

## CURRICULUM VITAE

**Mukul Mukherjee, PhD.**

### **Office Address:**

Center for Research in Human Movement Variability  
BRB#210, Biomechanics Research Building  
6160 University Drive, Omaha, NE 68182-0860  
University of Nebraska at Omaha  
USA

Telephone: (402) 554-3551

Fax: (402) 554-5938

E-mail: [mmukherjee@unomaha.edu](mailto:mmukherjee@unomaha.edu)

[Homepage](#)

My Bibliography in US National Library of Medicine:

<https://www.ncbi.nlm.nih.gov/myncbi/mukul.mukherjee.1/bibliography/public/>

Open Researcher and Contributor ID (ORCID): <http://orcid.org/0000-0001-9653-0556>

Google scholar: <http://scholar.google.com/citations?user=-sJyJkEAAAAJ&hl=en>

Researchgate: [https://www.researchgate.net/profile/Mukul\\_Mukherjee/?ev=hdr\\_xprf](https://www.researchgate.net/profile/Mukul_Mukherjee/?ev=hdr_xprf)

LinkedIn: [www.linkedin.com/pub/mukul-mukherjee/75/627/726/](http://www.linkedin.com/pub/mukul-mukherjee/75/627/726/)

Loop – Research Network (Frontiers): <http://loop.frontiersin.org/people/465310/overview>

## ACADEMIC AND EMPLOYMENT HISTORY

### EDUCATION

- 2011**      **Postdoctoral fellow** University of Nebraska at Omaha  
**Concentration:** Biomechanics, Virtual Reality, Nonlinear Analysis  
 Omaha, Nebraska.
- 2009**      **Postdoctoral fellow** University of Nebraska Medical Center  
 Department of Computer Assisted Surgery  
**Concentration:** Surgical Robotics  
 Omaha, Nebraska.
- 2007**      **Postdoctoral fellow** University of Kansas Medical Center  
**Concentration:** Rehabilitation Robotics  
 Kansas City, Kansas
- 2006**      **Doctor of Philosophy** University of Kansas Medical Center  
**Concentration:** Rehabilitation Science  
**Support Areas:** Biomechanics and Motor Control  
 Kansas City, Kansas  
 Dissertation: *Uncertainty in the Sensorimotor Control of Human Movements.*
- 1998**      **Bachelor of Science (Honors)** Delhi University  
**Concentration:** Physical Therapy  
 New Delhi, India

### ACADEMIC AND RESEARCH APPOINTMENTS

2023-present	Affiliate Faculty	The Center for Brain, Biology and Behavior, University of Nebraska, Lincoln
2018-present	Associate Professor	The Department of Biomechanics, University of Nebraska at Omaha
2012-2018	Research Assistant Professor	The Department of Biomechanics, University of Nebraska at Omaha
2012 - 2014	Assistant Director	The Nebraska Biomechanics Core Facility (NBCF), University of Nebraska at Omaha
2008 - 2012	Instructor	School of HPER, University of Nebraska at Omaha
2010 - 2016	Director	The Virtual Reality Laboratory, Biomechanics Research Building (BRB), University of Nebraska at Omaha
2010 - 2011	Research Associate	The NBCF, BRB, University of Nebraska at Omaha
2008 - 2016	Director	The Robotics Laboratory, NBCF, University of Nebraska at Omaha
2008 - 2009	AHA Postdoctoral Fellow	The NBCF, University of Nebraska at Omaha
2007 - 2009	Research Associate	The Center for Advanced Surgical Technology, University of Nebraska Medical Center, Omaha, Nebraska

2007	Postdoctoral Research Associate	Neuromuscular Research Lab, University of Kansas Medical Center (KUMC), Kansas City, Kansas
2002 - 2006	Graduate Research Assistant	Neuromuscular Research Lab, KUMC, Kansas City, Kansas
2000 - 2002	Graduate Research Assistant	ILEP (International Leprosy) Nerve Function Impairment and Reaction (INFIR) Cohort Study at the Leprosy Mission Hospitals, Naini and Faizabad, India

### **OTHER EXPERIENCE**

1998 - 1999	Physical Therapist	Shubham Nursing Home, New Delhi, India
1998 - 1999	Physical Therapist	Mohinder Hospital, New Delhi, India

### **RESEARCH RELATED GRANTS**

#### **Ongoing Research Support (Faculty)**

##### **1. Tactile-augmented walking in stroke survivors: biomechanics and brain control.**

**Grantor:** UN System Science Collaboration Initiative

**Dates:** 07/01/24-06/30/25

**Cost:** \$100,000

**Role:** PI (30%)

**PI:** Mukherjee

##### **2. Low-cost asymmetric exosuits for home-based constraint induced therapy in rural stroke survivors.**

**Grantor:** UN System Science Collaboration Initiative

**Dates:** 07/01/24-06/30/25

**Cost:** \$97,415

**Role:** Co-PI (20%)

**PI:** Malcolm

#### **Ongoing Research Support (Mentored Student Research)**

##### **1. Optimizing modalities for exosuit training in chronic stroke survivors**

**Grantor:** American Heart Association (Pre-doctoral Fellowship)

**Dates:** 04/01/25-12/31/26

**Cost:** \$69,548

**Role:** Co-Sponsor (0%)

**PI:** Shin

##### **2. Design and development of a soft, passive exosuit for balance control for returning astronauts**

**Grantor:** NASA Nebraska space grant fellowship

**Dates:** 09/01/24- 04/30/25

**Cost:** \$6,000

**Role:** Mentor (0%)

**PI: Rains****3. Tactile Augmented Exoskeleton Assistance Training in Stroke Survivors****Grantor:** NASA Nebraska space grant fellowship**Dates:** 09/01/24- 04/30/25**Cost:** \$5,000**Role:** Mentor (0%)**PI: Engsberg****4. Tactile Augmented Exoskeleton Assistance Training in Stroke Survivors**<https://doi.org/10.58275/AHA.24PRE1196160.pc.gr.190612>**Grantor:** AHA pre-doctoral fellowship #24PRE1196160 [Percentile rank: 10]**Dates:** 01/01/24-012/31/25**Cost:** \$67,388**Role:** Sponsor (0%)**PI: Engsberg****5. The effect of exoskeletal devices on locomotor adaptive ability in healthy human subjects****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/24- 04/30/25**Cost:** \$5,000**Role:** Mentor (0%)**PI: Rains****6. The Effect of Tactile Stimulation on Brain Activity During Walking: The Effect of Walking Speed****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/24- 04/30/25**Cost:** \$5,000**Role:** Mentor (0%)**PI: Engsberg****Completed Research Support (Faculty)****1. Improving gait outcomes in stroke survivors through tactile stimulation: understanding the brain mechanisms.****Grantor:** AHA AIREA #959486 [Merit Score (not specified); Percentile: 1.67]**Dates:** 04/01/22-03/31/25**Cost:** \$154,000**Role:** PI (30%)**PI: Mukherjee****2. Tactile-augmented walking in stroke survivors: biomechanics and brain control.****Grantor:** UN System Science Collaboration Initiative**Dates:** 07/01/22-06/30/24**Cost:** \$40,000**Role:** PI (0%)

**PI: Mukherjee**

**3. At-home stroke rehabilitation using low-cost asymmetric exosuits**

**Grantor:** UN System Science Collaboration Initiative

**Dates:** 06/01/22-05/31/23

**Cost:** \$40,000

**Role:** Co-I (0%)

**PI: Malcolm**

**4. Virtual-reality augmented gait adaptation in stroke survivors.**

**Grantor:** AHA AIREA Award 18AIREA33960251 [Merit Score 1.66/5, Percentile: 14.89]

**Dates:** 07/01/18-11/30/22 [NCE]

**Cost:** \$154,000

**Role:** PI (30%)

**PI: Mukherjee**

**5. MORS: Modular Robotic Suit as an Exercise System for Maintenance of Muscle Strength of Astronauts during Long-Term Space Missions**

**Grantor:** NASA EPSCoR 80NSSC18M0076

**Dates:** 07/01/18-10/11/22

**Cost:** \$1,125,017

**Role:** PI (40%)

**PI: Mukherjee**

**6. Developing and Testing Low-cost 3D Printed Prostheses to Restore and Improve Function of Children with Congenital or Traumatic Below Elbow Amputations**

**Grantor:** UN System Science Collaboration Initiative

**Dates:** 06/01/17-05/31/19

**Cost:** \$150,000

**Role:** Co-I (10%)

**PI: Zuniga**

**7. Center Title: Harnessing movement variability to treat and prevent motor related disorder**

**Purpose and Objectives:** To develop a biomedical center for research studies on human movement variability.

**Grantor:** NIH/NIGMS COBRE 1P20GM109090-01 (*Merit Score: 30*)

**Cost:** \$10,748,897

**Center PI: Stergiou**

**Project Title: The Effects of Virtual Reality on Gait Variability after Stroke**

**Grantor:** NIH COBRE 1P20GM109090-01

**Dates:** 08/01/14-07/31/19

**Cost:** \$761,842

**Role:** PI (100%)

**PI: Mukherjee**

**8. Influence of foot-ground traction on optimality and kinematical execution of gaits performed in reduced gravity****Grantor:** NASA Nebraska Space Grant**Dates:** 08/01/17-05/31/18**Cost:** \$35,000**Role:** Co-I (0%)**PI:** Malcolm**9. Sensory Organization and Movement Variability in those with Ankle Instability****Grantor:** COBRE Pilot grant**Dates:** 08/01/16-07/31/17**Cost:** \$25,000**Role:** Co-I (0%)**PI:** Rosen**10. Development of the Home-based Sensory Organization Test****Grantor:** NASA Nebraska Space Grant**Dates:** 08/01/16-08/30/17**Cost:** \$28,195**Role:** PI (0%)**PI:** Mukherjee**11. Nonlinear Analysis and Pattern Recognition of Variability in Physical Activity after Stroke****Grantor:** COBRE Pilot grant renewal**Dates:** 11/01/15-10/31/16**Cost:** \$30,000**Role:** Co-PI (0%)**PI:** Lee**12. Modular Robotic System for Assessment and Exercise of Human Movement****Grantor:** UNO Sponsored Program**Dates:** 12/01/15-07/31/16**Cost:** \$20,000**Role:** Co-PI (0%)**PI:** Dasgupta**13. Movement Variability, Cortical Activation and Cognitive Load in Ankle Instability****Grantor:** COBRE Pilot grant**Dates:** 08/01/15-07/31/16**Cost:** \$38,000**Role:** Co-PI (0%)**PI:** Rosen**14. Nonlinear Analysis and Pattern Recognition of Variability in Physical Activity after Stroke**

**Grantor:** COBRE Pilot grant

**Dates:** 11/01/14-10/31/15

**Cost:** \$50,000

**Role:** Co-PI (0%)

**PI:** Lee

**15: The Effect of Vestibular Stimulation in Virtual Reality for Locomotor Adaptation in Astronauts**

**Grantor:** NASA Nebraska EPSCoR Research Mini-Grant

**Dates:** 09/01/14-08/31/15

**Cost:** \$50,000

**Role:** PI (25%)

**PI:** Mukherjee

**16. A USA-Ireland partnership to promote research in the area of Physical activity in stroke survivors**

**Grantor:** Faculty Research International

**Dates:** 08/01/14-07/31/15

**Cost:** \$5,000

**Role:** PI (100%)

**PI:** Mukherjee

**17. MRI: Acquisition of ETG-4000 24 Channel Optical Topography System for research, training and outreach activities.**

**Grantor:** National Science Foundation 1229299

**Dates:** 08/01/12-07/31/15

**Cost:** \$233,367

**Role:** Co-I (0%)

**PI:** Stergiou

**18. Role of tactile sensation on locomotor adaptation in astronauts returning from long duration space flights.**

**Grantor:** NASA EPSCoR NNX11AM06A

**Dates:** 07/01/11-06/30/15

**Cost:** \$750,000

**Role:** Co-I (100%)

**PI:** Stergiou

**19. Modular Robotic System for Muscular Strength Training during Long-term Space Missions**

**Grantor:** NASA Nebraska Space Grant

**Dates:** 09/01/14-05/31/15

**Cost:** \$3,750

**Role:** Collaborator (0%)

**PI:** Jose Baca

**20. Sensory interaction in patients with benign paroxysmal positional vertigo during locomotion in space.****Grantor:** NASA Nebraska Space Grant and EPSCoR**Dates:** 09/01/11-05/31/12**Cost:** \$62,500**Role:** Co-I (0%)**PI:** Stergiou**21. Restoration of function post-flight through exercise rehabilitation.****Grantor:** NASA Nebraska Space Grant and EPSCoR**Dates:** 09/01/11-05/31/12**Cost:** \$62,500**Role:** Co-I (0%)**PI:** Blanke**22. Wii Fit for Improving Activity, Gait, and Balance in Alzheimer's Dementia****Grantor:** Alzheimer's Association (New Investigator Research Grant)**Dates:** 01/01/10-12/31/11**Cost:** \$80,000**Role:** Key Person (50%)**PI:** Padala**23. The Use of Virtual Simulations and Robotic Manipulators for the Improvement of Robotic Surgical Educational Training.****Grantor:** Nebraska Research Initiative**Dates:** 7/01/09-06/30/11**Cost:** \$681,057**Role:** Key Person (50%)**PI:** Oleynikov**24. The Effect of Augmented Sensory Feedback in Motor Learning of Upper Limb Movements in Chronic Stroke Survivors****Grantor:** AHA (Postdoctoral Fellowship #0820136Z - *Merit score 1.83/5, Percentile 1.23%*)**Dates:** 01/01/08-12/31/09**Cost:** \$85,000**Role:** PI (100%)**PI:** Mukherjee**Completed Research Support (Mentored Student Research)****1. The effect of tactile stimulation on brain activity during walking: The effect of walking speed****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/22- 04/30/23**Cost:** \$5,000**PI:** Sado



