

Shivayogi V. Hiremath

August 22, 2022

Assistant Professor
Department of Health and Rehabilitation Sciences
College of Public Health, Temple University
636 Ritter Annex, 1301 Cecil B. Moore Avenue
Philadelphia, PA 19122
Phone: 412-638-0020
Email: Shiv.Hiremath@temple.edu
PHIRE Lab: <https://sites.temple.edu/phire/>
Pronouns: he/him/his

Research Interests:

Rehabilitation Sciences; Spinal Cord Injury; Health and Physical Activity;
Wearable devices; Rehabilitation Engineering; Assistive Technology

Education:

- 2015 **University of Pittsburgh, Pittsburgh, USA**
Post-Doctoral Fellowship in Physical Medicine and Rehabilitation
Postdoctoral training in clinical brain computer interfaces.
Mentor: Wei Wang
- 2013 **University of Pittsburgh, Pittsburgh, USA**
PhD in Rehabilitation Science
Dissertation title: *Physical activity monitoring system for manual wheelchair users*. Advisor: Dan Ding
- 2009 **University of Pittsburgh, Pittsburgh, USA**
MS in Rehabilitation Science and Technology
Thesis title: *Evaluation of accelerometer-based activity monitors to assess energy expenditure of manual wheelchairs users with spinal cord injury*.
Advisor: Dan Ding
- 2005 **Visvesvaraya Technological University, Belagavi, India**
M. S. Ramaiah Institute of Technology, Bengaluru, India
Bachelor of Engineering in Electrical and Electronics
Thesis title: *Probabilistic methodologies for mobile robot navigation*.
Advisor: Sartaj Singh

Appointments and Research Experience:

- 2016-Present Assistant Professor on Tenure Track
Neuromotor Science and Physical Therapy Programs
Department of Health and Rehabilitation Sciences, Temple University

Curriculum Vitae

- 2021-Present Research Specialist (without compensation: WOC), Corporal Michael J. Crescenzo VA Medical Center, Philadelphia, PA
- 2017-Present Affiliate Member, Center for Obesity Research and Education, Temple University
- 2017-2018 Visiting Scholar, Center for Large Data Research and Data Sharing in Rehabilitation, University of Texas Medical Branch, Galveston
- 2013-2015 Post-Doctoral Associate, Human Rehabilitation and Neural Engineering Laboratory, Department of Physical Medicine and Rehabilitation, University of Pittsburgh, Pittsburgh, USA; Mentors: Wei Wang, Michael L. Boninger
- 2007-2013 Graduate Student Researcher, Human Engineering Research Laboratories Department of Rehabilitation Science and Technology, University of Pittsburgh, Pittsburgh, USA; Mentors: Dan Ding, Rory A. Cooper
- 2007-2013 Graduate Student Researcher (without compensation: WOC) w/ Dan Ding, PhD, and Rory A. Cooper, PhD, VA Pittsburgh Healthcare System, Pittsburgh, USA
- 2008-2013 Visiting Researcher, Informatics Group BodyMedia, Inc., Pittsburgh, USA
- 2005-2007 Project Engineer Systemantics India Pvt. Ltd., Bengaluru, India
- 2005 Visiting Researcher Spastics Society of Karnataka, Bengaluru, India
- 2005 Research Experience for Undergraduate Student Centre for Artificial Intelligence and Robotics, Bengaluru, India
- 2002-2005 Research Experience for Undergraduate Student, Mass Spectroscopy Laboratory Indian Institute of Science, Bengaluru, India

Research Funding:

Ongoing Research Support

- Principal Investigator (PI), Eunice Kennedy Shriver National Institute of Child Health & Human Development, National Institutes of Health (NIH), *mHealth-based just-in-time adaptive intervention to improve physical activity levels of individuals with spinal cord injury*, Grant number: **R01HD103904**. (\$3,019,964; 7/2021-6/2026: 25% Effort).
Co-Investigators (Co-Is): Donna L. Coffman, Stephen S. Intille, Ralph J. Marino, Marlyn Ramos-Lambo, Mary Schmidt-Read, Inbal Nahum-Shani, Mohanraj Thirumalai
- PI, Department of Defense - Congressionally Directed Medical Research Programs, Spinal Cord Injury Research Program, Investigator-Initiated Research Award, *Development of a sensor-based movement biomarker to capture upper extremity use during daily activities in*

Curriculum Vitae

individuals with cervical spinal cord injury, Grant number: **W81XWH2110637**. (\$721,321; 9/2021-8/2024: 20% Effort).

Co-Is: Donna L. Coffman, Ralph J. Marino, Mary Schmidt-Read, Kelly Heath, Melissa Nunn

- PI, National Institute on Disability, Independent Living, and Rehabilitation Research, Administration for Community Living, *Harnessing social networks to personalize sensor-driven, just-in-time physical activity interventions for individuals with spinal cord injury*, Grant number: **90IFDV0018**. (\$600,000; 9/2020-8/2023: 15% Effort).

Co-Is: Stephen S. Intille, Mary Schmidt-Read, Melissa Nunn

- PI, Eunice Kennedy Shriver National Institute of Child Health & Human Development, NIH, *Evaluating associations between trauma-related characteristics and functional recovery in individuals with spinal cord injury*, Grant number: **1R03HD101064**. (\$331,040; 8/2020-7/2021: 30% Effort; 8/2021-7/2022: 25% Effort).

Co-Is: Donna L. Coffman, Ralph J. Marino, Carole A. Tucker, Amol M. Karmarkar

- Co-I (PI: Gretchen Snethen), Healthcare Improvement Foundation, *Developing a peer & community approach for managing diabetes in disability*. (\$20,000; 1/2021-12/2021: 2.5% In-kind Effort).

Completed Research Support

- PI, Center for Large Data Research and Data Sharing in Rehabilitation, University of Texas Medical Branch; Prime: NIH, *Examining the impact of admission latency and functional status on post-acute outcomes in individuals with spinal cord injury*. (\$25,000; 2018-19: 10% Effort).

Co-Is: Ralph J. Marino, Amol M. Karmarkar

- PI, Craig H. Nielsen Foundation Pilot Grant, *Just-in-time adaptive feedback systems to assist individuals with spinal cord injury*, Project Number: **382252**. (\$300,000: 2016-19: 14.5% Effort).

Co-Is: Stephen S. Intille, Marlyn Ramos-Lambooy, Mary Schmidt-Read, Gretchen Snethen

- PI, National Science Foundation, Student Travel Grant, *Student mentoring and travel support for the 5th International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM) 2017*, Award Number: **1737459**. (\$15,000; 2017-18: 0% Effort, Supported 10 graduate students in the US to travel to ICAMPAM to present their research and receive mentorship).
- PI, Grant-In-Aid, Temple University, *Location based physical activity levels in individuals with spinal cord injury*. (\$2,833; 2018: 0% Effort: Supported an undergraduate student researcher at the Personal Health Informatics and Rehabilitation Engineering Laboratory).
- PI, Paralyzed Veterans of America Research Foundation Fellowship Grant, *Use of sensory inputs for brain-computer interface training*, PVA#**3039** (\$100,000; 2015: 67% Effort, 2016: 20% Effort).

Curriculum Vitae

- Site-PI at University of Pittsburgh, (PI: Jodi Forlizzi, Carnegie Mellon University), Google, Inc., *Shared attention in human-robot collaboration*. (\$9,453; 2014-15: 10% Effort).
- PI, Mary E. Switzer Research Fellowship from National Institute on Disability and Rehabilitation Research, U.S. Department of Education, *Development of a physical activity monitor system for manual wheelchair users*, Grant Number: **H133F110032**. (\$65,000; 2011-12: 100% Effort).

Publications:

Google Scholar: Citations: 1014; H-index: 17; i10-index: 19 [Aug 22, 2022]

Web of Science: Citations: 525; H-index: 13; Average citations per item: 16.9 [Aug. 22, 2022]

Scopus: Citations: 604; H-index: 13, Citations by 506 documents [Aug. 22, 2022]

The citation difference is due to publications in interdisciplinary fields such as rehabilitation engineering and technology, which are not indexed by Web of Science and Scopus.

Peer Reviewed Publications

* indicates Mentee or Advisee, ^ψ indicates Senior or Corresponding Author

1. ^ψ**Hiremath S.V.**, Marino, R.J., Coffman, D.L., Karmarkar, A.M., Tucker, C.A. *Evaluating associations between trauma-related characteristics and functional recovery in individuals with spinal cord injury*. The Journal of Spinal Cord Medicine. August 22, 2022.
<https://doi.org/10.1080/10790268.2022.2112849>
2. ^ψ**Hiremath, S.V.**, Karmarkar, A.M., Kumar, A., Coffman, D.L., Marino, R.J. *Factors associated with post-acute functional status and discharge dispositions in individuals with spinal cord injury*. The Journal of Spinal Cord Medicine, 45(1), 126-136, 2022.
<https://pubmed.ncbi.nlm.nih.gov/33606613/>
3. Baehr, L.A, Kaimal G., **Hiremath S.V.**, Trost Z., Finley M. *Staying active after rehab: Physical activity perspectives with spinal cord injury beyond functional gains*. PLOS One. 17(3): e0265807. 2022.
<https://doi.org/10.1371/journal.pone.0265807>.
4. *Bernal V.C.E., ^ψ**Hiremath S.V.**, Wolf B., Riley B., Mendonca R.J., Johnson M.J. *Classifying and tracking rehabilitation interventions through machine-learning algorithms in individuals with stroke*. Journal of Rehabilitation and Assistive Technologies Engineering, 07 October 2021.
<https://pubmed.ncbi.nlm.nih.gov/34646574/>
5. ^ψ**Hiremath, S.V.**, Kupfer, M., Ruediger, M. *Timing and pattern of readmission in individuals with spinal cord injury in the setting of a specialized medical home*. Journal of Spinal Cord Medicine, 44 (6), 896-901, 2021.
<https://pubmed.ncbi.nlm.nih.gov/33606601/>
6. *Canori, A., *Amiri, A.M., Thapa-Chhetry, B., Finley, M.A., Schmidt-Read, M., Lamboy, M.R., Intille, S.S., ^ψ**Hiremath, S.V.** *Relationship between pain, fatigue, and physical activity levels during a technology-based physical activity intervention*. The Journal of Spinal Cord Medicine, 44(4), 549-56, 2021.
<https://pubmed.ncbi.nlm.nih.gov/32496966/>
7. Snethen, G., Brusilovskiy,E., McCormick, B.P., **Hiremath, S.V.**, Salzer, M.S. *The relationship between community participation and physical activity among individuals with*

- serious mental illnesses*. *Mental Health and Physical Activity*, 20, 100381, 2021.
<https://pubmed.ncbi.nlm.nih.gov/34745346/>
8. *Canori, A., Kumar, A., **Hiremath, S.V.** *Factors associated with multiple hospital readmissions for individuals with spinal cord injury*. *CommonHealth*, 1 (2), 57-61, 2020.
<https://pubmed.ncbi.nlm.nih.gov/33554212/>
 9. Brusilovskiy, E., Klein, L.A., Townley, G., Snethen, G., McCormick, B., **Hiremath, S.V.**, Salzer, M.S. *Examining the relationship between community mobility and participation using GPS and self-report data*. *Social Science & Medicine*, 265, 113539, 2020.
<https://pubmed.ncbi.nlm.nih.gov/33234453/>
 10. Finley, M.A., Euiler, E., **Hiremath, S.V.**, and Sarver, J. *Movement coordination during humeral elevation in individuals with newly acquired spinal cord injury*. *Journal of Applied Biomechanics*, 36(5), 345-350, 2020.
<https://pubmed.ncbi.nlm.nih.gov/32796138/>
 11. Skrzat, J.M., Carp, S.J., Dai, T., Lauer, R., **Hiremath, S.V.**, Gaeckle, N., Tucker, C.A. *Use of surface electromyography to measure muscle fatigue in patients in an acute care hospital*, *Physical Therapy*, 100 (6) 897–906, 2020.
<https://pubmed.ncbi.nlm.nih.gov/32157308/>
 12. **Hiremath, S.V.**, *Amiri, A.M., Chhetry, B.T., Snethen, G., Schmidt-Read, M., Lamboy, M.R., Coffman, D.L., Intille, S.S. *Mobile health-based physical activity intervention for individuals with spinal cord injury in the community: A pilot study*. *PLOS ONE*, 14(10), 2019.
 - The article was chosen as an Editor’s pick for the Veterans Disability & Rehabilitation Research Channel in November 2019.
<https://pubmed.ncbi.nlm.nih.gov/31613909/>
 13. *Amiri, A.M., **Hiremath, S.V.**, Salzer, M.S., Snethen, G. *Predicting physical activity levels in individuals with schizophrenia through integrated global positioning system and accelerometer data*. *Schizophrenia Research*, 212, 246-248, August 9, 2019.
<https://pubmed.ncbi.nlm.nih.gov/31405621/>
 14. Degenhart, A.D, **Hiremath, S.V.**, Yang, Y., Foldes, S.T., Collinger, J.L., Boninger, M.L., Tyler-Kabara, E.C., Wang W. *Remapping cortical modulation for electrocorticographic brain-computer interfaces: a somatotopy-based approach in individuals with upper-limb paralysis*. *Journal of Neural Engineering*. 15 (2), 026021, 2018.
 - A figure from this article was selected as the cover image for the 2nd issue of the Journal of Neural Engineering in 2018.
<https://pubmed.ncbi.nlm.nih.gov/29160240/>
 15. **Hiremath, S.V.**, Hogaboom, N.S., Roscher, M.R., Worobey, L.A., Oyster, M.L., Boninger, M.L. *Longitudinal prediction of quality of life scores and locomotion in individuals with traumatic spinal cord injury*. *Archives of Physical Medicine and Rehabilitation*. 98(12) 2385-92, 2017.
<https://pubmed.ncbi.nlm.nih.gov/28647550/>
 16. **Hiremath, S.V.**, Tyler-Kabara, E.C., Wheeler, J.J., Moran, D.W., Gaunt, R.A., Collinger, J.L., Foldes, S.T., Weber, D.J., Chen, W., Boninger, M.L., Wang, W. *Human perception of electrical stimulation on the surface of somatosensory cortex*. *PLoS ONE*, 12(5), p.e0176020, 2017.
<https://pubmed.ncbi.nlm.nih.gov/28489913/>
 17. Amiri, A.M., Peltier, N., Goldberg, C., Sun, Y., Nathan, A., **Hiremath, S.V.**, Mankodiya, K. *WearSense: Detecting autism stereotypic behaviors through smartwatches*. *Healthcare, Multidisciplinary Digital Publishing Institute*, 5 (1), 11, 2017.

- <https://pubmed.ncbi.nlm.nih.gov/28264474/>
18. [¶]**Hiremath, S.V.**, Intille, S.S., Kelleher, A., Cooper, R.A., Ding D. *Estimation of energy expenditure for wheelchair users using a physical activity monitoring system*. Archives of Physical Medicine and Rehabilitation, 97(7) 1146-1153, 2016.
<https://pubmed.ncbi.nlm.nih.gov/26976800/>
 19. Tsang, K., **Hiremath, S.V.**, Crytzer, T.M., Dicianno, B.E., and Ding, D., *Validity of activity monitors in wheelchair users: A systematic review*. Journal of Rehabilitation Research and Development, 53 (6) 641-658, 2016.
<https://pubmed.ncbi.nlm.nih.gov/27997674/>
 20. **Hiremath, S.V.**, Chen, W., Wang, W., Foldes, S., Yang, Y., Tyler-Kabara, E.C, Collinger, J.L., Boninger, M.L. *Brain computer interface learning for systems based on electrocorticography and intracortical microelectrode arrays*. Frontiers in Integrative Neuroscience, 9:40. 2015.
<https://pubmed.ncbi.nlm.nih.gov/26113812/>
 21. **Hiremath, S.V.**, Intille, S.S., Kelleher, A., Cooper, R.A., Ding D. *Detection of physical activities using a physical activity monitor system for wheelchair users*. Medical Engineering & Physics. 37(1) 68-76: 2015.
<https://pubmed.ncbi.nlm.nih.gov/25465284/>
 22. Tsang, K., **Hiremath, S.V.**, Ding, D., *Evaluation of custom energy expenditure models for the SenseWear armband in manual wheelchair users*. Journal of Rehabilitation Research and Development, 52 (7), 793-804, 2015.
<https://pubmed.ncbi.nlm.nih.gov/26745837/>
 23. Sindall P., Lenton J.P., Malone L., Douglas S., Cooper R.A., **Hiremath S.**, Tolfrey K., Goosey-Tolfrey V. *Effect of low-compression balls on wheelchair tennis match-play*. International Journal of Sports Medicine, 35 (5), 424-431: 2014.
<https://pubmed.ncbi.nlm.nih.gov/24081621/>
 24. **Hiremath, S.V.**, Ding, D., Cooper, R.A. *Development and evaluation of a gyroscope based wheel rotation monitor for manual wheelchair users*. Journal of Spinal Cord Medicine, 36 (4), 347-356: 2013.
<https://pubmed.ncbi.nlm.nih.gov/23820150/>
 25. **Hiremath, S.V.**, Ding, D., Farrington, J., Vyas, N., and Cooper, R.A. *Physical activity classification utilizing SenseWear activity monitor in manual wheelchair users with spinal cord injury*. Journal of Spinal Cord, 51 (9), 705-709: 2013.
<https://pubmed.ncbi.nlm.nih.gov/23689386/>
 26. **Hiremath, S.V.**, Ding, D., Farrington, J., Cooper, R.A. *Predicting energy expenditure of manual wheelchair users with spinal cord injury using a multi-sensor based activity monitor*. Archives of Physical Medicine and Rehabilitation, 93 (11), 1937-1943: 2012.
<https://pubmed.ncbi.nlm.nih.gov/22609119/>
 27. **Hiremath, S.V.** and Ding, D., *Evaluation of activity monitors in manual wheelchair users with paraplegia*. Journal of Spinal Cord Medicine. 34(1), 110-117: 2011.
<https://pubmed.ncbi.nlm.nih.gov/21528634/>

Peer Reviewed Conference Proceedings

Rehabilitation Engineering conference papers are typically full-length (4-8 pages), double-blind peer-reviewed, archival research contributions. Some of these papers are not listed in PubMed.

* indicates Mentee or Advisee, [¶] indicates Senior or Corresponding Author

28. Campbell, C., Ahmad, F., **Hiremath, S.V.** *Accelerometer-based body-plus-assistive-device sensor network for mobility tracking in individuals with stroke*. In Big Data II: Learning,

- Analytics, and Applications. SPIE: International Society for Optics and Photonics. Vol. 11395, p. 113950H, 2020.
<https://spie.org/Publications/Proceedings/Paper/10.1117/12.2560275?SSO=1>
29. *Islam, N., Amiri, A.M., Forlizzi, J., **Hiremath, S.V.** *Automatic mouth detection for self-feeding*. 2018 Institute of Electrical and Electronics Engineers (IEEE) Signal Processing in Medicine and Biology Symposium (SPMB) (2018): 01-03. Web.
<https://ieeexplore.ieee.org/document/8615594>
 30. *Shoaib, N., Amiri, A.M., Thapa-Chhetry, B., Snethen, G., Schmidt-Read, M., Lamboy, M.R., Intille, S.S., **Hiremath, S.V.** *Improving physical activity levels of individuals with spinal cord injury in the community*. Rehabilitation Engineering and Assistive Technology Society of North America, Arlington, VA, 2018.
https://www.resna.org/sites/default/files/conference/2018/pdf_versions/outcomes/Shoaib.pdf
 31. *Amiri, A.M., Shoaib, N., **Hiremath, S.V.** *A framework to enhance assistive technology based mobility tracking in individuals with spinal cord injury*, 5th IEEE Global Conference on Signal and Information Processing: Montreal, Canada, 467-471: 2017.
<https://ieeexplore.ieee.org/document/8308686>
 32. James, K., Wongsirikul, N., **Hiremath, S.**, Tsang, K., and Ding, D., *Usability of physical activity monitoring and sharing system for manual wheelchair users*. Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Annual Conference, Washington, DC, 2016.
https://www.resna.org/sites/default/files/conference/2016/emerging_technology/james.html
 33. Tsang, K., **Hiremath, S.V.**, and Ding, D., *Measuring energy expenditure in manual wheelchair users with an ActiGraph based activity monitor*. RESNA Annual Conference, Denver, CO, 2015.
https://www.resna.org/sites/default/files/conference/2015/wheeled_mobility/student_scientific/tsang.html
 34. **Hiremath, S.V.**, Yang, G., Mankodiya, K. *Wearable Internet of Things: concept, architectural components and promises for person-centered healthcare*. MOBIHEALTH, Athens, Greece, 304-307: 2014.
<https://ieeexplore.ieee.org/document/7015971>
 35. Tsang, K., **Hiremath, S.V.**, and Ding, D., *Evaluating the energy expenditure prediction models for manual wheelchair users with spinal cord injuries*. RESNA Annual Conference, Indianapolis, IN, 2014.
<https://www.resna.org/sites/default/files/conference/2014/Outcomes/Student%20Scientific/Tsang.html>
 36. **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*. RESNA Annual Conference, Seattle, WA, 2013.
<https://www.resna.org/sites/default/files/legacy/conference/proceedings/2013/Wheeled%20Mobility/Student%20Scientific/Hiremath.html>
 37. Ding, D., Soleh, A., **Hiremath, S.V.**, and Parmanto, B., *Physical activity monitoring and sharing platform for manual wheelchair users*. 2012 Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), San Diego, CA, 5833-5836: 2012.
<https://pubmed.ncbi.nlm.nih.gov/23367255/>
 38. **Hiremath, S.V.** and Ding, D., *Quantifying physical activity using an ActiGraph in manual wheelchair users with spinal cord injury*. RESNA Annual Conference, Baltimore, MD, 2012.
https://sites.temple.edu/phire/files/2019/09/Conference_RESNA_HiremathSV_2012.pdf

39. **Hiremath, S.V.** and Ding, D., *Regression equations for RT3 activity monitors to estimate energy expenditure in manual wheelchair users*. IEEE EMBC Annual Conference, Boston, MA, 7348-7351: 2011.
<https://pubmed.ncbi.nlm.nih.gov/22256036/>
40. Ding, D., **Hiremath, S.V.**, Chung, Y., and Cooper, R.A., *Detection of wheelchair user activities using wearable sensors*. Proceedings of the 6th International Conference on Universal access in human-computer interaction: context diversity, Orlando, FL, 145-152: 2011.
https://link.springer.com/content/pdf/10.1007/978-3-642-21666-4_17.pdf
41. **Hiremath, S.V.** and Ding, D., *Predicting energy expenditure of manual wheelchair users using a wearable device*. RESNA Annual Conference, Toronto, Canada, 2011.
https://sites.temple.edu/phire/files/2019/09/Conference_RESNA_Shiv_2011.pdf
42. Lin, J.T., Ding, D., **Hiremath, S.V.**, Koontz, A., and Cooper, R., *Cross-slope and surface type influence on manual wheelchair propulsion symmetry*. RESNA Annual Conference, Toronto, Canada, 2011.
https://sites.temple.edu/phire/files/2019/09/Conference_RESNA_LinJ_2011.pdf
43. **Hiremath, S.V.** and Ding, D., *Physical activity classification utilizing activity monitors in manual wheelchair users with SCI*. Biomedical Engineering Society Annual Meeting, Austin, TX, 2010.
https://sites.temple.edu/phire/files/2019/09/Conference_BMES_2010.pdf
44. **Hiremath, S.V.** and Ding, D., *Evaluation of activity monitors in estimating energy expenditure in manual wheelchair users*. RESNA Annual Conference, Las Vegas, NV, 2010.
<https://www.resna.org/sites/default/files/legacy/conference/proceedings/2010/Wheeled%20Mobility/Student%20Papers/HiremathS.html>
45. Chung, Y., **Hiremath, S.V.** and Ding, D., *Activity classification of manual wheelchair users with wearable sensors*. RESNA Annual Conference, Las Vegas, NV, 2010.
https://sites.temple.edu/phire/files/2019/09/Conference_RESNA_ChungY_2010.pdf
46. Chacon, A., **Hiremath, S.V.** and Ding, D., *Evaluation of the RT3 tri-axial accelerometer to measure physical activity in manual wheelchair users with spinal cord injury*. RESNA Annual Conference, Las Vegas, NV, 2010.
<https://www.resna.org/sites/default/files/legacy/conference/proceedings/2010/Wheeled%20Mobility/Student%20Papers/ChaconA.html>
47. Lin, J.T., Ding, D., **Hiremath, S.V.**, Koontz, A., and Cooper, R., *Impact of cross slope and surface type on wheelchair propulsion*. RESNA Annual Conference, Las Vegas, NV, 2010.
https://sites.temple.edu/phire/files/2019/09/Conference_RESNA_LinJ_2010.pdf
48. **Hiremath, S.V.** and Ding, D., *Evaluation of activity monitors to estimate energy expenditure in manual wheelchair users*. IEEE EMBC Annual Conference, Minneapolis, 835-838: 2009.
<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=5333626>
49. Ding, D., **Hiremath, S.V.** and Kelleher, A., *Using SenseWear armband to evaluate energy expenditure in manual wheelchair users*. 4th International State-of-the-art Congress Rehabilitation: Mobility, Exercise & Sports, Amsterdam, 2009.
50. **Hiremath, S.V.**, Ding, D. and Koontz, A., *Estimating temporal parameters of wheelchair propulsion based on hand acceleration*. RESNA Annual Conference, Washington, DC, 2008.
https://sites.temple.edu/phire/files/2019/09/Conference_RESNA_HiremathS_2008.pdf

Book Chapters

1. **Hiremath, S.V.**, Cooper, R.A., Pelleschi, T.L., and Cooper, R., *Wheeled mobility devices*. In P.A. Smith, F. Rauch, and G.F. Harris (Eds.). *Transitional Care in Osteogenesis Imperfecta*:

Curriculum Vitae

Advances in Biology, Technology, and Clinical Practice. Chicago: Shriners Hospitals for Children; 2015, 301-326.

2. Cooper, R.A., McCue, M., Schein, R.M., Cooper, R., Sporer, M.L., Dodson, M.B., Reinsfelder, A.M., Yeager, A.F., Jinks, A., LoPresti, E., McClure, L., Wang, H., Collinger, J.L., **Hiremath, S.**, Ding, D., Lewis, A., *Assistive technology for people with traumatic brain injuries*. In Nathan Zasler, Douglas Katz, Ross Zafonte, David B. Arciniegas, M. Ross Bullock, Jeffrey S. Kreutzer (Eds.). *Brain Injury Medicine: Principles and Practice*, 2nd edition. New York: Demos Medical Publishing; 2012, 1178-1201.

Consumer Magazine

1. **Hiremath, S.V.** *How much physical activity do you do?* Paraplegia News, October 2012, Paralyzed Veterans of America, 66 (10), 20-21: 2012.

In Press

* indicates Mentee or Advisee, ^ψ indicates Senior or Corresponding Author

1. Lakshminarayanan, R., Canori, A., Ponnada, A., Nunn, M., Schmidt-Read, M., **Hiremath, S.V.**, Intille, S.S. *Exploring opportunities to improve physical activity in individuals with spinal cord injury using context aware messaging*. 25th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2022). [Accepted July 2022]

Works in Progress (In preparation or under review)

* indicates Mentee or Advisee, ^ψ indicates Senior or Corresponding Author

1. Algheryafi R.A., Bevans K.B., **Hiremath S.V.**, Lai J., Tucker C.A. *Enhancing the content validity of self-reported physical activity self-efficacy in adolescents: A qualitative study*. Pediatric Physical Therapy Journal. [Under Review, August 2021].
2. Algheryafi R.A., Bevans K.B., **Hiremath S.V.**, Lai J., Tucker C.A. *Convergent validity of the 7-Day PROMIS-PA pediatric measure with ecological momentary assessment and daily assessments and accelerometry*. Pediatric Physical Therapy Journal. [Under Review, February 2022].
3. Algheryafi R.A., Bevans K.B., **Hiremath S.V.**, Lai J., Tucker C.A. *Validity of physical activity self-efficacy instruments in younger and older adolescents: An exploratory study*. Pediatric Physical Therapy Journal [In Preparation].

Peer Reviewed Abstracts

* indicates Mentee or Advisee, ^ψ indicates Senior or Corresponding Author

1. ^ψ**Hiremath S.V.**, Marino, R.J., Coffman, D.L., Karmarkar, A.M., Tucker, C.A. *Evaluating associations between trauma-related characteristics and functional recovery in individuals with spinal cord injury*. American Congress of Rehabilitation Medicine Annual Conference, Chicago, IL, 2022.
2. *Canori, A., Lakshminarayanan, R., Nunn, M., Schmidt-Read, M., Intille, S.S. ^ψ**Hiremath, S.V.** *Effects of social engagement on motivation for physical activity in individuals with spinal cord injury*. American Congress of Rehabilitation Medicine Annual Conference, Chicago, IL, 2022.
3. *Canori, A., Lakshminarayanan, R., Nunn, M., Schmidt-Read, M., Intille, S.S. ^ψ**Hiremath, S.V.** *Effects of social engagement on motivation for physical activity in individuals with spinal cord injury*. 61st International Spinal Cord Society Annual Scientific Meeting, Vancouver, Canada, 2022.
4. *Canori, A., Lakshminarayanan, R., Ponnada, A., Intille, S.S. ^ψ**Hiremath, S.V.** *Engaging*

- social connections to promote physical activity in individuals with spinal cord injury.* American Congress of Rehabilitation Medicine Annual Conference, Virtual, 2021.
5. Snethen, G., Brusilovskiy, E., McCormick, B., Nagata, S., Townley, G., **Hiremath, S.V.**, Salzer, M. *Impact of activity, being in the community and being with others on mood states of individuals with serious mental illnesses.* American Public Health Association, Virtual, 2021
 6. Finley, M., Euiler, E., **Hiremath, S.V.**, Sarver, J. *Movement coordination during humeral elevation in individuals with newly acquired spinal cord injury.* Virtual 44th Meeting of the American Society of Biomechanics, 2020.
 7. Goodwin, B.M., Jahanian, O. Madansingh, S.I, Cloud-Biebl, B.A., Zhao, K.D., **Hiremath, S.V.**, Morrow, M.M.B, Fortune, E. *The accuracy of machine learning models for detecting propulsion from an inertial measurement unit worn on the arm of manual wheelchair users.* Virtual 44th Meeting of the American Society of Biomechanics, 2020.
 8. *Canori, A., Kumar, A., ^ψ**Hiremath, S.V.** *Multidimensional clinical and psychosocial factors associated with one-year hospital readmissions for individuals with spinal cord injury.* American Public Health Association (APHA) Annual Meeting, Philadelphia, PA, 2019.
 - Dr. Canori won APHA Disability Section’s Career enhancement student scholarship award.
 9. *Canori, A., Reudiger, M., ^ψ**Hiremath, S.V.** *Patterns of health conditions associated with multiple hospital readmissions for individuals with spinal cord injury.* American Congress of Rehabilitation Medicine Annual Conference, Dallas, TX, 2018.
 - Dr. Canori won a student travel award from the Center for Large Data Research and Data Sharing in Rehabilitation, University of Texas Medical Branch Galveston.
 10. **Hiremath, S.V.**, Amiri, A.M., Thapa-Chhetry, B., Shoaib, N., Snethen, G., Schmidt-Read, M., Lamboy, M.R., Intille, S.S. *Mobile-health based physical activity intervention for individuals with spinal cord injury in the community.* American Congress of Rehabilitation Medicine Annual Conference, Dallas, TX, 2018.
 11. **Hiremath, S.V.**, Amiri, A.M., Chhetry, B.T., Intille, S.S. *m-Health physical activity intervention system for individuals with disability.* mHealth Technology Showcase, National Institutes of Health, Bethesda, MD, 2018.
 12. **Hiremath, S.V.**, Chhetry, B.T., Amiri, A.M., Intille, S.S. *A Just-In-Time-Adaptive-Intervention system for improving physical activity levels of individuals with spinal cord injury.* International Conference on Ambulatory Monitoring of Physical Activity and Movement, Bethesda, MD, 2017.
 13. Brusilovskiy, E., Klein, L., Townley, G., Snethen, G., **Hiremath, S.**, Salzer M. *Using Global Positioning Systems to measure community mobility and participation among individuals with disability: A validity study.* American Public Health Association, Atlanta, GA, 2017.
 14. **Hiremath, S.V.**, Wang, W., Richardson, R.M., Alhourani, A., Lipski, W., Tyler-Kabara, E.C., Boninger, M.L., *Motor and pre-motor cortical activity during attempted, observed, passive and overt movements.* Neuroscience 2017, Washington, DC, 2017.
 15. Skrzat, J., Carp, S., Lauer, R., **Hiremath, S.**, Tucker, C. *A Pilot Study of Muscle fatigue and recovery in patients who are critically ill.* American Thoracic Society’s 2017 International Conference, Washington, DC, 2017.
 16. Skrzat, J., Carp, S., Gong, N., Tosto, J., Lauer, R., **Hiremath, S.**, Tucker, C. *Muscle fatigue and recovery in healthy younger and older adults.* American Physical Therapy Association’s 2017 Combined Sections Meeting, San Antonio, TX, 2017.
 17. **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: Moving the Field Forward, Bethesda, MD, 2016.

18. **Hiremath, S.V.**, Tyler-Kabara, E.C., Wheeler, J.J., Moran, D.W., Gaunt, R.A., Collinger, J.L., Foldes, S. T., Weber, D. J., Chen, W., Boninger, M. L., Wang, W. *Human perception of electrical stimulation on the cortical surface of somatosensory cortex*, Neuroscience 2015, Chicago, IL.
19. **Hiremath, S.V.**, Tyler-Kabara, E.C., Wheeler, J.J., Moran, D.W., Gaunt, R.A., Collinger, J.L., Foldes, S. T., Weber, D. J., Chen, W., Boninger, M. L., Wang, W. *Use of cortical surface stimulation toward restoration of reliable sensation in human*, 2015 American Congress of Rehabilitation Medicine Annual Conference, Dallas, TX.
20. **Hiremath, S.V.**, Intille, S.S., Cooper, R.A., and Ding, D. *Quantifying energy expenditure of wheelchair-based physical activities in free-living environments*. Wireless Health, Bethesda, MD, 2014.
21. **Hiremath, S.V.**, Degenhart, A., Yang, Y., Collinger, J.L., Foldes, S., Tyler-Kabara, E.C., Weber, D.J., Gaunt, R., Boninger, M.L., and Wang, W. *Activation of the human primary motor cortex by sensory inputs in individuals with limb paralysis and implications for brain computer interfaces*. Neuroscience, Washington, DC, 2014.
22. **Hiremath, S.V.**, Degenhart, A., Yang, Y., Collinger, J.L., Foldes, S., Tyler-Kabara, E.C., Weber, D.J., Gaunt, R., Boninger, M.L., Wang, W. *Use of sensory inputs to train brain computer interface decoders in individuals with limb paralysis*. Neural Interfaces Conference, Dallas, TX, 2014.
23. Degenhart, A., **Hiremath, S.V.**, Yang, Y., Foldes, S., Collinger, J.L., Boninger, M.L., Weber, D.J., Schwartz, A., Tyler-Kabara, E.C., and Wang, W. *Remapping cortical modulation for brain-machine interfaces: a somatotopy-based approach in individuals with upper-limb paralysis*. Neural Interfaces Conference, Dallas, TX, 2014.
24. **Hiremath, S.V.**, Ding, D. *Evaluation of a physical activity monitoring system for manual wheelchair users*. International Seating Symposium, Nashville, TN, 2013.
25. **Hiremath, S.V.**, Ding, D., Goosey-Tolfrey, V., Malone, L.A., Lenton, J., Sindall, P. and Cooper, R.A. *Validation and testing of a wheel rotation datalogger for quantifying activity in manual wheelchair users*, North American Federation of Adapted Physical Activity Conference, Birmingham, AL, 2012.

Peer Reviewed Abstracts presented at Temple University

* indicates Mentee or Advisee, † indicates Senior or Corresponding Author

1. *Canori, A., Lakshminarayanan, R., Schmidt-Read, M., Intille, S.S. †**Hiremath, S.V.** *Effects of social engagement on motivation for physical activity in individuals with spinal cord injury*. College of Public Health Research and Evidence Based Practice Day 2022.
2. *Johnson, T., Hagen, C., Coffman, D.L., Marino, R.J., †**Hiremath, S.V.** *Applying machine learning algorithms to classify upper extremity actions using wrist-worn sensors: A proof-of-concept Study*. College of Public Health Research and Evidence Based Practice Day 2022.
3. *Carey, R., Canori, A., †**Hiremath, S.V.** *Evaluation of a new methodology for determining normative values in wheelchair-based activities*. College of Public Health Research and Evidence Based Practice Day 2022.
4. *Bergquist, J.S., †**Hiremath, S.V.** *Feasibility study: Using MIDI technology to measure tapping force during gamified manual motor rehabilitation*. College of Public Health Research and Evidence Based Practice Day 2022.
5. Clarke, L.M., Jones, R.M., **Hiremath, S.V.**, Franklin, C., Tucker, C.A. *Sex differences in muscle fatigue patterns and smoothness of gait during adolescence*. College of Public Health Research and Evidence Based Practice Day 2022.

Curriculum Vitae

6. *Canori, A., Lakshminarayanan, R., Ponnada, A., Intille, S.S. [¶]**Hiremath, S.V.** *Engaging social connections to promote physical activity in individuals with spinal cord injury.* College of Public Health Research and Evidence Based Practice Day 2021.
7. *Canori, A., *Amiri, A.M., Thapa-Chhetry, B., Finley, M.A., Schmidt-Read, M., Lamboy, M.R., Intille, S.S., [¶]**Hiremath, S.V.** *Relationship between pain, fatigue, and physical activity levels during a technology-based physical activity.* College of Public Health Research and Evidence Based Practice Day 2020.
8. *Hanna, K., Yerger, D., [¶]**Hiremath, S.V.** *Usability testing of a new computer access technology.* College of Public Health Research and Evidence Based Practice Day 2020.
9. *Canori, A., Kumar, A., [¶]**Hiremath, S.V.** *Multidimensional clinical and psychosocial factors associated with one-year rehospitalization for individuals with spinal cord injury.* College of Public Health Research Day 2019.
10. *Shoaib, N., Amiri, A.M., [¶]**Hiremath, S.V.** *The improvement of physical activity levels in individuals with spinal cord injury.* College of Public Health Research Day 2018.
11. *Islam, N., Amiri, A.M., [¶]**Hiremath, S.V.** *Meal assistance robot with camera-based automatic mouth open detection.* College of Public Health Research Day 2018.

Honors/Awards/Special Recognition:

- 2021 **Best PTOS Data Request Award**, Pennsylvania Trauma Systems Foundation
- **Winning Papers** in Rehabilitation Engineering and Assistive Technology Society of North America's Annual Conferences, Student Scientific Paper Competition (2013, 2011, 2010).
- **Honorable Mentions** in Rehabilitation Engineering and Assistive Technology Society of North America Annual Conferences, Student Scientific Paper Competition (2015, 2014, 2010, 2008).
- **Thomas O'Connor PhD Student Award** for 2012, Department of Rehabilitation Science and Technology, University of Pittsburgh.
- **First Place**, Perfect Pitch Competition, Quality of Life Technology Engineering Research Center, National Science Foundation Engineering Research Center, 2012.
- **Mary E. Switzer Research Fellow**, Funded by National Institute on Disability and Rehabilitation Research, U.S. Department of Education, 2011.
- The **Ernest Bors Award** for Scientific Development awarded by the Academy of Spinal Cord Injury Professionals, USA, 2011.
- **First Place**, Elevator Pitch Competition along with Soleh Udin Al Ayubi, Research Symposium, Quality of Life Technology Engineering Research Center, 2011.
- **Best Achiever** for the year 2005 from Electrical and Electronics Department, M. S. Ramaiah Institute of Technology, Visvesvaraya Technological University, India, 2005.
- Awarded **Second Place** in Student Scientific Paper Competition in "INFLUX 2005" conducted by M. S. Ramaiah Institute of Technology, Visvesvaraya Technological University, India, 2005.
- **Best Paper** in SYNCHRO 2003, National Level Technical Symposium conducted by Sri Muthukumaran Institute of Technology, Chennai, India, 2003.

Presentations:

Refereed Conferences

* indicates Mentee or Advisee

- *Evaluating associations between trauma-related characteristics and functional recovery in individuals with spinal cord injury.* American Congress of Rehabilitation Medicine Annual Conference, Chicago, IL, 2022.
- *Factors associated with post-acute functional status and discharge dispositions in individuals with spinal cord injury.* Pennsylvania Trauma Systems Foundation Annual Fall Conference, Virtual, 2021.
- *Canori, A., *Multidimensional clinical and psychosocial factors associated with one-year hospital readmissions for individuals with spinal cord injury.* American Public Health Association Annual Meeting, Philadelphia, PA, 2019.
- *Canori, A., *Patterns of health conditions associated with multiple hospital readmissions for individuals with spinal cord injury.* American Congress of Rehabilitation Medicine Annual Conference, Dallas, TX, 2018.
- *Mobile-health based physical activity intervention for individuals with spinal cord injury in the community.* American Congress of Rehabilitation Medicine Annual Conference, Dallas, TX, 2018.
- *A framework to enhance assistive technology based mobility tracking in individuals with spinal cord injury,* 5th IEEE Global Conference on Signal and Information Processing: Montreal, Canada, 2017.
- *Evaluating the energy expenditure prediction models for manual wheelchair users with spinal cord injuries.* RESNA Annual Conference, Indianapolis, IN, 2014.
- *Validation of a gyroscope based wheel rotation monitor for manual wheelchair users.* RESNA Annual Conference, Seattle, WA, 2013.
- *Predicting energy expenditure of manual wheelchair users using a wearable device.* RESNA Annual Conference, Toronto, Canada, 2011.
- *Evaluation of activity monitors in manual wheelchair users with paraplegia.* Annual Meeting of the Academy of Spinal Cord Injury Professionals, Las Vegas, NV, 2011.
- *Evaluation of activity monitors in estimating energy expenditure in manual wheelchair users.* RESNA Annual Conference, Las Vegas, NV, 2010.
- *Physical activity classification utilizing activity monitors in manual wheelchair users with SCI.* Biomedical Engineering Society Annual Meeting, Austin, TX, 2010.

Invited Presentations

- *Developing and translating mHealth technologies from laboratory to community for individuals with spinal cord injury.* University of Alabama at Birmingham, Birmingham, AL. 7/22. Host: Dr. Mohanraj Thirumalai.
- *Developing and evaluating affordable health technologies for individuals with disabilities.* Co-Presented with Dr. Michelle J. Johnson from the University of Pennsylvania, Sir John Golding Rehabilitation Centre, Kingston, Jamaica, 10/21. Host: Dr. Dean Everett Wright.
- *Developing and evaluating mHealth technologies for individuals with spinal cord injury.* Capacity Building – RecTech Alumni, RERC-RecTech’s Virtual State of the Science Conference 2021, 10/21.
- *Developing and evaluating mHealth technologies for individuals with spinal cord injury.* Webinar Series – Spinal Cord Injury: From Discovery to Recovery, Society for Experimental

Curriculum Vitae

- Biology and Medicine, 09/21. Hosts: Drs. Michael N. Lehman and Lique M. Coolen.
- *Developing and evaluating mHealth technologies for individuals with spinal cord injury.* Panel discussion on AI for Function, Disability, and Health 2021 (AI4Function), 08/21. Host: Dr. Denis R. Newman-Griffis.
 - *Tracking of upper extremity movement in individuals with spinal cord injury (Online)*, Global Perspectives on Medicine, Rehabilitation and Robotics Webinar Series, 07/2021, Host: Dr. Michelle J. Johnson.
 - *Health and physical activity patterns in individuals with spinal cord injury (Online)*, Loughborough University, Loughborough, Leicestershire, UK, 07/2021, Host: Dr. Vicky Goosey-Tolfrey.
 - *Developing and translating accessible technologies from laboratory to community for individuals with spinal cord injury*, Good Shepherd Rehabilitation Hospital, Allentown, PA, 07/2021, Host: Dr. Kaitlin P. Fiedler.
 - *Telerehabilitation Webinar: Mobile health based physical activity intervention for individuals with spinal cord injury (Online)*, The University of Tennessee Health Science Center, Memphis, TN, 06/2020, Host: Dr. Sajeesh Kumar KR.
 - *Intelligent and expert systems to monitor activity*, University of Pennsylvania, Philadelphia, PA, 09/2019, Host: Dr. Michelle J. Johnson.
 - *Mobile-health based physical activity intervention for individuals with spinal cord injury*, Paralyzed Veterans of America Healthcare Summit, Orlando FL, 08/2019.
 - *Mobile-health based physical activity intervention for individuals with spinal cord*, Zhejiang University, Hangzhou, China, 06/2019, Host: Dr. Weidong Chen.
 - *mHealth based Physical Activity Intervention for Individuals with Spinal Cord Injury in the Community*, Moss Rehab Research Institute's Topics in Rehabilitation Science, MossRehab, Philadelphia, PA, 09/2018, Host: Shailesh Kantak.
 - *Mobile-health based physical activity intervention for individuals with spinal cord injury in the community*, Paralyzed Veterans of America Healthcare Summit, Dallas TX, 08/2018.
 - *mHealth physical activity intervention system for individuals with disability*. mHealth Technology Showcase, National Institutes of Health, Bethesda, MD, 05/2018.
 - *Just-in-time-adaptive-intervention system for improving physical activity in individuals with disabilities*. Research Symposium, College of Engineering, Temple University, 05/2018.
 - *Mobile-health based physical activity intervention system for individuals with spinal cord injury*. CPH National Public Health Week, College of Public Health, Temple University, 4/2018, Host: Dr. Gina Tripicchio.
 - *Mobile-health based physical activity intervention system for individuals with spinal cord injury*. College of Nursing and Health Professions, Drexel University, 12/2017, Host: Dr. Margaret Finley.
 - *Physical activity intervention system for individuals with spinal cord injury at Magee Rehabilitation Outpatient Therapy Center – Riverfront clinic*. 11/2017, Host: Dr. Carol Owens.
 - *Quantifying physical activity towards improving quality of life in individuals with disabilities*. Moss Rehabilitation Hospital, 04/2017, Host: Dr. Wesley Chay.
 - *Quantifying physical activity and neural basis of movement towards improving quality of life in individuals with disabilities*. Department of Electrical & Computer Engineering, ECE Department Seminar Series, Temple University, 01/2017, Host: Dr. Fauzia Ahmad.
 - *Quantifying physical activity and neural basis of movement towards improving quality of life in individuals with disabilities*. Temple Movement Science Club, Temple University,

Curriculum Vitae

02/2016, Host: Dr. Andrew Spence.

- *Quantifying physical activity and neural basis of movement towards improving quality of life in individuals with disabilities.* Department of Physical Therapy, Temple University, 01/2015, Host: Dr. Emily Keshner.
- *Physical activity monitor system for manual wheelchair users.* IEEE Engineering in Medicine & Biology Society of Pittsburgh Lecture, 12/2014.
- *Quantifying intentional and actual movements towards improving quality of life of individuals with disabilities.* Personal Robotics Laboratory, Carnegie Mellon University, 07/2014, Host: Dr. Siddhartha Srinivasa.
- *Development and evaluation of physical activity monitors for manual wheelchair users.* Human Rehabilitation and Neural Engineering Laboratory, University of Pittsburgh, 02/2013, Host: Dr. Wei Wang.

Other presentations

- **Hiremath, S.V.** and Biradar, A.B., *Gas detection using fuzzy logic for TGS-823*, in INFLUX 2005 conducted by M. S. Ramaiah Institute of Technology, Visvesvaraya Technological University, India, 2005.
- **Hiremath, S.V.** and Biradar, A.B., *Fuzzy logic motor control to minimize reactive power intake in a synchronous motor*, in SYNCHRO 2003, National Level Technical Symposium conducted by Sri Muthukumar Institute of Technology, Chennai, India, 2003.

Training Workshops:

- Temple University College of Public Health's Online Teaching Training, Philadelphia, 2020.
- NIH mHealth Training Institute, University of California Los Angeles, Los Angeles, 2017.
- NSF Smart and Connected Health Aspiring Investigators workshop, Arlington, VA, 2015.
- Training in Grantsmanship for Rehabilitation Research Workshop. Chapel Hill, NC, 2014.

Professional Societies Affiliation:

Member

- American Congress of Rehabilitation Medicine (ACRM)
- American Public Health Association (APHA).

Senior Member

- IEEE
- IEEE Engineering in Medicine and Biology Society (IEEE-EMBS).

Teaching and Mentoring at Temple University:

Instructor: Neuromotor Science Program, Department of Health and Rehabilitation Sciences
Average student feedback was an Upper Performance Level for the courses listed below.

- NMS9623: Programming (Sole Instructor)
 - Spring 2021; 4 students
 - Spring 2020; 5 students
 - Spring 2019; 7 students
 - Spring 2018; 4 students
 - Spring 2017; 11 students
- NMS9622: Instrumentation
 - Fall 2020 (co-taught with Dr. Richard Lauer); 2 students
 - Fall 2019 (co-taught with Drs. Richard Lauer and Carole Tucker); 6 students
 - Fall 2018 (co-taught with Drs. Richard Lauer and Carole Tucker); 6 students
 - Fall 2017 (co-taught with Dr. Richard Lauer); 4 students.
- Research Experience in Health Professions/Neuromotor Science lab rotation (Sole Instructor)
 - Spring 2022; 2 students
 - Fall 2021; 1 student
 - Spring 2021; 1 student
 - Fall 2020; 1 student
 - Fall 2019; 1 student.
- Dissertation Research/Dissertation Proposal (Sole Instructor)
 - Spring 2022; 1 student
 - Spring 2021; 1 student
 - Fall 2021; 1 student.

Instructor: Doctor of Physical Therapy, Department of Health and Rehabilitation Sciences
Average student feedback was an Upper Performance Level for the courses listed below.

- PHTH 8137: Evidence Based Practice II
 - Fall 2021 (co-taught with Dr. Scott Burns); 55 students
 - Fall 2020; 52 students
 - Fall 2019; 65 students
 - Fall 2018 (co-taught with Dr. Elizabeth Thompson); 59 students.
- PHTH 8151: Evidence Based Practice III
 - Fall 2019; guided 7 students on their capstone research project.

Guest Lecturer

- Department of Bioengineering, University of Pennsylvania, *Intelligent wearable systems to monitor activity* in BE 514: Rehab Engineering and Design. Fall 2021.
- Department of Health and Rehabilitation Sciences, Temple University. *Use of wearable monitors for physical activity monitoring* in ATHT 8348/NMS 9622: Laboratory Techniques. Fall 2021.
- Department of Kinesiology, Temple University. *Utilizing technology to improve the quality of life of individuals with spinal cord injury* in KINS9901: Research Methods in Kinesiology; Fall 2021.
- Department of Kinesiology, Temple University. *Use of wearable monitors for physical activity monitoring* in KINS3501: Research Methods in Kinesiology; Spring 2021.

Curriculum Vitae

- Department of Electrical, Computer, & Biomedical Engineering, University of Rhode Island, Kingston, RI, *Clinical brain-computer interfaces* in BME468: Neural Engineering; Spring 2015, Spring 2016, Spring 2017.

Research Mentoring:

Mentoring of trainees at the Personal Health Informatics and Rehabilitation Engineering (PHIRE) Laboratory, Temple University.

- Postdoctoral Fellow:
 - Amir Mohammad Amiri (2016-2018).
- Graduate students:
 - Tessa Johnson (2021-present)
 - J. Steve Bergquist (2021)
 - Rachel Carey (2021-present)
 - Cole Hagen (2021-present)
 - Alexandra Canori (2018-present)
 - Kirillos Hanna (2019-2020)
 - Sabura Shiffrin (2016)
 - Sara Snell (2016).
- Undergraduate students:
 - Emily Carlson (2022-present)
 - Micaela Robalino (2018-2019)
 - Jada-Nicole Goodson (Summer 2018)
 - Najafa Islam (2017-2019)
 - Noor Shoaib (2017-2019)
 - Kimberly Le (2016)
 - Zoe Bermudez (2016).
- Middle and high school students:
 - Dhaval Tantry (Summer 2021)
 - Ramez Hamad (Summer 2019, Fall 2019)
 - Ryan Lehrman (Summer 2019)
 - Noelle Lehrman (Summer 2019)
 - Absalom Hobson (Summer 2019)
 - Steven Ho (Summer 2018)
 - Tigidankay Saccoh (Summer 2017).

Doctor of Physical Therapy (DPT) Advising:

Advising of the DPT Students at Temple University.

- 2017-20
 - Jonathan Francis
 - Matthew Pascarella
 - Robert Trombley
 - Troy Abell
- 2018-21
 - James Boland
 - AJ Nielsen
 - Samantha Ginsberg
 - Robert Trombley
 - Alyssa Kresge

Curriculum Vitae

- 2019-22
 - Doug Andrews
 - Allison Gallagher
 - Jessica Nevis
 - Colin Stone
- 2020-23
 - Jonathan Grube
 - Rachel Hark
 - Adam Hennessy
 - Shawn Henry
- 2021-24
 - Dhaval Patel
 - Amy Pham
 - Jeremy DePree

Doctoral/Master's/Thesis Committees:

Dissertation Committee

- Alexandra Canori, Temple University (2021-present).
- Laura Baehr, Drexel University (2021-present).
- Lindsay Clarke, Temple University (2019-present).
- Reem Algheryafi, Temple University (2019-2021).
- Julie Skrzat, Temple University (2016-2019).

Master's Thesis Committee

- Sivan Zlotnikov, Temple University (2019-2020).
- Natthasit Wongsirikul, University of Pittsburgh (2012-2014).

Bachelor's (Honors) Thesis Committee

- Yousif J. Shwetar, University of Pittsburgh (2020).

External Examiner/Reviewer for Doctoral Dissertation:

Doctoral Dissertation

- Kati Karinharju, The University of Queensland, Australia, (2021).
- Vaishali S. Amin, Temple University (2022).
- Abrar Alrumayh, Temple University (2022).

Education and Outreach:

Assistive Technology Development Workshop 2019

- In collaboration with GEAR UP, Temple University, and Dr. Rochelle Mendonca I organized a three-week 3D assistive technology development workshop for 15 high school students from Benjamin Franklin High School, Philadelphia.

Assistive Technology Development Workshops 2018

- In collaboration with GEAR UP, Temple University, and Dr. Amir Amiri, I organized a two-

Curriculum Vitae

week assistive technology development workshop with mobile robots simulating power wheelchairs for 20 high school students from Benjamin Franklin and Thomas Alva Edison High Schools, Philadelphia.

- In collaboration with The Franklin Institute, I organized a four-week 3D assistive technology development workshop for 15 high school students who are part of the STEM Scholars program at Franklin Institute.

Assistive Technology and Biomechanics Lecture

- As part of the National Biomechanics Day 2017, I organized a lecture on assistive technology and biomechanics for 20 middle and high school girl students from North Philadelphia.

Assistive Technology Development Workshops 2017

- In collaboration with GEAR UP, Temple University, and Dr. Christopher K. Thompson, I organized a two-week assistive technology development workshop for 10 high school students.
- In collaboration with Franklin Institute, I organized a two-week assistive technology development workshop for 12 high school students from Science Leadership Academy.

Assistive Technology

- I organized a lecture to the volunteers of the Family Friends Program, Temple University, 2017.

Presentations

- Hiremath, S.V., Thompson, C.K. *STEM Education through assistive technology development workshop*, College of Public Health Teaching Symposium, Temple University, 2017.

Teaching and Mentoring at the University of Pittsburgh:

Teaching Assistant: *Department of Rehabilitation Science and Technology*

- HRS2704: Fundamentals of Rehabilitation Engineering and Assistive Technology; Fall 2008.
- HRS2901: Introduction to Research Methodology; Spring 2009 and Fall 2010.

Guest Lecturer

- Department of Bioengineering, University of Pittsburgh, *Wheelchair biomechanics* in BIOENG 1630: Biomechanics 1; Spring 2013, Spring 2014, Fall 2015.

Research Mentoring:

Mentored graduate and undergraduate students working on research projects at the Human Rehabilitation and Neural Engineering Laboratory, Department of Physical Medicine and Rehabilitation.

- Physician Scientist Training Program:
 - Dongning Zhang (2014).
- Undergraduate students:
 - Zachary Wool (2014-15)
 - Shivbaskar Rajesh (2015).

Mentored graduate and undergraduate students who were part of the American Student Placement in Rehabilitation Engineering and Quality of Life Technology research programs, Human Engineering Research Laboratories, Department of Rehabilitation Science and Technology.

- Graduate students:
 - KaLai Tsang (2013-2015)
 - Natthasit Wongsirikul (2012- 2014)
 - Sasa Tripathy (2011)
 - Megha Dhawan (2009).
- Undergraduate students:
 - Matthew Hannan (2012-13)
 - Christopher Okonkwo (2012)
 - Josh Davis (2011)
 - Alix Cave (2010)
 - David Berlin (2010)
 - Adriana Chacon (2009).

Professional Service:

National/International

Grant Reviewer

- National Institutes of Health (2022)
- Swiss National Science Foundation, Switzerland (2022)
- Health Research Board Ireland, Ireland (2022)
- Natural Sciences and Engineering Research Council of Canada, Canada (2021)
- National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Administration for Community Living, U.S. Department of Health and Human Services (2016, 2017, 2019, 2020, 2022)
 - Small Business Innovation Research Program Phase I
 - Small Business Innovation Research Program Phase II
 - Disability and Rehabilitation Research Projects (DRRP) Program
 - Rehabilitation Engineering Research Center (RERC) Program
 - Site reviewer.
- Maryland Industrial Partnerships Program, University of Maryland, College Park, MD (2020)
- Paralyzed Veterans of America: Fellowships, Clinical/Development pilot grants (2015, 2019)
- Center for Large Data Research and Data Sharing in Rehabilitation, University of Texas Medical Branch, Galveston (2019).

Editorial Board Member

- Reviewer, Journal of Spinal Cord Medicine (2021-present).
- Review Editor, Non-Pharmacological Treatment of Pain, Frontiers in Pain Research (2021-present).

Regular Journal Reviewer

- Journal of Spinal Cord Medicine (2013-Present)
- Archives of Physical Medicine and Rehabilitation (2012-Present).

Ad-Hoc Journal Reviewer

- Topics in Spinal Cord Injury Rehabilitation
- Spinal Cord
- Journal of Neurotrauma
- Journal of Rehabilitation and Assistive Technologies Engineering
- International Journal of Nursing Studies
- IEEE Transactions on Neural Systems & Rehabilitation Engineering
- Rehabilitation Psychology
- Burns & Trauma
- Assistive Technology Journal
- Obesity Science and Practice
- IEEE Open Journal of Engineering in Medicine and Biology
- PLOS One
- Journal of Biomedical and Health Informatics
- IEEE Transactions on Neural Networks and Learning Systems
- Medical Engineering & Physics

Curriculum Vitae

- Neuroscience Letters
- Journal of Medical Internet Research
- Sensors, MDPI
- Sports Medicine Open
- ACM Interactive, Mobile, Wearable and Ubiquitous Technologies
- Medicine & Science in Sports & Exercise
- BioMed Research International
- Journal of Neuroengineering and Rehabilitation
- Journal of Sports Sciences
- Journal of Rehabilitation Research & Development
- Advances in Physiotherapy
- IEEE Transactions on Signal Processing.

Ad-Hoc Conference Reviewer

- Annual RESNA Conference
- IEEE Global Conference on Signal and Information Processing
- IEEE Engineering in Medicine and Biology Conference
- Human Robot Interaction
- Future Generation Computer Systems
- IEEE International Conference on Smart Computing
- ACM/IEEE International Conference on Human-Robot Interaction
- IEEE International Conference on Robot and Human Interactive Communication.

Program Committee

- Associate Editor, The 8th IEEE RAS/EMBS International Conference on Biomedical Robotics & Biomechanics, New York, NY, 2020
- Technical Program Committee, Big Data Analytics for Internet-of-Things Healthcare, The 5th IEEE Global Conference on Signal and Information Processing: Montreal, Canada, 2017.

Standards Committee

- Chair of the IEEE P1752 *Physical Activity and Mobility Sub-Group* (2017-21). The sub-group is working with international experts to create Open Mobile-Health Standards.

Professional Organizations

- Senior Member Review Panel (2016), IEEE Admission & Advancement, Philadelphia.
- Vice-Chairman, IEEE Engineering in Medicine and Biology Society, Pittsburgh Section, 2013-15.
- Vice-Chairman, IEEE Student Branch, M. S. Ramaiah Institute of Technology, Visvesvaraya Technological University, India, 2004-05.

Science Fairs

- Science Fair Judge, Delaware Valley Science Fairs (2020).

Temple University

University Service

- University Marshall, Temple University (2017-present)
- Educators Delegation from Temple University to Zhejiang Normal University, 2019.

Curriculum Vitae

College of Public Health

- Office of Community Engaged Research and Practice
 - Steering committee (2019-present)
 - Biostats Core Working Group (2021-present).
- Tenure Track Workload Committee (2022).
- Faculty Search Committee
 - Department of Kinesiology (Fall 2020 for two tenure track faculty candidates).
- Committees
 - Tenure Track Workload Committee (Spring 2022-present).

Department of Health and Rehabilitation Sciences

- Faculty Search Committee
 - Department of Health and Rehabilitation Sciences (2018-19, 19-20: for Chair position)
 - Physical Therapy Program, Department of Health and Rehabilitation Sciences (Fall 2019: for two non-tenure track faculty candidates, Spring 2022 for three on-tenure track faculty candidates)
- Organized Human Movement Day 2016 and 2017 to recruit graduate students for the Neuromotor Science and Doctoral of Physical Therapy Programs.
- Committees
 - Neuromotor Science Program Committee (2016-Present)
 - Diversity, Equity, and Inclusion (2020-Present)
 - Marketing, Rankings and Visibility work group, Department of Physical Therapy, Temple University (2017-2019).

University of Pittsburgh

- Graduate student recruitment, Department of Bioengineering (2014).
- Quality of Life Technology Engineering Research Center Student Leadership Council, National Science Foundation Engineering Research Center between Carnegie Mellon University and University of Pittsburgh:
 - Co-chair (2011-13)
 - Industry Chair (2008-10)
 - Education, Outreach, and Diversity Chair (2010-11).
- President, ANKUR Indian Graduate Student Association, University of Pittsburgh, 2008-09.

Media:

May 2022

Department of Defense – Congressionally Directed Medical Research Programs
Consumer involvement story: Melissa Nunn: Integrating as a spinal cord injury lived experience consultant within the Hiremath research team

Link: https://cdmrp.army.mil/cwg/stories/2022/Melissa_Nunn_profile.aspx

February 2022

CPH researchers study movement of those with spinal cord injuries

Link: <https://www.youtube.com/watch?v=6VEuGwl6hnc>

November 2020

Connecting early spinal cord injury treatment with long-term outcomes

Link: <https://cph.temple.edu/about/news-events/news/connecting-early-spinal-cord-injury-treatment-long-term-outcomes>

March 2020

Faculty Interview Series, Online Physical Therapy Programs

Link: <https://onlinephysicaltherapyprograms.com/faculty-research/shivayogi-hiremath/>

August 2018

NIH Hosts mHealth Technology Showcase for Health Researchers, Device Developers, NIH Record Newsletter, Vol. LXX, No. 16, pg 3.

Link: https://nihrecord.nih.gov/newsletters/2018/08_10_2018/story4.htm

July 2018

Video: Philadelphia high school students get an early start in robotics

Link: <https://youtu.be/QWnSjgA6fWE>

June 2018

Video: Adapting fitness technology to help wheelchair users stay active

Link: <https://youtu.be/ggxyao6rafw>

May 2017

PT Faculty Selected for NIH Mobile Health Institute

Link: <https://cph.temple.edu/about/news-events/news/pt-faculty-selected-nih-mobile-health-institute>