

Harshal P. Mahajan, PhD.

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RESEARCH INTERESTS

Smart home environments and cognitive orthoses for older adults with disabilities, assistive technologies, virtual and augmented reality for rehabilitation interventions, participatory design and clinical validation of rehabilitation tools, universal design, rehabilitation engineering, human computer interaction.

EDUCATION

PhD, Rehabilitation Science

April. 2012

School of Health & Rehabilitation Sciences, University of Pittsburgh, PA

Advisors: Dr. Rory Cooper & Dr. Brad Dicianno

Dissertation: Development And Validation Of Simulators For Power Wheelchair Driving Evaluations.

B. Eng, Biomedical Engineering

July 2004

University of Mumbai, India.

EXPERIENCE

Assistant Director of Research

2019-present

McKechnie Family Living in Interactive Future Environments (LIFE) smart home research center.

Research Assistant Professor

College of Applied Health Sciences,

University of Illinois at Urbana-Champaign.

- Managed technology infrastructure and set up research processes in a smart home research facility
- Managed research activities with robots and smart home technologies.
- Engaged university based groups and industry clients in activities at the LIFE Home.

Research Scientist

2015-2019

College of Design, Center for Assistive Technology and Environmental Access,

Georgia Institute of Technology

- Evaluated Smart Bathroom testbed part of TechSAge Rehabilitation Engineering Research Center on Technologies to Support Aging-in-Place for People with Long-Term Disabilities.
- Evaluated usability and perceptions towards wearable and assistive robots and mHealth apps
- Developed surveys for universal design assessments of physical & social environments at workplaces.
- Took research initiatives to inform policies and environment design guidelines for older adults aging with disabilities.
- Received two seed grants and published 4 conference papers and abstracts.

Post-Doctoral Researcher

2012-2014

School of Health and Rehabilitation Sciences, University of Pittsburgh

Human Engineering Research Laboratories, VA Pittsburgh Healthcare System, Pittsburgh, PA.

- Led cutting-edge research initiatives in National Science Foundation funded Quality of Life Engineering Research Center
- Developed and evaluated a Smart Cueing Kitchen system and other rehabilitation products for people with cognitive impairments

- Collaborated with multidisciplinary professionals (engineers, therapists, counsellors etc.) and managed several clinical research projects
- Published 3 manuscripts in peer reviewed journals and 5 conference papers and abstracts.

Researcher Associate

2005-2012

University of Pittsburgh, Pittsburgh, PA.

- Developed and evaluated virtual reality systems for wheelchair driving assessment and training
- Established validity & reliability of a novel rehabilitation outcomes measurement tool.
- Conducted Human Computer Interaction usability evaluations and mathematical Modeling
- Published 9 manuscripts in peer reviewed journals and 12 conference papers and abstracts.