**2. The brain correlates of tactile augmented insole stimulation in sequential patterns during walking****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/22- 04/30/23**Cost:** \$5,000**PI:** Engsberg**3. Gaze Control During the Dynamic Visual Acuity Test****Grantor:** FUSE/Unomaha**Dates:** 05/01/22- 04/30/23**Cost:** \$2000**PI:** Stogdill**4. Gaze Control During the Dynamic Visual Acuity Test****Grantor:** FUSE/Unomaha**Dates:** 05/01/22- 04/30/23**Cost:** \$2000**PI:** Rains**5. Gaze Control During the Dynamic Visual Acuity Test****Grantor:** FUSE/Unomaha**Dates:** 05/01/21-12/15/21**Cost:** \$2000**PI:** Dhakal**6. Inter-limb coordination is impacted by age****Grantor:** FUSE/Unomaha**Dates:** 05/01/21-12/15/21**Cost:** \$2000**PI:** Stogdill**7. Dynamic visual acuity in astronauts****Grantor:** NASA Nebraska Space Grant Fellowship**Dates:** 09/01/20-04/30/21**Cost:** \$3,000**PI:** Mace**8. Differences in perceiving visual verticality and point of emergence of optic flow during walking tasks****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/20-3/01/21**Cost:** \$5,000**PI:** Mace**9. Development of the Home-based Sensory Organization Test**

**Grantor:** Graduate Research and Creative Activity

**Dates:** 05/01/20-3/01/21

**Cost:** \$5,000

**PI:** Sado

**10. Lower inter-limb coordination in chronic stroke survivors**

**Grantor:** American Heart Association (Pre-doctoral Fellowship) 19PRE34380881

**Dates:** 01/01/19-12/31/20

**Cost:** \$53,688

**PI:** Motz

**11. Visual contributions to balance control during gait**

**Grantor:** Graduate Research and Creative Activity

**Dates:** 05/01/19-02/01/20

**Cost:** \$5,000

**PI:** Brozek

**12. The effect of sensory input on the temporal structure of center of pressure in stroke survivor**

**Grantor:** FUSE/Unomaha

**Dates:** 05/01/19-08/30/19

**Cost:** \$2500

**PI:** Chong

**13. Cortical activation dynamics in postural tasks**

**Grantor:** FUSE/Unomaha [*Received - Withdrawn*]

**Dates:** 05/01/19-08/30/19

**Cost:** \$2500

**PI:** Maddisen

**14. Inter-limb coordination in younger and older adults.**

**Grantor:** NASA Nebraska Space Grant Fellowship

**Dates:** 08/01/18-02/28/19

**Cost:** \$2,000

**PI:** Motz

**15. Comparing passive and Active exoskeletons for improving gait adaptation**

**Grantor:** Graduate Research and Creative Activity

**Dates:** 05/01/18-04/30/19

**Cost:** \$5,000

**PI:** Sado

**16. Inter-limb coordination in chronic stroke survivors**

**Grantor:** Graduate Research and Creative Activity

**Dates:** 05/01/18-04/30/19

**Cost:** \$5,000

**PI: Motz**

**17. Development of the Home-based Sensory Organization Test**

**Grantor:** ORCA student fellowship

**Dates:** 05/30/17-05/29/18

**Cost:** \$2500

**PI: Bowman**

**18. Relationship between the Mullen Scales of Early Learning and Posture Control Measures in children with Autism**

**Grantor:** FUSE/Unomaha

**Dates:** 09/01/17-05/30/18

**Cost:** \$2500

**PI: Averhoff**

**19. Relationship between the Mullen Scales of Early Learning and Posture Control Measures in infants**

**Grantor:** FUSE/Unomaha

**Dates:** 09/01/17-05/30/18

**Cost:** \$2500

**PI: Wehrle**

**20. Exploring the Ability in Healthy Young Adults to Couple and Uncouple Postural Sway with Different Environmental Stimuli.**

**Grantor:** NASA Nebraska Space Grant Fellowship

**Dates:** 08/01/17-02/28/18

**Cost:** \$2,000

**PI: Motz**

**21. Effect of a passive Exoskeleton on locomotor adaptation**

**Grantor:** FUSE/Unomaha

**Dates:** 12/01/15-05/30/17

**Cost:** \$2500

**PI: Nielsen**

**22. The home-based sensory organization test (HSOT) as an instrument for measuring balance asymmetry in stroke survivors**

**Grantor:** FUSE/Unomaha [Declined]

**Dates:** 05/30/17-05/29/18

**Cost:** \$2500

**PI: Maxwell**

**23. Locomotor adaptation through multiple sensory modality augmentation in astronauts**

**Grantor:** NASA Nebraska Space Grant Fellowship

**Dates:** 08/01/15-07/31/16

**Cost:** \$5,000

**PI: Fujan-Hansen****24. Asymmetry in the complexity of gait in younger stroke populations****Grantor:** University Committee on Research and Creative Activity student grant**Dates:** 06/01/16-06/30/16**Cost:** \$500**PI: Fujan-Hansen****25. The role of vestibular perception in learning a novel locomotor task****Grantor:** Funds for Undergraduate Scholarly Experiences/Unomaha**Dates:** 12/01/14-05/30/16**Cost:** \$2500**PI: Allison Hoover****26. The effect of split belt walking and virtual reality on the gait symmetry in stroke survivors****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/14-04/30/15**Cost:** \$5000**PI: Rand****27. COP Variability as a Biomarker for Balance During Gait****Grantor:** Graduate Research and Creative Activity**Dates:** 05/01/14-04/30/15**Cost:** \$5000**PI: Pickhinke****28. Affect of sensory input on the temporal structure of center of pressure during standing****Grantor:** University Committee on Research and Creative Activity student grant**Dates:** 04/18/14-06/30/14**Cost:** \$500**PI: Rand****29. Rotating optical flow affects postural balance****Grantor:** University Committee on Research and Creative Activity student grant**Dates:** 06/01/14-06/30/14**Cost:** \$500**PI: Pickhinke****HONORS/AWARDS/MEDIA FEATURE**

1. In the 2018 Annual Report of the IDEA EPSCOR Nebraska; *UNO, UNL Collaboration builds device for NASA*: [[https://epscor.nebraska.edu/-/media/projects/epscor/documents/57012\\_newproof-approved.pdf](https://epscor.nebraska.edu/-/media/projects/epscor/documents/57012_newproof-approved.pdf)]

2. In KMTV broadcast on Monday July 17, 2017; *3D printers to make prosthesis under NU grant*: [<http://www.3newsnow.com/news/local-news/3d-printers-to-make-prostheses-under-nu-grant>]
3. In Unomaha Campus news, Monday July 17, 2017; *NU Team to Research, Design Next Generation of 3D-Printed Prostheses*, by Charley Reed, University Communications: [<https://www.unomaha.edu/news/2017/07/nu-team-to-research-design-next-gen-3d-printed-prostheses.php>]
4. In Omaha World Herald: July 18, 2017. *\$150,000 investment will allow UNO researcher to improve 3-D-printed prosthetic hand for children*. Rick Ruggles. World Herald staff writer. [[http://www.omaha.com/livewellnebraska/health/investment-will-allow-uno-researcher-to-improve--d-printed/article\\_3b4d3de6-6b04-11e7-bb5e-bb412c81ecab.html](http://www.omaha.com/livewellnebraska/health/investment-will-allow-uno-researcher-to-improve--d-printed/article_3b4d3de6-6b04-11e7-bb5e-bb412c81ecab.html)]
5. In UNK news (University of Nebraska at Kearney), Monday July 17, 2017; *UNK's Abushamleh joins NU researchers to design 3D-Printed Prostheses*, by Charley Reed, University Communications: [<http://unknews.unk.edu/2017/07/17/unks-abushamleh-joins-nu-researchers-to-design-3d-printed-prostheses/>]
6. Interview for Kaneko Exhibit, "KINETIC"; video [<https://vimeo.com/220980500>] published in June 2017 in the KANEKO website [<http://thekaneke.org/seasons/kinetic/>]: *KINETIC at KANEKO explores the art & science of movement & the perception of motion*.
7. Ten-year Service Award, University of Nebraska at Omaha, 2017.
8. In UNO Magazine, Spring 2016; *Virtual Reality and Robotics help Stroke Patients Recover*, by Greg Kozol, [[https://issuu.com/aflott/docs/spring\\_16\\_mag/48](https://issuu.com/aflott/docs/spring_16_mag/48)]
9. In Businesswire.com, Oct 07, 2015: *Cadence Biomedical, University of Nebraska Omaha Announce Research Collaboration: New Study to Investigate Motor Adaptations with Kickstart® Use in Stroke Survivors*. [<http://www.businesswire.com/news/home/20151007005403/en/Cadence-Biomedical-University-Nebraska-Omaha-Announce-Research#.VhVf7tbZe-K>]  
[Also featured in Reuters.com, Bloomberg.com, and Yahoo Finance, Oct 07, 2015]
10. In UNO Alumni Magazine, Vol 6, No. 3, 2015; *A Backwards Bicycle that bends your brain*, by Wendy Townley, [<https://unoalumni.org/file/UNO-Magazine-Fall-2015.pdf>]
11. In the 2014 Annual Report of the IDEA EPSCOR Nebraska; *UNO gains \$10.1 million NIH Grant for Biomechanics Center*.
12. In the NASA Nebraska Space Grant website, Nov 2014 for mini-grant award; *The Effect of vestibular stimulation in virtual reality for locomotor adaptation in astronauts*.
13. In KETV newswatch7 broadcast on Sunday August 31 2014 at 10pm; *Exclusive grant to fund game changing research at UNO*: [[www.ketv.com/news/exclusive-grant-to-fund-gamechanging-research-at-uno/27822680#!bOyIsq](http://www.ketv.com/news/exclusive-grant-to-fund-gamechanging-research-at-uno/27822680#!bOyIsq)]
14. In KETV newswatch7 webpage, August 31, 2014; *UNO receives \$10 million grant to study movement variability* by KETV reporter Alex Hoffman: [[www.ketv.com/news/uno-receives-10-million-grant-to-study-movement-variability/27814756#!bOymrq](http://www.ketv.com/news/uno-receives-10-million-grant-to-study-movement-variability/27814756#!bOymrq)]
15. In Unomaha Campus news, August 15, 2014; *UNO Receives Largest Research Grant in School History to Launch Biomechanics Research Center*, by Charley Reed, University Communications: [[www.unomaha.edu/news/2014/08/cobre.php](http://www.unomaha.edu/news/2014/08/cobre.php)]
16. New Invention Notification from UNeMed Corporation (UNMC), June 10, 2014.
17. New Invention Notification from UNeMed Corporation (UNMC), *Research Innovation Awards*, Oct 18, 2012.

18. In Omaha World Herald: August 05, 2013. *\$6 million research building will give UNO a leg up in biomechanics*. Rick Ruggles. World Herald staff writer.
19. In Midlands Business Journal: September 20, 2013, page 37; *Insighter: A snapshot of recent happenings in the areas business community*. [Featured with our donors Ruth and Bill Scott]
20. Five-year Service Award, University of Nebraska at Omaha, 2012.
21. Honorable Mention from College of Education for *Highest Amount Requested for Submitted Grants in the 2011-2012 Academic Year*.
22. American Heart Association *Postdoctoral Fellowship Award*, 2008-2009.
23. Travel grant for *Sigma Xi Annual Meeting and Student Research Conference*, Detroit, Michigan. Nov 2-5, 2006
24. Travel grant for *International Stroke Conference*, Kissimmee, FL, Feb 2006.
25. Merit Scholarship by the Engineer's India Ltd., New Delhi for undergraduate studies in Physical Therapy, 1994-1998.
26. Junior Science Talent Search Examination, New Delhi, India, 1991-1992
27. 2<sup>nd</sup> prize in painting, *Hungarian Information and Cultural Center*, New Delhi, 1987
28. Certificate of Merit, *Shankar's International Children's Painting competition*, New Delhi, 1985
29. Prize, *Shankar's International Children's Painting competition*, New Delhi, 1984
30. Gold Medal, *The Nehru Bal Samiti Painting competition*, New Delhi, 1983

### **SCHOLARSHIPS/FELLOWSHIPS/TRAVEL AWARDS FOR STUDENTS**

1. Sangwon Shin, recognized at the Student Honors Convocation, University of Nebraska at Omaha, Omaha, April 25, 2025, for being awarded the AHA pre-doctoral fellowship.
2. Chris Engsborg, recognized at the Student Honors Convocation, University of Nebraska at Omaha, Omaha, April 25, 2025, for being awarded the AHA pre-doctoral fellowship.
3. Chris Engsborg, "Outstanding" Graduate Poster presentation, Research and Creative Activity Fair, University of Nebraska at Omaha, Omaha, April 11, 2025.
4. Alexia Rains, "Honorable mention" for Graduate Oral presentation, Research and Creative Activity Fair, University of Nebraska at Omaha, Omaha, Mar 22, 2024.
5. Alexia Rains, Qualysis promising researcher award, Human Movement Variability and Great Plains Biomechanics Conference, University of Nebraska at Omaha, Omaha, May 5-6, 2023.
6. Takashi Sado, Theia markerless best clinical impact award, Human Movement Variability and Great Plains Biomechanics Conference, University of Nebraska at Omaha, Omaha, May 5-6, 2023.
7. Takashi Sado: Dr. Etop Essen award for student excellence in scientific presentation, 11<sup>th</sup> Annual International Space Station Research and Development Conference, Technical Sessions, Washington DC, July 25-28, 2022.
8. Stephanie Mace, Outstanding poster award, Human Movement Variability and Great Plains Biomechanics Conference, University of Nebraska at Omaha, Omaha, May 16-20, 2022.
9. Takashi Sado: \$140 Conference award from UCRCA, UNO to attend 28<sup>th</sup> Congress of the International Society of Biomechanics 2021.
10. Stephanie Mace, Outstanding poster award, Human Movement Variability and Great Plains Biomechanics Conference, University of Nebraska at Omaha, Omaha, May 20-21, 2021.
11. Takashi Sado, Outstanding poster award, Human Movement Variability and Great Plains Biomechanics Conference, University of Nebraska at Omaha, Omaha, May 20-21, 2021.

