manual Wheelchair Users in Two Real World Environments
2002 – 2004	Beth Ann Kaminski, Rehabilitation Science and Technology, University of Pittsburgh <i>Master's Thesis:</i> Application of a Commercial Datalogger to Electric Powered and Manual Wheelchairs of Children
2001 – 2003	Andrew Kwarciak, Bioengineering, University of Pittsburgh <i>Master's Thesis:</i> Performance Analysis of Suspension Manual Wheelchairs

Graduate Student Interns Supervised

01/16 – Present	Haoran Zhao, Master student in Information Science, University of Pittsburgh
08/14 – 05/15	Sanjuan Jin, Master student in Information Sciences, University of Pittsburgh
01/15 – 05/15	Kayla Geer, Master student in Integrated Innovation in Products and Services, Carnegie Mellon University
09/14 – 05/15	Satish Raishankar, Master student in Robotics Institute, Carnegie Mellon University
09/11 – 07/14	Monsak Socharoentum, PhD student in Information Sciences, University of Pittsburgh
05/14 – 07/14	Meng Shi, Master student in Tangible Interaction Design, Carnegie Mellon University
11/11 – 08/12	Vijeta Parvatikar, Master student in Physical Therapy, University of Pittsburgh
05/11 – 11/11	Sasa Tripathy, Master student in Biomedical Engineering, University of Texas Arlington
01/11 – 05/11	Abdul Raqeeb Azeez, Master student in Information Sciences, University of Pittsburgh
01/11 – 05/11	Gabriela Uribe, Master student in Design, Carnegie Mellon University
11/08 – 12/09	Megha Dhawan, Master student in Physical Therapy, University of Pittsburgh
05/06 – 08/06	Stephen Gaukrodger, Master student in Computer Science, University of Canterbury, New Zealand

Undergraduate Student Interns Supervised

01/16 – 05/16	Joseph Lynch, Electrical and Computer Engineering, University of Pittsburgh
05/15 – 07/15	Bethany Langdon, Biomedical Engineering and Mechanical Engineering, University of Arizona
05/15 – 07/15	Tenzin Chhoshpel, Computer Science, City University of New York – City College
05/15 – 07/15	Llorr Robinson, Computer Engineering, Savannah State University
05/14 – 07/14	Elizabeth Gauen, Industrial and Enterprise Systems Engineering, University of Illinois at Urbana-Champaign
05/14 – 07/14	Jonathan Velez, Psychology, University of Central Florida
05/14 – 07/14	Erika Mason, Electrical Engineering, University of Rochester
05/14 – 07/14	Lucas Webster, Electrical Engineering, Universidade Federal do Espirito Santo, Brazil
05/13 – 08/13	Alex Santos, Computer Science, University of Puerto Rico, Rio Piedras Campus

05/13 – 08/13	Erik Dornbush, Systems Engineering, University of Virginia
03/12 – 12/12	Josh Cohen, Electrical Engineering, University of Pittsburgh
05/12 – 08/12	Evan Radkoff, Computer Science, The College of Wooster
05/12 – 08/12	Dung Pham, Computer Science, Hanover College
05/12 – 08/12	Shelly Ni, Product Design, Stanford University
05/12 – 08/12	Matthew Hannan, University of Pittsburgh
05/12 – 08/12	Chris Okonkwo, Computer Science, Norfolk State University
09/11 – 12/11	Greg Hill, Computer Engineering, University of Pittsburgh
01/11 – 08/11	Sossena Wood, Electrical Engineering, University of Pittsburgh
01/11 – 05/11	Shawn Hanna, Computer Engineering, University of Pittsburgh
05/11 – 08/11	Josh Davis, Electrical Engineering Technology, California University of Pennsylvania
01/10 – 05/10	David Berlin, Electrical Engineering, University of Pittsburgh
05/10 – 08/10	David Carter, Mechanical Engineering, Carnegie Mellon University
05/10 – 08/10	Faiz Hasanuzzaman, Electrical Engineering, City College of NY
05/10 – 08/10	Alix Cave, Electrical Engineering, St. Mary's University
05/09 – 08/09	Adriana Chacon, Mechanical Engineering, South Florida University
05/07 – 08/07	Ruhani Sandhu, Electrical Engineering, University of Buffalo
05/06 – 08/06	Nick Marchuk, Mechanical Engineering, Johns Hopkins University
01/05 – 05/05	Sulaiman Harris, Electrical Engineering, University of Pittsburgh
05/05 – 08/05	Mpitulo Kala-Lufulwabo, Electrical Engineering, University of Pittsburgh
05/04 – 08/04	Scott Novich, Electrical Engineering, Rice University
05/03 – 08/03	Erika Fanzen, Bioengineering, University of Pittsburgh
05/02 – 08/02	Alex Cheung, Biomedical Engineering, Carnegie Mellon University

