

**I. Academic/Professional Background**A. Name: **HARSH H. BUDDHADEV**

Title: Professor

**B. Educational Background**

<i>Degree</i>	<i>Year</i>	<i>University</i>	<i>Major</i>	<i>Minor</i>
Ph.D.	2015	Iowa State University	Kinesiology	Gerontology
M.S.	2011	University of North Texas	Kinesiology	
B.P.T.	2007	Gujarat University, India	Physiotherapy	

**C. University Experience**

<i>Position</i>	<i>University</i>	<i>Dates</i>
Professor	Sam Houston State University	8/23-Present
Professor	Western Washington University	9/21-8/23
Associate Professor	Western Washington University	9/19-9/21
Assistant Professor	Western Washington University	9/15-9/19
Graduate Teaching Assistant	Iowa State University	8/11-5/15
Teaching Fellow	University of North Texas	1/09-5/11
Clinical Instructor	SBB College of Physiotherapy, India	07/07-06/08

**D. Relevant Professional Experience**

<i>Position</i>	<i>Entity</i>	<i>Dates</i>
Clinical Instructor	SBB College of Physiotherapy, India	07/07-06/08

**E. Other Professional Credentials (licensure, certification, etc.)**

Life Member, Indian Association of Physiotherapists, 2007-Present

**II. TEACHING****A. Teaching Honors and Awards:**

2021	Nominee Peter J. Elich Excellence in Teaching Award, Western Washington University
2019	Nominee Faculty Mentor of the Year Award, Western Washington University
2013	Graduate Teaching Excellence Award, Iowa State University

**B. Courses Taught:****(at Sam Houston State University: 2023-present)**

KINE 3364	Motor Learning
KINE 4362	Biomechanical Analysis

KINE 5385 Biomechanics of Injury  
 KINE 5395 Advanced Biomechanics

**(at Western Washington University 2015-2023)**

KIN 306 Measurement and Evaluation in Kinesiology  
 KIN 311 Biomechanics  
 KIN 312 Functional Anatomy  
 KIN 409 Aging and Functional Assessments  
 KIN 410 Motor Control and Learning  
 KIN 545 Biomechanical Gait Analysis

**(at Iowa State University 2012)**

KIN 355 Biomechanics

**(at University of North Texas 2011)**

KIN 3050 Biomechanics

C. Graduate Theses/Dissertations, Honors Theses, or Exit Committees (if supervisor, please indicate):

**Sam Houston State University 2023-Present**

Supervisor

2024 Kierra Anstee, Bridge Scholar Student, "Height normalized evaluation of the weight bearing lunge test", Supervisor

**Western Washington University 2015-2023**

Supervisor

2023 Emily Lovekin, M.S. Student, "Investigate effects of different step lengths at preferred speed on forefoot, midfoot, and hindfoot motion", Supervisor  
 2023 Mariel Relyea, M.S. Student, "The effect of long-haul COVID-19 on balance confidence in older adults", Supervisor  
 2021 Emily Carlson, Honors Student, "Risk of knee osteoarthritis associated with high heel use", Supervisor  
 2019 Andrew Fife, M.S. Student, "The effect of pedal extenders on frontal plane joint kinematics during stationary cycling", Supervisor  
 2019 Carolyn Barbee, M.S. Student, "The effect of hallux valgus on dynamic balance during walking in older adults", Supervisor  
 2018 Gary Wiley, M.S. Student, "Does cycling cadence affect interlimb asymmetry in pedaling power in individuals with Parkinson's disease?", Supervisor  
 2017 Daniel Crisafulli, M.S. Student, "Creatine and electrolyte supplementation improves repetitive sprint cycling performance", Supervisor

Committee Member

2023 Taylor Walston, M.S. Student, "Force production asymmetry in men and women during three variations of a counter movement push-up", Member  
 2021 Eliot Mackay, M.S. Student, "The effect of EMG biofeedback training on muscle activation in an impingement population", Member  
 2020 Blake Corl-Baietti, M.S. Student, "The effects of 6 weeks of hip-strengthening exercises on drop jump performance in middle school children", Member  
 2020 Julianna Johnson, M.S. Student, "Active and passive joint position sense on healthy hips", Member