GRANT FUNDING

1. Principal Investigator (2020-2025): Feasibility and Efficacy of a Fear of Falling Intervention for Wheelchair Users with Multiple Sclerosis. National Institute of Disability, Independent Living and Rehabilitation Research, Disability and Rehabilitation Research Projects Program: Health and Function (90DPHF0010), \$2,463,767.
2. Co-Investigator (2022-2024): Stretching their Reach: Robotic Support for Older Individuals with Mild Cognitive Impairment, Early Alzheimer's Dementia, and Mobility Impairments, National Institute of Aging (R44 AG072982), PI: Wendy A. Rogers, PhD., \$2,537,474.
3. Co-Investigator (2021-2022): Stretching their reach: Robotic support for domestic activities for older individuals with mobility limitations, National Institute of Aging (1R43AG072982), PI: Wendy A. Rogers, PhD., \$256,064.
4. Co-Investigator (2019-2024): Enhancing Neurocognitive Health, Abilities, Networks and Community Engagement (ENHANCE) Rehabilitation Engineering Research Center, National Institute of Disability, Independent Living and Rehabilitation Research (90REGE0012), PI: Sara J. Czaja, PhD.
5. Co-Investigator (2015-2020): Monitoring and managing falls project, Smart Bathroom development project and Aging with mobility impairments project, Technologies to Support Aging-in-Place for People with Long-Term Disabilities Rehabilitation Engineering Research Center, National Institute of Disability, Independent Living and Rehabilitation Research (90RE5016-01-00 & #90REGE0006-01-00), PI: Jon Sanford, M.Arch, Co-PI Wendy A. Rogers, PhD, Co-PI Tracy L. Mitzner, PhD.
6. Principal Investigator (2019): An automated smart cooking coach for people with cognitive impairments, Research Faculty Development Grant, Georgia Institute of Technology, \$9,999.
7. Co-Investigator (2018-2019): Pilot Study on Bias and Trust in AI Systems, National Science Foundation Early Concept Grant for Exploratory Research Award (1849101), PI: Ayanna Howard, PhD and Jason Borenstein, PhD, \$74,529.
8. Principal Investigator (2017-2018): Preliminary psychometric evaluation of a clinical instrument for estimating fear of falling in older adults using wheelchairs, Research Faculty Development Grant, Georgia Institute of Technology, \$7,961.
9. Co-Investigator (2015-2018): Disability and Rehabilitation Research Project on Universal Design in the Workplace, National Institute on Disability and Rehabilitation Research (90DP0049/H133A120120), PI: Jon Sanford, M.Arch.
10. Co-Investigator (2012-2014): Smart Cueing Kitchen Project, National Science Foundation funded Quality of Life Engineering Research Center (EEEC-0540865), Project PI: Dan Ding, PhD; Rory Cooper, PhD, \$125,156.

11. Co-Investigator (2009-2012): Computer Based and Virtual Assessments of Power Wheelchair Mobility. Department of Veterans Affairs VA RR&D Service Merit Review, PI: Brad Dicianno, MS, MD, \$446,500.
12. Co-Investigator (2005-2007): Isometric Controls with Personalized Algorithms for Driving Electric Powered Wheelchairs. Department of Veterans Affairs VA RR&D Service Merit Review, PI: Rory Cooper, PhD, \$323,100.

PUBLICATIONS

Peer reviewed journals

16. Rice, L.A., Fliflet, A., Frechette, M., Brokenshire, R., Abou, L., Presti, P., **Mahajan, H.**, Sosnoff, J., Rogers, W. (2022) Insights on an Automated Fall Detection Device Designed for Older Adult Wheelchair and Scooter Users: A Qualitative Study. *Disability and Health Journal*, 15(1S), 101207.
15. Abou, L., Fliflet, A., Hawari, L., Presti, P., Sosnoff, J. J., **Mahajan, H. P.**, Frechette, M. L., & Rice, L. A. (2021). Sensitivity of Apple Watch fall detection feature among wheelchair users. *Assistive technology: the official journal of RESNA*, 1–7.
14. Borenstein, J., **Mahajan, H. P.**, Wagner, A. R., Howard, A. (2020) Trust and Pediatric Exoskeletons: A Comparative Study of Clinician and Parental Perspectives. *IEEE Transactions on Technology and Society*.
13. Park, D., Hoshi, Y., **Mahajan, H. P.**, Kim, HK., Erickson, Z., Rogers, W. A., Kemp C. C. (2020) Active robot-assisted feeding with a general-purpose mobile manipulator: Design, evaluation, and lessons learned. *Robotics and Autonomous Systems* 124, 103344.
12. Wang, J., **Mahajan, H. P.**, Toto, P. E., McCue, M. P. & Ding, D. (2019). The feasibility of an automatic prompting system in assisting people with traumatic brain injury in cooking tasks. *Disability and Rehabilitation: Assistive Technology*. 1–9.
11. Kamaraj, D. C., Dicianno, B. E., **Mahajan, H. P.**, Buhari, A. M., & Cooper, R. A. (2016a). Interrater Reliability of the Power Mobility Road Test in the Virtual Reality-Based Simulator-2. *Archives of Physical Medicine and Rehabilitation*, 97(7), 1078–1084.
10. Kamaraj, D. C., Dicianno, B. E., **Mahajan, H. P.**, Buhari, A. M., & Cooper, R. A. (2016b). Stability and Workload of the Virtual Reality-Based Simulator-2. *Archives of Physical Medicine and Rehabilitation*, 97(7), 1085–1092.
9. Wang, J., Ding, D., Teodorski, E. E., **Mahajan, H. P.**, & Cooper, R. A. (2016). Use of Assistive Technology for Cognition Among People With Traumatic Brain Injury: A Survey Study. *Military Medicine*, 181(6), 560–566.
8. Dicianno, B. E., **Mahajan, H. P.**, & Cooper, R. A. (2015). Advanced Joystick Algorithms for Computer Access Tasks. *PM & R: The Journal of Injury, Function, and Rehabilitation*, 7(6), 555–561.
7. Wang, J., **Mahajan, H. P.**, Toto, P., McKeon, A., McCue, M., & Ding, D. (2014b). Comparison of Two Prompting Methods in Guiding People with Traumatic Brain Injury in Cooking Tasks. In C. Bodine, S. Helal, T. Gu, & M. Mokhtari (Eds.), *Smart Homes and Health Telematics* (pp. 83–92). Springer International Publishing.
6. **Mahajan, H. P.**, Spaeth, D. M., Dicianno, B. E., Brown, K. W., & Cooper, R. A. (2014). Preliminary Evaluation of a Variable Compliance Joystick for People with Multiple Sclerosis. *Journal of Rehabilitation Research and Development*, 51(6).
5. **Mahajan, H. P.**, Dicianno, B. E., Cooper, R. A., & Ding, D. (2013). Assessment of wheelchair driving performance in a virtual reality-based simulator. *The journal of spinal cord medicine*, 36(4), 322–332.

4. Dicianno, B. E., **Mahajan, H. P.**, Guirand, A. S., & Cooper, R. A. (2012). Virtual Electric Power Wheelchair Driving Performance of Individuals with Spastic Cerebral Palsy. *American Journal of Physical Medicine & Rehabilitation*, 91(10), 823–830.
3. **Mahajan, H. P.**, Cooper, R. A., Spaeth, D. M., Dicianno, B. E., Collins, D. M., & Boninger, M. (2011). Comparison of virtual wheelchair driving performance of people with TBI using an isometric and a conventional joystick. *Archives of Physical Medicine and Rehabilitation*, 92(8).
2. Guirand, A. S., Dicianno, B. E., **Mahajan, H. P.**, & Cooper, R. A. (2011). Tuning algorithms for control interfaces for users with upper-limb impairments. *American journal of physical medicine & rehabilitation / Association of Academic Physiatrists*, 90(12), 992–998.
1. Spaeth, D. M., **Mahajan, H. P.**, Karmarkar, A., Collins, D., Cooper, R., & Boninger, M. (2008). Development of a wheelchair virtual driving environment: trials with subjects with traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, 89(5), 996–1003.

Peer reviewed conferences and abstracts

27. Quamar, A. H., Collins, D. M., & **Mahajan, H.P.** (2022). Using internet-Connected Assistive Devices for COPING with the COVID-19 Lockdown: Global Online Survey. *Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Annual Conference*. July, 2022.
26. Quamar, A. H., Collins, D. M., & **Mahajan, H.P.** (2022). Coping with the COVID-19 Pandemic using internet-connected assistive devices: Global online survey. *National Council on Rehabilitation Education (NCRE) Spring conference*. March-April, 2022.
25. Quamar, A. H., **Mahajan, H. P.**, Garcia, C., & Collins, D. M. (2021) Impact of COVID-19 lockdown on IADL functioning for people with disabilities using internet-connected assistive devices: Global online survey. *Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Annual conference*. July, 2021.
24. Kadylak, T., Bayles, M.A., Galoso, L., **Mahajan, H.P.** Chan, M., Kemp, C.C., Edsinger, A., Rogers, W.A. (2021). A human factors analysis of the Stretch mobile manipulator robot. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 2021;65(1):442-446.
23. Kadylak, T., Bayles, M.A., Galoso, L., **Mahajan, H.P.** Chan, M., Kemp, C.C., Edsinger, A., Rogers, W.A. (2021) Exploring the potential of the Stretch mobile robot for older adults with mobility disabilities. *International Symposium on Human Factors and Ergonomics in Health Care (HFES), Virtual*.
22. **Mahajan, H. P.**, Milchus, K., Harris, F., Linden, M., Moon, N., & Sanford, J. (2019). Do coworker interactions impact workplace participation of people with disabilities?. *Assistive Technology* 31 (5), 239-239.
21. **Mahajan, H.**, Zuniga, E. I., & Sanford, J. (2018). Fear of Falling and Age Related Activity Challenges in Older Wheelchair Users. *Archives of Physical Medicine and Rehabilitation*, 99(10), e105.
20. Ruzic, L., **Mahajan, H. P.**, & Sanford, J. A. (2018). Universally Designed mHealth App for Individuals Aging with Multiple Sclerosis. In *The Third International Conference on Universal Accessibility in the Internet of Things and Smart Environments - SMART ACCESSIBILITY 2018* (pp. 29–35). Rome, Italy: International Academy, Research, and Industry Association (IARIA).
19. Kamaraj, D. C., Dicianno, B. E., **Mahajan, H. P.**, & Cooper, R. A. (2017). Psychometric Properties of the Quantitative Driving Metrics in VRSIM-2 (Vol. 96). Presented at the Association of Academic Physiatrists Annual Meeting, Las Vegas, USA.
18. Jones, B. D., Pandey, S., Presti, P., Taylor, R., Natarajan, P., Mahajan, S., **Mahajan, H. P.**, Sanford, J. A. (2017). SmartBathroom: Developing A Smart Environment To Study Bathroom Transfers. In

Proceedings of the Rehabilitation Engineering and Assistive Technology Society of North America Annual Conference. Arlington VA: RESNA

17. Kamaraj, D. C., **Mahajan, H. P.**, Dicianno, B., Terhorst, L., & Cooper, R. (2016). Discriminative Ability of The Quantitative Electric Powered Wheelchair Driving Metrics In VRSIM-2. Archives of Physical Medicine and Rehabilitation, 97(10), e47. (Best Poster award)
16. Sanath A. A, **Mahajan, H.P**, Gonzalez E., Sanford J. A & Fain, W.B. (2016). Analysis of the effect of a rear wall grab bar configuration on the fall risk associated with toilet transfers in older adults with mobility impairment. In Proceedings of the Annual Conference on Rehabilitation Technology. Presented at the RESNA, Arlington, Virginia: RESNA. (**Honorable mention in student scientific paper competition**)
15. Kamaraj, D. C., Dicianno, B., Youk, A., **Mahajan, H. P.**, & Cooper, R. (2015). Perceived Workload Between Experienced and Novice Power Wheelchair Users While Using a Wheelchair Driving Simulator. Archives of Physical Medicine and Rehabilitation, 96(10), e60–e61.
14. Wang, J., **Mahajan, H. P.**, Toto, P. E., McKeon, A., McCue, M. P., & Ding, D. (2015). Comparison of Two Prompting Methods in Guiding People with Traumatic Brain Injury in Cooking Tasks. In ICOST 2014 - 12th International Conference on Smart Homes, Assistive Technology and Health Telematics: Advances in Cognitive Technologies. Denver, Colorado: Springer.
13. **Mahajan, H. P.**, & Ding, D. (2014). Cueing Kitchen: A smart cooking assistant. In Bioengineering Conference (NEBEC), 2014 40th Annual Northeast. Boston, Massachusetts: IEEE.
12. **Mahajan, H. P.** (2013). Article 3 (NIDRR) Development and Evaluation of a Smart Cueing Kitchen for Individuals with Cognitive Impairments. Archives of Physical Medicine and Rehabilitation, 94(10), e1–e2.
11. **Mahajan, H. P.**, Ding, D., Wang, J., Ni, S. X., & Telson, J. (2013). Towards Developing A “Cueing Kitchen” For People With Traumatic Brain Injury. In Proceedings of the 36th Annual Conference on Rehabilitation Technology. Presented at the RESNA, Seattle, Washington: RESNA.
10. Wang, J., Ding, D., **Mahajan, H. P.**, Filippone, A. B., Toto, P. E., & McCue, M. P. (2013). Evaluating Different Types of Prompts in Guiding Kitchen Tasks for People with Traumatic Brain Injury: A Pilot Study. In Proceedings of the 36th Annual Conference on Rehabilitation Technology. Presented at the RESNA, Seattle, Washington: RESNA.
9. Guirand, A. S., Dicianno, B. E., **Mahajan, H. P.**, & Cooper, R. (2010). Tuning Algorithms for Control Interfaces for Users with Upper Limb Impairments (Vol. 89, pp. S1–2 (**Medical Student Category Award Winner**)). Presented at the Annual Meeting of the Association of Academic Physiatrists, Bonita Springs, FL.
8. **Mahajan, H. P.**, Wasser, R., Dicianno, B. E., & Cooper, R. A. (2009). Isometric Joystick Performance and Error Correction During Computer Access Tasks. Presented at the RESNA, New Orleans, LA: RESNA.
7. Spaeth, D. M., & **Mahajan, H. P.** (2009). Software to Enhance Computer Access. Presented at the RESNA, New Orleans, LA: RESNA.
6. **Mahajan, H. P.**, Dicianno, B. E., Gordon, A. T., Cooper, R. A., Wang, H., & Sibenaller, S. (2008). A Control Algorithm to Improve Target Tracking in Individuals with and without Cerebral Palsy. Presented at the RESNA, Arlington VA: RESNA.
5. Dicianno, B. E., Winful, C., Cooper, R. A., Spaeth, D. M., & **Mahajan, H. P.** (2008). Isometric Joystick Control Interfaces for Individuals with Spastic Cerebral Palsy (Vol. 87, p. S2 (**Best Faculty Research Paper**)). Presented at the Annual Meeting of the Association of Academic Physiatrists, Anaheim, CA.
4. **Mahajan, H. P.**, Spaeth, D., & Cooper, R. A. (2007). Preliminary Analysis Of Wheelchair Driving Performance In A 2D Virtual Environment. Presented at the RESNA, Phoenix, AZ: RESNA.

3. Winful, C., Dicianno, B. E., Cooper, R. A., Spaeth, D., & **Mahajan, H. P.** (2007). Joystick Use for Virtual Electric Power Wheelchair Driving in Individuals with Spastic Cerebral Palsy. Presented at the RESNA, Phoenix, AZ.
2. **Mahajan, H. P.**, Spaeth, D., Bevely, A. J. I., Ding, D., & Cooper, R. A. (2006). A Wheelchair Driving Simulation For People With Low Visual Attention Span. Presented at the RESNA, Atlanta, GA: RESNA.
1. Brown, K. W., & **Mahajan, H. P.** (2006). Modeling an Electric Powered Wheelchair for a Virtual Driving Simulator. Presented at the Institute of Rehabilitation and Research (IRR) research day, Pittsburgh, Pennsylvania, United States: University of Pittsburgh.

Magazine/News Articles

1. Mahajan, H. P., Kumar, Amit (2009, September). State of the Science: Virtual Reality. PN: Paraplegia News, Vol. 63, No. 9, pp. 52-54. Retrieved from http://pvamag.com/pn/article/2915/research_update
2. Mahajan, H. P. (2007, May). State of the Science Workshop on Regenerative Medicine. Human Engineering Research Laboratories HERL Newsletter, Volume 6, No. 1. Retrieved from <http://www.herl.pitt.edu/newsletters/NewsletterVol6No1.pdf>

TEACHING EXPERIENCE

1. Fall 2022: HT 510 Health Technology Capstone Orientation.
 - Role: Instructor
 - Class: 8 professional graduate students
2. Fall 2021: HT 502 Human Factors Methods for Health Technology.
 - Role: Guest Lecturer
 - Class: 8 professional graduate students
3. Fall 2021: CHLH 470 Technology, Health, and Aging
 - Role: Guest Lecturer & Lab coordinator
 - Class: 12 Graduate & Undergraduate students
4. Spring 2021: HT 503 Hardware engineering for Health Technology
 - Role: Guest Lecturer
 - Class: 6 professional graduate students
5. Spring 2021: CHLH 203 Intro to Health Technology
 - Role: Guest Lecturer
 - Class: 10 Undergraduate students
6. Fall 2018: Design Studio, Industrial Design
 - Role: Guest Lecturer
 - Class: 30 Undergraduate students
7. Spring 2014: Rehabilitation Engineering and Assistive Technology Practices
 - Role: Guest Lecturer
 - Class: 25 graduate students
8. Fall 2006: Fundamentals of Rehabilitation Engineering and Technologies I
 - Role: Teaching assistant, grading assistant, laboratory coordinator
 - Class: 45 Undergraduate and 25 graduate students
9. Spring 2007: Research Methodology
 - Role: Teaching assistant, grading assistant
 - Class: 25 graduate students

EDITORIAL AND REVIEW WORK

1. National Institute of Disability Independent Living & Rehabilitation Research: Grant Application Reviewer (2017, 2019-2023)
2. Paralyzed Veterans of America: Grant Application Reviewer (2015- 2022)
3. National Academy of Medicine Global Longevity Challenge: Subject Matter Expert Grant Reviewer (2020-22)
4. Disability and Rehabilitation: Assistive Technology: Manuscript Reviewer (2021, 2022)
5. Journal of Spinal Cord Medicine: Manuscript Reviewer (2021)
6. Architectural Engineering and Design Management: Manuscript Reviewer (2022)
7. Assistive Technology Outcomes & Benefits: Manuscript Reviewer (2020)
8. Applied Sciences: Manuscript Reviewer (2019- 2021)
9. BMC Geriatrics: Manuscript Reviewer (2019)
10. PLOS ONE: Manuscript Reviewer (2017, 2019)
11. Assistive Technology: Manuscript Reviewer (2014, 2017, 2020, 2021)
12. Robotics: Manuscript Reviewer (2019, 2020)
13. Electronics: Manuscript Reviewer (2020)
14. International Journal of Environmental Research and Public Health: Manuscript Reviewer (2020, 2021)
15. Annual meeting of American Congress of Rehabilitation Medicine: Reviewer (2014-2021)
16. Rehabilitation Engineering Society of North America Annual Conference: Reviewer (2008-2021)
17. Displays: Manuscript Reviewer (2016)
18. Journal of Rehabilitation Research and Development: Manuscript Reviewer (2015)
19. Biomedical Research International: Manuscript Reviewer (2014)
20. IEEE Transactions Neural Systems & Rehabilitation Engineering: Manuscript Reviewer (2012, 2014)
21. IEEE Engineering in Medicine and Biology Magazine: Manuscript Reviewer (2006)
22. IEEE/RSJ International Conference on Intelligent Robots and Systems: Manuscript Reviewer (2006).

PROFESSIONAL ASSOCIATIONS AND SERVICE

1. American Congress of Rehabilitation Medicine: Member
 - International conference Program Committee
 - Technology Networking Group
2. Rehabilitation Engineering Society of North America: Member

AWARDS

1. Advanced Rehabilitation Research Training Post-Doctoral fellowship 2012, 2013.
2. NIDRR ARRT Fellow award, Young Investigators Symposium, American Congress of Rehabilitation Medicine meeting, Progress in Rehabilitation Research, 2013.

SELECTED INVITED TALKS

1. “Increasing Independence With Stretch: A Mobile Robot Enabling Functional Performance of Daily Activities”, (Nguygen, V., Evans, H., Evans, J., Mahajan, H.) American Occupational Therapy Association, INSPIRE Annual Conference, 2022, San Antonio, TX.
2. “SmartBathroom: Enhancing Personalization of Assistive Technologies to Improve Bathroom Transfers.” (Jones, B., Sanford, J., Lee, S., & Mahajan, H. P.) Assistive Technology Industry Association (ATIA) conference, 2020, Orlando, FL.

3. “Smart Bathroom: Assessing Toilet Transfers with Different User-Selected Grab Bar Configurations” TechSAGE Rehabilitation Engineering Research Center Symposia presentation at the 97th annual conference of the American Congress of Rehabilitation Medicine, 2020, Virtual.
4. “The Cueing Kitchen” 36th Annual Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Conference, Seattle, Washington, 2013.
5. “Development and Evaluation of a Smart “Cueing Kitchen” for Individuals with Cognitive Impairments”, American Congress of Rehabilitation Medicine meeting, Progress in Rehabilitation Research, Orlando, FL, 2013. (**Post-doctoral fellow award winner**)
6. “Research Update of Home and Community Health and Wellness: Cueing Kitchen”, Quality of Life Technologies Summit, Carnegie Mellon University, Pittsburgh, PA, 2013.
7. “Wheelchair Assessment: Virtual Reality for Power Wheelchair Driving Assessment and Training”, Institute for Continuing Education, 1199SEIU Funds Training and Employment, New York, NY, 2013.
8. “The Cueing Kitchen”, Tech It Out Event, Woman in Cable and Telecommunications (WICT) Greater Philadelphia, Philadelphia, PA, 2013.
9. “Virtual Reality for Power Wheelchair Driving Assessment and Training”, State of Science Symposium: Virtual Reality and its role in Wounded Warrior and Veteran Care, The Walter Reed National Military Medical Center and The Center for Rehabilitation Science Research, Bethesda, MD, 2012.
10. “Design and validation of a Power Wheelchair Driving Simulator (PoWDS)” Quality of Life Technology Engineering Research Center, Pittsburgh, PA, 2009.
11. “Preliminary Analysis Of Wheelchair Driving Performance In A 2D Virtual Environment” 30th Annual Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Conference, Phoenix, Arizona, 2007.

LEADERSHIP, MENTORING & SERVICE

1. **Mentored clinical research internships** of 14 undergraduate students, 3 medical school students, 4 graduate students, and 1 high school student
2. National Veteran Wheelchair Games, Volunteer and Researcher Coordinator (2008, 2012)
3. Pittsburgh Internal Revenue Service’s Volunteer Income Tax Assistance program: Volunteer (2008-09)
4. Student Leadership Council, Quality of Life Technology ERC: Outreach Coordinator (2008-09)
5. Association for India’s Development, Pittsburgh: President(2009-12), Overall Project Coordinator (2008), Secretary (2005-07)
6. Indian Graduate Student Association: Cross Cultural Coordinator (2008-09)
7. Engineering in Medicine & Biology Society, IEEE student chapter: Chairperson (2003) & Secretary (2002)
8. Volunteered at a therapy clinic, Mumbai, India (2002-04).