Other Teaching Activities

Seminar Coordination

Fall 2006, 2007 Quality of Life Technology Seminar Series

Instructional Courses, Workshops, Seminars, Short Courses

07/16	Ding D and Tsang K, Workshop on understanding wearable activity trackers for wheelchair users, <i>the Annual RESNA Conference</i> , Washington DC
07/16	Parmanto B, Andi Saptono, and Ding D , Workshop on improving quality of life for individuals with disability through mobile health, <i>the Annual RESNA Conference</i> , Washington DC
02/13	Cueing Kitchen – Assistive Technology for Cognition, Spring Seminar Series at the Alzheimer Disease Research Center, University of Pittsburgh.
07/10	Fundamentals of Assistive Technology, presented at the 4 th International Convention for Rehabilitation Engineering & Technology, Shanghai, China.
03/09	Activity Telemonitor for Wheelchair Users: Changing Behaviors, presented at the International Seating Symposium Instructional Course Session on TeleRehabilitation: a Viable Method for Wheelchair Prescription, Orlando, FL.
01/09	Overview of Rehabilitation Engineering, presented at the Dept. of Bioengineering's Undergraduate Seminar Series, University of Pittsburgh.

03/09 Overview of Rehabilitation Engineering, presented at the Dept of Electrical Engineering's Undergraduate Seminar Series, University of Pittsburgh.

Invited Talks and Lectures

- 04/16 Making off-the-shelf fitness wearables accessible to wheelchair users, Bending the Arc of Exercise Technology Toward People with Disabilities: RERC RecTech Third State of the Science Conference, Washington DC
- 07/14 ARRT on Career Advancement for Engineers in the Science of Rehabilitation, Advanced Rehabilitation Research Training and Switzer Fellowship Summit, National Institute on Disability and Rehabilitation Research.
- 03/13 Smart Home Technology and Brain Injury, presented at the CoBI Brain Injury Conference, Sheraton Station Square, Pittsburgh, PA.
- 05/11 Home and Community Health and Wellness, presented at the State of Science Workshop on Universal Design, National Intrepid Center for Excellence, Bethesda, MD.
- 10/10 Utility of Common Activity Monitoring Devices in Measuring Energy Expenditure in Manual Wheelchair Users with SCI, presented at the State of the Science Conference on Interactive Exercise Technologies and Exercise Physiology for People with Disabilities, Chicago, IL.
- 04/08 Wearable Sensors/Systems and Their Applications in Wheeled Mobility, presented at the McGowan Institute of Regenerative Medicine Retreat, University of Pittsburgh.
- 08/07 Monitoring Seat Feature Usage among Wheelchair Users, presented at the Special Session on Advanced Assistive Technology, IEEE EMBS conference, Lyon, France.
- 02/07 Quality of Life Technology, presented at the Florida-Georgia Louise Stokes Alliance for Minority Participation (FGLSAMP) Expo, Tampa, FL.
- 04/06 Rehabilitation Robotics, presented at the State of the Science Workshop on Advanced Assistive Technology, Walter Reed Army Medical Center, Washington DC.
- 08/05 Wheeled Mobility and Seating, presented at the International Rehabilitation Forum, Xi'an, China
- 04/05 Enhanced Wheelchair Monitoring System, presented at the Switzer Research Fellowship Seminar, National Institute of Disability and Rehabilitation Research, Washington DC.
- 03/05 Wheeled Mobility and Seating, presented at the VA Research Week (along with Dr. Alicia Koontz), Department of Veterans Affairs, Washington DC.

SERVICE

Departmental Administration and Committees or Activities

- 2010 – Present Coordinator of the Assistive Technology Certificate Program
- 2009 – present Coordinator of the RST International Exchange Program
- 2008 – present Program Director of the MS Program in Rehabilitation Science and Technology

2005 – present	Chair of the RST Graduate Program Admission Committee
2016	Chair of a Tenure Promotion Review Committee
2007 – 2010	Direct supervisor of Juan Jose Vazquez Lopez, Research Engineer, RST
2006 – 2015	Education Co-Director of the Quality of Life Technology Engineering Research Center
2007 – 2014	Direct supervisor of Mary Goldberg, Education and Outreach Coordinator, RST
2009 – 2014	Next-level supervisor of Shelly Brown, Education and Outreach Coordinator, RST
2010 – 2014	Next-level supervisor of Maria Milleville, Education and Outreach Coordinator, RST

School Administration and Committees or Activities

2010 – present	Member, SHRS Academic Policies Committee
2013 – present	Member, SHRS Method of Inquiry Preliminary Examination Committee
2016	Chair of an Ad-Hoc Promotion Review Committee
2012 – 2015	Member, SHRS Assistive Technology Preliminary Exam Committee
2009 – 2011	Co-investigator of the Commonwealth funding for minority retention and recruitment