- 2019 Katie Olinger, M.S. Student, “Trunk, hip, and knee motions during a step-down test and running in patellofemoral pain individuals”, Member
- 2019 Andrew Brown, M.S. Student, “Effects of deep slow breath training on performance and recovery during intensity interval cycling”, Member
- 2019 Sarah Perry, M.S. Student, “Fascia thickness and rate of force development in classically trained ballet dancers”, Member
- 2017 Samuel Lyons, M.S. Student, “The effect of knee extension angle on knee joint position sense between genders”, Member
- 2017 Cody Brocato, M.S. Student, “Joint motions of the knee, hip, and trunk during a single-leg step-down test and running”, Member
- 2017 Jason Shepherd, M.S. Student, “The effects of an ankle strengthening and proprioception exercise protocol on peak torque and joint position sense”, Member
- 2017 Deanna Emnett, M.S. Student, “Effects of thoracic spine position during sprint cycling recovery”, Member
- 2017 Hussain Aslan, M.S. Student, “Acute effects of two hip flexor stretching techniques on knee joint position sense and balance”, Member
- 2017 Nicole Kelp, M.S. Student, “Effect of rowing distance on lumbar flexion and erector spinae electromyography on a slide versus fixed base rowing ergometer”, Member

#### D. Courses Prepared and Curriculum Development:

- 2024 Biomechanical Gait Analysis (at Sam Houston State University)
- 2018 Biomechanical Gait Analysis (at Western Washington University)

#### E. Funded External Teaching Grants and Contracts:

#### F. Submitted, but not Funded, External Teaching Grants and Contracts:

#### G. Funded Internal Teaching Grants and Contracts:

##### (at Western Washington University)

- 2020 Tech Initiatives Grant, “Using motion capture technology in undergraduate kinesiology classes”, (Buddadev, H.H., Suprak, D.N., & San Juan, J.G.), \$3596
- 2016 Summer Teaching Grant, “Curriculum development: Graduate biomechanical gait analysis class”, (Buddhadev, H.H.), \$6000

#### H. Submitted, but not Funded, Internal Teaching Grants and Contracts:

#### I. Other:

### III. SCHOLARLY/CREATIVE

Orcid ID: 0000-0003-3726-2795 Orcid public record <https://orcid.org/0000-0003-3726-2795>

**Citations: 324**; h-index: 11; i10-index: 11

#### A. Works in Print (including works accepted, forthcoming, in press)

##### 1. Books (if not refereed, please indicate)

a. Scholarly Monographs:

b. Textbooks:

c. Edited Books:

d. Chapters in Books:

e. Creative Books:

2. Articles

a. Refereed Journal Articles

- 2024 Lovekin, E. M., Buddhadev, H.H., Robey, N.J., & Chalmers, G.R. (2024). Effects of different step lengths at a preferred walking speed on forefoot, midfoot, and hindfoot motion in health young adults. *Journal of Biomechanics*, *168*, 112117. <https://doi.org/10.1016/j.jbiomech.2024.112117>
- 2023 Buddhadev, H.H., Suprak, D.N., Jordan, K.H., & Hynds, A. (2023). Walking in high-heel shoes induces redistribution of joint power and work. *International Biomechanics*, *10*(1), 10-17. <https://doi.org/10.1080/23335432.2023.2228362>
- 2023 Mackay, E.J., Robey, N.J., Suprak, D.N., Buddhadev, H.H., & San Juan, J.G. (2023). The effect of EMG biofeedback training on muscle activation in an impingement population. *Journal of Electromyography and Kinesiology*, *70*, 102772. <https://doi.org/10.1016/j.jelekin.2023.102772>
- 2020 Barbee, C.E., Buddhadev, H.H., Chalmers, G.R., & Suprak, D.N. (2020). The effects of hallux valgus and walking speed on dynamic balance in older adults. *Gait & Posture*, *80*, 137-142. <https://doi.org/10.1016/j.gaitpost.2020.05.039>
- 2020 Buddhadev, H.H., Smiley, A.L., & Martin, P.E. (2020). Effects of age, speed, and step length on lower extremity net joint moments and power during walking. *Human Movement Science*, *71*, 102611. <https://doi.org/10.1016/j.humov.2020.102611>
- 2020 Fife, A.N., Buddhadev, H.H., Suprak, D.N., Paxon, S.B., & San Juan, J.G. (2020). Effect of Q-factor manipulation via pedal spacers on lower limb frontal plane kinematics during cycling. *Journal of Science and Cycling*, *9*(1), 33-43. <https://doi.org/10.28985/0620.jsc.05>
- 2020 Buddhadev, H.H., & Barbee, C.E. Redistribution of joint moments and work in older women with and without hallux valgus at two walking speeds. (2020). *Gait & Posture*, *77*, 112-117. <https://doi.org/10.1016/j.gaitpost.2020.01.023>
- 2019 Perry, S.K., Buddhadev, H.H., Brilla, L.R., & Suprak, D.N. Mechanical demands at the ankle joint during saut de chat and temps levé jumps in classically trained ballet dancers. (2019). *Open Access Journal of Sports Medicine*, *10*, 191-197. <https://doi.org/10.2147/OAJSM.S234289>
- 2019 Hummer, E., Suprak, D.N., Buddhadev, H.H., Brilla, L., & San Juan, J.G. (2019). Creatine electrolyte supplement improves anaerobic power and strength: A randomized double-blind control study. *Journal of the International Society of Sports Nutrition*, *2019*, 16-24. <https://doi.org/10.1186/s12970-019-0291-x>
- 2018 Buddhadev, H.H., & Martin, P.E. (2018). Effects of age, power output, and cadence on energy expenditure and lower limb antagonist muscle co-activation in cycling. *Journal of Aging and Physical Activity*, *27*(1), 83-92. <https://doi.org/10.1123/japa.2017-0400>

- 2018 Aslan, H., Buddhadev, H.H., Suprak, D.N., & San Juan J.G. (2018). Acute effects of two hip flexor stretching techniques on knee joint position sense and dynamic balance. *International Journal of Sports Physical Therapy*, 13(5), 846-859. <https://doi.org/10.26603/ijsp20180846>
- 2018 Buddhadev, H.H., Crisafulli, D.N., Suprak, D.N., & San Juan J.G. (2018). Individuals with knee osteoarthritis demonstrate interlimb asymmetry in pedaling power during stationary cycling. *Journal of Applied Biomechanics*, 34, 306-311. <https://doi.org/10.1123/jab.2017-0363>
- 2018 Crisafulli, D.N., Buddhadev, H.H., Brilla, L.R., Chalmers, G.R., Suprak, D.N., & San Juan, J.G. (2018). Creatine-electrolyte supplementation improves repetitive sprint cycling performance: A double blind randomized control study. *Journal of the International Society of Sports Nutrition*, 2018, 15-21. <https://doi.org/10.1186/s12970-018-0226-y>
- 2016 Buddhadev, H.H., & Martin, P.E. (2016). Effects of age and physical activity status on redistribution of joint work during walking. *Gait & Posture*, 50, 131-136. <https://doi.org/10.1016/j.gaitpost.2016.08.034>
- 2013 Vingren, J.L., Hill, D.W., Buddhadev, H.H., & Duplanty, A.A. (2013). Postresistance exercise ethanol ingestion and acute testosterone bioavailability. *Medicine and Science in Sports and Exercise*, 45(9), 1825-32. <https://doi.org/10.1249/MSS.0b013e31828d3767>
- 2012 Buddhadev, H.H., Vingren, J.L., Duplanty, A.A., & Hill D.W. (2012). Mechanisms underlying the reduced performance measures from using equipment with a counterbalance weight system. *Journal of Strength and Conditioning Research*, 26(3), 641-47. <https://doi.org/10.1519/JSC.0b013e318245c0b1>
- 2011 Irvin, K., Ede, A., Buddhadev, H.H., Driver, S., & Ronai, P. (2011). Physical activity and traumatic brain injury. *Strength and Conditioning Journal*, 33(4), 43-47. <https://doi.org/10.1519/SSC.0b013e318210e899>
- 2011 Ede, A., Buddhadev, H.H., Irvin, K., Driver, S., & Sorace, P. (2011). Circuit training recommendations for individuals with a traumatic brain injury. *Strength and Conditioning Journal*, 33(4), 48-51. <https://doi.org/10.1519/SSC.0b013e318211f99d>
- 2011 Vingren, J.L., Buddhadev, H.H., & Hill, D. W. (2011). Smith machine counterbalance system affects measures of maximal bench press throw performance. *Journal of Strength and Conditioning Research*, 25(7), 1951-56. <https://doi.org/10.1519/JSC.0b013e31821eb67f>

b. Non-refereed Articles:

3. Conference Proceedings

a. Refereed Conference Proceedings:

- 2023 Buddhadev, H.H. Pedaling cadence affects external knee adduction moment in older adults with and without knee osteoarthritis. 2023 Annual Meeting of the American College of Sports Medicine, Denver, CO.
- 2021 Mackay, E.J., Robey, N.J., Suprak, D.N., Buddhadev, H.H., & San Juan, J.G. The effect of electromyography biofeedback training on scapular stabilizer muscles in shoulder impingement patients. Poster presentation at the 2021 Virtual Annual Conference for American Society of Biomechanics.
- 2020 Buddhadev, H.H. Effect of power output and knee osteoarthritis on frontal plane

- knee joint moment during cycling. 2020 Annual Meeting of the American College of Sports Medicine, San Francisco, CA.
- 2020 Barbee, C.E., & Buddhadev, H.H. Hallux valgus and walking speed influence frontal plane net joint moments in older adults. 2020 Annual Meeting of the American College of Sports Medicine, San Francisco, CA.
- 2020 Brown, A., Brilla, L.R., Buddhadev, H.H., & Suprak, D.N. Effect of deep slow breathing training on performance and recovery during high intensity interval training. 2020 Annual Meeting of the American College of Sports Medicine, San Francisco, CA.
- 2019 Barbee C.E., Buddhadev, H.H., Suprak D.N., & Chalmers, G.R. The effects of controlled walking speed on dynamic balance in older adults with hallux valgus. Poster presentation at the 2019 Northwest Biomechanics Symposium, Bozeman, MT.
- 2019 Jordan, K.H., Fernandez, A., Suprak D.N., & Buddhadev, H.H. The effects of high heels on stance width and double support duration during a walking gait cycle. Poster presentation at the 2019 Northwest Biomechanics Symposium, Bozeman, MT.
- 2019 Perry, S.K. , Brilla, L.R., Buddhadev, H.H., & Suprak, D.N. Fascia thickness and rate of force development in classically trained ballet dancers. Poster presentation at the 2019 Northwest Biomechanics Symposium, Bozeman, MT.
- 2019 Olinger, K.M. , Brocato, C.J. , Suprak, D.N, Buddhadev, H.H., Mac-kay, E.J. , & San Juan J.G. Motions of the trunk, hip and knee during a single leg step-down test and running in patellofemoral pain. Podium presentation at the 2019 Northwest Biomechanics Symposium, Bozeman, MT.
- 2018 Buddhadev, H.H., Crisafulli, D.N., Duong, J.N., San Juan J.G., & Suprak, D.N. Number of successive crank cycles needed to achieve stable pedal forces data. Poster presentation at the 2018 Annual Conference for the American Society of Biomechanics, Minneapolis, MN.
- 2018 Emnott, D.M., Brilla, L.R., Buddhadev, H.H., & McLaughlin, W.L. Posture influence on recovery intervals in sprint cycling. Poster presentation at the 2018 Annual Meeting of the American College of Sports Medicine, Minneapolis, MN.
- 2018 Aslan, H., Suprak, D.N., Buddhadev, H.H., & San Juan, J.G Acute effects of two hip flexor stretching techniques on knee joint position sense and balance. Poster presentation at the 2018 Annual Meeting of the American College of Sports Medicine, Minneapolis, MN.
- 2017 Buddhadev, H.H., Crisafulli, D.N., Suprak, D.N., & San Juan J.G. Individuals with knee osteoarthritis show asymmetry in pedaling mechanics. Poster presentation at the 2017 Annual Conference for the American Society of Biomechanics, Boulder, CO.
- 2017 Buddhadev, H.H., & Martin, P.E Age effects on sagittal plane joint powers during submaximal cycling. Poster presentation at the 2017 Annual Meeting of the American College of Sports Medicine, Denver, CO.
- 2017 Crisafulli, D.N., Buddhadev, H.H, Brilla, L.R., Chalmers, G.R., Suprak, D.N., & San Juan, J.G. Sprint cycling performance improvement post creatine supplementation is associated with increase in lean body mass. Poster presentation at the 2017 Annual Meeting of the American College of Sports Medicine, Denver, CO.
- 2017 Miller, D.R., Brilla, L.R., San Juan, J.G., Suprak, D.N., Buddhadev, H.H. Differently formulated creatine effects on fatigue, work, and power in