12. Takashi Sado: \$100 Conference award from UCRCA, UNO to attend *SFN global connectome: Virtual Event* – Jan 6, 2020.
13. Takashi Sado: Third place student's poster award – International research forum on biomechanics of running-specific prosthesis. Tokyo, Japan, Feb 20, 2020.
14. Zach Motz: Best scientific achievement award, Human Movement Variability Conference, May 16, 2019.
15. Zach Motz: selected for the Regents Tuition Waiver, 2019.
16. Takashi Sado: Outstanding Graduate Oral presentation award, Research and Creative Activity Fair, UNO, 2019
17. Zach Motz: selected through competition for presenting research at the International Students' Research Forum, Denmark, 2019
18. Zach Motz: Travel award for the NIH Clinical Center's Clinical and Translational Research Course at NIH, Bethesda, MD, 2018
19. Zach Motz: Selected through competition for the NIH Clinical Center's Clinical and Translational Research Course at NIH, Bethesda, MD, 2018.
20. Lauren Wehrle: ORCA 'Outstanding' poster presentation award, UNO, March 2018.
21. Alyssa Averhoff: ORCA 'Meritorious' oral presentation award, UNO, March 2018.
22. Allison Hoover: NASA Nebraska Space Grant fellowship, 2016
23. Lauren Bowman: NASA Nebraska Space Grant fellowship, 2016
24. Jessica Fujan-Hansen: selected for the Regents Tuition Waiver, 2016
25. Jessica Fujan-Hansen: ORCA Best Poster presentation award, UNO, March 2016.
26. Jessica Fujan-Hansen: Selected through competition for attending the Summer School on Neurorehabilitation at Baiona, Spain, 2016.
27. Troy Rand: Selected through competition for the NIH Clinical Center's Clinical and Translational Research Course at NIH, Bethesda, MD, 2015
28. Troy Rand: Selected through competition for the Summer School on Neurorehabilitation at Valencia, Spain, 2015
29. Troy Rand: AMTI Travel award for attending the Summer School on Neurorehabilitation at Valencia, Spain, 2015
30. Jessica Fujan-Hansen: Summer graduate fellowship, 2015.
31. Jessica Fujan-Hansen: Phi Delta Gamma Scholarship, 2015.
32. Allison Hoover: NASA Nebraska Space Grant fellowship, 2014.
33. Kimberly Leuders: NASA Nebraska Space Grant fellowship, 2014.
34. Troy Rand: COE Travel award for attending the Neuroscience conference, Washington DC, 2014.
35. Troy Rand: Graduate studies Travel award for attending the Neuroscience conference, Washington DC, 2014.
36. Josh Pickhinke: Graduate studies Travel award for attending MMVR conference, Manhattan Beach, CA, 2014.
37. Josh Pickhinke: COE Travel award for attending the World Congress of Biomechanics, Boston, MA, 2014.

### **PROFESSIONAL Memberships**

1. 2022- Member, IEEE/EMBS – Engineering in Medicine and Biology Society
2. 2022- Member, Society for the Neural Control of Movement
3. 2022- Member, American Physiological Society
4. 2016- Member, World Stroke Organization

5. 2016- Member, NM4R – Neuromodulation for Rehabilitation Group
6. 2010- Member, Stroke Council, American Heart Association
7. 2009- Member, American Heart Association
8. 2008- Member, International Brain Research Organization
9. 2008- Member, Society for Neuroscience
10. 2006- Member, American Society of Biomechanics
11. 2006- Member, International Society of Biomechanics
12. 2006- Member, Sigma Xi Research Society

### **JOURNAL REVIEWER**

1. 2022- *BMC Sports Science*
2. 2022- *Medicine and Rehabilitation*
3. 2022- *Biomedical Engineering Online*
4. 2020- *Frontiers for Young Minds*
5. 2020- *Frontiers in Neurology*
6. 2019- *IEEE Robotics and Automation*
7. 2017- *Topics in Stroke Rehabilitation*
8. 2016- *Attention, Perception and Psychophysics*
9. 2016- *Human Movement Sciences*
10. 2016- *Nature Scientific Reports*
11. 2015- *Virtual Reality*
12. 2015- *Journal of NeuroEngineering and Rehabilitation*
13. 2015- *Clinical Neurology and Neurosurgery*
14. 2014- *Laterality: Asymmetries of Body, Brain and Cognition*
15. 2013- *Journal of Neurophysiology*
16. 2013- *Journal of Gerontology Psychological Sciences*
17. 2013- *PLOS One*
18. 2012- *Physical Therapy*
19. 2012- *Experimental Brain Research*
20. 2012- *Annals of Biomedical Engineering*
21. 2012- *Neurorehabilitation and Neural Repair*
22. 2012- *Journal of Applied Biomechanics*
23. 2012- *Transactions on Neural Systems & Rehabilitation Engineering*
24. 2011- *Journal of Biomechanics*
25. 2010- *Gait and Posture*
26. 2009- *Stroke*
27. 2009- *Archives of Physical Medicine & Rehabilitation*
28. 2009- *CyberPsychology and Behavior*
29. 2009- *Neuroscience Letters*

### **EDITORIAL BOARD MEMBER**

1. 2023 onwards – *Scientific Reports*
2. 2020 onwards – *Frontiers for Neuro Ergonomics* [Review Editor for *Clinical Neuroergonomics*]
3. 2018 onwards – *Frontiers for Young Minds* [Review Editor for *Understanding Neuroscience*]
4. 2015 onwards – *Brain Sciences*



**GRANT REVIEWER**

1. 2025 – Peer Reviewer, Small Business Innovation Research (SBIR) Program-Phase II, National Institute of Disability, Independent Living and Rehabilitation Research (*US Dept. of Education*), *April 22-24*.
2. 2025 – Peer Reviewer, Field Initiated Projects Program (Research and Development), National Institute of Disability, Independent Living and Rehabilitation Research (*US Dept. of Education*), *April 15-17*.
3. 2024 – Peer Reviewer, NSF Mind, Machine and Motor Nexus (M3X), Division of Civil, Mechanical and Manufacturing Innovation (CMMI), *April 5, 2024*.
4. 2023 – Peer Reviewer, American Heart Association: Pre-doctoral and post-doctoral Fellowships (Bioengineering and Technology II), *Nov 10*.
5. 2023 – Peer Reviewer, Rehabilitation Engineering Research Centers (RERC) Program: RERC on Rehabilitation Strategies, Techniques and Interventions, National Institute of Disability and Rehabilitation Research (*US Dept. of Education*), *May 9-11*.
6. 2023 – Peer Reviewer, American Heart Association: Career Development Award (Bioengineering Committee), *March 2*.
7. 2022 – Peer Reviewer, American Heart Association: Career Development Award (Bioengineering Committee)
8. 2021 – Peer Reviewer, American Heart Association: Career Development Award (Bioengineering Committee)
9. 2019 – Peer Reviewer, Switzer Research Fellowships Program, National Institute of Disability, Independent Living and Rehabilitation Research (*US Dept. of Education*), *March 26-28, 2019*.
10. 2019 – Peer Reviewer, International Students Research Forum, travel grant awards, *University of Nebraska Medical Center, Omaha. Feb 21, 2019*.
11. 2018 – Invited Reviewer, faculty grant program, Center for Health + Technology Clinical Neuroscience pilot program (*University of Rochester, Rochester, NY*), *August 2018*.
12. 2018 – Peer Reviewer, Small Business Innovation Research – Phase I, National Institute of Disability, Independent Living and Rehabilitation Research (*US Dept. of Education*), *March 6-8*.
13. 2017 – Peer Reviewer, National Science Foundation, Perception Action and Cognition, *September 16, 2017*.
14. 2017 – Peer Reviewer (Alternate), DRRP on Health & Function for Individuals with Physical Disabilities, National Institute of Disability, Independent Living and Rehabilitation Research (*US Dept. of Education*), *May 2-4*.
15. 2017 – Peer Reviewer, Small Business Innovation Research – Phase I, National Institute of Disability, Independent Living and Rehabilitation Research (*US Dept. of Education*), *April 3-5*.
16. 2016 – Peer Reviewer, Graduate Research and Creative Activity Awards, ORCA, University of Nebraska at Omaha. *Nov 2016*.
17. 2016 – Peer Reviewer, Type I Diabetes Pathfinder Award, NIH/NIDDK National Institute of Diabetes and Digestive and Kidney Diseases Special, Bethesda, MD, *July 14, 2016*.
18. 2015 – Peer Reviewer, Graduate Research Fellowship, National Science Foundation, *Sep 9-11*.

19. 2015 – Peer Reviewer, Graduate Research and Creative Activity Awards, Office of Research and Creative Activity, University of Nebraska at Omaha. April 9-11.
20. 2014 – Peer Reviewer, RRTC on Health & Function for Individuals with Physical Disabilities, National Institute of Disability and Rehabilitation Research (US Dept. of Education), Sep 9-11.
21. 2014 – Peer Reviewer, DRRP on Health & Function for Individuals with Physical Disabilities, National Institute of Disability and Rehabilitation Research (US Dept. of Education), April 9-11.
22. 2013 – Peer Reviewer, DRRP on Health & Function for Individuals with Physical Disabilities, National Institute of Disability and Rehabilitation Research (US Dept. of Education), August 21-23.
23. UNMC Graduate Fellowship 2010 Bioinformatics section.

### **PANEL MEMBER**

1. National Strategic Research Institute (NSRI) Panel/Exhibitor at *Military Health System Research Symposium* at Orlando, FL, Aug 26-30, 2024. Mukherjee M. Portable devices for mobile rehabilitation.
2. Mukherjee M, Sado T, Chae JS, Nelson CA, Baca J. MORS: Modular robotics as a counter measure to prevent muscle atrophy in astronauts during long duration space missions. *10<sup>th</sup> Annual International Space Station Research and Development Conference, Technical Sessions, August 9-18, 2021. [Panel presentation]*.
3. Omaha STEM ecosystem Pathways to emerging technology: Virtual Reality Technology in the workplace, today and tomorrow. March 27, 2018.
4. Mukherjee M., Chien JH, Arnold B, Myers S, Stergiou N. Tactile stimulation enhances locomotor adaptation. *The 84<sup>th</sup> Annual Scientific Meeting of the Aerospace Medical Association*. Chicago, IL, May 12-May 16, 2013. *[Panel presentation]*.

### **SERVICE IN COMMITTEES**

#### Departmental Chair (Biomechanics)

Acting Chair, Department of Biomechanics, [Fall 2018-Spring 2019]

#### Committee Chair

GPC Committee, BMCH [Fall 2024-2027]

RPT Committee, BMCH [Fall 2017-2021]

Faculty Search Committee, Department of Biomechanics, BRB [Fall 2015-Spring 2016]

Doctoral Program Committee, BMCH and HPER [Fall 2014]

#### Committee Member

Graduate Committee, CEHHS, UNO [Fall 2024 -]

Doctoral Program Committee, HPER/BMCH [Spring 2014-present]

RPT Committee, BMCH [Fall 2020-]

RPT Committee, BMCH [Fall 2015-Spring 2017]

Academic Standards and Policy Committee, COE [Fall 2015-Spring 2017]

Library and Learning Services Committee, UNO [Fall 2014-Spring 2017]

Management Committee, BRB [2012-2016]

COBRE Faculty Search Committee, Biomechanics Research Building, UNO [Fall 2014-Spring 2015]

**ADVISING and TEACHING ACTIVITY*****Doctoral Dissertation Committee:******A. Committee Chair:***

1. Chris Engsberg (2023-)
2. Takashi Sado (2019-2023)
3. Zach Motz (2017-2020)
4. Jessica Fujan-Hansen (2015-2018)
5. Troy Rand (2013-2018)
6. Bryon Applequist (2013-2017)

***B. Committee Member:***

1. Narges Shakerian (2024-)
2. Alli Grunkemeyer (2023-)
3. Sangwon Shin (2023-)
4. Kaitlin Fraser (2021-)
5. Chris Copeland (2020-)
6. Alex Dzewaltowski (2018-2023)
7. Liz Pekas (2018-2023)
8. Jay Chae (2017-2023)
9. Ryan Meidinger, UNO (2018-2023)
10. Abderrahman Ouattas (2018-2022)
11. Jenny Kent, UNO (2015-2018)
12. Jung Hung Chien, UNMC (2010-2015)

***Master's Thesis Committee:******A. Committee Chair:***

1. Alexia Rains (2023-)
2. Chris Engsberg (2021-2023)
3. Stephanie Mace (2020-2022)
4. Kyle Brozek (2018-2020)
5. Takashi Sado (2017-2019)
6. Dan Ridenour (2016-2018)

***B. Committee Member:***

1. Ana Pineda Gutierrez (2023-)
2. Chandler Brock (2022-)
3. Hiva Razavi (2022-)
4. Liliana Delgado (2021-2023)
5. Seongwoo Mun (2021-2022)
6. Kayla Kowalczyk (2020-2022)
7. Christopher Copeland (2017-2020)
8. Corbin Rasmussen (2017-2019)
9. Todd Leutzinger (2017-2019)
10. Austin Duncan (2016-2018)
11. James Pierce (2016-2018)
12. Molly Schieber (2014-2017)

13. William Denton (2014-2017)
14. Zach Motz (2014-2016)
15. Alek Diffendaffer, UNO (2012-2014)
16. Troy Rand, UNO (2011-2013)

***Graduate Advising (Non-thesis/dissertation/Comprehensive examination)***

1. Gabriel Shewfelt [2025]
2. Marcus Santos [2025]
3. Adrien Petigny [2025]
4. Jenny Maun [2021]
5. Peter Kostrunek [2020]
6. Nick Than [2017]
7. Sarah Baker [2017]
8. Josh Pickhinke [2015]
9. Jessica Fujan-Hansen [2014]
10. Julio Cajas [2014]
11. Brendan Raybourn [2011]
12. Abby Johnson [2010]
13. Christopher Richardson [2010]
14. Kelly Craig [2009]

***Teaching Advising***

1. Taylor Kinney, BMCH Anatomy and Physiology I Lab, UNO (Fall 2021).
2. Logan White, BMCH Anatomy and Physiology II Lab, UNO (Fall 2021).
3. Kaitlin Fraser, BMCH Anatomy and Physiology II Lab, UNO (Spring 2021).
4. Kaitlin Fraser, BMCH Anatomy and Physiology II Lab, UNO (Fall 2020).

***Undergraduate Advising***

1. Esha Noor Butt (2025-)
2. Sohan Shrestha (2024-)
3. Alexia Rains (2020-2023)
4. Isha Dhakal (2020-2023)
5. Hannah Stogdill (2020-2023)
6. Maria Salha (2020)
7. Samantha Hui Wen Chong, UNO (2018-2020).
8. Maddisen Mohnsen, UNO (2018).
9. Jan Dam, UNO (2018).
10. Lauren Bowman UNO (2016-2018)
11. Daniel Maxwell, UNO (2017)
12. Jarron Storm, UNO (2016)
13. Aaron Anderson, Creighton University (2014)
14. James Nielsen, UNO (2014-2017)
15. Rebecca Tuemler, UNO (2014-2016)
16. Megan Catlett, UNO (2014-2016)
17. Allison Hoover, UNO (2014-2017)
18. Kimberley Lueders, UNO (2014)

19. Bryan Arnold, UNO (2011-2014)
20. Will Heida, UNO (2013)
21. Austin Davidson, UNO (2010-2013)

***Medical/Engineering Student Advising***

1. William Guo, Biomedical Engineering student, University of Wisconsin (Summer 2018)
2. John Graden Hudson, MS student in Human Computer Interaction at Iowa State University (Fall 2016) - *advising for a HCI project.*
3. Mohan Ambati (2016-2017), Engineering student from UNO PKI
4. Douglas Rowen, Biomedical Engineering student, UNL (Summer 2015)
5. Alexandra Pollack, MD student, Creighton University (Summer 2014)
6. Mitchel White, Biomedical Engineering student, UNL (Summer 2014)
7. Songita Choudhury, MD-PhD student (Summer 2013)

***School Student Advising:***

1. Noah Bastola, High School Senior (Summer 2015)
2. Caelan Young, 7<sup>th</sup> grade – advising for a school science project

***Laboratory Technician Advising***

1. Troy Rand, UNO (2016-2018)
2. Patrick Meng-Frecker, UNO (2014-2016).

***Postdoctoral Research Associate Advising***

1. Pieter van den Berghe, UNO (2024-).
2. Jose Baca, UNO (2013-2017).
3. Pradeep Ambati, UNO (2014-2016).
4. Dirk-Jan Eikema, UNO (2013-2015).

***Co-Mentoring graduate students with Dr. Nick Stergiou at UNO and Dr. Wen Liu at KUMC***

1. Chun-Kai Huang, doctoral student, UNMC (2010- 2015).
2. Chi-Wei Tan, doctoral student, UNMC (2010-2011).
3. Panagiotis Koutakis, doctoral student, UNMC (2010).
4. Jeffery Kaipust, Master's student, UNO (2008-10).
5. Irene Lee, doctoral student, UNMC (2007- 2011).
6. Dimitros Katsavelis, doctoral student, UNMC (2007- 2010).
7. Carrie Park, Doctor of Physical Therapy student, KUMC (2005-06).

***Co-Mentoring postdoctoral students with Dr. Nick Stergiou at UNO***

2. Mu Qiao, UNO (2012-2014).
3. Yawen Yu, UNO (2011- 2013).
4. Srikant Vallabhajosula, UNO (2011- 2012).
5. Shihyun Park, UNO (2010- 2011).

**TEACHING ACTIVITY:**

1. Instructor, PE 9910: Doctoral Seminar Study, Chris Engsborg, UNO (Spring 2025).

2. Instructor, BMKI 9500: Motor Learning II, UNO (Spring 2025).
3. Instructor, BMCH 8400/9401: Motor Learning I, UNO (Fall 2024).
4. Instructor, PE 9910: Doctoral Seminar Study, Chris Engsborg, UNO (Fall 2024).
5. Instructor, BMCH 8910: Independent Study, Chris Engsborg, UNO (Fall 2024).
6. Instructor, BMCH 8900: Independent Research, Alexia Rains, UNO (Fall 2024).
7. Instructor, BMCH 9510: Motor Control II, UNO (Spring 2024).
8. Instructor, BMCH 8910: Independent Study, Alexia Rains, UNO (Spring 2024).
9. Instructor, BMCH 8910: Independent Study, Chris Engsborg, UNO (Fall 2023).
10. Instructor, BMCH 8410/BMKI 9411: Motor Control I, UNO (Fall 2023).
11. Instructor, BMCH 8910: Independent Study, Chris Engsborg, UNO (Spring 2023).
12. Instructor, BMCH 8900: Independent Research, Chris Engsborg, UNO (Spring 2023).
13. Instructor, BMKI 9500: Motor Learning II, UNO (Spring 2023).
14. Instructor, BMCH 8400/9401: Motor Learning I, UNO (Fall 2022).
15. Instructor, BMCH 8910: Independent Study, Chris Engsborg, UNO (Fall 2022).
16. Instructor, BMCH 8900: Independent Research, Chris Engsborg, UNO (Spring 2022).
17. Instructor, BMCH 8910: Independent Study, Takashi Sado, UNO (Spring 2022).
18. Instructor, PE 9910: Doctoral Seminar Study, Takashi Sado, UNO (Spring 2022).
19. Instructor, BMCH 9510: Motor Control II, UNO (Spring 2022).
20. Instructor, BMCH 2500: Anatomy and Physiology II, UNO (Fall 2021).
21. Instructor, BMCH 2400: Anatomy and Physiology I, UNO (Fall 2021).
22. Instructor, BMCH 8910: Independent Study, Stephanie Mace, UNO (Fall 2021).
23. Instructor, BMCH 8900: Independent Research, Stephanie Mace, UNO (Fall 2021).
24. Instructor, BMCH 8900: Independent Research, Takashi Sado, UNO (Fall 2021).
25. Instructor, PE 9910: Doctoral Seminar Study, Takashi Sado, UNO (Fall 2021).
26. Instructor, BMCH 8900: Independent Research, Ryan Meidinger, UNO (Spring 2021).
27. Instructor, PE 9910: Doctoral Seminar Study, Takashi Sado, UNO (Spring 2021).
28. Instructor, BMCH 8900: Independent Research, Stephanie Mace, UNO (Spring 2021).
29. Instructor, BMCH 2500: Anatomy and Physiology II, UNO (Spring 2021).
30. Instructor, BMCH 8910: Independent Study, Takashi Sado, UNO (Fall 2020).
31. Instructor, PE 9910: Doctoral Seminar Study, Takashi Sado, UNO (Fall 2020).
32. Instructor, BMCH 2500: Anatomy and Physiology II, UNO (Fall 2020).
33. Instructor, PE 9910: Doctoral Seminar Study, Takashi Sado, UNO (Spring 2020).
34. Instructor, BMCH 8910: Independent Study, Joao Gomes, UNO (Spring 2020).
35. Instructor, BMCH 9510: Motor Control II, UNO (Spring 2020).
36. Instructor, BMCH 8910: Independent Study, Kyle Brozek, UNO (Fall 2019).
37. Instructor, BMCH 8900: Independent Research, Kyle Brozek, UNO (Fall 2019).
38. Instructor, BMCH 8420/9421: Motor Development, UNO (Fall 2019).
39. Instructor, BMCH 8910: Independent Study, Kyle Brozek, UNO (Spring 2019).
40. Instructor, BMCH 8910: Independent Study, Zach Motz, UNO (Spring 2019).
41. Instructor, BMCH 8910: Independent Study, Zach Motz, UNO (Fall 2018).
42. Instructor, BMCH 8400/9401: Motor Learning I, UNO (Fall 2018).
43. Instructor, BMCH 9510: Motor Control II, UNO (Spring 2018).
44. Invited lecturer, Advanced Biomechanics II, UNO (Spring 2018)
45. Instructor, BMCH 8910: Independent Study, Austin Duncan, UNO (Fall 2017).
46. Invited lecturer, Motor Learning II, BMCH 9500, UNO (Spring 2017)
47. Invited lecturer, Advanced Biomechanics II, UNO (Spring 2017)

48. Instructor, HPER 8100: Independent Study, Troy Rand, UNO (Fall 2016).
49. Instructor, HPER 8100: Independent Study, Jessica Fujan-Hansen, UNO (Fall 2016).
50. Instructor, HPER 8100: Independent Study, Troy Rand, UNO (Fall 2015).
51. Instructor, HPER 8100: Independent Study, Christopher Collins, UNO (Summer 2015).
52. Invited lecturer, Motor Learning I, BMCH 8400/9401, UNO (Fall 2014)
53. Invited lecturer, Advanced Biomechanics II, UNO (Spring 2014)
54. Instructor, HPER 8100: Independent Study, Josh Pickhinke, UNO (Spring 2013).
55. Instructor, PE 8400: Motor Learning, UNO (Spring 2013).
56. Co-Instructor, PE 8410: Motor Control, UNO (Fall 2012).
57. Co-Instructor, PE 8400: Motor Learning, UNO (Spring 2010).
58. Instructor, PE 8400: Motor Learning, UNO (Fall 2008).
59. Co-Instructor, PE 8410: Motor Control, UNO (Spring 2008).
60. Graduate teaching assistant Instrumental Analysis of Human Motion (Fall 2004).

## **BIBLIOGRAPHY**

My Bibliography in US National Library of Medicine:

<https://www.ncbi.nlm.nih.gov/myncbi/mukul.mukherjee.1/bibliography/public/?sortby=pubDate&sdirection=descending>

## **ARTICLES IN PEER REVIEWED JOURNALS**

1. Engsberg CP, Hunt NH, Barlow S, **Mukherjee M**. Effect of Vibro-Tactile Stimulation Sequence and Support Surface Inclination on Gait and Balance Measures. *Brain Sciences*. 2025; 15(2):138. <https://doi.org/10.3390/brainsci15020138>
2. Engsberg C, Hunt N, **Mukherjee M**. Gait Kinematics Dependent Plantar Stimulation. *Annu Int Conf IEEE Eng Med Biol Soc*. 2024; pp. 1-4, <https://doi.org/10.1109/EMBC53108.2024.10782134>.
3. Rand TJ, **Mukherjee M**. Structured visual and somatosensory stimuli evoke modality-invariant positional and modality specific velocity dynamics during standing, 30 August 2023, PREPRINT (Version 1) available at Research Square <https://doi.org/10.21203/rs.3.rs-3275206/v1>
4. Kowalczyk KM, **Mukherjee M**, Malcolm P. Can a passive unilateral hip exosuit diminish walking asymmetry? A randomized trial. *J NeuroEngineering Rehabil* **20**, 88 (2023). <https://doi.org/10.1186/s12984-023-01212-w>. PMID: 37438846, PMCID: [PMC10339586](https://pubmed.ncbi.nlm.nih.gov/PMC10339586/)
5. Mangalam M, Skiadopoulou A, Siu KC, **Mukherjee M**, Likens A, and Stergiou N. Leveraging a virtual alley with continuously varying width modulates step width variability during self-paced treadmill walking. *Neuroscience Letters*. [10.1016/j.neulet.2022.136966](https://doi.org/10.1016/j.neulet.2022.136966)
6. Rasmussen CM, Curtze C, **Mukherjee M**, Hunt N, Slipping Mechanics during Walking Along Curved Paths Depend on the Biomechanical Context at Slip Onset. *Scientific Reports*. **12**, 17801 (2022). <https://doi.org/10.1038/s41598-022-21701-7>
7. Sado T, Motz, Z, Yentes J, **Mukherjee M**. Passive Exoskeleton-Assisted Gait Shows a Unique Interlimb Coordination Signature Without Restricting Regular Walking. *Front. Physiol*. 2022, 13:916185. <https://doi.org/10.3389/fphys.2022.916185> [Pre-print: <https://www.researchsquare.com/article/rs-1327967/v1> Takashi Sado, Zachary Motz, Jennifer M. Yentes et al. Passive exoskeleton assisted treadmill walking reduces duration

- and synchrony of inter-limb coordination, 23 February 2022, PREPRINT (Version 1) available at Research Square].
8. Sado. T., Nielsen J, Glaister B, Takahashi K, Malcolm P, **Mukherjee M.** A passive exoskeleton device can assist split-belt adaptation. *Experimental Brain Research*. 2022, 240: 1159-1176. <https://link.springer.com/article/10.1007/s00221-022-06314-w>
  9. Yufeng L, **Mukherjee M**, Stergiou N, Chien JH. Using mastoid vibration to detect age-related uni/bilateral vestibular deterioration during standing. *Journal of Vestibular Research*. 2022;32(2):145-154. <https://doi.org/10.3233/VES-210042>
  10. Copeland C., **Mukherjee M.**, Wang Y., Fraser, K, Zuniga, J. Changes in sensorimotor cortical activation in children using prostheses and prosthetic simulators. *Brain Sciences*. 2021, 11(8), 991; <https://doi.org/10.3390/brainsci11080991>
  11. Yao J., Sado. T., Wang W., Gao J., Zhao Y., Qi Q., **Mukherjee M.** The Kickstart Walk Assist system for improving balance and walking function in stroke survivors: a feasibility study. *Journal of NeuroEngineering and Rehabilitation*. 18, 42 (2021). <https://doi.org/10.1186/s12984-020-00795-y>
  12. Vaz JR, Rand TJ, Fujan-Hansen J, **Mukherjee M**, Stergiou N. Auditory and visual external cues have different effects on spatial but similar effects on temporal measures of gait variability. *Frontiers in Physiology*. 2020 11:67. <https://doi.org/10.3389/fphys.2020.00067>
  13. Meade Z, Marmelat V, **Mukherjee M**, Sado, T, Takahashi, K. Comparison of a portable balance board for measures of persistence in postural sway. *Journal of Biomechanics*. 2020 Jan 3:109600. <https://doi.org/10.1016/j.jbiomech.2020.109600>
  14. Kent JA, Sommerfeld JH, **Mukherjee M**, Kota Z Takahashi, KZ, Stergiou N. Locomotor patterns change over time during walking on an uneven surface. *Journal of Experimental Biology*. 2019 July 16. <https://doi.org/10.1242/jeb.202093>
  15. Rosen AB, Yentes JM, McGrath ML, Maerlander AC, Myers SA, **Mukherjee M.** Alterations in cortical activation among individuals with chronic ankle instability during single-limb postural control. *Journal of Athletic Training*. 2019 Jun 4. <https://doi.org/10.4085/1062-6050-448-17>.
  16. Rand TJ, Ambati P, **Mukherjee M.** Persistence in postural dynamics is dependent on constraints of vision, postural orientation and the temporal structure of postural perturbations. *Experimental Brain Research*. 2019 Mar; 237(3): 601-610. <https://doi.org/10.1007/s00221-018-5444-7>. Epub 2018 Dec 1.
  17. Rafalt P, Vallabhajosula S, Renz J, **Mukherjee M**, Stergiou N. Lower limb joint angle variability and dimensionality is different in stairmill climbing and treadmill walking. *Royal Society Open Science*. 2018. 5: 180996. <http://dx.doi.org/10.1098/rsos.180996>.
  18. Dutt-Mazumder, A., Rand TJ, **Mukherjee M**, Newell, K.M. Scaling oscillatory platform frequency reveals recurrence of intermittent postural attractor states. *Sci Rep*. August 2018. 8(1) 11580. <https://doi.org/10.1038/s41598-018-29844-2>
  19. Rosen A.B., Yentes J.M., McGrath M.L., Myers S., Maerlander A.C., **Mukherjee, M.** Cortical Activation Variability is Altered in Individuals with Chronic Ankle Instability During Single-Limb Postural Control. *Journal of Athletic Training*. [In Press]
  20. Rand TJ, **Mukherjee M.** Transitions in persistence of postural dynamics depend on the velocity and structure of postural perturbations. *Experimental Brain Research*. 2018 Mar 21. <https://doi.org/10.1007/s00221-018-5235-1>



21. **Mukherjee, M.**, Yentes, J. Movement variability: A perspective on success in sports, health, and life. *Scandinavian Journal of Medicine and Science in Sports*. Editorial. 26 Feb 2018. doi: <https://doi.org/10.1111/sms.13038>
22. Rafalt, P., Vallabhajosula, S., Renz, J., **Mukherjee, M.**, Stergiou, N. (2017). Dynamics of stride interval characteristics during continuous stairmill climbing. *Frontiers in Physiology*. Aug 23;8:609. <https://doi.org/10.3389/fphys.2017.00609>
23. Baca, J., Ambati, M.S., Dasgupta, P., **Mukherjee, M.** (2017) A Modular Robotic System for Assessment and Exercise of Human Movement. In: Chang I., Baca J., Moreno H., Carrera I., Cardona M. (eds) *Advances in Automation and Robotics Research in Latin America, pp 61-70, Lecture Notes in Networks and Systems*, Vol 13. Springer, Cham. [http://link.springer.com/chapter/10.1007/978-3-319-54377-2\\_6](http://link.springer.com/chapter/10.1007/978-3-319-54377-2_6)
24. Rosen, A.B., Than, N., Smith, W.Z., Yentes, J.M., McGrath, M.L., **Mukherjee, M.**, Myers, S., Maerlander, A.C. (2017). Attention is Associated with Postural Control in Those with Chronic Ankle Stability. *Gait and Posture*. Feb 24;54:34-38.
25. Chien, J.H., Ambati, P., Huang, C-K, **Mukherjee, M.** (2017). Tactile stimuli affect long-range correlations of stride interval and stride length differently during walking. *Experimental Brain Research*. 2017 April; 235(4): 1185-1193. doi: 10.1007/s00221-017-4881-z.
26. Chien, J.H., **Mukherjee, M.**, Kent, J.A., Stergiou, N. (2017). Mastoid vibration affects dynamic postural control during gait in healthy older adults. *Sci. Rep.* Jan 27;7:41547.
27. Chien, J.H., **Mukherjee, M.**, Stergiou N. (2016). Mastoid vibration affects dynamic postural control during gait. *Annals of Biomedical Engineering*. Sep;44(9):2774-84.
28. Eikema, D.J., Chien, J.H., Myers, S.A., Scott-Pandorf, M., Bloomberg, J.J., Stergiou, N., **Mukherjee, M.** (2016). Optic flow improves adaptability of spatiotemporal characteristics during split-belt locomotor adaptation with tactile stimulation. *Experimental Brain Research*. Feb;234(2):511-22.
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#### PEER-REVIEWED ABSTRACTS

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77. Huang C-K, Chien JH, Myers, SA, **Mukherjee M**, Stergiou, N. The effect of tactile stimuli on the locomotor rhythm depends on the characteristics of the tactile signal. *Proceedings of the 28<sup>th</sup> Annual Meeting of the American Society for Gravitational and Space Research*. New Orleans, LA, 2012.
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- 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, Florida, August 2012.
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91. Chien JH, Huang C-K, **Mukherjee M.**, Siu K-C, Stergiou N. Sensory Interactions under Perturbations during Locomotion in Healthy Individuals. *Proceedings of the Society for Neurocience 41<sup>st</sup> Annual Meeting, Washington DC, Nov 12-16, 2011*.
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100. Koutakis P., **Mukherjee, M.**, Strasser R., Stergiou, N. Path integration of human walking on a circular path: The effect of the vestibular system. *Neuroscience, San Diego, CA, Nov 13-17, 2010*.
101. Siu K-C, Chien J.C., **Mukherjee, M.**, Katsavelis, D., Park SH, Stergiou, N. Walking in a Moving Virtual Corridor with Variable Width Amplitude affects Step Width Variability. *Neuroscience, San Diego, CA, Nov 13-17, 2010*.
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103. Siu K-C, **Mukherjee, M.**, Katsavelis, D., Chien J.C., Stergiou, N. The Width of a Moving Virtual Corridor affects Step Width Control. *Proceedings of the Annual Meeting of Gait and Clinical Movement Analysis Society, Miami, Florida, May 12-15, 2010*.
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106. Suh IH., Chien JC, **Mukherjee M.**, Park SH, Oleynikov D., Siu K-C. The Negative Effect of Distraction on Performance of Robot-assisted Surgical Tasks between Expert and Novice. *Proceedings of the The International Congress of the Minimally Invasive Robotic Association, San Diego, CA. January 27-30, 2010*.
107. Chien JC, Tiwari M, Suh IH., **Mukherjee M.**, Park SH, Oleynikov D., Siu K-C. The Trade-off between Accuracy and Speed in Robot-assisted Surgery Obeys Fitt's Law. *Proceedings of the The International Congress of the Minimally Invasive Robotic Association, San Diego, CA. January 27-30, 2010*.
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110. Chen S-J, **Mukherjee M.** Grasping Handrail Alters Joint Moments of the Lower Limbs during Stair Ascent. *Proceedings of the XXIst Annual International Occupational Ergonomics and Safety Conference*. Dallas, Texas, USA, June 11-12, 2009.74-77.
111. Suh IH., Siu K-C, **Mukherjee M.**, Monk E, Shah BC, Oleynikov D., Stergiou N. Analysis of Fundamental Skill Retention in a Novel Robotic Surgery Training Program. Society of American Gastrointestinal and Endoscopic Surgeons annual meeting Phoenix, Arizona, April 22-25, 2009. *Surgical Endoscopy*. Vol 23, S1, April 2009.

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113. **Mukherjee, M.**, Katsavelis, D., Stergiou, N. The effect of virtual reality on locomotor adaptation. *Neuroscience*. Washington, D.C., November 2008.
114. **Mukherjee M**, Kim SH, Liu W. Motor Learning of Reaching Movements in Randomized Force Fields in chronic stroke survivors. *Journal of Biomechanics*, 41:S138, July 2008.
115. Liu W, **Mukherjee M**, Tsaur Y, Kim S, Liu H. Sensory-enhanced Motor Training For The Hemiparetic Arm. *Journal of Biomechanics*, 41:S138, July 2008.
116. Lee I., Siu K-C, **Mukherjee M.**, Oleynikov D., Stergiou N. A Novel training program for Learning Robot-Assisted Surgery. The North American Society for the Psychology of Sport and Physical Activity 2008, June 5-7, 2008, Niagara Falls, Ontario, Canada. *Journal of Sport & Exercise Psychology Volume 30 (S103)*.
117. Radovic M., Chen S-J, **Mukherjee M**. Handrail force quantification in 3D during stair negotiation. *Proceedings of the XXth Annual International Occupational Ergonomics and Safety Conference*. Chicago, Illinois, USA June 12-13 2008. 253-256.
118. **Mukherjee M**, Liu W. Electromyographic Correlates of Internal Models of Target Reaching Tasks in Randomized Force Fields. *Proceedings of the American Society of Biomechanics Annual Conference*, 2007 [<http://www.asbweb.org/conferences/2007/387.pdf>].
119. Kim SH, **Mukherjee M**, Liu W. The Influence of Laterality of Brain Lesion on Recovery of Muscle Function after Stroke. *Journal of Neurologic Physical Therapy*. 2007; 30(4): 213-214. [[http://journals.lww.com/jnpt/Fulltext/2006/12000/The\\_Influence\\_of\\_Laterality\\_of\\_Brain\\_Lesion\\_on.61.aspx](http://journals.lww.com/jnpt/Fulltext/2006/12000/The_Influence_of_Laterality_of_Brain_Lesion_on.61.aspx)]
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121. **Mukherjee M**, McPeak L, Redford J, Sun C, Liu W. The effect of electro-acupuncture on upper limb spasticity in chronic stroke survivors. *Stroke*. 2006; 37(2): 631.
122. Liu W, **Mukherjee M**, McPeak L, Redford J. Functional improvement through a combination of electro-acupuncture and strength training in chronic stroke survivors. *Stroke*. 2006; 37(2): 663.
123. Kim SH, Maletsky R, Zahner L, **Mukherjee M**, Liu W. Effects of stroke symptoms on gait for stroke patients. *Stroke*. 2005; 36(2): 518.
124. Liu W, Kim SH, Maletsky R, Zahner L, **Mukherjee M**. Effects of postural feedback training on gait for stroke patients. *Stroke*. 2005; 36(2): 518.

## PRESENTATIONS

### A. ORAL PRESENTATIONS (CONFERENCES/SYMPOSIA)

#### A.1. International

1. Engsborg C, Hunt N, **Mukherjee M**. Gait Kinematics Dependent Plantar Stimulation. Presented at the 46<sup>th</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Orlando, FL, July 15-19, 2024.

2. Chae JS, Nelson CA, Baca J, **Mukherjee M**. Design, Kinematics, and Control of a Modular Robotic Suit as an Exercise System to Prevent Muscle Atrophy of Astronauts During Long-Duration Space Missions. Presented at the *ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference [IDETC/CIE]* 2022 Aug 14-17, St. Louis, MO.
3. **Mukherjee M**, Sado T, Chae JS, Nelson CA, Baca J. MORS: Modular robotics as a counter measure to prevent muscle atrophy in astronauts during long duration space missions. *10<sup>th</sup> Annual International Space Station Research and Development Conference, Technical Sessions, August 9-18, 2021. [Panel presentation]*.
4. Motz, Z, **Mukherjee M**. Inter-limb coordination in chronic stroke survivors. Proceedings of the *International Student Research Forum*, University of Southern Denmark, Odense, Denmark, June 16-20, 2019.
5. Rafalt P, Vallabhajosula S, Renz J, **Mukherjee M**, Stergiou N. Stability of joint angle dynamics during oscillatory lower limb gaits is task-dependent. Presented at *the 8th World Congress of Biomechanics*, Dublin Ireland, July 8-12, 2018.
6. Rafalt P, Vallabhajosula S, Renz J, **Mukherjee M**, Stergiou N. Continuous stair-climbing affects joint angle dynamics. Presented at *the 9th Annual Meeting of the Danish Society of Biomechanics*, Aarhus University, Aarhus, Denmark, Sep 22, 2017.
7. Rosen AB, **Mukherjee M**, Yentes JM, McGrath ML, Maerlender AC. Cortical activation variability is different in individuals with chronic ankle instability during single limb postural control. Presented at *the 7<sup>th</sup> International Ankle Symposium*, University of North Carolina, Chapel Hill, NC, September 15-17, 2017.
8. Baca, J., Ambati, MS., Dasgupta, P, **Mukherjee, M**. A modular robotic system for assessment and exercise of human movement. Presented at *the Latin American Congress on Automation and Robotics, Panama City, Panama, Feb 8-10, 2017*.
9. Fujan-Hansen J., Rand T.J., Fayad, P., **Mukherjee, M**. Inter-limb transition in gait coordination tasks after stroke is affected by age. Presented at *the School and Symposium in Advanced Neurorehabilitation*, June 6-10, 2016, Baiona, Spain.
10. Ambati, V.N., Rand T.J., Fujan-Hansen J., Fayad, P., **Mukherjee, M**. Cortical responses evoked by noisy support surface perturbations during normal standing after stroke. Presented at *the International Congress on Neurorehabilitation and Neural Repair*, May 21-22, 2015, Maastricht, The Netherlands.
11. **Mukherjee M**., Koutakis P., Fayad P., Stergiou N. Augmented Visual Feedback Affects Endpoint Stiffness Control in Chronic Stroke Survivors during Learning of Reaching Movements in a Dynamic Environment. *International Stroke Conference, Los Angeles, CA, Feb 8-11, 2011*.
12. **Mukherjee M**, Kim SH, Liu W. Motor Learning of Reaching Movements in Randomized Force Fields in chronic stroke survivors. *16<sup>th</sup> Congress of the European Society of Biomechanics, Lucerne, Switzerland, July 6-9, 2008*.
13. Liu W, **Mukherjee M**, Tsaor Y, Kim S, Liu H. Sensory-enhanced motor training for the hemiparetic arm. *16<sup>th</sup> Congress of the European Society of Biomechanics, Lucerne, Switzerland, 2008*.
14. **Mukherjee M**, McPeak L, Redford J, Sun C, Liu W. The effect of electro-acupuncture on upper limb spasticity in chronic stroke survivors. *International Stroke Conference, Kissimmee, FL. Feb 2006*.

*A.2. National*

15. Dasgupta, P., Belcher, S., Brozek, K., **Mukherjee M.** Machine learning techniques for predicting mobility-related perception errors of astronauts. Presented at the *Technology Collaboration Center's Automation, AI and Robotics Workshop*, NASA Johnson Space Center, Houston, TX, March 28, 2019.
16. Vaz JR, Rand T, Fujan-Hansen J, **Mukherjee M**, Stergiou N. Auditory and visual external cues have different effects on spatial but similar effects on temporal gait variability. *Presented at the 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Mayo Clinic, Rochester, Minnesota, August 8-11, 2018. [selected for Rapid podium presentation]
17. Rand, T, **Mukherjee, M.** The dependence of postural dynamics on constraints of vision, postural orientation and the temporal structure of environmental stimuli. Presented at the *28<sup>th</sup> Annual conference of the Society for Chaos Theory in Psychology and the Life Sciences*, North Carolina State University, Raleigh, NC, August 2-4, 2018.
18. Lueders K., Eikema, D.J.A., **Mukherjee, M.** The effect of mastoid bone vibration on spatial orientation during overground walking. Presented at the *125<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 17, 2015.
19. Baca, J., Woosley, B., Dasgupta, P., **Mukherjee, M.**, Nelson C. Configuration Discovery of Modular Robots for Muscular Strength Training. Presented at the *125<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 17, 2015.
20. Eikema, D.J.A., Chien, J., **Mukherjee, M.**, Stergiou, N. Optic flow affects the specificity of spatiotemporal characteristics of split-belt locomotor adaptation. Presented at the *North American Society for the Psychology of Sport and Physical Activity Conference*. Minneapolis, Minnesota, June 2014.
21. Eikema, D.J.A., **Mukherjee, M.** The role of Visual and Tactile Stimulation in Locomotor Adaptation. Presented at the Annual Meeting of the *Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, NASA Nebraska Space Grant office, Lincoln, NE, April 11, 2014.
22. Pickhinke, J., Chien, J.C., **Mukherjee, M.** Varying the Speed of Perceived Self-Motion Affects Postural Control During Locomotion. Presented at the *21<sup>st</sup> Medicine Meets Virtual Reality Annual Conference*. Manhattan Beach, California, February 2014.
23. **Mukherjee M.**, Chien JH, Arnold B, Myers S, Stergiou N. Tactile stimulation enhances locomotor adaptation. *The 84<sup>th</sup> Annual Scientific Meeting of the Aerospace Medical Association*. Chicago, IL, May 12-May 16, 2013.
24. Rand T, Kyvelidou A, **Mukherjee M**, Myers S. The temporal structure of center of pressure during standing is affected by proprioceptive input. Presented at the *37<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Omaha, Nebraska, September 2013.
25. Yu Y, **Mukherjee M.** The effect of optic flow speed and hip restriction on cortical activation during walking. Presented at the *37<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Omaha, Nebraska, September 2013.
26. Davidson AJ, Vallabhajosula S, **Mukherjee M**, Stergiou N. Vestibular contributions to blindfolded path navigation. Presented at the *37<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Omaha, Nebraska, September 2013.
27. Qiao, M., Myers, S., **Mukherjee, M.**, Yu, Y., Stergiou, N. Effect of Tactile Stimuli on Locomotor Rhythm. Presented at the Annual Meeting of the *Aeronautics and Space*

- Science Section of the Nebraska Academy of Sciences*, NASA Nebraska Space Grant office, Lincoln, NE, April 19, 2013.
28. Qiao M, **Mukherjee M**, Stergiou N. Medio-lateral restriction and the speed of optic flow affect the temporal structure of gait variability. *Presented at the 37<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Omaha, Nebraska, September 2013.
  29. Huang C-K, Chien JH, Myers, SA, **Mukherjee M**, Stergiou, N. The effect of tactile stimuli on the locomotor rhythm depends on the characteristics of the tactile signal. *The 28<sup>th</sup> Annual Meeting of the American Society for Gravitational and Space Research*. New Orleans, LA, Nov 28-Dec, 2012.
  30. Davidson, A. J., Chien, J., **Mukherjee, M.**, Huang, C. K., Myers, S., Siu, K.-C., Stergiou, N. Dynamic postural control using the Locomotor Sensory Organization Test. *Annual Meeting of the Nebraska Academy of Sciences*, Lincoln, NE, USA, April 2012.
  31. **Mukherjee M.**, Koutakis P., Fayad P., Stergiou N. Augmented Visual Feedback Affects Endpoint Stiffness Control in Chronic Stroke Survivors during Learning of Reaching Movements in a Dynamic Environment. *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, April 05-06, 2011.
  32. **Mukherjee, M.** The Effect of Augmented Visual Feedback on Motor Learning of Reaching Movements in Novel Dynamic Environments in Chronic Stroke Survivors. *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, April 06-07, 2010.
  33. **Mukherjee M.** Stroke Rehabilitation with Robotics and Virtual Technology. *Nebraska Research and Innovation Conference*, September 25, 2009, Omaha, Nebraska.
  34. **Mukherjee, M.**, Katsavelis, D., Stergiou, N. The effect of virtual reality on locomotor adaptation. *Centennial Celebration of Student Research and Creative Activity*, Univ. of Nebraska at Omaha, March 24-25, 2009.
  35. **Mukherjee M.**, Siu K-C, Lee I., Klutman A, Oleynikov D., Stergiou N. A Virtual Reality Training Program for Improvement of Robotic Surgical Skills. *Medicine Meets Virtual Reality Conference, Long Beach, California, January 19-22, 2009*.
  36. Lee I., Siu K-C, **Mukherjee M.**, Monk E, Oleynikov D., Stergiou N. Consistency of Performance of Robot-Assisted Surgical Tasks in Virtual Reality. *Medicine Meets Virtual Reality Conference, Long Beach, California, January 19-22, 2009*.
  37. **Mukherjee M.** Virtual Reality Technology in Human Locomotion. *Nebraska Research and Innovation Conference*, October 28, 2008, Lincoln, Nebraska.
  38. **Mukherjee M**, Liu W. Internal Models of Randomized Force Fields. *Sigma Xi Annual Meeting and Student Research Conference, Detroit, Michigan*. Nov 2-5, 2006.
  39. McPeak L, Liu W, **Mukherjee M**, Redford J. Functional improvement through a combination of electro-acupuncture and strength training in chronic stroke survivors. *67<sup>th</sup> Annual Assembly of the American Academy of Physical Medicine and Rehabilitation, Honolulu, Hawaii*. Nov 9-12, 2006. (President's Citation Award).
  40. **Mukherjee M**, John E.B., Gregory R.W., Liu W. The effect of age and joint angle on signal dependent noise during isometric force production. *Students Research Forum, University of Kansas Medical Center, Kansas City, Kansas*. April 6-7, 2006.
  41. **Mukherjee M**, McPeak L, Redford J, Sun C, Liu W. Quantification of reduction in spasticity after electro-acupuncture treatment. *KPTA, Wichita, KS*. April 2006.
  42. **Mukherjee M**, Sun C, Liu H, Redford J, Liu W. A combined treatment of electro-acupuncture and strengthening exercise for the hemiplegic wrist and finger joints. *Students Research Forum, University of Kansas Medical Center, Kansas City, Kansas*. April 7-8, 2005.

43. Kim SH, Maletsky R, Zahner L, **Mukherjee M**, Liu W. Improvement in target reaching following postural feedback training after stroke. *Students Research Forum, University of Kansas Medical Center, Kansas City, Kansas*. April 7-8, 2005.

### A.3. Local

44. Engsberg C, Hunt N, Malcolm P, **Mukherjee M**. Symmetry biofeedback of temporal gait metrics through plantar tactile stimulation. Presented at the *135<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, University of Nebraska, Lincoln, East Campus Union, NE, April 25, 2025.
45. Rains A, Engsberg C, Hunt N, Malcolm P, **Mukherjee M**. Mediolateral Exosuit for Balance Control. Presented at the *135<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, University of Nebraska, Lincoln, East Campus Union, NE, April 25, 2025.
46. Rains A, Engsberg C, Hunt N, Malcolm P, **Mukherjee M**. Mediolateral Exosuit for Balance Control during Circumductory Gait. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, April 11, 2025.
47. Rains A, Engsberg C, Hunt N, Malcolm, P, **Mukherjee M**. The relationship between compensatory behavior and balance control during walking in stroke survivors. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 22, 2024 [*Honorable mention in Graduate Oral presentation category*]
48. Engsberg C, Rains A, **Mukherjee M**. The effect of patterned plantar stimulation during gait. Presented at the *Human Movement Variability Conference*, Univ. of Nebraska at Omaha, June 5-6, 2023.
49. Sado T, **Mukherjee M**. Asymmetric mobility deficits at the ankle and knee compromises balance control. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 24, 2023.
50. Engsberg C, Sado T, **Mukherjee M**. The brain correlates of patterned plantar stimulation during gait in stroke survivors. Presented at the *Human Movement Variability Conference*, Univ. of Nebraska at Omaha, May 16-20, 2022. [*Selected for Promising student award podium presentations*]
51. Mace S, **Mukherjee M**. The effect of virtual heading error on one's ability to perceive optic flow while walking. Presented at the *132<sup>nd</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, April 22, 2022.
52. Sado T, **Mukherjee M**. Modular robotic exosuit (MORS) for position perception detection in astronauts during space missions. Presented at the *132<sup>nd</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, April 22, 2022.
53. Mace S, **Mukherjee M**. Is replicating the dynamics of the environment important or a simple eye chart will do? Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 4, 2022.
54. Sado T, Curtze C, **Mukherjee M**. Turning reveals characteristic inter-arm coordination patterns in Parkinson's disease. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 4, 2022.
55. Engsberg C, Sado T, **Mukherjee M**. The brain correlates of patterned plantar stimulation during gait in stroke survivors. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 4, 2022.



56. Mace S, **Mukherjee M.** Visual Contributions to balance control during gait. Presented at the *131<sup>st</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Virtual meeting, April 23, 2021.
57. Sado T, **Mukherjee M.** Disrupting inter-limb coordination through an exoskeleton device. Presented at the *131<sup>st</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Virtual meeting, April 23, 2021.
58. Mace S, Brozek K, Curtze C, **Mukherjee M.** Investigating gaze patterns during treadmill walking on an oscillating support surface with matched and conflicted visual feedback. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 26, 2021.
59. Sado T, Takahashi K, **Mukherjee M.** A Wii Balance Board can capture changes in postural dynamics resulting from task manipulations during standing. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 26, 2021.
60. Brozek K, **Mukherjee M.** Quantifying the effect of visual feedback on the orthogonality of balance control during gait. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2020.
61. Motz, Z, Sado T, Yentes J, Fayad P, **Mukherjee M.** Inter-limb coordination in chronic stroke survivors. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2020.
62. Sado T, **Mukherjee M.** Inter-limb coordination changes during passive exoskeletal-assisted gait is due to spring-loaded assistance more than the device weight. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2020.
63. Sado T, **Mukherjee M.** Passive exoskeletal assisted treadmill walking reduces duration and regularity of inter-limb coupling. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 1, 2019. [Best graduate oral presentation award]
64. Motz, Z, **Mukherjee M.** Inter-limb coordination in chronic stroke survivors. For presentation at the follow-up luncheon to the International Student Research Forum, University of Nebraska Medical Center, Omaha, Nebraska, August 20, 2019.
65. Rosen, A., Yentes, J., McGrath, M., **Mukherjee, M.**, Myers, S. Sample entropy differences in static postural control in individuals with chronic ankle instability. Presented at the *Third Human Movement Variability Conference*, University of Nebraska at Omaha, Omaha, May 17, 2018.
66. Duncan, A., Mukherjee, M., Hunt, N., Siu, K.C., Bhatti, D., Marmelat, V. Bridging the gap: individual relationships between long-range correlations and dexterity in walking. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 2, 2018.
67. Sado, T., Nielsen, Rand, T, Glaister, B., Takahashi, K., Malcolm, P., **Mukherjee, M.** Passive exoskeleton-assistance enhances gait adaptation of temporal components in a split-belt adaptation task. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 2, 2018.
68. Kotsalis, J., Frederick, C., **Mukherjee, M.**, Takahashi, K., Malcolm, P. Influence of foot-ground traction on gaits used in reduced gravity. Presented at the *138<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 20, 2018.
69. Bowman, L. **Mukerjee, M.** Development of the home-based sensory organization test. Presented at the *127<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the*

- Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 21, 2017.
70. Duncan, A., Mukherjee, M., Marmelat, V. (2017, March 3). Bridging the gap: Individual relationships of gait variability and adaptability. UNO Research and Creative Activity Fair, Omaha, NE (U.S.A). Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 3, 2017.
  71. Rand, T., **Mukherjee, M.** Temporal correlations of support surface movement affect the control of center of pressure velocity. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 3, 2017.
  72. **Mukherjee M.** State Space Reconstruction. Presented at the *Nonlinear Workshop, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, Nebraska, August 2016.*
  73. **Mukherjee, M.** The effects of virtual reality on gait variability after stroke. Presented at the *first Human Movement Variability Conference*, University of Nebraska at Omaha, Omaha, June 8, 2016.
  74. **Mukherjee, M.** The effects of virtual reality on gait variability after stroke: Challenges and Opportunities. Presented at *meeting of the External Advisory Committee for the Human Movement Variability COBRE P20 grant*, University of Nebraska at Omaha, Omaha, June 9, 2016.
  75. Hoover, A. **Mukherjee, M.** The Role of Vestibular Perception in Learning a Novel Locomotor Task. Presented at the *126<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 22, 2016.
  76. Fujan-Hansen, J., **Mukherjee, M.** Locomotor adaptation through multiple sensory modality augmentation in astronauts. Presented at the *126<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 22, 2016.
  77. Fujan-Hansen J., **Mukherjee, M.** Perception of self-motion using virtual reality augments context-independent transfer of temporal asymmetry in young healthy adults. Presented to UNO Sponsored Programs Administration. April, 2016.
  78. Rand T.J., **Mukherjee, M.** Postural responses to noisy support surface perturbations after stroke. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 4, 2016.
  79. **Mukherjee M.** State Space Reconstruction. Presented at the *Nonlinear Workshop, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, Nebraska, July 2015.*
  80. **Mukherjee M**, Lee JM. Nonlinear analysis and pattern recognition of variability in physical activity after stroke. Presented at the *1<sup>st</sup> COBRE Research Day, Biomechanics Research Building, University of Nebraska at Omaha, May 13, 2015.*
  81. **Mukherjee M.** The effects of virtual reality on gait variability after stroke. Presented at the *1<sup>st</sup> COBRE Research Day, Biomechanics Research Building, University of Nebraska at Omaha, May 13, 2015.*
  82. **Mukherjee M.** Integrated environments and devices for neurorehabilitation. Presented to members of the Stanford Research Institute visiting the *Biomechanics Research Building, University of Nebraska at Omaha, March 12, 2015.*

83. **Mukherjee M.** Nonlinear Tools for Studying the Effects of Virtual Reality and Rehabilitation Robotics. Presented at the *Nonlinear Workshop, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, Nebraska.* 2014.
84. **Mukherjee M.** The Role of Tactile Stimulation in Locomotor Adaptation. Presented at the *NASA EPSCoR Technical Advisory Committee Meeting at the Strategic Air Space Museum, Omaha.* Feb 07, 2014.
85. Qiao, M., Stergiou, N., **Mukherjee, M.** Developing a Trunk Reflex Examination Device to Assess Reflex Responses in Individuals with Recurrent Low Back Pain. *Aging with Passion & Purpose Conference*, Omaha, NE, USA, October 2013.
86. **Mukherjee M.** Nonlinear Tools for Studying the Effects of Virtual Reality and Rehabilitation Robotics. Presented at the *Nonlinear Workshop, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, Nebraska.* 2013.
87. **Mukherjee M.** Nonlinear Tools for Studying the Effects of Virtual Reality and Rehabilitation Robotics. Presented at the *Nonlinear Workshop, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, Nebraska.* 2012.
88. **Mukherjee M.** Nonlinear Tools for Studying the Effects of Virtual Reality and Rehabilitation Robotics. Presented at the *Nonlinear Workshop, Nebraska Biomechanics Core Facility, University of Nebraska at Omaha, Omaha, Nebraska.* 2011.

#### A.4. Invited

89. **Mukherjee M.** Sensory contributions to human movement control and learning in health and disease. *Presented in the Seminar Series, Department of Biomechanics, University of Nebraska at Omaha*, Oct 29, 2021.
90. **Mukherjee M.** Sensory contributions to human movement control and learning in health and disease. *Presented to the members of the Institutional Review Board, University of Nebraska Medical Center*, March 21, 2019.
91. **Mukherjee M.** Human movement variability: techniques to evaluate the temporal structure of movement *Presented to the Department of Computer Science and Engineering, National Institute of Technology, Rourkela, Odisha, India*, Dec 28, 2017 for the workshop *Innovative Principles of Gait Training: Neuroplasticity Principles, Biomechanics, and Computational Methods*, Dec 26-30, 2017 under Government of India's Global Initiative of Academic Networks.
92. **Mukherjee M.** Sensory contributions to human movement control and learning in health and disease. *Presented in the Seminar Series, Department of Biomechanics, University of Nebraska at Omaha*, Nov 17, 2017.
93. **Mukherjee M.** The effects of sensory stimulation on learning gait coordination in health and after stroke. *Presented at the Annual American Heart Association Nurses Conference: Care of Stroke Patients from Initial Symptoms through Rehabilitation and Beyond*, Southeast Community College, Lincoln, NE, Feb 11, 2017.
94. **Mukherjee M.** The effects of sensory stimulation on learning gait coordination in health and after stroke. *Presented at the Holland Regenerative Medicine Program, Department of Surgery, College of Medicine, University of Nebraska Medical Center, Omaha, NE*, Nov 9, 2016. University of Nebraska Medical Center, Nov 9, 2016.
95. **Mukherjee M.** Novel tools for neurorehabilitation: Virtual Reality, Robotics and Chaos. Presented at the *Moss Rehabilitation Research Institute, Elkins Park, PA*, Dec 6, 2011.

96. **Mukherjee M.** Novel tools for studying sensorimotor adaptation: Virtual Reality, Robotics and Chaos. Presented at the *Moss Rehabilitation Research Institute*, Elkins Park, PA, Dec 6, 2011.
97. **Mukherjee M.** Robotics and virtual technology for rehabilitation. Presented at the *Medical University of South Carolina*, Charleston, SC, April 22, 2011.
98. **Mukherjee M.** Robotic Rehabilitation: The effect of augmented feedback. Presented at the *Northwestern University*, Chicago, IL, August 3, 2010.
99. **Mukherjee M.** Virtual and Robotic Technology in Stroke Rehabilitation. *The Eighth Annual Nebraska Stroke Symposium: Present Challenges and Future Hopes*, October 12, 2009, University of Nebraska Medical Center, Omaha, Nebraska.
100. **Mukherjee M.** Uncertainty in the sensorimotor control of human movements. Presented at the *School of HPER, University of Nebraska at Omaha*, Omaha, NE, 2007.

## B. POSTER PRESENTATIONS

### B.1. International

101. Engsberg C, Barlow SM, Wang Y, **Mukherjee M.** Planter tactile stimulation of gait speeds: an fMRI study. Presented at *the 54<sup>th</sup> Annual meeting of the Society for Neuroscience*, Chicago, IL, Oct 5-9, 2024.
102. Rains AK, Engsberg CP, Barlow SM, Likens AD, Wang Y, **Mukherjee, M.** Machine learning tools for predicting gait-like plantar Stimulation from BOLD activity of the brain. Presented at *the 53<sup>rd</sup> Annual meeting of the Society for Neuroscience*, Chicago, IL, Oct 5-9, 2024.
103. Curtze C, **Mukherjee M**, Yentes, J. Adaptability of locomotor patterns during walking and turning in people with Parkinson's disease. Proceedings of the *North American Congress on Biomechanics, Ottawa, Canada Aug 21-25, 2022*.
104. Sado T, Chae JS, Nelson CA, Baca J, **Mukherjee M.** Modular Robotics for Assessing Position Perception in Astronauts during Long Duration Space Missions. Presented at the *11<sup>th</sup> Annual International Space Station Research and Development Conference, Technical Sessions, Washington DC, July 25-28, 2022*. [Dr. Etop Essen award for student excellence in scientific presentation]
105. Curtze C, **Mukherjee M**, Yentes, J. Adaptability of locomotor patterns during walking and turning in people with Parkinson's disease. Proceedings of the *International Society of Posture and Gait Research World Congress, Montreal, Canada July 3-5, 2022*.
106. Sado T., Takahashi K, **Mukherjee M.** A Wii Balance Board can capture changes in postural dynamics resulting from task manipulations during standing. Presented at the *XXVIII Congress of the International Society of Biomechanics*, virtual conference, July 25-29, 2021.
107. Brozek K, Mace S, **Mukherjee M.** Look where you are going! Quantifying the effect of visual feedback on the orthogonality of balance control during gait. To be presented at the *XVI International Symposium of the 3-D Analysis of Human Movement*, virtual conference organized by the Univ. of Iowa at Ames, May 24-28, 2021.
108. Sado T, Chong S, Mace S, Mukherjee, M. Inter-limb coordination changes during passive exoskeletal-assisted gait is due to spring-loaded assistance more than the device weight.

- To be presented at the *XVI International Symposium of the 3-D Analysis of Human Movement*, virtual conference organized by the Univ. of Iowa at Ames, May 24-28, 2021.
109. Sado T, Motz, Z, **Mukherjee M.** Inter-limb coordination in chronic stroke survivors. Presented at the *International Stroke Conference, Virtual conference, March 17-19, 2021.*
  110. Motz, Z, Likens A, **Mukherjee M.** Determining Transitions in Postural Sway Coupling between Visual Stimuli of Differing Complexities using Cross-Wavelet Coherence. Presented at the *Society of Neuroscience Global Connectome: A Virtual Event. Jan 11-13, 2021.*
  111. Sado T, Motz, Z, **Mukherjee M.** Inter-limb coordination in chronic stroke survivors. Presented at the *Society of Neuroscience Global Connectome: A Virtual Event. Jan 11-13, 2021.*
  112. Sado, T., Takahashi, K. Z., Malcolm, P., Mukherjee, M. Passive exoskeleton assistance during a gait coordination task alters gait adaptation patterns. Presented at the *International Research Forum on Biomechanics of Running-specific prostheses*, Tokyo, Japan, Feb 20, 2020. [Students' poster award winner]
  113. **Leutzinger, T.**, Pipinos, I., Johanning J., **Mukherjee, M.**, Myers, M. Single Session Walking Adaptations to an Ankle Foot Orthosis in Individuals with Claudication and Peripheral Artery Disease. Presented at the *XXVII Congress of the International Society of Biomechanics (ISB2019), held in conjunction with the 43rd Annual Meeting of the American Society of Biomechanics (ASB2019)*, Calgary, Canada, July 31-Aug 4, 2019.
  114. **Mukherjee, M.**, Sado, T., Motz, Z., Fayad, P. Enhancing perception of self-motion after stroke using virtual reality affects gait adaptation in those with high levels of gait asymmetry. Presented at the *International Stroke Conference, Honolulu, HI, Feb 6-8, 2019.*
  115. **Mukherjee, M.**, Rand T.J., Fujan-Hansen J., Fayad, P. Gait Adaptation in Virtual Reality after a Stroke: Does baseline Spatio-temporal Asymmetry Play a Role? *Presented at the International Stroke Conference, Los Angeles, CA, Jan 24-26, 2018.* [Moderated Poster].
  116. Denton W, **Mukherjee M.**, Stergiou N, Yentes J. Effects of Virtual Uphill Walking on Energy Expenditure and Locomotor-Respiratory Coupling. *Presented at the 21st IAGG World Congress of Gerontology and Geriatrics, San Francisco, CA, July 23-27, 2017.*
  117. **Mukherjee, M.**, Rand T.J., Fujan-Hansen J., Ambati, V.N., Fayad, P. Virtual Reality effects the Learning of a Gait Coordination Task after Stroke. Presented at the *10<sup>th</sup> World Stroke Congress*, Hyderabad, India, October 26-29, 2016.
  118. Rand T.J., Fujan-Hansen J., Fayad, P., **Mukherjee, M.** Postural responses to noisy support surface translations after stroke. Presented at the *Summer School on Neurorehabilitation*, September 13-18, 2015, Valencia, Spain.
  119. Baca, J., Woosley, B., Dasgupta, P., **Mukherjee, M.**, Nelson C. Modular Robotic System for Muscular Strength Training during Long-term Space Missions. Presented at the *IEEE International Conference on Robotics and Automation*, Seattle, Washington, May 26-30, 2015.
  120. Rand T.J., Fujan-Hansen J., Ambati, P., Fayad, P., **Mukherjee, M.** Postural responses to noisy support surface perturbations after stroke. Presented at the *International Congress on Neurorehabilitation and Neural Repair*, May 21-22, 2015, Maastricht, The Netherlands.
  121. Rand, T.J., Fayad, P., **Mukherjee, M.** Neurovascular Changes Characterize Split-belt Adaptation in Chronic Stroke Survivors: Preliminary Results. Presented at the *International Stroke Conference, Nashville, TN, Feb 11-13, 2015.*

122. **Mukherjee, M.**, Rand, T.J., Fayad, P. Perception of Self-Motion using a Virtual Reality Environment Enhances Gait Adaptation in Chronic Stroke Survivors. Presented at the *International Stroke Conference, Nashville, TN, Feb 11-13, 2015*.
123. **Mukherjee M.**, Chang W-P. Preliminary analysis of modulation of event-related desynchronization in robot-assisted hand performance: effect of augmented visual feedback and force adaptation. Presented at the *53<sup>rd</sup> Annual Meeting of the Society for Psychophysiological Research*. Florence, Italy, October 2-6, 2013.
124. **Mukherjee M.**, Chang W-P, Siu K-C, Fayad P., Stergiou N. Brain activity related to effects of augmented feedback on learning movements in a dynamic environment in healthy and stroke survivors. *International Stroke Conference, Honolulu, Hawaii, Feb 6-8, 2013*.
125. Padala K, **Mukherjee M**, Padala PK, Burke WJ, Stergiou N. Ambulatory Activity Patterns in Alzheimer's Disease based on the Living Situation: Preliminary Results. *Annual Meeting of the Alzheimer's Association: ICAD, Paris, July 16-21, 2011*.
126. **Mukherjee M.**, Siu K-C, Wilson T.W., Liu W., Fayad P., Stergiou N. The Effect of Augmented Visual Feedback on Motor Learning of Reaching Movements in Novel Dynamic Environments in Chronic Stroke Survivors. *International Stroke Conference, San Antonio, TX, Feb 24-26, 2010*.
127. Siu K-C, Lee IH, **Mukherjee M**, Oleynikov D, Stergiou N. The Negative Impact of Noise on Robotic Surgery: An Electromyographic Analysis. *The 3<sup>rd</sup> International Congress of the Minimally Invasive Robotic Association, Rome, Italy*. January 24-26, 2008.
128. Liu W, **Mukherjee M**, McPeak L, Redford J. Functional improvement through a combination of electro-acupuncture and strength training in chronic stroke survivors. *International Stroke Conference, Kissimmee, FL*. Feb 2006.

## B.2. National

129. Engsberg C, Malcolm P, Hunt N, **Mukherjee M**. Developing a tactile augmented exoskeleton assistance system for gait rehabilitation. *Presented at the 48<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Madison, WI, August 5-8, 2024.
130. Shin S, **Mukherjee M**, Malcolm P. Exploring the feasibility of measuring walking symmetry at home from thigh angular acceleration. *Presented at the 48<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Madison, WI, August 5-8, 2024.
131. **Mukherjee M**, Sommerfield J, Sado T, Engsberg C, Likens A. Machine learning tools for predicting task conditions from alterations in walking behavior in astronauts. *Proceedings of the NASA Human Research Program Investigators' Workshop, Galveston, TX, Feb 12-16, 2024*.
132. Engsberg C, Rains A, Sado T, Wang Y, Barlow S, **Mukherjee M**. The effect of gait-like plantar stimulation walking. Presented at the *American Physiology Summit, Long Beach, CA, April 20-23, 2023*.
133. Rains A, Engsberg C, **Mukherjee M**. The effect of tactile-augmented insole stimulation in a sequential pattern on healthy walking. Presented at the *National Conference on Undergraduate Research, University of Wisconsin-Eau Claire, WI, April 13-15, 2023*.
134. Sado T, Chong S, Mace S, Mukherjee, M. Inter-limb coordination changes during passive exoskeletal-assisted gait is due to spring-loaded assistance more than the device weight. Presented at *Rehabilitation Research 2020: Envisioning a Functional Future*, virtual conference organized by NIH/NINDS/NICHD/NIA/NCMRR, Oct 15-16, 2020.

135. **Mukherjee M**, Sado T, Motz Z, Fayad P. Perception of gait asymmetry in chronic stroke survivors during a bilateral coordination task. Presented at the *Rehabilitation Research 2020: Envisioning a Functional Future*, virtual conference organized by NIH/NINDS/NICHHD/NIA/NCMRR, Oct 15-16, 2020.
136. Rosen AB, Henrickson J, Yentes JM, **Mukherjee M**. Differences in Sensory Organization between Chronic Ankle Instability and Control Participants. Proceedings of the *70<sup>th</sup> Clinical Symposia and AT Expo of the National Athletic Trainers Association*, Las Vegas, NV, June 24-27, 2019.
137. Motz, Z., Sado, T, Denton, W, **Mukherjee, M**. Flexibly switching postural responses between structured visual stimuli depends on the temporal determinism of the stimuli. Presented at the *48<sup>th</sup> Annual meeting of the Society for Neuroscience*, San Diego, CA, Nov 3-7, 2018.
138. Sado, T., Nielsen, Glaister, B., Takahashi, K., Malcolm, P., **Mukherjee, M**. Passive exoskeleton assistance during a split-belt adaptation task alters both spatial and temporal patterns of gait coordination. Presented at the *48<sup>th</sup> Annual meeting of the Society for Neuroscience*, San Diego, CA, Nov 3-7, 2018.
139. **Mukherjee, M**, Bowman L, Rand, T. Inter-limb coordination patterns during external versus internal asymmetric tasks. Presented at the *48<sup>th</sup> Annual meeting of the Society for Neuroscience*, San Diego, CA, Nov 3-7, 2018.
140. Bowman, L., Rand, T., Hoover, A., **Mukherjee, M**. Asymmetrical Limb Loading affects Spatial and Temporal Gait Parameters differently in comparison to Split-belt Adaptation. Presented at the *41<sup>st</sup> Annual Meeting of the American Society of Biomechanics*. Boulder, Colorado, August 8-11, 2017.
141. Rand, T., **Mukherjee, M**. Temporal structure of support surface movements affect the control of center of pressure velocity. *Proceedings of the North American Society for the Psychology of Sport and Physical Activity*, San Diego, CA, June 4-7, 2017.
142. Rand T.J., Fujan-Hansen J., Ambati, V.N., **Mukherjee, M**. Virtual reality augments learning of the spatial components of a gait coordination task differently for each leg. Presented at the *46<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, Nov 12-16, 2016*.
143. Pollack, A., Rand, T.J., **Mukherjee, M**. The effects of optic flow and treadmill speed on the spatial and temporal components of gait. Presented at the *46<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, Nov 12-16, 2016*.
144. Ambati, V.N., Rand T.J., Fujan-Hansen J., Fayad, P, **Mukherjee, M**. Split belt walking increases Neurovascular Response during Gait Coordination Task after Stroke. Presented at the *46<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, Nov 12-16, 2016*.
145. Nielsen, J., Ambati, V.N.P., Mukherjee, M. The effect of optic flow direction on orthogonality of balance control during walking. Presented at the *46<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, Nov 12-16, 2016*.
146. Fujan-Hansen J., Rand T.J., **Mukherjee, M**. Stepping to injected colored rhythms effect gait entropy more for auditory stimuli than visual. Presented at the *46<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, CA, Nov 12-16, 2016*.
147. **Mukherjee, M**, Rand T.J., Fujan-Hansen J., Fayad, P. Virtual Reality effects spatial variability for each leg differently when learning a gait coordination task after stroke.

- Presented at *the Biomechanics and Neural Control of Movement Conference*, Mt. Sterling, OH, June 12-17, 2016.
148. Rand T.J., Fayad, P., **Mukherjee, M.** Mediolateral postural responses to anteroposterior translations in stroke survivors. Presented at *the Biomechanics and Neural Control of Movement Conference*, Mt. Sterling, OH, June 12-17, 2016.
  149. **Mukherjee, M.**, Rand T.J., Fujan-Hansen J., Fayad, P, Nick Stergiou. Learning a Gait Coordination Task after Stroke in Virtual Reality. Presented at *the 6th Biennial National IDeA Symposium of Biomedical Research Excellence*, Washington DC, June 26-28, 2016.
  150. Ambati, V.N., Rand T.J., Nielsen J., **Mukherjee, M.** Long range correlations of center of pressure are stronger for AP perturbations than ML perturbations in healthy young adults. Presented at the *39<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Columbus, Ohio, August 5-8, 2015.
  151. Lueders K., Eikema, D.J.A., Stergiou, N., Bloomberg, J.J., **Mukherjee, M.** Locomotor Adaptation to support surface roll oscillations: Reductions in postural coupling with the environment is enhanced by noisy plantar tactile stimulation. Presented at the *39<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Columbus, Ohio, August 5-8, 2015.
  152. Eikema, D.J.A., **Mukherjee, M.** Locomotor adaptation to support surface roll oscillations. Presented at the *125<sup>th</sup> Annual Meeting of the Aeronautics and Space Science Section of the Nebraska Academy of Sciences*, Nebraska Wesleyan University, Lincoln, NE, April 17, 2015.
  153. Fujan-Hansen, J., Rand, T.J., Fayad, P., **Mukherjee, M.** Neurovascular Changes Characterize Split-belt Adaptation in Chronic Stroke Survivors: Preliminary Results. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.
  154. **Mukherjee, M.**, Rand, T.J., Fayad, P. Perception of Self-Motion using a Virtual Reality Environment Enhances Gait Adaptation in Chronic Stroke Survivors. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.
  155. Pickhinke, J., Eikema, D., Rand, T.J., **Mukherjee, M.** The complexity of postural control variability while walking on an unstable support surface. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.
  156. Hoover, A, Pickhinke, J., Rand, T.J., Eikema, D., **Mukherjee, M.** Optical flow with roll oscillations affects postural control during human locomotion. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.
  157. Lueders, K., Rand, T.J., **Mukherjee, M.** As risk of falls increases in the elderly, standing postural control shows stronger long-range correlations. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.
  158. Eikema DJ, Chien JH, Stergiou N, Scott-Pandorf M, Peters B, Bloomberg JJ, **Mukherjee M.** Locomotor adaptation to support surface perturbations is characterized by environmental decoupling. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.
  159. Ambati, V.N., **Mukherjee M.**, Chang W-P. Preliminary analysis of modulation of event-related desynchronization in robot-assisted hand performance: effect of augmented visual feedback and force adaptation. Presented at the *Student Research and Creative Activity Fair*, Univ. of Nebraska at Omaha, March 6, 2015.



160. Pickhinke, J., Rand, T.J., Eikema, D., **Mukherjee, M.** Optical flow with roll oscillations affects postural control during human locomotion. Presented at the *Annual Meeting of the Society for Neuroscience, Washington DC, Nov 15-19, 2014.*
161. Rand, T.J., **Mukherjee, M.** As risk of falls increases in the elderly, standing postural control shows stronger long-range correlations. Presented at the *Annual Meeting of the Society for Neuroscience, Washington DC, Nov 15-19, 2014.*
162. Eikema DJ, Chien JH, Stergiou N, Scott-Pandorf M, Peters B, Bloomberg JJ, **Mukherjee M.** Locomotor adaptation to support surface perturbations is characterized by environmental decoupling. Presented at the *Annual Meeting of the Society for Neuroscience, Washington DC, Nov 15-19, 2014.*
163. Renz J, Chien JH, **Mukherjee M**, Stergiou N. The temporal structure of postural control variability during standing is affected by suprathreshold mechanical stimulation. Presented at the *37<sup>th</sup> Annual Meeting of the American Society of Biomechanics.* Omaha, Nebraska, September 2013.
164. Chien JH, **Mukherjee M.** Determining vestibular contributions to postural control during standing using suprathreshold mechanical stimulation. Presented at the *37<sup>th</sup> Annual Meeting of the American Society of Biomechanics.* Omaha, Nebraska, September 2013.
165. Vallabhajosula S, **Mukherjee M**, Davidson AJ, Stergiou N. Leg dominance influences minimum toe clearance during stair ascension. Presented at the *18<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting.* Cincinnati, OH, 2013.
166. **Mukherjee M.**, Chien JH, Vallabhajosula S, Stergiou N. Locomotor Adaptation in a Virtual Environment affects Gait Kinetics. For presentation at the *Annual Meeting of the Society of Neuroscience.* New Orleans, LA, 2012.
167. Chien JH, **Mukherjee M.**, Stergiou N. Suprathreshold mechanical vestibular stimulation affects postural control during standing For presentation at the *Annual Meeting of the Society of Neuroscience.* New Orleans, LA, 2012.
168. Davidson AJ, **Mukherjee M**, Padala K, Stergiou N. The relationship between static standing balance control and the Sensory Organization Test in Alzheimer's patients. *Annual meeting of the North American Society for the Psychology of Sport and Physical Activity.* Honolulu, Hawaii, June 7-9, 2012.
169. Chien JH, Huang CK, Vallabhajosula S, **Mukherjee M**, Siu KC, Stergiou N. The effect of vibrotactile stimulation on long range correlation of stride interval time series among different walking speeds. For presentation at the *36<sup>th</sup> Annual Meeting of the American Society of Biomechanics.* Gainesville, Florida, August 2012.
170. Davidson AJ, Vallabhajosula S, Tan CW, **Mukherjee M**, Siu KC, Yentes JM, McGrath D, Myers SA. Impact of dual-tasking on lower joint dynamics during stair ascension. For presentation at the *36<sup>th</sup> Annual Meeting of the American Society of Biomechanics.* Gainesville, Florida, August 2012.
171. Vallabhajosula S, Tan CW, Davidson AJ, **Mukherjee M**, Siu KC, Yentes JM, McGrath D, Myers SA. Kinematics and kinetics of stair ascent while dual-tasking. For presentation at the *36<sup>th</sup> Annual Meeting of the American Society of Biomechanics.* Gainesville, Florida, August 2012.
172. Kaipust, J.P., **Mukherjee, M.**, Stergiou, N. Does auditory stimulation effect gait variability in healthy elderly? *Annual meeting of the North American Society for the Psychology of Sport and Physical Activity.* Honolulu, Hawaii, June 7-9, 2012.

173. Padala K, **Mukherjee M**, Padala PK, Burke WJ, Stergiou N. Ambulatory Activity Patterns in Alzheimer's Disease: Preliminary Results in Samples of Community-dwelling and Assisted Living Subjects. *Annual Meeting of the American Geriatrics Society*, Washington DC, May 11-14, 2011. *Received the Merck/AGS New Investigator Award*.
174. **Mukherjee M.**, Koutakis P., Siu K-C, Fayad P., Stergiou N. Movement Variability during Motor Learning of Reaching in Novel Dynamic Environments in Chronic Stroke Survivors. *Neuroscience, San Diego, CA, Nov 13-17, 2010*.
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