Academic Committees or Activities

Editorial Boards

05/10 – present	Associate Editor of Research, Assistive Technology Journal
02/14 – 08/14	Guest Editor for Special Issue on Wheeled Mobility, Biomed Research International

Ad-Hoc Grant Review

06/15	Small Business Innovation Research (SBIR) Program, National Institute of Disability, Independent Living, and Rehabilitation Research
05/15	Rehabilitation Engineering Research Center Program, National Institute of Disability, Independent Living, and Rehabilitation Research
04/13	SPiRE program, VA RR&D
08/12	Small Business Innovation Research Program, National Institute of Disability Research and Rehabilitation
06/12	Field Initiated Program, National Institute of Disability Research and Rehabilitation
05/12	AXA Research Fund
03/12	Merit Review Program, VA Rehabilitation R&D Service
01/12	Bioengineering Panel, Graduate Research Fellowship Program (GRFP), National Science Foundation,
11/11	Clinical and Biomedical Research Unit, Health Research Board, Ireland
04/11	Field Initiated Program, National Institute of Disability Research and Rehabilitation
04/10	Field Initiated Program, National Institute of Disability Research and Rehabilitation
06/07	Research to Aid Individuals with Disabilities, National Science Foundation
04/06	Field Initiated Program, National Institute of Disability Research and Rehabilitation
04/05	Field Initiated Program, National Institute of Disability Research and Rehabilitation
10/05	Central Research Development Fund, University of Pittsburgh
04/04	Field Initiated Program, National Institute of Disability Research and Rehabilitation

Conference Committees

05/12	Technical program committee of the International Conference on Rehabilitation Medical Engineering, Shanghai, China
07/10	Program Co-Chair of the 4 th International Convention for Rehabilitation Engineering &

- Technology, Shanghai, China
- 09/08 Program committee of the International Conference on Intelligent Robots and Systems, Nice, France
- 09/06 Session Chair, Advanced Assistive Technology Session, International Conference of the IEEE Engineering in Medicine and Biology Society, Shanghai, China

Journal Peer Review

- 2016 Medical Engineering and Physics
Disability and Rehabilitation
Journal of Rehabilitation Research and Development
- 2015 Archives of Physical Medicine and Rehabilitation
IEEE Transactions on Human Machine Systems
Assistive Technology
IEEE Journal of Biomedical and Health Informatics
- 2014 Sensors
Disability and Rehabilitation: Assistive Technology
Journal of Rehabilitation Research and Development (JRRD)
Assistive Technology
Journal of Neuro Engineering and Rehabilitation
IEEE EMBC Conference
- 2013 Disability and Rehabilitation: Assistive Technology
Assistive Technology
Journal of Rehabilitation Research and Development (JRRD)
- 2012 Archives of Physical Medicine and Rehabilitation
Medical Engineering and Physics
Disability and Rehabilitation
Assistive Technology
Control Engineering Practice
- 2011 Archives of Physical Medicine and Rehabilitation
Medical Engineering and Physics
Disability and Rehabilitation
Assistive Technology
Control Engineering Practice
IEEE EMBS Conference
- 2010 Medicine & Science in Sports & Exercise
Archives of Physical Medicine and Rehabilitation
Journal of Rehabilitation Research and Development (JRRD)
Assistive Technology
IEEE EMBS Conference
- 2009 Journal of Rehabilitation Research and Development (JRRD)
American Journal of Physical Medicine and Rehabilitation
Assistive Technology
Archives of Physical Medicine and Rehabilitation
IEEE EMBS Conference
- 2008 Journal of Rehabilitation Research and Development (JRRD)
Assistive Technology
- 2007 Journal of Rehabilitation Research and Development (JRRD)
Assistive Technology
- 2006 Journal of Rehabilitation Research and Development (JRRD)
IEEE Transactions on Neural Systems and Rehabilitation Engineering
Assistive Technology

- 2005 Journal of Rehabilitation Research and Development (JRRD)
Assistive Technology
- 2004 The Encyclopedia of Biomedical Engineering
Assistive Technology
- 2003 Assistive Technology
Iranian Journal of Electrical and Computer Engineering
- 2002 IEEE Transactions on Robotics and Automation
- 2001 IEEE Transactions on Robotics and Automation

Community Service

- 02 – 06, 09, 11 National Veterans Wheelchair Games
- 11/11 – 03/12 Mentor of the Adventures in Technology Project, Catalyst Connection – serving as a mentor for two teams of high school students (16 students) from Propel Schools on their research projects
- 11/11 Keynote talk on Rehabilitation Engineering at the SciTech Festival, Carnegie Science Museum (~200 high school students)
- 03/10 Judge of the 5th Annual High School Innovative Design Competition, School of Engineering, University of Pittsburgh
- 11/06 Keynote talk on Quality of Life Technology at the SciTech Festival, Carnegie Science Museum (~200 high school students)