- resistance-trained subjects. Poster presentation at the 2017 Annual Meeting of the American College of Sports Medicine, Denver, CO.
- 2016 Hummer, E., Suprak, D.N., Crisafulli, D., Buddhadev, H.H., San Juan J., & Brilla, L. The effect of a multi-ingredient performance supplement on back squat and bench press performance. Podium presentation at the 2016 NSCA National Conference, New Orleans, LA.
- 2015 Buddhadev, H.H., Smiley-Oyen, A.L., & Martin, P.E. Age-associated redistribution of relative joint moment impulses is robust to stride length manipulations. Thematic presentation at 2015 Annual Conference for American Society of Biomechanics, Columbus, OH.
- 2014 Buddhadev, H.H., Janssen, T., & Martin, P.E. Do age and physical activity status affect distribution of joint moment powers at the ankle, knee, and hip during walking? Poster presentation at the 7<sup>th</sup> World Congress of Biomechanics, Boston, MA.
- 2013 Buddhadev, H.H. and Martin, P.E. Stride length at controlled walking speeds is not related to redistribution of lower extremity joint powers. Poster presentation at the 2013 Annual Conference for American Society of Biomechanics, Omaha, NE.
- 2010 Buddhadev, H.H., Duplanty, A.A., Hill, D.W., Driver, S., Goggin, N., & Vingren, J.L. Use of counter-balanced Smith machine affects performance measurements for rebound bench press throws. Poster presentation at the 2010 Annual Meeting of the American College of Sports Medicine, Denver, CO.
- 2010 Duplanty, A.A., Buddhadev, H.H., Hill, D.W., Driver, S., Goggin, N., & Vingren, J.L. Effect of using a counter-balanced Smith machine on performance measurements for concentric-only bench press throws. Poster presentation at 2010 Annual Meeting of the American College of Sports Medicine, Denver, CO.
- 2010 Vingren, J.L., Buddhadev, H.H., Evans, B., & Hill, D.W. Use of a counter-balance weight affects measurements of bench press throw performance. Podium presentation at the National Conference of National Strength and Conditioning Association, Orlando, FL.
- 2010 Buddhadev, H.H., Vingren, J. L., & Hill, D. W. Modelling the relationship between velocity and time to fatigue in elite female long-track speed skaters. Poster presentation at the Annual meeting of the American College of Sports Medicine, Baltimore, MD.
- 2010 Vingren, J. L., Buddhadev, H.H., & Hill, D. W. Modelling the relationship between velocity and time to fatigue in elite male long-track speed skaters. Poster presentation at the annual meeting of the American College of Sports Medicine, Baltimore, MD.

b. Non-refereed:

4. Abstracts:

5. Reports:

6. Book Reviews:

7. Other Works in Print:

B. Works not in Print

## 1. Papers Presented at Professional Meetings:

## 2. Creative works

## 4. Invited Talks, Lectures, and Presentations:

## 5. Consultancies:

## 6. Workshops:

- a. 2024 Center for the Improvement of Mentored Experiences in Research (CIMER) Workshop

## 7.5. Other Works not in Print:

- a. Works “submitted” or “under review”
- b. Works “in progress”

## C. Grants and Contracts

## 1. Funded External Grants and Contracts:

- 2015 Evaluate effects of creatinine and electrolyte supplementation on exercise performance, Albion Laboratories, Clearfield, UT, (Brilla, L.R., Buddhadev, H.H., San Juan, J.G., & Suprak, D.N.), \$36,948

## 2. Submitted, but not Funded, External Grants and Contracts:

- 2016 Longitudinal assessment of changes in walking and cycling mechanics, lower extremity strength, and knee joint position sense in patients with total and partial knee arthroplasty, Zimmer Biomet, (San Juan, J.G., Suprak, D.N., Buddhadev, H.H., Brilla, L.R., & Williamson, R.), \$131,078

## 3. Funded Internal Grants and Contracts:

- 2018 Summer Research Grant, Effect of stance width manipulation of pedaling mechanics of individuals with knee osteoarthritis, Western Washington University, (Buddhadev, H.H.), \$6000
- 2015 Summer Research Grant, Symmetry in pedaling mechanics of older adults with knee osteoarthritis, Western Washington University, (Buddhadev, H.H.), \$6000
- 2012 Pease Research Doctoral Award to support research conducted as part of doctoral dissertation, Iowa State University, (Buddhadev, H.H.), \$2000

## 4. Submitted, but not Funded, Internal Grants and Contracts:

## D. Fellowships, Awards, Honors:

- 2015 American Kinesiology Association Doctoral Scholar Award
- 2015 American Kinesiology Association National Doctoral Scholar Award, Honorable Mention
- 2014 Barbara E. Forker Scholarship, Iowa State University
- 2012 Thesis Award Winner, College of Education, University of North Texas



## IV. SERVICE

### A. Institutional

#### 1. University:

##### (at Sam Houston University)

2024-present Primary Member, Institutional Review Board Committee

##### (at Western Washington University)

2020-2023 Member, Academic honesty board  
 2020-2023 Member, Western coalition for integrity  
 2020-2021 Chair, Western coalition for Integrity  
 2017-2021 Faculty senate representative, Student technology fee committee  
 2017-2020 Faculty senate representative, Central health and safety committee  
 2017 Search committee - Vice provost for research/ dean of graduate school  
 2017 Faculty evaluator, 6<sup>th</sup> annual graduate student conference

#### 2. College:

##### (at Western Washington University)

2020-2022 Member, College of Health and Social Sciences professional leave committee  
 2020-2022 Member, College of Health and Social Sciences computer advisory committee

#### 3. Department/School:

##### (at Sam Houston University)

2023-present Director, Motor Behavior and Biomechanics Laboratory  
 Fall 2024 Chair, Search Committee – Tenure Track Assistant Professor of Kinesiology, Strength & Conditioning  
 2023-present Coordinator, Clinical Exercise Science Program  
 2024-present DPTAC Committee Member

##### (at Western Washington University)

2018-2023 Director, Gait and Cycling Biomechanics Laboratory  
 2020-2023 Carver facilities liaison  
 2019-2020 Director, Mature adult training program  
 2017 Search committee - Primary physical education and health faculty  
 2016 Search committee - Secondary physical education and health faculty  
 2016-2017 Transfer advisor for the kinesiology program

#### 4. Professional:

##### Journal Reviewer

2016-Present Gait & Posture  
 2017-Present Medicine and Science in Sports and Exercise  
 2021-Present Journal of Musculoskeletal Research  
 2023-Present Journal of Applied Biomechanics  
 2024-Present Journal of Aging and Physical Activity

2024 South Central American Society of Biomechanics: Organizing committee member, session moderator, poster judge, career roundtables organizer

**(at Western Washington University)**

External Reviewer for tenure and promotion

2018 Biola University, La Mirada, CA

2019 Willamette University, Salem, OR

American Society of Biomechanics

2021 Abstract reviewer for the 2021 Annual Conference

2019-2023 Northwest Biomechanics Symposium: Abstract reviewer, podium presentation evaluator, panel speaker, discussion moderator

2018 Organizing member 2018 Northwest Biomechanics Symposium

C. Community:

D. Service Honors and Awards:

2017 Outstanding Reviewer Award, Gait & Posture

E. Service Grants and Contracts

1. Funded External Service Grants and Contracts:

2. Submitted, but not Funded, External Service Grants and Contracts:

3. Funded Internal Service Grants and Contracts:

4. Submitted, but not Funded, Internal Service Grants and Contracts: