

Harish Chander, Ph.D.

Associate Professor of Biomechanics & Co-Director of the Neuromechanics Laboratory
Faculty Affiliate - Athlete Engineering & Center for Advanced Vehicular Systems (CAVS)

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My research centers on the application of principles of neuromechanics to human performance, injury prevention and safety promotion. My research efforts are focused in areas of human factors in ergonomics, athletics, clinical, geriatric, pediatric and daily living populations, with special emphasis in postural stability, gait, slips, trips, falls and fall prevention, attempting to minimize injuries while promoting safety and enhancing efficient human performance.



KEY PERFORMANCE INDICATORS (KPI)			
Research Publications - Peer-Reviewed			
	Published	In-Review	In-Preparation
Journal Articles	119	5	5
Conference Proceedings & Presentations	164	-	-
Textbook Chapters	2	-	-
Textbook	1	-	1
Research Metrics			
H-Index	26		
I-10 Index	62		
Research Funding			
	Applied	Funded	In-Review
External Funding	\$20,500,735.00	\$3,155,923.00	\$5,604,476.00
Internal Funding	\$135,250.00	\$135,250.00	\$0
Total	\$20,500,735.00	\$3,291,173.00	\$5,604,476.00
~\$4million NIST is pending award. Total Acquired funding will be \$7,290,275.00			
Entrepreneurship & Intellectual Property			
Patents	1 Awarded and 1 Applied		
Invention Disclosures	2 Invention Disclosures		
Teaching			
Teaching Evaluations	Overall Average		
Global Index (Old Format) (max score of 5)	4.6 / 5-point scale		
Median Score (New Format) (max score of 4)	3.86 / 4-point scale		
Awards			
Research Awards	5 awards (Note: MSU Herb Handley Research Excellence)		
Teaching Awards	2 awards (Note: MSU Alumni Association & Cindy Rose Teaching Excellence)		
Advising Awards	1 award (Note: MSU Graduate School Advisor of the Year)		
Academic Excellence Awards	2 awards (Note: Robert Blackburn & Graduate Achievement)		
Invited Peer-Reviewer for Journals, Conferences, Textbooks and Grants			
International Journals	37 Journals		
Invited Peer-Reviews Performed	143 Peer-Reviews		
Invited Book Peer-Reviews Performed	1 Book Peer-Review		
Invited Book Chapter Peer-Review Performed	2 Book Chapter Peer-Review		
Invited PhD Dissertation/Thesis External Reviewer	1 International (Australia)		
Invited Reviewer for Federal Agencies	NIH, NSF, CDC/NIOSH, IRSST, CFI (Canada), HRB (Ireland)		
Faculty Advisor and Research Committee Service			
Graduate - Doctoral (PhD)	Graduate Level 1 Faculty		
	Chair: 8 Students; Committee Member: 8 Students		
Graduate - Masters (MS)	Chair: 6 Students		
	Committee Member: 2 Students		
	DIS & Non-Thesis Chair: 4 Students Committee: 12 Students		
Undergraduate - Bachelors (BS)	Chair for Directed Individual Study: 18 Students		
	Chair Internship: 6 Students; Chair Research: 37 Students		
	Advisor: 60 Students every semester		

EVERYTHING IN BLUE COLOR TEXT ARE ACTIVITIES THAT OCCURRED AFTER SUBMITTING MY P&T DOSSIER FOR ASSISTANT TO ASSOCIATE PROFESSOR WITH TENURE IN AUGUST 2019

Research, Teaching, Service are split as **Before Aug 2019** and **Since Aug 2019**

EDUCATION

Doctor of Philosophy (PhD) Health & Kinesiology, Biomechanics, University of Mississippi, 2014
Major Area: Biomechanics / Neuromechanics
Minor Area: Exercise Physiology
Research Concentration: Ergonomics and Fall Prevention
Dissertation: Biomechanics of Slips in Alternative Footwear

Master of Science (MS) Health & Kinesiology, Biomechanics, University of Mississippi, 2012
Major Area: Neuromechanics
Research Concentration: Ergonomics and Fall Prevention
Thesis: Impact of Occupational Footwear on Balance

Bachelor of Physical Therapy (BPT) Physical Therapy, The T.N. MGR Medical University, Sree Balaji College of Physiotherapy, 2008
Major Area: Orthopedic and Pediatric PT
Work Concentration: Neuro-Developmental Therapy
UG Dissertation: The Effects of Cryotherapy and Massage in the Treatment of Delayed Onset of Muscle Soreness (DOMS)

EMPLOYMENT (Salaried/Funded Positions)

2023 – 2024 Faculty Leadership Intern, Office of Research and Economic Development (ORED), Mississippi State University

2022 – Present Faculty Mentor, University of Mississippi Medical Center (UMMC) Graduate Training and Education Center (GTEC)

2022 – Present Faculty Mentor, Starkville High School Base Pair Program

2020 – Present Associate Professor of Biomechanics (Tenured) & Level I Graduate Faculty
Co-Director of the Neuromechanics Laboratory
Department of Kinesiology, Mississippi State University
Faculty Affiliate, Athlete Engineering

2018 – Present Faculty Affiliate, Center for Advanced Vehicular Systems (CAVS)

2015 – Present Assistant Professor of Biomechanics (Tenure-Track) & Level I Graduate Faculty
Co-Director of the Neuromechanics Laboratory
Department of Kinesiology, Mississippi State University

2016 – 2019 Adjunct Research Assistant Professor, Department of Health, Exercise Science, and Recreation, The University of Mississippi (*Non-Funded*)

2010 – 2014 Graduate Teaching Assistant, Department of Health, Exercise Science, and Recreation, The University of Mississippi

2008 – 2009 Physical Therapist, Talwalkars Better Value Fitness Pvt. Ltd., India

2007 – 2009 Home Care Physical Therapist, Chennai, India

2007 – 2008 Pediatric Physical Therapist, Vinayaga Physio Point, Chennai, India

LEADERSHIP AND MENTORSHIP TRAINING

2023 – 2024 Mississippi State University, Office of Research and Economic Development (ORED) Faculty Leadership Intern (FLIP) (competitive paid leadership training)

2023 – 2024 Mississippi State University, Faculty Leadership Development Program (FLDP)

2022 Mississippi Center of Clinical and Translational Research (MCCTR)
Mentoring Academy Fellow, Class of 2022.
2022 – 2023 College of Education Mid-Career Mentoring Program
2023 National Institute of Health (NIH) Center for Scientific Review (CSR),
Training in Review Integrity and Mitigating Bias in Peer Review

DIRECTORSHIP, LEADERSHIP AND MENTORSHIP

2014 – Present Co-Director of the Neuromechanics Laboratory
2021 – Present Chair, Academic Culture Committee, Department of Kinesiology,
Mississippi State University
2022 – Present NIH-NHLBI Selected Faculty Mentor, University of Mississippi Medical
Center (UMMC), Graduate Training and Education Center (GTEC)
through NIH/NHLBI
2023 – Present Faculty Representative for the Undergraduate Research and Creative
Discovery Committee
2023 – Present Faculty Mentor, MS Base Pair Program, Starkville High School and
Mississippi State University
2021 – Present Faculty Affiliate, Center for Teaching and Learning (CTL), Mississippi
State University (*Preparing Future Faculty & Instructional Course Design
& Assessment*)
2018 – 2023 Faculty Mentor for Funded NIOSH Pilot Program Training and Research
2018 – Present Faculty Advisor, Shackouls Honors College, Mississippi State University
(*Honors thesis and Directed Individual Study*)
2016 – Present Faculty Advisor, Neuromechanics Research Group (NRG),
Undergraduate Student Club, Mississippi State University
2016 – 2017 Co-Director of the Human Factors Working Group, Mississippi State
University

COMMITTEE SERVICE

2023 – Present Faculty Representative for Mississippi State University, Federal
Demonstration Partnership (FDP)
2022 – Present Undergraduate Research and Creative Discovery Committee (URCDC),
Shackouls Honors College, Mississippi State University *Dean Appointed
Committee Member for College of Education.*
2021 – Present Institutional Review Board (IRB), Mississippi State University, *Invited
Committee Member*
2022 – Present Promotion and Tenure Committee, College of Education, Mississippi
State University, *Elected Committee Member*
2021 – 2022 Graduate Studies Working Group, Strategic Enrollment Planning
Exercise, Mississippi State University, *Invited Committee Member*
2020 – Present Public Relations Committee, Department of Kinesiology, Mississippi State
University, *Elected Committee Member*
2019 – Present Vice Chair Faculty Council, College of Education, Mississippi State
University, *Elected Vice Chair*
2019 – Present Faculty Council, College of Education, Mississippi State University,
Elected Committee Member
2014 – 2016 Diversity Committee, College of Education, Mississippi State University,
Elected Committee Member
2014 – Present Laboratory Committee, Department of Kinesiology, Mississippi State
University, *Appointed Committee Member*
2014 – Present Academic Culture Committee, Department of Kinesiology, Mississippi
State University, *Appointed Committee Member*
2014 – Present Exercise Science Curriculum Committee, Department of Kinesiology,
Mississippi State University, *Appointed Committee Member*

2014 – Present	Sports Studies Curriculum Committee, Department of Kinesiology, Mississippi State University, <i>Appointed Committee Member</i>
2019 – 2020	ISWD Faculty Search Committee, <i>Appointed Committee Member</i>
2023 – 2024	Kinesiology Faculty Search Committee, <i>Appointed Committee Member</i>

Other University Service:

2016 – Present	Recurring Graduate Teaching Assistant (GTA) Evaluator, Graduate School, Mississippi State University
2020 – Present	Recurring Guest Mentor, Preparing Future Faculty (PFF), Center for Teaching and Learning (CTL)
2020 – Present	Recurring Guest Speaker, Research Involvement, Shackouls Honors College.
2015 – Present	Recurring Judge at Graduate and Undergraduate Research Symposium

Awards and Recognitions

- Winner of the MSU Alumni Association Graduate and Professional Teaching Excellence Award, 2024.
- Winner of the Cindy Rose Teaching Award, College of Education, Mississippi State University, 2023.
- Winner of the Graduate Advisor of the Year, Graduate Student Association, MSU Graduate School, 2021.
- Winner of the Herb Handley Research Award, College of Education, Mississippi State University, 2020.
- Third place winner of Rapid Research Race for Assistant Professors at SEACSM 2020.
- J. Robert Blackburn Graduate Award in Exercise Science, University of Mississippi Honors Convocation, 2014.
- Graduate Achievement Award in Health, Exercise Science and Recreation Management, University of Mississippi Honors Convocation, 2014.
- Grand Prize Winner, University of Mississippi 3 Minute Thesis Competition (3MT®) - Represented University of Mississippi at the South Council of Graduate Schools at San Antonio in February 2014.
- Winner of the Student of the Month, School of the Applied Sciences - October 2013.
- Winner of University of Mississippi - Annual Research Day and Symposium - 2nd Place; 2012.

Mentored Student Research Awards:

- Hunter Derby – Kinesiology Doctoral Student of the Year (2024) – Primary Advisor
- Faith Hagan – 1st Place Undergraduate Research Symposium Movement Sciences (2024) – Primary Advisor
- Hasini Yamagowni – 2nd Place Undergraduate Research Symposium Movement Sciences (2024) – Primary Advisor
- Agatha Taquino – 3rd Place Undergraduate Research Symposium Movement Sciences (2024) – Primary Advisor
- Sachini Kodi - ORED/COE Graduate Student Researcher of the year award – 2021 – Primary Advisor
- Luke Ramsey - ORED/COE Undergraduate Student Researcher of the year award – 2020 – Primary Advisor
- Alana Turner - ORED/COE Graduate Student Researcher of the year award – 2020 – Primary Advisor
- Hannah Freeman - ORED/COE Undergraduate Student Researcher of the year award – 2020 – Primary Advisor
- Sachini Kodi – Graduate School GTA of the year award – 2020 – Primary Advisor
- Sachini Kodi - Kinesiology Exercise Science Master's Student of the year award – 2019 – Primary Advisor
- Alana Turner – Kinesiology Exercise Science Master's Student of the year award – 2018 – Primary Advisor
- Sachini Kodi – Research Poster Presentation Winner GSA – 2018 – Primary Advisor
- Alana Turner – ORED/COE Undergraduate Student Researcher of the year award – 2017 – Primary Advisor
- Jeffrey Simpson - ORED/COE Graduate Student Researcher of the year award – 2016 – Committee Member
- Christopher Hill – ORED/COE Graduate Student Researcher of the year award – 2015 – Primary Advisor

RESEARCH

Research Publications - Peer-Reviewed:

Only Peer-Reviewed Scholarly Activity	Aug 2014 to Jul 2019	Since Aug 2019	Total Aug 2014 to Aug 2024	Current	
	Published	Published	Published	In-Review	In-Preparation
Journal Articles	51	66	117 (+2)	5	5
Conference Proceedings & Presentations	103	38	147 (+17)	1	-
Textbook Chapters	1	1	2	-	-
Textbook	-	1	1	-	1

Note: Additional journal articles and conferences reflected in parentheses are prior to MSU

Research Metrics:

Research Metrics	Prior to 2019	Since 2019	Current
<i>H-Index</i>	3	23	26
<i>I-10 Index</i>	2	60	62

† Denotes Primary Student Mentored Projects

- Lowell, R., Saucier, D., **Chander, H.**, Burch, R., & Gillen, Z. (2024). Effects of an Auditory Versus Visual Stimulus on Reaction and Response Time During Countermovement Jumps. *Perceptual and Motor Skills*, 00315125241256688.
- † Turner, A. J., **Chander, H.**, Kodithuwakku Arachchige, S. N., Griffith, A., Chen, P. L., Chen, C. C., ... & Smith, J. C. (2024). The Effects of an Inclusive Badminton Program on Static Postural Control for Individuals with Intellectual and Developmental Disabilities. *International Journal of Environmental Research and Public Health*, 21(2), 210. <https://doi.org/10.3390/ijerph21020210>
- Simpson, J. D., Lima, L. C., Lee, Y., **Chander, H.**, & Knight, A. C. (2024). Closed-Loop Reflex Responses of the Lateral Ankle Musculature from Various Thresholds During a Lateral Ankle Sprain Perturbation. *Journal of Sport Rehabilitation*, 1, 1-5. <https://doi.org/10.1123/jsr.2023-0336>
- † Derby, H., Conner, N. O., Hull, J. M., Hagan, F., Barfield, S., Stewart, T., ... & **Chander, H.** (2023). Effects of Acute Exposure to Virtually Generated Slip Hazards during Overground Walking. *Applied Sciences*, 13(23), 12848. <https://doi.org/10.3390/app132312848>
- † Freeman, H. R., **Chander, H.**, Kodithuwakku Arachchige, S. N., Turner, A. J., Jones, J. A., Pan, Z., ... & Knight, A. C. (2023). Postural Control Behavior in a Virtual Moving Room Paradigm. *Biomechanics*, 3(4), 539-551. <https://doi.org/10.3390/biomechanics3040043>
- † Kodithuwakku Arachchige, S. N. K., **Chander, H.**, Brown, C., Freeman, H.R., Shojaei, A., Knight, A.C., Burch R.F.V., Chen, C.C. (2023). Effects of Virtual Heights, Dual-Tasking, and Training on Static Postural Stability. *Applied Ergonomics*, 114, 104145. <https://doi.org/https://doi.org/10.1016/j.apergo.2023.104145>
- † Kodithuwakku Arachchige, S. N. K., **Chander, H.**, Turner, A. J., Shojaei, A., Knight, A. C., Griffith, A., Burch, R. F., & Chen, C.-C. (2023). Physiological and Subjective Measures of Anxiety with Repeated Exposure to Virtual Construction Sites at Different Heights. *Safety and Health at Work*, 14(3), 303–308. <https://doi.org/https://doi.org/10.1016/j.shaw.2023.07.005>
- Nolff, M. R., Kapur, S., Kendall, B. J., Doumas, M., Conner, N. O., **Chander, H.**, ... & Goble, D. J. (2023). An Initial Set of Reference Values for the Balance Tracking System (BTrackS) Limits of Stability Protocol. *Gait & Posture*, 107, 67-71. <https://doi.org/10.1016/j.gaitpost.2023.09.008>
- Conner, N. O., Haworth, J. L., Nolff, M. R., **Chander, H.**, & Goble, D. J. (2023). Six Weeks of at Home BTrackS Target Tracking Training Induces Sustained Dynamic Balance Improvement in Healthy Young Adults. *Medical Devices: Evidence and Research*, 81-89. <https://doi.org/10.2147/MDER.S404536>
- Chander, H.**, McCrory, A., Chandler, S. J., Freeny, S., Griffith, A., Burch, R., ... & Knight, A. C. (2023). Noise Interference Impacts Simple and Choice Response Times during a Lower Extremity Cognitive–Motor Task. *Clinical and Translational Neuroscience*, 7(1), 4. <https://doi.org/10.3390/ctn7010004>
- † Lowell, R., Conner, N. O., Derby, H., Hill, C. M., Gillen, Z., Burch, R. F., Knight, A., Reneker, J. & **Chander, H.** (2023). Quick on Your Feet: Modifying the Star Excursion Balance Test with a Response

Time Task. *International Journal of Environmental Research and Public Health*, 20, 1204.
<https://doi.org/10.3390/ijerph20021204>.

12. Davarzani, S., Saucier, D., Talegaonkar, P., Parker, E., Turner, A., Middleton, C., W., Ball, J. E., Gurbuz, A., **Chander, H.**, Burch, R. F., Smith, B. K., Knight, A., & Freeman, C. (2023). Closing the Wearable Gap—Part X: Foot-ankle Kinematic Modeling via Deep Learning Models Based on a Smart Sock Wearable. *Wearable Technologies*, 4, e4. <https://doi.org/10.1017/wtc.2023.3>
13. † Derby, H., **Chander, H.**, Kodithuwakku Arachchige, S. N. K., Turner, A., Knight, A. C., Burch, R. F., Freeman, C., Wade, C., & Garner, J. C. (2023). Occupational Footwear Design Influences Biomechanics and Physiology of Human Postural Control and Fall Risk. *Applied Sciences*, 13(1), 116. <https://doi.org/10.3390/app13010116>.
14. Strawderman, L., Jose, B., Burch, R., Warren, S., Taylor, C., Ball, J., ... & **Chander, H.** (2022). The applicability of existing acceptance models for enterprise organizational technology acceptance of wearables. *International Journal of Industrial Ergonomics*, 92, 103381. <https://doi.org/10.1016/j.ergon.2022.103381>.
15. Persons, A. K., Middleton, C., Parker, E., Carroll, W., Turner, A., Talegaonkar, P., Davarzani, S., Saucier, D., **Chander, H.**, ... & Burch V, R. F. (2022). Comparison of the Capacitance of a Cyclically Fatigued Stretch Sensor to a Non-Fatigued Stretch Sensor When Performing Static and Dynamic Foot-Ankle Motions. *Sensors*, 22(21), 8168. <https://doi.org/10.3390/s22218168>
16. Mamun, A. A., Bormon, K. K., Rasu, M. N. S., Talukder, A., Freeman, C., Burch, R., & **Chander, H.** (2022). An Assessment of Energy and Groundwater Consumption of Textile Dyeing Mills in Bangladesh and Minimization of Environmental Impacts via Long-Term Key Performance Indicators (KPI) Baseline. *Textiles*, 2(4), 511-523. <https://doi.org/10.3390/textiles2040029>
17. † Conner, N. O., Freeman, H. R., Jones, J. A., Luczak, T., Carruth, D., Knight, A. C., & **Chander, H.** (2022). Virtual Reality Induced Symptoms and Effects: Concerns, Causes, Assessment & Mitigation. *Virtual Worlds* 1 (2), 130-146. <https://doi.org/10.3390/virtualworlds1020008>
18. † Derby, H.; Conner, N.O.; Talukder, A.; Griffith, A.; Freeman, C.; Burch, R.; Simpson, J.D.; Goble, D.J.; Knight, A.C.; **Chander, H.** (2022). Impact of Sub-Clinical and Clinical Compression Socks on Postural Stability Tasks among Individuals with Ankle Instability. *Healthcare*, 10, 1271. <https://doi.org/10.3390/healthcare10071271>
19. **Chander, H.**, Freeman, H. R., Hill, C. M., Hudson, C. R., Kodithuwakku Arachchige, S. N., Turner, A. J., ... & Knight, A. C. (2022). The Walls Are Closing in: Postural Responses to a Virtual Reality Claustrophobic Simulation. *Clinical and Translational Neuroscience*, 6(2), 15. <https://doi.org/10.3390/ctn6020015>
20. † Talukder, A., Derby, H., Freeman, C., Burch, R., Knight, A., & **Chander, H.** (2022). Sensory and Tactile Comfort Assessment of Sub-Clinical and Clinical Compression Socks on Individuals with Ankle Instability. *Textiles*, 2(2), 307-317. <https://doi.org/10.3390/textiles2020017>
21. Gaddis, E. S., Burch, R.F.V., Strawderman, L., **Chander, H.**, Smith, B. K., Freeman, C., & Taylor, C. (2022). The impact of using wearable devices on the operator during manual material handling tasks. *International Journal of Industrial Ergonomics*, 89, 103294. <https://doi.org/10.1016/j.ergon.2022.103294>
22. Arlotti, J.S., Carroll, W.O., Afifi, Y., Talegaonkar, P., Albuquerque, L., Ball, J.E., **Chander, H.** and Petway, A., (2022). Benefits of IMU-based Wearables in Sports Medicine: Narrative Review. *International Journal of Kinesiology and Sports Science*, 10(1), 36-43. <https://doi.org/10.7575/aiac.ijkss.v.10n.1p.36>
23. Booker, R., **Chander H.**, Norris, K.C., Thorpe Jr, R.J, Vickers, B., Holmes, M.E. (2022). Comparison of Leisure Time Physical Activities by Metabolic Syndrome Status among Adolescents. *International Journal of Environmental Research and Public Health*, 19(3), 1415. <https://doi.org/10.3390/ijerph19031415>
24. McDevitt, S., Hernandez, H., Hicks, J., Lowell, R., Bentahaikt, H., Burch, R., Ball., J., **Chander, H.**, Freeman, C., Taylor, C. & Anderson, B. (2022). Wearables for Biomechanical Performance Optimization and Risk Assessment in Industrial and Sports Applications. *Bioengineering*, 9(1), 33. <https://doi.org/10.3390/bioengineering9010033>
25. Lehra, C., Omalekb, O., Osborne, S., Warren, Z., Saucier, D., Ball, J., & Chander, H. (2022). Wearable Applications in Rugby for Performance Quantification and Player Health Assessment: A Brief Review. *International Journal of Kinesiology and Sports Science*, 10(2), 1-10. <http://dx.doi.org/10.7575/aiac.ijkss.v.10n.2p.1>.
26. † Kodithuwakku Arachchige SNK, Burch RFV, **Chander H**, Turner AJ, and Knight AC. (2022). The Use of Wearable Devices in Cognitive Fatigue: Current Trends and Future Intentions. *Theoretical Issues in Ergonomics Science*, 23 (2), 374-386. <https://doi.org/10.1080/1463922X.2021.1965670>

27. Simpson J., Koldenhoven R., Wilson S., Stewart E., Turner A., **Chander H.**, & Knight A. (2022). Lower extremity joint kinematics of a simulated lateral ankle sprain after drop landings in subjects with chronic ankle instability. *Sports Biomechanics Special Issue on Ankle Sprains and Instability*, 21(4), 428-446. <https://doi.org/10.1080/14763141.2021.1908414>.
28. **Chander H.**, Kodithuwakku Arachchige SNK, Turner AJ & Knight AC. (2022). Is it me or the room moving? Recreating the classical "moving room" experiment with virtual reality for postural control adaptation. *Adaptive Behavior*, 30 (20), 199-204. <https://doi.org/10.1177%2F1059712320971372>
29. Luczak, T., Burch, R.F.V, Smith, B., **Chander, H.**, Lamberth, J., & Carruth, D. (2022). Using Human Factors Engineering and Garvin's Product Quality to Develop a Basketball Shoe Taxonomy. *Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology*, 236 (1), 60-69. <https://doi.org/10.1177%2F1754337120965421>
30. Wilson SJ, Gdovin JR, Williams CC, Donahue PT, Mouser JG, Mutchler JA, Simpson JD, **Chander H.** & Garner JC. (2022). More than a Footwedge – Golf Specific Footwear Alters Muscle Activation Patterns During Standing Balance. *Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology*, 236 (1), 36-42. <https://doi.org/10.1177%2F1754337120938269>.
31. Carroll, W., Fuller, S., Lawrence, J. M., Osborn, S., Stallcu, R., Burch, R., Freeman, C., **Chander, H.**, ... & Piroli, A. (2021). Stroboscopic Visual Training for Coaching Practitioners: A Comprehensive Literature Review. *International Journal of Kinesiology and Sports Science*, 9(4), 49-59. <http://dx.doi.org/10.7575/aiac.ijkss.v.9n.4p.49>
32. **Chander H.**, Kodithuwakku Arachchige SNK, Turner AJ, Burch RFV, Reneker JC, Knight AC, Wade C & Garner JC. Sensory Organization Test Conditions Influence Postural Strategy Rather than Footwear or Workload. *International Journal of Environmental Research and Public Health*, 2021, 18(19), 10511; <https://doi.org/10.3390/ijerph181910511>.
33. † Kodithuwakku Arachchige SNK, **Chander H.**, Knight AC, Burch RFV, and Chen C. Dual Tasking During Trip Recovery and Obstacle Clearance among Young, Healthy Adults in Human Factors Research. *International Journal of Environmental Research and Public Health*, 2021, 18(19), 10144; <https://doi.org/10.3390/ijerph181910144>.
34. **Chander H.**, Kodithuwakku Arachchige SNK, Turner AJ, Burch RFB, Knight AC, Wade C & Garner JC. (2021). Role of occupational footwear and workload on lower extremity muscle activation during maximal exertions and postural stability tasks. *Biomechanics*, 1(2), 202-213; <https://doi.org/10.3390/biomechanics1020017>
35. Saucier, D.N.; Davarzani, S.; Burch V, R.F.; **Chander, H.**; Strawderman, L.; Freeman, C.; Ogden, L.; Petway, A.; Duvall, A.; Crane, C.; Piroli, A. (2021). External Load and Muscle Activation Monitoring of NCAA Division I Basketball Team Using Smart Compression Shorts. *Sensors*, 21, 5348. <https://doi.org/10.3390/s21165348>
36. Carroll, W., Turner, A.J., Talegaonkar, P., Parker, E., Middleton, C., Peranich, P., Saucier, D.N., Burch, R.F.B.V., Ball, J.E., Smith, B.K., **Chander, H.**, Knight, A.C., & Freeman, C.E. (2021) "Closing the Wearable Gap: Part IX — Validation of an Improved Ankle Motion Capture Wearable," in IEEE Access, <https://ieeexplore.ieee.org/abstract/document/9508398>
37. † Turner, A.J., Carroll, W., Kodithuwakku Arachchige, S.N.K., Saucier, D., Burch, R.F., Ball, J.E., Smith, B.K., Freeman, C., Knight, A.C. & **Chander, H.** (2021). Closing the Wearable Gap: A Validation Study for a Smart Knee Brace to Capture Knee Joint Kinematics. *Biomechanics*, 1(1), 152-162; <https://doi.org/10.3390/biomechanics1010012>
38. Stewart, E., Stewart, M., Arachchige, S. N. K., Turner, A., Knight, A., Johnson, J., ... & **Chander, H.** (2021). Validation of a Bat Handle Sensor for Measuring Bat Velocity, Attack Angle, and Vertical Angle. *International Journal of Kinesiology and Sports Science*, 9(2), 28-32. <http://dx.doi.org/10.7575/aiac.ijkss.v.9n.2p.28>.
39. Smith E, Burch RFB, Smith B, Strawderman L & **Chander H.** (2021). A Comfort Analysis of Using Smart Glasses During the "Picking" and "Putting" Task. *International Journal of Industrial Ergonomics*. 83, <https://doi.org/10.1016/j.ergon.2021.103133>.
40. **Chander H.**, Garner JC, Wade C, Wilson SJ, Turner AJ, Kodithuwakku Arachchige SNK, Hill CM, DeBusk H, Simpson JD, Miller BL, Morris CE & Knight AC. (2021). An Analysis of Postural Control Strategies in Various Types of Footwear with Varying Workloads. *Footwear Science*. <https://doi.org/10.1080/19424280.2021.1899297>.

41. † Kodithuwakku Arachchige SNK, **Chander H**, Turner AJ, Knight AC. (2021). Impact of Prolonged Exposure to a Slippery Surface on Postural Stability. *International Journal of Environmental Research and Public Health*, 18(5), 2214; <https://doi.org/10.3390/ijerph18052214>
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Peer-Reviewed Conference Proceedings and Presentations:

American Society of Biomechanics (ASB):

1. **Chander, H.**, Freeman, H., & Knight, A.C. Is it the virtual environment or just the head-mounted virtual reality device that induces postural sway? Proceedings of the American Society of Biomechanics Annual Conference, Knoxville, TN, August 8-11, 2023.
2. Derby, H., Kodithuwakku Arachchige, S., Knight, A., **Chander, H.** Impact of Various Occupational Footwear On Postural Stability Using Balance Tracking System. Proceedings of the American Society of Biomechanics Annual Conference (Podium), Knoxville, TN, August 8-11, 2023.
3. Conner, N., Nolff, M., Kapur, S., Goble, D., Knight, A., **Chander, H.** An initial set of reference values for the balance tracking system (BTracks) limits of stability protocol based on 800 healthy young adults. Proceedings of the American Society of Biomechanics Annual Conference, Knoxville, TN, August 8-11, 2023.
4. Turner, A., Farm, I., Kodithuwakku Arachchige, S., Griffith, A., Chen, P., Chen, C., Knight, A., Smith, C., & **Chander, H.** The Effects of an Inclusive Badminton Program on Unilateral Static Balance for Young Adults

- with Intellectual and Developmental Disabilities. Proceedings of the American Society of Biomechanics Annual Conference, Knoxville, TN, August 8-11, 2023.
5. Hill CM, Chandler SJ, McCrory AN, Freeny S, Trigg SK, Burch RFBV, Knight AC & **Chander H**. Quick On Your Feet: Revamping the Star Excursion Balance Test With A Response Time Task. *North American Congress on Biomechanics*, August 21 – 25, 2022 in Ottawa, Ontario.
 6. Kodithuwakku Arachchige SNK, **Chander H**, Knight AC, and Turner AJ. The Effect of Minimalist Footwear Types on Static Postural Stability. Proceedings of the *American Society of Biomechanics Annual conference*, (online). August 10-13, 2021.
 7. Turner, A, **Chander, H**, Knight, A, Chen, C, Pan, Z, & Arachchige, S. Hydrotherapy Vs. Land-Based Exercises On Dual Task Postural Control In A Geriatric Population. *Proceedings of the American Society of Biomechanics Annual conference*, (online). August 10-13, 2021.
 8. Wilson, S.J., Hill, C.M., DeBusk, H., Simpson, J.D., Miller, B.L., Knight, A.C., Garner, J.C., Wade, C. & **Chander, H**. The Interaction of Cognitive Interference, Standing Surface, and Fatigue on Lower Extremity Muscle Activity. *Proceedings of the American Society of Biomechanics Annual Conference and World Congress of the International Society of Biomechanics (ISB)*, Calgary, Canada. July 31 – August 4, 2019.
 9. Smidebush, M., Stewart, E.M., Knight, A.C., **Chander, H**. & Shapiro, R. Muscle activation analysis with kinematic comparison between wind-up and stretch pitching with respect to the upper and lower extremities. *Proceedings of the American Society of Biomechanics Annual Conference and World Congress of Biomechanics*, Rochester, Minnesota, August 8-11, 2018.
 10. Wilson, S.J., Donahue, P.T., Williams, C.C., Hill, C.M., Luginsland, L., Waddell, D.E., **Chander, H**. & Garner, J.C. Lead leg recovery responses between individuals who fall and recover after an unexpected slip. *Proceedings of the American Society of Biomechanics Annual Conference and World Congress of Biomechanics*, Rochester, Minnesota, August 8-11, 2018.
 11. Garner, J.C., Donahue, P.T., Williams, C.C., Hill, C., Luginsland, L., Waddell, D.E., **Chander, H**. & Wilson, S.J. Postural control measures between individuals who fall and recover after an unexpected slip. *Proceedings of the American Society of Biomechanics Annual Conference and World Congress of Biomechanics*, Rochester, Minnesota, August 8-11, 2018.
 12. Hill, C.M., Wilson, S.J., Mouser, J.G. & **Chander, H**. Repeated motor control testing decreases co-contraction index in healthy young adults. *Proceedings of the American Society of Biomechanics Annual Conference and World Congress of Biomechanics*, Rochester, Minnesota, August 8-11, 2018.
 13. **Chander, H**, Knight, A.C., Garner, J.C., Wade, C., DeBusk, H., Wilson, S.J., Gdovin, J.R., Hill, C.M. & Carruth, D.W. Muscle Activity during Postural Stability Tasks: Role of Military Footwear and Workload. *Proceedings of the American Society of Biomechanics Annual Conference*, Boulder CO, August 8-11, 2017.
 14. Wilson, S.J., **Chander, H**, Knight, A.C., Garner, J.C., Wade, C., Luginsland, L., Hill, C.M., Gdovin, J.R., DeBusk, H. & Carruth, D.W. Lower extremity kinematics in military footwear during slip events. *Proceedings of the American Society of Biomechanics Annual Conference*, Boulder CO, August 8-11, 2017.
 15. Luginsland, L., **Chander, H**, Wade, C., Garner, J.C., Eason, J.D., Wilson, S.J., Gdovin, J.R., Hill, C.M., Knight, A.C., Carruth, D.W. Influence of Occupational Footwear on Muscle Activity during a Simulated Extended Time-Duration. *Proceedings of the American Society of Biomechanics Annual Conference*, Boulder CO, August 8-11, 2017.
 16. Hill, C.M., DeBusk, H., Wilson, S.J., Gdovin, J.R., Williams, C.C., Luginsland, L., Knight, A.C. and **Chander, H**. Influence of military type footwear and workload on co-contraction index in unilateral stance. *Proceedings of the American Society of Biomechanics Annual Conference*, Boulder CO, August 8-11, 2017.
 17. Simpson, J.D., DeBusk, H., Hill, C.M., Miller, B.L., Knight, A.C. and **Chander, H**. Effect of military footwear type on ankle stability following a simulated military workload. *Proceedings of the American Society of Biomechanics Annual Conference*, Boulder CO, August 8-11, 2017.
 18. **Chander, H**, Garner, J.C., Wade, C., Knight, A.C., Wilson, S.J. & Fu, Y.C. Human Balance in Occupational Footwear with an Extended Duration Workload. Abstracted: *Proceedings of the American Society of Biomechanics Annual Meeting*, Raleigh, NC, August 2-5, 2016.
 19. DeBusk, H., Hill, C.M., Stewart, T., Miller, B.L., Simpson, J.D., Knight, A.C. & **Chander, H**. Impact of High Top Military Type Boots on Balance. Abstracted: *Proceedings of the American Society of Biomechanics Annual Meeting*, Raleigh, NC, August 2-5, 2016.

20. Hill, C.M., DeBusk, H., Stewart, T., Miller, B.L., Simpson, J.D., Knight, A.C. & **Chander, H.** Impact of Military Type Footwear and Workload on Co-Contraction Index in Static Balance. Abstracted: *Proceedings of the American Society of Biomechanics Annual Meeting*, Raleigh, NC, Aug 2-5, 2016.
21. Eason, J.D., Wilson, S.J., Gdovin, J.R., Williams, C.C., Hoke, E.L., **Chander, H.** & Garner, J.C. Effects of whole body vibration on maximal voluntary isometric contraction and percent muscle activation during balance perturbations. Abstracted: *Proceedings of the American Society of Biomechanics Annual Meeting*, Raleigh, NC, August 2-5, 2016.
22. Wilson, S.J., Gdovin, J.R., Williams, C.C., Eason, J.D., **Chander, H.** & Garner, J.C. Applications of Whole Body Vibration: Are Spinal Modifications Playing a Role? Abstracted: *Proceedings of the American Society of Biomechanics Annual Meeting*, Raleigh, NC, August 2-5, 2016.
23. **Chander, H.**, Wade, C., Knight, A.C. & Garner, J.C. Lower Extremity Joint kinematics in Alternative Footwear during Slip Events. *Proceedings of the American Society of Biomechanics Annual Conference*, Columbus, OH Aug 5th -8th 2015.
24. Wilson, S.J., **Chander, H.**, Morris, C.E., Garner, J.C., Waddell, D.E. & Wade, C. Alternative Footwear's Influence on Muscle Activation Patterns of the Lower Leg following a One Mile Walk. *Proceedings of the American Society of Biomechanics Annual Conference*, Columbus, OH Aug 5th -8th 2015.
25. **Chander, H.**, Wade, C., Allen, C.R., Cazas, V.L., Lundahl, J. & Garner, J.C. Muscle Activity during Balance Perturbations in Occupational Footwear. *Proceedings of the American Society of Biomechanics Annual Conference and World Congress of Biomechanics*, Boston, MA, July 6-11, 2014.
26. **Chander, H.**, Wade, C., Dabbs, N.C., Allen, C.R., Cazas, V.L., Lundahl, J. & Garner, J.C. The Effect of Occupational Footwear on Dynamic Balance. *Proceedings of the American Society of Biomechanics Annual Meeting*, Omaha, NE, Sept 4-7, 2013.
27. **Chander, H.**, Garner, J.C., Wade, C., Roche, J., Dabbs, N.C. & MacNeill, R.L. The Effect of extended durations of walking in occupational footwear. *Proceedings of the American Society of Biomechanics*, Gainesville, FL, 2012.
28. **Chander, H.**, Wade, C., Garner, J.C., Garten, R. & Acevedo, E. The Influence of Firefighter Boot Type on Postural Measures. *Proceedings of the American Society of Biomechanics*, Long Beach, CA, 2011.

International Conference on Applied Human Factors and Ergonomics

29. Burch, R. F., Strawderman, L., Piroli, A., **Chander, H.**, Tian, W., & Murphy, F. (2019, July). The Importance of Baseline Division 1 Football Athlete Jumping Movements for Performance, Injury Mitigation, and Return to Play. In *International Conference on Applied Human Factors and Ergonomics* (pp. 332-344), Advances in Social and Occupational Ergonomics. AHFE 2019. Advances in Intelligent Systems and Computing, vol 970. Springer, Cham. https://doi.org/10.1007/978-3-030-20145-6_33

ASME International Mechanical Engineering Congress and Exposition:

30. Stranburg, T., Liu, Y., **Chander, H.** & Knight, A.C. (2018). Computational Design and Analysis of Nitinol-Based Arch Wedge Support. ASME 2018 Proceedings. Volume 13: Design, Reliability, Safety, and Risk, Paper No. IMECE2018-86287, pp. V013T05A001; 8 pages. Pittsburgh, Pennsylvania, USA, November 9–15, 2018. <https://doi.org/10.1115/IMECE2018-86287>

Human Factors and Ergonomics Society (HFES):

31. DeBusk, H., Babski-Reeves, K. & **Chander, H.** (2017). Preliminary Analysis of StrongArm® Ergoskeleton on Knee and Hip Kinematics and User Comfort. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Vol. 61, No. 1, pp. 1346-1350. Sage CA: Los Angeles, CA: SAGE Publications. <https://doi.org/10.1177/1541931213601820>

American College of Sports Medicine (ACSM):

32. Bailey C., Cagle G., Grozier C., Lehtola K., Weaver J., Wilson S., Chander H., Rendos N., & Simpson J. (2020). Gathering your 'sea legs': Extended durations in an offshore environment increases postural sway. *Medicine & Science in Sports & Exercise*, 52 (7S), 951.
33. Stewart, E.M., Simedebush, M., Simpson, J.D., Knight, A.C., **Chander, H.** & Shapiro, R. (2019). Quantification of Ground Reaction Forces for Skilled Versus Recreational Baseball Hitting: 2844 Board #1 May 31 3: 15 PM-5:15 PM. *Medicine & Science in Sports & Exercise*, 51(6), 780.

34. Wilson, S., Donahue, T., Hill, C., Williams, C., Simpson, J., **Chander, H.**, ... & Pascal, J. (2019). Novel Evidence of Cortical Control in Severe Slip Responses: 2495: Board# 159 May 31 9: 30 AM-11: 00 AM. *Medicine & Science in Sports & Exercise*, 51(6), 689.
35. Pascal, J., Donahue, T., Hill, C., Williams, C., Simpson, J., **Chander, H.**, ... & Johnson, A. (2019). Lead Leg Corrective Responses to Varying Slip Severity: 2491: Board# 155 May 31 9: 30 AM-11: 00 AM. *Medicine & Science in Sports & Exercise*, 51(6), 687.
36. Crawford, A. L., Donahue, T., Hill, C., Williams, C., Simpson, J., **Chander, H.**, ... & Haynes, A. (2019). Examination of the Influence of Lead Leg Recovery Mechanics on Slip Induced Outcomes: 2490: Board# 154 May 31 9: 30 AM-11: 00 AM. *Medicine & Science in Sports & Exercise*, 51(6), 687.
37. Haynes, A., Donahue, T., Hill, C., Williams, C., Simpson, J., **Chander, H.**, ... & Lewis, K. (2019). The Effects of Postural Control Measures on Induced Slip Outcomes: 2494: Board# 158 May 31 9: 30 AM-11: 00 AM. *Medicine & Science in Sports & Exercise*, 51(6), 688-689.
38. Sharp, D. W., Pace, M. T., Swain, J. C., Albino, R. T., Green, J. M., Killen, L. G., ... **Chander, H** & O'Neal, E. K. (2019). Minimalist Style Military Boot Does Not Improve Walking Economy Under Load In Trained Males: 3486: Board# 174 June 1 8: 00 AM-9: 30 AM. *Medicine & Science in Sports & Exercise*, 51(6), 958-959.
39. O'Neal, E. K., Pace, M. T., Swain, J. C., Albino, R. T., Green, J. M., Killen, L. G., ... & **Chander, H.** (2019). Minimalist Style Military Boot Improves Running Economy Under Load In Trained Males: 1042: Board# 276 May 29 2: 00 PM-3: 30 PM. *Medicine & Science in Sports & Exercise*, 51(6), 276-277.
40. Price, F. G., Turner, A., Krings, B., Waldman, H., **Chander, H.**, Knight, A., ... & McAllister, M. (2019). Can High Intensity Interval Training Effect Division I College 800/1500m Runner's Performance: 797: Board# 31 May 29 2: 00 PM-3: 30 PM. *Medicine & Science in Sports & Exercise*, 51(6), 195.
41. Morris, C.E., Winchester, L.J., Hussey, A.J., Tomes, A.S., Neal, W.A., Wilcoxon, D.M., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Physiological Strain Index and Blood Pressure. *American College of Sports Medicine Annual Meeting*, Minneapolis, MN, May 29 – June 2, 2018.
42. Neal, W.A., Morris, C.E., Winchester, L.J., Hussey, A.J., Tomes, A.S., Wilcoxon, D.M., Anderson, M.N., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Perceived Exertion and Blood Lactate. *American College of Sports Medicine Annual Meeting*, Minneapolis, MN, May 29 – June 2, 2018.
43. Tomes, A.S., Morris, C.E., Winchester, L.J., Hussey, A.J., Neal, W.A., Wilcoxon, D.M., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Immune System Markers of Physiological Stress and Inflammation. *American College of Sports Medicine Annual Meeting*, Minneapolis, MN, May 29 – June 2, 2018.
44. Hussey, A.J., Morris, C.E., Winchester, L.J., Neal, W.A., Tomes, A.S., Wilcoxon, D.M., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Reaction Time. *American College of Sports Medicine Annual Meeting*, Minneapolis, MN, May 29 – June 2, 2018.
45. Wiczynski, T.L., Morris, C.E., **Chander, H.**, Garner, J.C., DeBusk, H., Owens, S.G., Valliant, M.W. & Loftin, M. The Relationship of Weight Loss and Balance Performance Following an Exercise Intervention in Previously Sedentary Overweight Adults. *Medicine & Science in Sports & Exercise* 49 (5S), 926-927, 2017.
46. Morris, C.E., **Chander, H.**, Garner, J.C., DeBusk, H., Owens, S.G., Valliant, M.W. & Loftin, M. Evaluating Perturbations to Human Balance Following an Exercise Intervention in Previously Sedentary, Overweight Adults. *Medicine & Science in Sports & Exercise* 49 (5S), 655, 2017.
47. Dispennette, A.K., Morris, C.E., **Chander, H.**, Garner, J.C., DeBusk, H., Owens, S.G., Valliant, M.W. & Loftin, M. Impact of an Exercise Intervention on Human Balance Center of Pressure Sway Parameters in Previously Sedentary, Overweight Adults. *Medicine & Science in Sports & Exercise* 49 (5S), 657, 2017.
48. Garner, J.C., **Chander, H.**, Morris, C.E., Wilson, S.J. & Wade, C. Impact of Alternative Footwear on Balance Perturbations. *Medicine & Science in Sports & Exercise* 47 (5S), 250-251, 2015.
49. Wilson, S.J., **Chander, H.**, Morris, C.E., Wade, C. & Garner, J.C. Alternative Footwear's Influence on Static Balance Following a One Mile Walk. *Medicine & Science in Sports & Exercise* 47 (5S), 292, 2015.
50. DeBusk, H., **Chander, H.**, Morris, C.E., Wilson, S.J., Knight, A.C., Holmes, M.E., Hill, C.M., Wade, C. & Garner, J.C. The Effect of Commonly Used Alternative Footwear on Balance. *Medicine & Science in Sports & Exercise* 47 (5S), 294, 2015.

51. Hill, C.M., **Chander, H.**, Morris, C.E., Wilson, S.J., Knight, A.C., Holmes, M.E., DeBusk, H., Wade, C. & Garner, J.C. Impact of Low Intensity Workload on Muscle Exertion in Alternative Footwear. *Medicine & Science in Sports & Exercise* 47 (5S), 251, 2015.
52. Dabbs, N.C., **Chander, H.**, Black, C.D., Loftin, M., Valliant, M., Brown, L.E. & Garner, J.C. Effects of Whole Body Vibration on Voluntary Torque Following Exercise Induced Muscle Damage in Recreationally Trained Females. *Medicine & Science in Sports & Exercise*, 47(5S), 355, 2015.
53. Cazas-Moreno, V. L., **Chander, H.**, Allen, C. R., Garner, J. C., Gdovin, J. R., & Williams, C. C. (2015). The Influence of Whole-body Vibration on Rate of Force Development during an Isometric Clean Pull. *Medicine & Science in Sports & Exercise*, 47(5S), 782, 2015.
54. Garner, J.C., **Chander, H.**, Wade, C., Dabbs, N.C., Allen, C.R., Cazas, V.L., Lundahl, J., Borland, C.E. The Influence of Occupational Footwear on Lower Extremity Muscle Activity during Balance Perturbations. *Medicine and Science in Sports and Exercise* 46 (5), 692-692, 2014.
55. Garner, J.C., **Chander, H.**, Wade, C., Dabbs, N.C., Waddell, D.E. & Lundahl, J. Impacts of Muscle Activity while Walking in Occupational Footwear. Abstracted: *Medicine & Science in Sports & Exercise* 45 (5), 677-677, 2013.
56. Dabbs, N.C., **Chander, H.**, Lundahl, J., Allen, C.R. & Garner, J.C. The Effects of Whole Body Vibration on Vertical Jump Height and Peak Power. *Medicine and Science in Sports and Exercise*, 45 (5), 592-592, 2013.
57. Dabbs, N.C., Garner, J.C., Ricks, R.C., **Chander, H.**, Wilkerson, C. & Young, J. The Influence of different weighted warm-up bats on swinging performance. *Medicine and Science in Sports and Exercise* 44, 573-573, 2012.
58. Garner, J.C., **Chander, H.**, Dabbs, N.C., Roche, J. & Wade, C. The Influence of occupational footwear on balance. *Medicine & Science in Sports & Exercise* 44, 329-329, 2012.

National Strength Conditioning Association (NSCA):

59. Wilson, S.J., Gdovin, J.R., Williams, C.C., Eason, J.D., Luginsland, L., Hill, C.M., Donahue, P.T., Hoke, E.L., **Chander, H.**, Garner, J.C. More Than a Foot Wedge – Golf Footwear and Postural Control. Abstracted: *Journal of Strength & Conditioning Research*, 30(5), 2017.
60. Garner, J.C., Wilson, S.J., Gdovin, J.R., Williams, C.C., Eason, J.D., Hoke, E.L., Hill, C.M. & **Chander, H.** The Influence of Golf Specific Footwear on Postural Equilibrium and Latencies. Abstracted: *Journal of Strength & Conditioning Research*, 30(5), 2017.
61. Dabbs, N.C., **Chander, H.**, Moreno, V.L., Brown, L.E. & Garner, J.C. Effects of Whole Body Vibration on Muscle Activity during Maximal Voluntary Isometric Contraction Following Exercise Induced Muscle Damage. *NSCA Annual Meeting*, Las Vegas, NV, July 9-12, 2014. *Journal of Strength and Conditioning Research*, Vol 28, (12), 82, Dec 2014.
62. Moreno, V.L., **Chander, H.**, MacDonald, C.J., Dabbs, N.C., Allen, C.R., Lamont, H.S. & Garner, J.C. Differences in Reaction Time between Female Collegiate Athletes. *NSCA Annual Meeting*, Las Vegas, NV, July 9-12, 2014. *Journal of Strength and Conditioning Research*, Vol 28, (12), 90, Dec 2014.
63. Allen, C.R., Hatchett, A., Lundahl, J., Turnage, B., **Chander, H.**, Cazas, V.L., Garner, J.C. & Arpin, R. An Exploratory Examination of The Relationship Between Traditional Pushups, Hand-Release Pushups, And One-Repetition Maximum Bench Press Performance. *NSCA Annual Meeting*, Las Vegas, NV, July 9-12, 2014. *Journal of Strength and Conditioning Research*, Vol 28, (12), 88, Dec 2014.
64. Dabbs, N.C., **Chander, H.**, Allen, C.R., Lundahl, J., Cazas, V.L., Hilton, M.S., Italia, M.A. & Garner, J.C. The Effects of Whole-body Vibration on Ground Reaction Forces and Rate of Force Development in College Aged Females. *NSCA Annual Meeting*, Las Vegas, NV, July 11-13, 2013. *Journal of Strength and Conditioning Research*, Vol 27, (10), S73-74, Oct 2013.
65. Allen, C.R., Lundahl, J., **Chander, H.**, Zachay, C., Dabbs, N.C. & Garner, J.C. The Acute Effects of a Performance Mouthpiece on Whole Body Reaction Time to Balance Perturbations. *NSCA Annual Meeting*, Las Vegas, NV, July 11-13, 2013. *Journal of Strength and Conditioning Research*, Vol 27, (10), S10, Oct 2013.
66. Cazas, V.L., Brown, L.E., Coburn, J.W., Galpin, A.J., Tufano, J.J., Garner, J.C., Dabbs, N.C. & **Chander, H.** Influences of Rest Intervals Following Assisted Jumping on Peak Velocity, Rate of Velocity Development & Rate of Force Development. *NSCA Annual Meeting*, Las Vegas, NV, July 11-13, 2013. *Journal of Strength and Conditioning Research*, Vol 27, (10), S129-130, Oct 2013.

67. Dabbs, N.C., Garner, J.C., **Chander, H.** & Brown, L.E. Three-Dimensional Examination of the Influence of Different Weighted Warm-up Bats on Swing Kinematics. *NSCA Annual Meeting July 6 -9, 2012. Journal of Strength and Conditioning Research, Vol 27, Suppl 4, S3-4, Apr 2013.*
68. Lamont, H.S., Garner, J.C., Macdonald, C.J., Gentles, J., **Chander, H.**, Kavanaugh, A., Miziguchi, S. & Stone, M.H. The Acute Effects Of 12 Combinations of MVCs And WBV Exposures Upon Peak Ground Reaction Forces During CMVJs Over A 15 Minute Period. NSCA Annual Meeting, Las Vegas, July 2011. *Journal of Strength and Conditioning Research, Vol 26, Suppl 1, S65, Feb 2012.*
69. MacDonald, C.J., Lamont, H.S., Garner, J.C., **Chander, H.**, Gray, H., Gentles, J., Kavanaugh, A., Israel, M., Carter, C., Mizuguchi, S., Hornsby, W. & Stone, M.H. Comparisons between Body Composition and Power Production during Jumps in Collegiate Female Athletes. NSCA Annual Meeting, Las Vegas, July 2011. *Journal of Strength and Conditioning Research, Vol 26, Suppl 1, S56, Feb 2012.*

Gait and Clinical Movement Analysis Society (GCMAS):

70. **Chander, H.**, Garner, J.C., Wade, C. & Knight, A.C. Impact of Alternative Footwear on Lower Extremity Muscle Activity during Normal and Slippery Gait. *Annual Proceedings of the Gait and Clinical Movement Analysis Society.* Memphis, TN, May 17-20, 2016.

International Society of Posture and Gait Research (ISPGR):

71. Waddell, D.E., **Chander, H.**, Brewer, C.B. Exploring measures to better assess the effect of cold on dynamic balance in a young and older female population. *International Society for Posture & Gait Research. 2014 ISPGR World Congress, Vancouver, Canada, June 29-July 3, 2014.*

Southeast and Southwest American College of Sports Medicine (SEACSM and SWACSM):

72. Gourley, K., Hagan, F., Talukder, A., Jose, B., Strawderman, L., Freeman, C., ... & Chander, H. (2024). IMPACT OF DIFFERENT PERSONAL FLOATATION DEVICES DURING A SIMULATED WORKLOAD ON PHYSIOLOGICAL RESPONSES. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 271).
73. Wojciechowski, K. A., Farm, I. G., Griffith, A., Kodithuwakku Arachchige, S. N., Chen, C. C. J., Knight, A. C., ... & Turner, A. J. (2024). EFFECTS OF BADMINTON ON BILATERAL STATIC BALANCE FOR YOUNG ADULTS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 252).
74. Barfield, S. K., Griffith, A. A., Hull, J. M., Derby, H. C., Chander, H., & Knight, A. C. (2024). MUSCLE ACTIVITY OF THE PRIMARY ANKLE STABILIZERS IN SOCCER PLAYERS PERFORMING A DYNAMIC BALANCE TEST. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 270).
75. Derby, H., Conner, N., Hull, J., Hagan, F., Barfield, S., Boland, R., ... & Chander, H. (2024). EFFECTS OF ACUTE VIRTUAL REALITY EXPOSURE ON DYNAMIC POSTURAL STABILITY. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 75).
76. Hull, J. M., Nance, A., Derby, H., Conner, N. O., Knight, A. C., & Chander, H. (2024). THE IMPACT OF DIFFERENT SOUNDS AND NOISES ON STATIC AND DYNAMIC POSTURAL STABILITY. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 168).
77. Farm, I. G., Wojciechowski, K. A., Griffith, A., Kodithuwakku Arachchige, S. N., Chen, C. C. J., Knight, A. C., ... & Turner, A. J. (2024). EFFECTS OF BADMINTON ON UNILATERAL STATIC BALANCE FOR YOUNG ADULTS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 264).
78. Griffith, A. A., Homer, V., Mason, R. C., Harrington, M., Conner, N., Derby, H., ... & Knight, A. C. (2024). THE Y-BALANCE TEST AS A MEASURE OF DYNAMIC STABILITY AMONG COLLEGIATE AMERICAN FOOTBALL PLAYERS. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 16, No. 3, p. 373).
79. Conner NO, Kodithuwakku Arachchige SNK Garner JC, Wade C, Knight AC & Chander H. Limits of Postural Stability in Various Occupational Footwear. Southeast American College of Sports Medicine Annual Meeting, February 23-25, 2023.
80. Derby H, Kodithuwakku Arachchige SNK, Young D, Carter S, Ramsey L, Knight AC & Chander H. Barefoot Versus Shod Comparisons on Bipedal Posturography Using Balance Tracking System (Btracks). Southeast American College of Sports Medicine Annual Meeting, February 23-25, 2023.
81. Lowell RK, Saucier DN, Chander H, Burch RFB & Gillen Z. Effects of Auditory and Visual Stimuli on Reaction And Response Time During Countermovement Jumps. Southeast American College of Sports Medicine Annual Meeting, February 23-25, 2023.
82. Turner, A, **Chander, H**, Kodithuwakku Arachchige, SNK, Knight, A, Wade, C, & Garner, JC. Sensory Organization Test Conditions Influence Postural Strategy rather than Footwear or Workload. Southeast American College of Sports Medicine Annual Meeting, Greenville SC. February 17-19, 2022. Oral Presentation.

83. Kodithuwakku Arachchige SNK, **Chander H**, Freeman H, Hill C, Hudson C, Turner A, Jones A, & Knight A. The Walls Are Closing In: Postural Responses To A Virtual Claustrophobic Simulation. Southeast American College of Sports Medicine Annual Meeting, Greenville SC. February 17-19, 2022.
84. Kodithuwakku Arachchige SNK, **Chander H**, Turner A, and Knight A. Impact of Prolonged Exposure to Slippery Surface on Static Postural Stability. *Southeast American College of Sports Medicine Annual Meeting, Online, February 17-18, 2021.*
85. Ramsey L, Kodithuwakku Arachchige SNK, Turner AJ., **Chander H.**, and Knight AC. Using Virtual Reality to Recreate the Classical "Moving Room" Experiment to Assess Postural Control. *Southeast American College of Sports Medicine Annual Meeting, Online, February 17-18, 2021.*
86. Derby H, Gourley K, Kirk K, Kodithuwakku Arachchige SNK, Turner A, **Chander H**, and Knight A. Influence of an Athletic Shoe with a Compression Sock on Static Balance. *Southeast American College of Sports Medicine Annual Meeting, Online, February 17-18, 2021.*
87. Freeman H, **Chander H**, Turner AJ, Kodithuwakku Arachchige SNK, Knight AC, Wade C, and Garner JC. Role of Occupational Footwear and Workload on Lower Extremity Muscle Activation During Maximal Exertions and Postural Stability Tasks. *Southeast American College of Sports Medicine Annual Meeting, Online, February 17-18, 2021.*
88. Turner A, **Chander H**, Knight A, Kodithuwakku Arachchige SNK, Pan Z, Chen CC. Hydrotherapy vs. Land-Based Exercises on Dual-Task Static and Dynamic Balance in a Geriatric Population. *Southeast American College of Sports Medicine Annual Meeting, Online, February 17-18, 2021.*
89. Turner AJ, **Chander H**, Knight AC, Chen C, Pan Z, Kodithuwakku Arachchige SNK. The effects of hydrotherapy versus land-based exercises on dual-task postural control in a geriatric population. South East American College of Sports Medicine Annual Conference, Jacksonville, FL, February 13-15, 2020.
90. **Chander H**, Kodithuwakku Arachchige SNK, Turner A, Deb S, Shojaei A, Hudson C, Knight A, and Carruth D. Impact of Virtual Reality Generated Construction Environments at Different Heights on Postural Stability. Southeast American College of Sports Medicine Annual Meeting, Jacksonville, FL, February 13th-15th, 2020.
91. Arnett, J.E., Simpson, J.D., Cosio-Lima, L., Lee, Y., Rendos, N.K., Stewart, E.M., **Chander, H.**, & Knight, A.C. Ground reaction forces during single-leg drop landings on an inverted surface. *Southeast American College of Sports Medicine Annual Conference.* Greenville, SC. February 14-16, 2019.
92. Simpson, J.D., Stewart, E.M., Turner, A.J., Rendos, N.K., Lee, Y., Cosio-Lima, L., **Chander, H.**, Knight, A.C. Chronic ankle instability alters spatiotemporal postural control during a lateral step-down test. *Southeast American College of Sports Medicine Annual Conference.* Greenville, SC. February 14-16, 2019.
93. Grammer, E.E., Simpson, J.D., Cosio-Lima, L., Lee, Y., Rendos, N.K., Stewart, E.M., **Chander, H.**, Knight, A.C. Latency of the peroneus longus and peroneus brevis during unexpected and expected inversion perturbations. *Southeast American College of Sports Medicine Annual Conference.* Greenville, SC. February 14-16, 2019.
94. Lewis, J.T., Simpson, J.D., Rendos, N.K., Lee, Y., Cosio-Lima, L., Stewart, E.M., **Chander, H.**, Knight, A.C. Assessment of ankle muscle activity during unexpected and expected inversion perturbations. *Southeast American College of Sports Medicine Annual Conference.* Greenville, SC. February 14-16, 2019.
95. Simpson, J., Rendos, N., Stewart, E., Koldenhoven, R., Macias, D., Wilson, S., **Chander, H.**, & Knight, A.C. Anticipating inversion perturbations during drop landings results in frontal plane kinematic alterations. *International Ankle Symposium*, Amsterdam, The Netherlands. October 3-4, 2019.
96. Turner, A.J., **Chander, H.**, Morris, C.E., Wilson, S.J., Buckner, M., Knight, A.C., Wade, C. & Garner, J.C. Postural Strategy during Sensory Organization Test when Exposed to Alternative Footwear and Workload. *Southeast American College of Sports Medicine*, Greenville, SC, 2019.
97. Kodithuwakku Arachchige, S.N.K., **Chander, H.**, Knight, A.C., Wilson, S.J., Wade, C., Garner, J.C. & Carruth, D.W. Ground reaction forces during slip events: Impact of military footwear and load carriage. South East American College of Sports Medicine Annual Conference, Greenville, SC. February 14-16, 2019
98. Stewart, E.M., Smidebush, M., Simpson, J.D., Knight, A.C., **Chander, H.** & Shapiro, R. Analysis of the start times for the swing phases for baseball hitters of varying skill. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
99. Simpson, J.D., Stewart, E.M., Smidebush, M., Knight, A.C., **Chander, H.** & Shapiro, R. Analysis of vertical ground reaction forces during the baseball swing in hitters of different skill level. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.

100. Price, F.G., Turner, A.J., Krings, B.M., Waldman, H.S., **Chander, H.**, Knight, A.C., McAllister, M.J. & Smith, J.W. Impact of high-intensity interval training on division I college 800m/1500m runner's performance. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
101. Tomes, A.S., Morris, C.E., Winchester, L.J., Hussey, A.J., Neal, W.A., Wilcoxon, D.M., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Immune System Markers of Physiological Stress and Inflammation. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
102. Wilcoxon, D.M., Morris, C.E., Winchester, L.J., Hussey, A.J., Neal, W.A., Tomes, A.S., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Physiological Strain Index And Blood Pressure. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
103. Hussey, A.J., Morris, C.E., Winchester, L.J., Neal, W.A., Tomes, A.S., Wilcoxon, D.M., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Reaction Time. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
104. Neal, W.A., Morris, C.E., Winchester, L.J., Hussey, A.J., Tomes, A.S., Wilcoxon, D.M., Anderson, M.N., Bradshaw, W.J., Lucas, D.N., **Chander, H.** & Arnett, S.W. Effect of a Simulated Tactical Occupation Stressor on Perceived Exertion. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
105. Sutton, P.E., **Chander, H.**, Knight, A.C., Turner, A.J., Garner, J.C., Wade, C. & Carruth, D.W. Co-Contraction Index of Lower Extremity Muscles During Multiple Slip Events: Role of Footwear. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
106. Turner, A.J., Hill, C.M., DeBusk, H., **Chander, H.**, Knight, A.C., Wilson, S.J., Williams, C.C. & Luginsland, L. Impact of Military Type Footwear and Workload on Percent Muscle Activation in Unilateral Static Balance. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
107. Shepherd, B.D., Krings, B.M., Williamson, P.L., Swain, J.C., Turner, A.J., Waldman, H.S., **Chander, H.**, McAllister, M.J., Smith, J.W. & Knight, A.C. Effects of Fat Gripz™ on Muscle Activity and Performance during Deadlift and Bent-Over Row Exercises. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
108. Hill, C.M., Wilson, S.J., Mouser, J.G., Williams, C.C., Luginsland, L., Donahue, P.T., **Chander, H.** Impact of Repeated Balance Perturbations on Lower Extremity Mean Muscle Activity. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
109. Wilson, S.J., Hill, C.M., Mouser, J.G., Williams, C.C., Luginsland, L., Donahue, P.T., Garner, J.C., **Chander, H.** Can Postural Responses Be Learned? *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
110. Garner JC, Hill CM, Wilson SJ, Mouser JG, Williams CC, Luginsland LA, Donahue PT, **Chander H.** Influence of Repeated Motor Control Tests on Proximal Lower Extremity Musculature Activation. *Southeast American College of Sports Medicine Annual Conference*, Chattanooga, TN. February 15-17, 2018.
111. Simpson, J.D., Miller, B.L., O'Neal, E.K., **Chander, H.** & Knight, A.C. Analysis of Landing Kinetics During a Drop Vertical Jump After Three Weeks of External Load Training. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
112. Forge, S.R., Simpson, J.D., Miller, B.L., O'Neal, E.K., **Chander, H.** & Knight, A.C. Changes in Jumping Kinetics Following Three Weeks of External Load Training in Well-Trained Women. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
113. Sutton, P., Forge, S.R., Mosby, A., McDaniel, J., Miller, B.L., Simpson, J.D., **Chander, H.** & Knight, A.C. Three-Week External Load Training Does Not Improve Vertical Jump and Sprint Performance in Well-Trained Women *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
114. Mosby, A., Sutton, P., Forge, S.R., McDaniel, J., Miller, B.L., Simpson, J.D., **Chander, H.** & Knight, A.C. Three-Weeks of External Load Training Does Not Alter Muscle Activity During Static Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
115. McDaniel, J., Forge, S.R., Sutton, P., Mosby, A., Miller, B.L., Simpson, J.D., **Chander, H.** & Knight, A.C. Three Week External Load Training Does Not Increase Lower Extremity Muscle Activation in Well-

- Trained Females. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
116. Swain, J.C., Miller, B.L., Pace, M.T., Lowell, R.K., Simpson, J.D., Knight, A.C. & **Chander, H.** Impact of Minimalist Footwear Type and Fatigue on Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
117. Turner, A.J., DeBusk, H., Lowell, R.K., Hill, C.M., Miller, B.L., Simpson, J.D., Knight, A.C. & **Chander, H.** Effects of Military Type Footwear and Workload on Unilateral Static Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
118. Miller, B.L., Simpson, J.D., Swain, J.C., Pace, M.T., Lowell, R.K., Pan, Z., Knight, A.C. & **Chander, H.** Effect of Minimalist Footwear and Fatigue on Static Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
119. Dispennette, A.K., Morris, C.E., **Chander, H.**, Garner, J.C., DeBusk, H., Owens, S.G., Valliant, M.W. & Loftin, M. Impact of an Exercise Intervention on Human Balance Center of Pressure Sway Parameters in Previously Sedentary, Overweight Adults. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
120. Eason, J.D., Wilson, S.J., Gdovin, J.R., Williams, C.C., Hoke, E.L., Luginsland, L., Hill, C.M., Donahue, P.T., **Chander, H.**, Wade, C. & Garner, J.C. The Effects of Golf Shoe Type on Balance Equilibrium Scores. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
121. Gdovin, J.R., Wilson, S.J., Williams, C.C., Eason, J.D., Hoke, E.L., Luginsland, L., Hill, C.M., Donahue, P.T., Davis, R.E., **Chander, H.**, Wade, C. & Garner, J.C. The Acute Effects of Golf Specific Footwear on Reaction Time Latencies. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
122. Hoke, E.L., Wilson, S.J., Gdovin, J.R., Williams, C.C., Eason, J.D., Luginsland, L., Hill, C.M., Donahue, P.T., **Chander, H.**, Wade, C., Green, M. & Garner, J.C. Acute Effects of Golf Specific Footwear on Bilateral Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
123. Luginsland, L., Wilson, S.J., Gdovin, J.R., Williams, C.C., Eason, J.D., Hoke, E.L., Hill, C.M., Donahue, P.T., **Chander, H.**, Wade, C. & Garner, J.C. The Acute Influence of Golf Specific Footwear on Balance Equilibrium Scores. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
124. Morris, C.E., **Chander, H.**, Garner, J.C., DeBusk, H., Owens, S.G., Valliant, M.W. & Loftin, M. Evaluating Perturbations to Human Balance Following an Exercise Intervention in Previously Sedentary, Overweight Adults. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
125. Pearson, R.C., Morris, C.E., **Chander, H.**, Wilson, S.J., Loftin, M., Wade, C. & Garner, J.C. Impact of Alternative Footwear on Human Energy Expenditure. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
126. Wiczynski, T.L., Morris, C.E., **Chander, H.**, Garner, J.C., DeBusk, H., Owens, S.G., Valliant, M.W. & Loftin, M. The Relationship of Weight Loss and Balance Performance Following an Exercise Intervention in Previously Sedentary Overweight Adults. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
127. Williams, C.C., Wilson, S.J., Gdovin, J.R., Eason, J.D., Hoke, E.L., Luginsland, L., Hill, C.M., Donahue, P.T., Davis, R.E., **Chander, H.**, Wade, C. & Garner, J.C. The Influence of Golf Specific Footwear on Whole Body Reaction Times. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
128. Wilson, S.J., Gdovin, J.R., Williams, C.C., Eason, J.D., Hoke, E.L., Luginsland, L., Hill, C.M., Donahue, P.T., **Chander, H.**, Wade, C., Green, M. & Garner, J.C. The Effects of Golf Specific Footwear on Human Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 16-18, 2017.
129. **Chander, H.**, Garner, J.C., Wade, C., Knight, A.C., DeBusk, H. & Hill, C.M. (2016). Lower Extremity Muscle Activity in Alternative Footwear During Slip Events: A Preliminary Analysis. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
130. DeBusk, H., Hill, C.M., Stewart, T., Miller, B.M., Simpson, J.D., Knight, A.C. & **Chander, H.** Effects of Military Type Footwear and Workload on Static Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.

131. Hill, C.M., DeBusk, H., Stewart, T., Simpson, J.D., Miller, B.L., Knight, A.C. & **Chander, H.** Impact Of Military Type Footwear and Workload on Muscle Activity in Static Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC February 18-20, 2016.
132. Miller, B.L., DeBusk, H., Hill, C.M., Stewart, T., Simpson, J.D., Knight, A.C. & **Chander, H.** (2016). Impact of Military Boot Type and Physical Work Load on Dynamic Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
133. Simpson, J.D., Hill, C.M., DeBusk, H., Stewart, T., Miller, B.L., Knight, A.C. & **Chander, H.** Influence of Military Boot Types and Physiological Workload on Lower Extremity Muscle Activation. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
134. Stewart, T., Kimble, A., Brown, J., Holmes, M.E., **Chander, H.** & Knight, A.C. Effects of event specialty, Gender and leg dominance on running kinetics of high school track and field athletes. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
135. Wilson, S.J., **Chander, H.**, Wade, C., Cazas-Moreno, V.L., Gdovin, J.R., Williams, C.C. & Garner, J.C. Ankle Kinematics in Alternative Footwear during Slip Events. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
136. Gdovin, J.R., **Chander, H.**, Wade, C., Wilson, S.J., Cazás-Moreno, V.L., Williams, C.C. & Garner, J.C. Occupational Footwear's Effect on Balance. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
137. Williams, C.C., **Chander, H.**, Wade, C., Wilson, S.J., Cazás-Moreno, V.L., Gdovin, J.R. & Garner, J.C. Footwear Design Characteristic's Impact on Lower Extremity Muscle Activity. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, February 18th - 20th, 2016.
138. **Chander, H.**, Morris, C.E., Wilson, S.J., Knight, A.C., Holmes, M.E., Wade, C. & Garner, J.C. Impact of Alternative Footwear on Balance Perturbations. *Southeast American College of Sports Medicine Annual Conference*, Jacksonville, FL, February 12-14, 2015.
139. Wilson, S.J., **Chander, H.**, Morris, C.E., Wade, C. & Garner, J.C. Alternative Footwear's Influence on Static Balance Following a One Mile Walk. *Southeast American College of Sports Medicine Annual Conference*, Jacksonville, FL, February 12-14, 2015.
140. DeBusk, H., **Chander, H.**, Morris, C.E., Wilson, S.J., Knight, A.C., Holmes, M.E., Hill, C.M., Wade, C. & Garner, J.C. The Effect of Commonly Used Alternative Footwear on Balance. *Southeast American College of Sports Medicine Annual Conference*, Jacksonville, FL, February 12-14, 2015.
141. Hill, C.M., **Chander, H.**, Morris, C.E., Wilson, S.J., Knight, A.C., Holmes, M.E., DeBusk, H., Wade, C. & Garner, J.C. Impact of Low Intensity Workload on Muscle Exertion in Alternative Footwear. *Southeast American College of Sports Medicine Annual Conference*, Jacksonville, FL, February 12-14, 2015.
142. Kimble, A., Brown, J., Stewart, T., **Chander, H.**, Holmes, M.E. & Knight, A.C. Influence of Event, Gender, and Leg Dominance on Balance among 1 High School Track and Field Athletes. *Southeast American College of Sports Medicine Annual Conference*, Jacksonville, FL, February 12-14, 2015.
143. Stewart, T., Brown, J., Kimble, A., **Chander, H.**, Holmes, M.E. & Knight, A.C. Influence of Event, Gender, and Leg Dominance on Balance among 1 High School Track and Field Athletes. *Southeast American College of Sports Medicine Annual Conference*, Jacksonville, FL, February 12-14, 2015.
144. Dabbs, N.C., **Chander, H.**, Cazas, V.L., Allen, C.R., Lundahl, J., Terrell, E. & Castles, C., Brown, L.E. & Garner, J.C. Effects of Whole Body Vibration on Vertical Jump Height and Power Output Following Exercise Induced Muscle Soreness in Women. *Southwest American College of Sports Medicine Annual Conference*, Newport Beach, CA, Oct 18-19, 2013.
145. **Chander, H.**, Garner, J.C., Wade, C., Dabbs, N.C., Waddell, D.E. & Lundahl, J. Impacts of Muscle Activity while Walking in Occupational Footwear. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 14-16, 2013.
146. Dabbs, N.C., **Chander, H.**, Lundahl, J., Allen, C.R. & Garner, J.C. The Effects of Wholebody Vibration on Vertical Jump Height and Peak Power. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 14-16, 2013.
147. Lundahl, J., Allen, C.R., Dabbs, N.C., **Chander, H.** & Garner, J.C. The Acute Effects of a performance Mouthpiece on Measures of strength and power. *Southeast American College of Sports Medicine Annual Conference*, Greenville, SC, Feb 14-16, 2013.

Mid-South Biomechanics Conference:

148. Kodithuwakku Arachchige SNK, **Chander H**, Knight AC, Chen C, Pan Z, Turner AJ. Impact of foot arch type, quadriceps angle, and minimalist footwear on static postural stability. *Footwear Science. Mid-South Biomechanics Conference*, Memphis, TN. February 20-21, 2020.
149. Turner AJ, **Chander H**, Knight AC, Chen C, Pan Z, Kodithuwakku Arachchige SNK. The effects of hydrotherapy versus land-based exercises on dual-task postural control in a geriatric population. *Mid-South Biomechanics Conference*, Memphis, TN, February 20-21, 2020.
150. Freeman H, **Chander H**, Kodithuwakku Arachchige SNK, Turner AJ, Knight AC, Wade C, Garner JC. Impact of Alternative Footwear on Lower Extremity Muscle Activation during Normal Gait, Unexpected, Alert and Expected Slips. *Mid-South Biomechanics Conference*, Memphis, TN, February 20-21, 2020
151. Turner, A.J., **Chander, H.**, Morris, C.E., Wilson, S.J., Buckner, M., Knight, A.C., Wade, C. & Garner, J.C. Postural Strategy during Sensory Organization Test when Exposed to Alternative Footwear and Workload. *Mid-South Biomechanics Conference*, Memphis, TN. February 21-22, 2019.
152. Kodithuwakku Arachchige, S.N.K., **Chander, H.**, Knight, A.C., Wilson, S.J., Wade, C., Garner, J.C. & Carruth, D.W. Ground reaction forces during slip events: Impact of military footwear and load carriage. *Mid-South Biomechanics Conference*, Memphis, TN. February 21-22, 2019.
153. Sutton, P.E., **Chander, H.**, Knight, A.C., Turner, A.J., Garner, J.C., Wade, C. & Carruth, D.W. Co-Contraction Index of Lower Extremity Muscles During Multiple Slip Events: Role of Footwear. *Mid-South Biomechanics Conference*, Memphis, TN. February 22-23, 2018.
154. Turner, A.J., Hill, C.M., DeBusk, H., **Chander, H.**, Knight, A.C., Wilson, S.J., Williams, C.C. & Luginsland, L. Impact of Military Type Footwear and Workload on Percent Muscle Activation in Unilateral Static Balance. *Mid-South Biomechanics Conference*, Memphis, TN. February 22-23, 2018.
155. Hill, C.M., Wilson, S.J., Mouser, J.G., Williams, C.C., Luginsland, L., Donahue, P.T., **Chander, H.** Impact of Repeated Balance Perturbations on Lower Extremity Mean Muscle Activity. *Mid-South Biomechanics Conference*, Memphis, TN. February 22-23, 2018.
156. Stewart, E.M., Smidebush, M., Simpson, J.D., Knight, A.C., **Chander, H.** & Shapiro, R. Analysis of the start times for the swing phases for baseball hitters of varying skill. *Mid-South Biomechanics Conference*, Memphis, TN. February 22-23, 2018.
157. Kodithuwakku Arachchige, S.N.K., **Chander, H.**, Knight, A.C. & Pan, Z. Impact of foot arch type and quadriceps angle on postural stability: A comparison of two types of Vibram™ Minimalist Footwear. *Mid-South Biomechanics Conference*, Memphis, TN. February 22-23, 2018.

Applied Ergonomics Conference:

158. **Chander, H.**, Stewart, E.M., Saucier, D., Nguyen, P., Luczak, T., Ball, J.E., Knight, A.C., Smith, B.K., Burch, R.F.V., Prabhu, R.K. The Use of Stretch Sensors in Detecting Ankle Joint Kinematics during Slips and Trips. *The 23rd Annual Applied Ergonomics Conference*, Louisville, KY, 2020.
159. Deb, S., **Chander, H.**, Shojaei, A., Kodithuwakku Arachchige, S.N.K., Hudson, C., Knight, A.C. & Carruth, D.W. Impact of Virtual Reality (VR)-Induced Visual Perturbations on Postural Stability and Fall Risk. *The 23rd Annual Applied Ergonomics Conference*, Louisville, KY, 2020.
160. Burch, R.F.V., Luczak, T., Ball, J.E., **Chander, H.**, Knight, A.C., Smith, B.K., Burch, R.F.V., Prabhu, R.K. Closing the Wearable Gap: Replacing Goniometers and (Eventually) 3D Motion Capture with Stretchable Soft Robotic Sensors. *The 23rd Annual Applied Ergonomics Conference*, Louisville, KY, 2020.
161. Shelly, Z., Burch, R.F.V., Strawderman, L., **Chander, H.** & May, D. Helmet Prototype Response Time Assessment Using NCAA Division 1 Collegiate Football Athletes. *The 23rd Annual Applied Ergonomics Conference*, Louisville, KY, 2020.

Mississippi Academy of Sciences Conference:

162. Kodithuwakku Arachchige, SNK, **Chander, H**, Knight, A.C, and Turner, A.J. The Effect of Minimalist Footwear Types on Static Postural Stability. *85th Annual Mississippi Academy of Sciences conference*, Biloxi, MS. August 5-6, 2021.

IEEE Conference on Virtual Reality and 3D User Interfaces:

163. Luczak, T., Freeman, C., Middleton, C., Parker, E., Burch, R. F., Saucier, D., Lamberth, J., Chen, C. C., Gillen, Z., Knight, A., **Chander, H.**, Ball, J. E., Jackson, K., Neff, M., Tian, L., Tang, Y., Grice, S., Taquino, M., & Duclose, M. The Opportunity to Collect Kinetic Forces during a Round of Golf using Wearable Devices: Single-Subject Case Study – The Full Swings. *2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops*.

TechConnect Conference:

164. Luczak, T., Freeman, F., Burch, R. F., Saucier, D., **Chander, H.**, Barlow, J., Ball, J., Nelsen, P., Parker, E., Middleton, C., Strawderman, L., Mohammadi-Aragh, J., Gillen, Z., Smith, B., Jones, J. A., Duclos, M., Taquino, M., & Grice, S. (2022). Athlete Engineering Baseline Ecosystem: innovative technologies to enhance human performance. *Proceedings of the TechConnect 2022 Conference*, Washington D.C., 95-98.

RESEARCH FUNDING

	Aug 2014 to Jul 2019		Since Aug 2019		Total Aug 2014 to Aug 2024		Current
	Applied	Funded	Applied	Funded	Applied	Funded	In-Review
External Funding	\$3,259,842	\$998,435	\$17,240,893	\$2,157,488	\$20,500,735.00	\$3,155,923.00	\$5,604,476.00
Internal Funding	\$135,250	\$135,250	-	-	\$135,250.00	\$135,250.00	-
Total	\$3,402,587	\$1,139,180	\$17,240,893	\$2,157,488	\$20,500,735.00	\$3,291,173.00	\$5,604,476.00

NOTE: The ~\$4million NIST grant listed in-review is forecasted for being awarded. Waiting on final award notice. This will increase the acquired funding total to \$7,290,275.00.

Funded				In-Review and In-Submission			
Grant	Year	Role	Amount	Grant	Year	Role	Amount
DOD SBIR Phase II	2024	PI	\$409,413.00	NIH IDeA	2024	PI	\$500,309.00
ABB Motors	2024	Co-PI	\$132,687.00	NIA – SBIR	2024	Co-PI	\$306,347.00
DOD SBIR Phase I	2023	PI	\$2,307.00	NASA Flagship	2024	Co-PI	\$798,718.00
MS Highway Patrol	2023	Co-PI	\$25,000.00	NIST	2024	Co-PI	\$3,999,102.00
NHLBI UMMC-GTEC	2023	PI	\$69,836.00				
Toyota of MS	2023	Co-PI	\$144,683.00				
NIGMS / MCCTR	2023	PI	\$53,935.00				
MS - IHL Smart Act	2023	Co-PI	\$86,000.00				
NSF - MRI	2022	Co-PI	\$770,000.00				
MSU-SHS Base Pair	2022	PI	\$668.00				
NIOSH - PPRT	2022	PI	\$10,000.00				
NHLBI/UMMC-GTEC	2022	PI	\$34,332.00				
NHLBI/UMMC-GTEC	2022	PI	\$7,276.00				
ORAU Events	2022	Co-PI	\$4,000.00				
NSF-PFI (Suppl)	2021	Co-PI	\$44,302.00				
NIGMS / MCCTR	2021	Co-PI	\$39,988.00				
MSU ORED UG	2022	PI	\$2,000				
NSF SPRINT	2022	Co-PI	\$149,836.00				
NSF - iCorps (Site)	2020	PI	\$3,000.00				
NSF - PFI (Suppl)	2021	Co-PI	\$44,302.00				
NSF - PFI (Suppl)	2020	Co-PI	\$34,930.00				
NSF - PFI (Suppl)	2020	Co-PI	\$16,000.00				
NSF - PFI (Suppl)	2020	Co-PI	\$134,628.00				
DOL - OSHA	2020	Co-PI	\$74,993.00				
NIOSH - PPRT	2019	PI	\$12,000.00	Not Funded			
NSF - PFI	2018	Co-PI	\$749,932.00	Grant	Year	Role	Amount
NSF - iCorps (National)	2018	Co-PI	\$50,000.00	NSF-TT	2021	Co-PI	\$249,722.00
NIOSH - PPRT	2018	PI	\$12,000.00	FEMA	2021	PI (Sub-Award)	\$51,238.00
NSF - iCorps (Site)	2017	Co-PI	\$3,000.00	NSF-ERC	2021	Co-PI	\$98,464.00
NIOSH - PPRT	2015	PI	\$20,000.00	MCCTR/NIH	2021	PI	\$39,988.00
PACCAR	2018	Co-PI	\$16,875.00	MCCTR/NIH	2021	PI	\$39,997.00
ORED-COE	2018	PI	\$4,665.00	NIOSH - R03	2021	PI	\$142,802.00
ORED-UG RG	2018	Co-PI	\$2,000.00	CPWR	2021	PI	\$29,993.00
SEC Travel Grant	2018	PI	\$1,000.00	HRSA	2021	PI (Sub-Award)	\$748,456.00
ORED-UG RG	2018	PI	\$1,995.00	DOL - OSHA	2020	Co-PI	\$75,000.00
ORED-UG RG	2018	Co-PI	\$2,000.00	NIOSH - R03	2020	Co-PI	\$149,508.00
ORED-CC	2017	PI	\$2,000.00	NIOSH - R21	2020	PI	\$351,634.00
				DOT	2019	Co-PI	\$427,659.00
				NSF - TT	2019	Co-PI	\$249,948.00

ORED-UG RG	2017	Co-PI	\$2,000.00	DOD	2016	PI	\$497,956.00
ORED-F RG	2016	PI	\$1,700.00	NSF - PFI: BIC	2014	Co-PI	\$998,361.00
ORED-CC	2016	PI	\$2,000.00	DOL - OSHA	2023	PI	\$74,997.00
ORED-F RG	2015	PI	\$3,000.00	NIOSH/CDC - U01	2023	PI	\$973,612.00
BCOE-WG	2016	PI	\$2,000.00	NIH/NIA - R03	2023	PI	\$141,041.00
CAVS-KINE COLAB	2015	PI	\$100,000.00	VALD	2022	PI	\$40,024.00
BCOE-WG	2015	Co-PI	\$1,425.00	NIGMS/MCCTR	2022	Co-PI	\$630,657.00
ORED-FRG	2015	PI	\$965.00	NSF-FW-HTF	2023	Co-PI	\$1,000,000.00
ORED-CC	2015	PI	\$2,000.00	NIH STTR	2022	Co-PI	\$1,271,276.00
ORED-CC	2014	PI	\$2,000.00	NSF - NRT	2023	Co-PI	\$2,999,986.00
BCOE-WG	2014	PI	\$500.00	NSF - REU	2023	Co-PI	\$404,997.00
BCOE-WG	2014	Co-PI	\$2,000.00	NIGMS/MCCTR	2024	Co-PI	\$53,020.00

1. **National Institute of Standards and Technology (NIST) (2024)**
Balakrishnan B, **Chander H**, Hatami A, Jones A, Jung A, Ross J, Wall E.
Center for Simulated Environments and Experiences in STEM (SEE STEM)
Role: Co-PI; Funding: \$3,999,102.00; Status: In Review
2. **Department of Defense (DOD) (2024)**
Chander H, Knight AC, & Gillen ZM.
DOD Phase II SBIR 23.1 Topic No. DHA231-002, Portable Technology to Assess Ankle Instability (PT-AID II). Charles River Analytics.
Role: PI (MSU PI for the Sub-Award); Funding: \$409,413.00; Status: Funded (Finalizing budget)
3. **National Institute of Aging (NIA) (2024)**
Freeman C, Jones B, **Chander H**, Saucier D, Middleton C, Burch R, Jung K, Luczak A, Gillen ZM, Ball J.
Developing and Validating an Advanced Smart Sock with Pressure Sensors for Assessing Mobility and Fall Risk in Older Adults.
Role: Co-PI; Funding: \$306,347.00; Status: In Review
4. **National Institute for General Medicine Sciences (NIGMS) Team Science (2024).**
Chander, H., Burch., R.F.V., Saucier, D. Renneker J & Granger J. Validation of virtual reality-based tools to enhance neurocognitive and neuromotor control assessments and treatment techniques.
Role: PI for MSU Sub-Award; Funding: \$504,366.00; Status: In Review
5. **National Aeronautics and Space Administration (NASA) Flagship Proposal (2024).**
Miralami R, Chander H, Gillen ZM, Holmes M. Noninvasive vibration therapy to enhance post-landing sensorimotor recovery focused on postural control and locomotion.
Role: Co-PI; Funding: \$798,718.00; Status: In Review
6. **National Heart, Lung, and Blood Institute (NHLBI) (Primary) / UMMC-GTEC Program (Secondary)**
Mentorship Subaward. (2023-2025)
Chander H.
Role: PI; Funding: \$69,836.00; Status: Funded
7. **Toyota Manufacturing of Mississippi (2023)**
Burch R.F.V., Strawderman L., **Chander H.**, Gillen Z., Saucier D. Testing Agreement: Toyota Paint-Liquid Wire Wearable Integration & Reporting Study
Role: Co-PI; Funding: \$144,683.00; Status: Funded
8. **Mississippi Center for Clinical and Translational Research (MCCTR) (2023)**
Movement Disorders and Cognitive Impairments from SARS-CoV-2 Infection in Older Adults.
Chander H, Jones, J.A., VanDen Heever, D., Burch R.F.V., Saucier, D.N., Ball, J.E., Renneker, J.
Role: PI; Funding: \$53,935.00; Status: Funded
9. **Department of Defense (DOD) (2023)**
Chander H, & Knight AC

DOD Phase I SBIR 23.1 Topic No. DHA231-002, Portable Technology to Assess Ankle Instability (PT-AID). Charles River Analytics.

Role: PI (MSU PI for the Sub-Award); Funding: \$2,307.00; Status: Funded

10. **Department of Labor – Occupational Safety Health Administration (DOL-OSHA) (2023)**
Chander H, Strawderman L, Burch RFV, Cardozo Gaibisso, L. Training and Educational Materials Development on Worker Fatigue (Topic #33) in English and Spanish with targeted manufacturing industries.
Role: Co-PI; Funding: \$74,997.00; Status: Not Funded
11. **National Heart, Lung, and Blood Institute (NHLBI) (Primary) / UMMC-GTEC Program (Secondary)**
Mentorship Subaward. (2022-2023)
Chander H.
Role: PI; Funding: \$34,332.00; Status: Funded
12. **National Heart, Lung, and Blood Institute (NHLBI) (Primary) / UMMC-GTEC Program (Secondary)**
Mentorship Subaward. (2022)
Chander H.
Role: PI; Funding: \$7,276.00; Status: Funded
13. **National Science Foundation: MRI (2023)**
Burch, R.F.V., Ball, J.E., **Chander, H.**, Gurbuz, A., Strawderman, L., Knight, A.C., Smith, B., Wang, J., Mohammadi-Aragh, J., Seitz., H., Panse-Barone, Gillen, Z., Freeman, C., McCubbins, O.P.
Acquisition of Biomechanical Movement and Body Volumetric Baseline Technology Suite for Motion Capture Improvement and Sensor-based Validation of Lower Body Characteristics.
Role: Co-PI; Funding: \$770,000.00; Status: Funded
14. **National Science Foundation (NSF) (2023) Future of Work at the Human-Technology Frontier**
Burch RF, Strawderman L, Gillen ZM, Marett K, Freeman CE, Saucier D, **Chander H.** When left to their own devices: The future of wearable implementation for manufacturing assembly workers.
Role: Co-PI; Funding: \$1,000,000.00; Status: Not-Funded
15. **National Institute of Aging (NIA) R03 (2023)**
Chander H, Jones, J.A., VanDen Heever, D., Burch R.F.V., Saucier, D.N Movement Disorders and Cognitive Impairments from SARS-CoV-2 Infection in Older Adults. Role: PI; Funding: \$134,853.00. Status: Not Funded
16. **National Institute of Occupational Safety and Health (NIOSH)-Commercial Fishing Occupational Safety Research Cooperative Agreement (U01). (2023)**
Chander, H., Freeman, C., Burch, R.F.V. Developing and implementing a safety training outreach program for commercial fishermen through a biomechanical analysis focused on fishing-related work tasks. Role: PI; Funding: \$974,484.00; Status: Not Funded
17. **National Science Foundation (NSF) – REU (2023)**
Occupational User Technology: Student-Honed Interdisciplinary Experiences (OUTSHINE).
Strawderman, L, Burch, R.F.V., **Chander, H.**, Freeman, C., Gillen, Z., Mohammadi-Aragh, J.
Role: Co-PI; Funding: \$404,166.00; Status: Not Funded
18. **National Science Foundation (NSF) – NRT (2023)**
Strawderman, L, Burch, R.F.V, **Chander, H**, Freeman, C., Ball, J.E., Saucier D, Mohammadi-Aragh, J, Lee, D., Hill, E. Occupational User Technology for Future Industry Transformation (OUTFIT)
Role: Co-PI; Funding: \$2,999,250.00; Status: Not Funded
19. **Smart Business Act (2022-2023)**
The Smart Health Sock App: Improving Fall Detection to Reduce Injuries
Grice S, Luczak T, Chander H., Ball J.E., Freeman C., Saucier, D.

Role: Co-PI; Funding: \$86,000; Status: Funded.

20. National Science Foundation (NSF) SPRINT (2022)

Burch, R.F.V., Ball, J.E., **Chander, H.**, Freeman, C. From the Ground Up: Using Soft Robotic Sensors to Create a Foot and Ankle Wearable that Accurately Captures Real-time, Kinematic and Kinetic Data During Athletic Training

Role: Co-PI; Funding: \$149,836.00; Status: Funded

21. ORAU Events (2022)

Burch, R.F.V., & **Chander, H.** Wearable Implementation for military and other large facilities workshop.

Role: Co-PI; Funding: \$4,000. Status: Funded

22. VALD. Applied Research Initiative (2022)

Chander H, Saucier D, Burch R, Jones A. Incorporation of VALD Health in Assessing Fall Risk in Elderly: A Biomechanical and Cognitive Approach.

Role: PI; Funding: \$40,024.00; Status: Not Funded

23. National Institute of Occupational Safety and Health (NIOSH) PPRTP (2022)

Chander H and Derby H. Fall Prevention Training using Virtual Reality Generated Slip-Trip Hazards.

Role: Co-PI; Funding: \$10,000.00; Status: Funded

24. National Science Foundation (NSF) – MRI (2022)

Burch RFB, Ball JE, **Chander H**, Gurbuz A, Strawderman L, Knight AC, Smith B, Wang J, To F. Acquisition of Biomechanical Movement and Body Volumetric Baseline Technology Suite for Motion Capture Improvement and Sensor-based Validation of Lower Body Characteristics.

Role: Co-PI; Funding: \$770,000.00; Status: Funded

25. National Institute of Health (Prime) / UMMC (Secondary) STTR (2022)

Burch R, **Chander H**, Ball J, Saucier D. Virtual Immersive Sensorimotor Testing Detection for Concussion: STTR Fast Track.

Role: Co-PI; Funding: \$1,271,276.00; Status: Not Funded

26. National Science Foundation (NSF) – TT (2022)

Freeman, C, **Chander, H**, Burch, R.F.V. Smart Fishing Shirt: Innovation of a Floatation Fishing Shirt that Provides Buoyancy and Tracking During Falls Overboard.

Role: Co-PI; Funding: \$249,512.00; Status: Not funded (Prepping for re-submission)

27. National Institute of Occupational Safety and Health (NIOSH) – R03 (2021)

Fall Prevention Training Using Virtual Reality Generated Slip-Trip Hazards.

Chander H, Burch R.F.V., and Strawderman L.

Role: PI; Funding: \$142,802.00; Status: Not Funded

28. Mississippi Center for Clinical and Translational Research (MCCTR) (2021)

Fall Risk and Mobility Status Assessment in Elderly and Young Using a Smart Sock.

Chander H, Burch R.F.V., Saucier, D.N., Freeman, C.

Role: PI; Funding: \$39,997.00; Status: Not Funded

29. Mississippi Center for Clinical and Translational Research (MCCTR) (2021)

Incorporation of a Smart Sock with the Virtual Immersive Test for Postural Stability.

Burch R.F.V., **Chander H**, Saucier, D.N., Ball J.

Role: Co-PI; Funding: \$39,988.00; Status: Funded

30. CPWR – Small Study Program (2021)

Chander H & Shojaei A. Facemasks and Fall Risk in Construction: Assessments and Safe Practices.

Role: PI; Funding: \$29,993.00; Status: Not Funded

- 31. National Science Foundation (NSF) – ERC Planning Grant (2021)**
Burch RFB, Freeman C, **Chander H**, Strawderman L, Ball J, Seitz H, Warren S. Planning Grant: Engineering Research Center for Athlete Engineering.
Role: Co-PI; Funding: \$98,464.00; Status: Not Funded
- 32. Federal Emergency Management Agency (FEMA) (2021)**
McAllister M (Texas State University), Waldman H (University of North Alabama-Sub-Award), **Chander H** (Mississippi State University-Sub-Award). Impact of a Virtual Reality Training Intervention on Markers of Stress, Physical and Mental Performance in Professional Firefighters.
Role: MSU-PI (Sub-Award); Funding: \$51,238.00; Status: Not Funded
- 33. Health Resources and Services Administration (HRSA) (2021)**
Deb S et al. University of Texas-Arlington, **Chander H**, Mississippi State University (Sub-Award). Virtual reality-based training for behavioral health workforce.
Role: MSU-PI (Sub-award) and Co-PI for overall proposal; Funding: Sub-award - \$748,456.00; Total Funding: \$1,919,269.00; Status: Not Funded
- 34. National Science Foundation (NSF) (2021)**
Liu Y, **Chander H**, Knight AC. Fabrication of metal-based foot orthotics with enhanced performance by additive manufacturing.
Role: Co-PI; Funding: \$249,923.00; Status: Not Funded
- 35. National Science Foundation (NSF) I-Corps Site Award (2020)**
Chander H, Turner AJ, Kodithuwakku SNK. The “virtual moving room” paradigm for fall prevention.
Role: Technical Lead; Funding: \$3,000.00; Status: Funded
- 36. Department of Labor – Occupational Safety Health Administration (DOL-OSHA) (2020)**
Strawderman L, Burch RFV, **Chander H**, Wyatt J. Industrial Personal Protective Equipment (PPE) for COVID-19: Training Materials Development.
Role: Co-PI; Funding: \$75,000.00; Status: Not Funded
- 37. National Institute of Occupational Safety and Health (NIOSH RO3) (2019-2021).** Burch RFV, Strawderman L, **Chander H**. Should Wearable Devices be the Next Technology Evolution to Aid Workers During Picking and Putting Tasks? An Investigation into Fatigue, Comfort, and Productivity Impacts of Wearables. Role: Co-PI; Funding: \$149,508.00; Status: Not Funded.
- 38. National Institute for Occupational Safety and Health (NIOSH) (2020) R21**
Chander H, Deb S & Shojaei A. Development of a virtual reality (VR) based fall prevention training program for roofing construction workers through multi-disciplinary analysis.
Role: PI; Funding: \$368,320.00; Status: Not Funded
- 39. National Science Foundation – Partnership for Innovation (NSF-PFI) NSF INTERN DCL 18-102: Non-Academic** Burch RFV, Ball JE, Smith B, **Chander H**, Knight AC, Prabhu R, Ronay M. Research Internship for Graduate Students Supplemental Funding Opportunity for Foot-Ankle Complex Modeling for Rehabilitation Application.
Role: Co-PI; Funding: \$44,302.00; Status: Funded
- 40. National Science Foundation – Partnership for Innovation (NSF-PFI) (2020) NSF Intern DCL Non-Academic Internship Supplement**
Burch RFV, Ball JE, Smith B, **Chander H**, Knight AC, Prabhu R, Ronay M. From the Ground Up: Using Soft Robotic Sensors to Create a Foot and Ankle Wearable that Accurately Captures Real-time, Kinematic and Kinetic Data During Athletic Training.
Role: Co-PI; Funding: \$34,930.00; Status: Funded
- 41. National Science Foundation – Partnership for Innovation (NSF-PFI) (2019) NSF REU: Supplemental Support**

Burch RFV, Ball JE, Smith B, **Chander H**, Knight AC, Prabhu R, Ronay M. From the Ground Up: Using Soft Robotic Sensors to Create a Foot and Ankle Wearable that Accurately Captures Real-time, Kinematic and Kinetic Data During Athletic Training.

Role: Co-PI; Funding: \$16,000.00; Status: Funded

42. National Science Foundation – Partnership for Innovation (NSF-PFI) (2019) NSF Includes DCL: Traineeship Supplement

Burch RFV, Ball JE, Smith B, **Chander H**, Knight AC, Prabhu R, Ronay M. From the Ground Up: Using Soft Robotic Sensors to Create a Foot and Ankle Wearable that Accurately Captures Real-time, Kinematic and Kinetic Data During Athletic Training.

Role: Co-PI; Funding: \$134,628.00; Status: Funded

43. Occupational Safety and Health Administration. U.S. Department of Labor (2019)

Strawderman S, Burch R & **Chander H**. Lift Truck Safety in Warehousing: Training Materials Development.

Role: Co-PI; Funding: \$74,993.00; Status: Funded

44. United States Department of Transportation (DOT) (2019)

Burch RFV, Strawderman L & **Chander H**. Assessment of Road/Vehicle User Issues in Automated Following for Future Freight Operations. (Sub-Contract through Auburn University).

Role: Co-PI; Funding: \$427,659.00; Status: Not Funded

45. National Institute for Occupational Safety and Health (NIOSH) - Pilot Projects Research Training Program (PPRTP) (2019)

Chander H & Kodithuwakku Arachchige SNK. Prolonged Exposure to Slippery Surface.

Role: PI; Funding: \$12,000.00; Status: Funded

46. National Science Foundation (NSF-TT) (2019-2021). Liu Y, **Chander H**, Knight A, Prabhu R, Doude H,

Yadollahi A. Using Additive Manufacturing Techniques to Fabricate Foot Orthotics with Enhanced Performance at Reduced Cost. Role: Co-PI; Funding: \$249,948.00; Status: Not Funded.

47. National Science Foundation – Partnership for Innovation (NSF-PFI) (2018)

Burch RFV, Ball JE, Smith B, **Chander H**, Knight AC, Prabhu R, Ronay M. From the Ground Up: Using Soft Robotic Sensors to Create a Foot and Ankle Wearable that Accurately Captures Real-time, Kinematic and Kinetic Data During Athletic Training.

Role: Co-PI; Funding: \$749,932.00; Status: Funded

48. College of Education Laboratory Development Grant (2018)

Chander H. Neuromechanics Laboratory Motion Capture Upgrade

Role: PI; Funding: \$4665.00; Status: Funded

49. Office of Research and Economic Development (ORED) UG Research Grant (2018-2019)

Knight AC & **Chander H**.

Role: Co-I; Funding: \$2,000.00; Status: Funded.

50. SEC Travel Grant (2018-2019)

Chander H. Research Visit to Auburn's Occupational Safety, Ergonomics and Injury Prevention.

Role: PI; Funding: \$1000.00; Status: Funded

51. National Institute for Occupational Safety and Health (NIOSH) - Pilot Projects Research Training Program (PPRTP) (2018)

Chander H & Stewart E. Fall prevention in construction and manufacturing.

Role: PI; Funding: \$12,000.00; Status: Funded

52. National Science Foundation – I-Corps Program (NSF-I-Corps) (2018)

Stranburg T, Liu Y, Bell J & **Chander H**. Customer Discovery and Commercialization for a Novel Performance-Enhancing Foot Orthoses for Military Personnel, Athletes and Others.

Role: Co-Technical Lead; Funding: \$50,000.00; Status: Funded

53. MSU COE UG Research Grant (2017-2018)

Chander H & Knight AC. How do we prevent falls in ergonomics? External perturbation or virtual reality (VR) induced balance training? – A novel approach.

Role: PI; Funding: \$1,995.00; Status: Funded

54. MSU COE UG Research Grant (2017-2018)

Pan Z, Chen CC, **Chander H**, Knight AC, Lamberth J, Huang M. The Effect of Vision on Variety of Balance Measures in Elderly Adults with and without Parkinson's Disease

Role: Co-I; Funding: \$2,000.00; Status: Funded

55. MSU Cross-College Grant (2017-2018)

Chander H, Knight AC, Liu Y. Impact of Novel Orthotics in the Military: Material and Human Factors.

Role: PI; Funding: \$2,000.00; Status: Funded.

56. MSU ORED UG Research Grant (2017-2018)

Knight AC & **Chander H**.

Role: Co-I; Funding: \$2,000.00; Status: Funded.

57. National Science Foundation – I Corps Program (NSF I-Corps) (2017)

Stranburg T, Liu Y, **Chander H** & Knight AC. Design and prototyping of the additive manufactured foot orthoses.

Role: Co-PI; Funding: \$3,000.00; Status: Funded.

58. PACCAR Engines Inc. Columbus, MS (2017)

Babski-Reeves K & **Chander H**. Ergonomic Assessment of Engine Assembly Tasks.

Role: Co-PI; Funding: \$16,875.00; Status: Funded.

59. MSU ORED Faculty Research Grant (2016-2017)

Chander H. American Society of Biomechanics.

Role: Research Talk (Thematic Poster); Funding: \$1,700.00; Status: Funded.

60. MSU Cross-College Grant (2016-2017)

Chander H, Knight AC, Liu Y. Impact of Novel Orthotics in the Military: Material and Human Factors.

Role: PI; Funding: \$2,000.00; Status: Funded.

61. Department of Kinesiology Research Funding (2017)

Chander H. Deep South Center of Occupational Safety Symposium.

Role: Invited Research Presentation; Funding: \$495.00; Status Funded.

62. Department of Defense (DOD), Congressionally Directed Medical Research Program (2016)

Chander H, Knight AC, Shamsei N, Thompson S & Garrison T. Impact of Novel Foot Orthoses in the Military.

Role: PI; Funding: \$497,956.00; Status: Selected at the pre-application level and invited for full application which was not funded.

63. Department of Kinesiology Research Funding (2017)

Chander H. Gait and Clinical Movement Analysis Society.

Role: Research Poster Presentation; Funding: \$500.00; Status Funded.

64. CAVS-Kinesiology Collaborative Research Development Grant (2015-2016)

Carruth D & **Chander H**. Human Performance Lab (HPL) upgrade at CAVS.

Role: Co-PI; Funding: \$100,000.00; Status: Funded.

65. Department of Kinesiology Research Funding (2015)

Chander H. Lab Development.

Role: Co-Director of NM Lab; Funding: \$1,000.00; Status Funded.

66. MSU ORED Faculty Research Grant (2015-2016)

Chander H. American Society of Biomechanics.

Role: Research Poster Presentation; Funding: \$3,000.00; Status: Funded.

67. MSU Bagley College of Engineering - Working Group (2016-2017)

Chander H, Strawderman L, Garrison T, Carruth D, Babski-Reeves K, Knight AC, Smith JW. Human Factors Working Group.

Role: Co-Director; Funding: \$2,000.00; Status: Funded.

68. National Institute for Occupational Safety and Health (NIOSH) - Pilot Projects Research Training Program (PPRTP) (2015)

Chander H. Biomechanics of Balance, Load Carriage and Slips in Military Footwear.

Role: PI; Funding: \$20,000.00; Status: Funded.

69. MSU Cross-College Grant (2015-2016)

Chander H, Knight AC, Babski-Reeves & Strawderman L. Slip Initiation in Military Footwear.

Role: PI; Funding: \$2,000.00; Status: Funded.

70. MSU Bagley College of Engineering - Working Group (2015-2016)

Garrison T, Carruth D, Babski-Reeves K, Strawderman L, Knight AC, Smith JW & **Chander H.** Human Factors Working Group.

Role: Member; Funding: \$1425.00; Status: Funded.

71. MSU ORED Faculty Research Grant (2014-2015)

Chander H. American Society of Biomechanics.

Role: Research Poster Presenter; Funding: \$965.00; Status: Funded.

72. MSU Cross-College Grant (2014-2015)

Chander H, Knight AC, Babski-Reeves & Strawderman L. Impact of High-Top Military Boots on Balance and Ankle Stability.

Role: PI; Funding: \$2,000.00; Status: Funded.

73. MSU Human Factors Working Group (2015)

DeBusk H & **Chander H.** Graduate Student Research Award.

Role: Chair/Advisor; Funding: \$500.00; Status: Funded.

74. MSU Bagley College of Engineering - Working Group (2014-2015)

Seran S, Anderson D, Ball J, Donohoe P Dabiru L, Aanstoos J, Kulandaivelu R, Samiappan S, Topsakal E & **Chander H.** RADAR Working Group.

Role: Member; Funding: \$2,000.00; Status: Funded.

75. National Science Foundation (NSF) (2014)

Knight AC, Strawderman L, Garrison T, Luczak T, **Chander H.** Improving Equipment Fit and Individual Customization of the Golf Swing.

Role: Co-PI; Funding: \$998,361.00; Status: Not Funded.

76. University of Mississippi Graduate Student Council Research Grant (2013)

Morris CE & **Chander H.** Impact of Alternative Footwear on Energy Expenditure, Balance & Gait

Role: Co-I; Funding: \$1000.00; Status: Funded.

77. University of Mississippi Graduate Student Council Research Grant (2013)

Chander H. Biomechanical analysis of barefoot and shod conditions in human gait and balance

Role: PI; Funding: \$1000.00; Status: Not Funded.

78. University of Mississippi Graduate Student Council Research Grant (2011)

Chander H & Garner JC. The effect of extended durations of walking in occupational footwear on postural control

Role: PI; Funding: \$500.00; Status: Funded.

79. University of Mississippi Research Travel Grant

Chander H. Recipient (2011, 2012, 2013).

80. Recipient of the University of Mississippi Summer Thesis Scholarship

Chander H. Recipient (Summer 2012).

81. Recipient of the University of Mississippi Summer Dissertation Scholarship

Chander H. Recipient (Summer 2014).

ENTREPRENEURSHIP

Patents Awarded

- [Reuben Burch, Harish Chander, Tony Luczak, David Saucier, & John Ball.](#) "Wearable flexible sensor motion capture system." U.S. Patent 11,672,480 issued June 13, 2023.

Patents Applied

- [Mobile Markerless Motion Capture for Movement Data Collection in All Environments](#) Case ID: 2023.1221, CR#: 4707-02300

Invention Disclosures

- [A Hand Wearable IMU Sensor Mount.](#) Case ID: 2023.1227
- [Virtual Reality Fall Prevention Tool Kit \(In-Progress\)](#)

Entrepreneurship Experience

- [HUMO., LLC.](#) – Non-managing partner (stepped down from managing partner due to time constraints)

Entrepreneurship Training

- NSF I-Corps Site - 2
 - Additive Manufactured Foot Orthotics
 - [Virtual Reality Fall Prevention Tool Kit](#)
- NSF I-Corps National – 1
 - Additive Manufactured Foot Orthotics

RESEARCH SERVICE

Journal Editorial and Reviewer Board:

2023 – Present	Guest Editor, Special Issue: Wearable Sensors for Movement, Posture and Gait Analysis, <i>Sensors</i>
2023 – Present	Associate Editor <i>Frontiers in Neuroscience</i>
2020 – Present	Topic Editor <i>International Journal of Environmental Research and Public Health</i>
2020 – Present	Reviewer Board Member <i>Healthcare</i>
2021 – 2022	Guest Editor, Special Issue: Advances in Fall Prevention, <i>International Journal of Environmental Research and Public Health</i>

Invited Grant Proposal Reviewer:

- NIH - National Institute of Health
 - (NIH Study Section: Neuroscience and NIH Study Section: Clinical Neuroimmunology and Brain Tumors - CNBT) – June 2024
 - (NIH Study Section: Fellowships: Sensory and Motor Neurosciences, Cognition and Perception) – June 2023
 - (NIH Study Section: Fellowships: Sensory and Motor Neurosciences, Cognition and Perception) – March 2023
- Health Research Board (HRB), Government of Ireland – European Union
- NSF – National Science Foundation
 - (NSF) Major Research Instrumentation (MRI)
- Center for Disease Control (CDC) / National Institute of Occupational Safety and Health (NIOSH)
- Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST) (Canada)
- Canada Foundation for Innovation (CFI) (Canada)

Invited Peer-Reviewer for Journals, Conferences, and Textbooks:

<i>Invited Peer-Reviews</i>	<i>From Aug 2014 to Aug 2019</i>	<i>Since Aug 2019</i>	<i>Total Aug 2014 to Aug 2024</i>
<i>Invited Peer-Reviews</i>	85 Reviews	58 Reviews	143 Reviews
<i>Invited Book Peer-Reviews</i>	1 Book	-	1 Book
<i>Invited Book Chapter Peer-Reviews</i>	1 Book Chapters	1 Book Chapter	2 Book Chapters
<i>Invited PhD Dissertation External Reviewer</i>	1 (Australia)	-	1 (Australia)

Note: Detailed information on manuscripts reviewed are provided separately by Clarivate Web of Science peer-review records.

Peer-Reviewed Invited Manuscript Reviewer:

- *International Journal of Industrial Ergonomics*
- *Applied Ergonomics*
- *Strength and Conditioning Journal*
- *International Journal of Environmental Research and Public Health*
- *Gait & Posture*
- *Footwear Science*
- *Entropy*
- *Ergonomics*
- *Safety*
- *Plos One*
- *Applied Physiology, Nutrition, and Metabolism*
- *Human Factors*
- *Research Quarterly for Exercise and Sport*
- *Journal of Applied Biomechanics*
- *Journal of Clinical Medicine*
- *Safety and Health at Work*
- *Brain Sciences*
- *Applied Sciences*
- *Medicina*
- *IISE Transactions on Occupational Ergonomics and Human Factors*
- *Journal of Science and Medicine in Sport*
- *Journal of Biomechanics*
- *Journal of Sport Rehabilitation*
- *Journal of Occupational Health*
- *Materials*
- *Computers*
- *Sports*
- *Biomimetics*
- *Information Fusion*
- *Journal of Physical Activity and Health*
- *Archives of Environmental and Occupational Medicine*
- *Journal of Motor Behavior*
- *Healthcare*
- *Symmetry*
- *Sensors*
- *Scandinavian Journal of Medicine and Science in Sports*
- *IEEE Transactions on Neural Systems and Rehabilitation Engineering*

MSU Research Working Groups:

2018 – Present	Working Group Member - Athlete Engineering Working Group
2017 – 2020	Working Group Member - Body Sensor Network and Wearable Technology
2014 – 2017	Working Group Member - Human Factors Working Group
2014 – 2015	Working Group Member - RADAR Working Group

TEACHING

Graduate and undergraduate level classes in six concentrations in the Department of Kinesiology.

Mississippi State University:

- [KI 8543](#) Postural and Locomotor Rehabilitation
- [EP 8503](#) Occupational Physiology
- [EP 8443](#) Neural Mechanisms in Human Movement and Exercise
- [EP 3643](#) Applied Anatomy & Pathophysiology
- [EP 3233](#) Anatomical Kinesiology
- [KI 3633](#) Rehabilitation Techniques in Sports Medicine
- [KI 3273](#) Athletic Training
- [PE 4283](#) Sports Biomechanics
- [EP 4503](#) Mechanical Analysis of Movement
- [PE 4853](#) Motor Learning and Skills Analyses
- [KI 2603](#) Medical Terminology

University of Mississippi:

- [ES 338](#) Motor Control and Learning
- [ES 346](#) Kinesiology
- [HP 303](#) Prevention and Care of Athletic Injuries
- [ES 447](#) Biomechanics Laboratory
- [ES 349](#) Exercise Physiology Laboratory
- [HP 191](#) Personal and Community Health
- [EL 151](#) Resistance Training and Weightlifting

Developed Courses:

- [Responsible Conduct of Research for UG Students](#) – Developed a completely free online course for all UG students at Mississippi State University. Faculty lead and worked with Office of Research Compliance and Security, Office of Undergraduate Research and Creative Discovery, Center for Distance Education and Office of Research and Economic Development.
- Honors Forum and Freshman Year Experience (1 credit hour) course – Need for Speed (Science and Human Factors in Motorsport) for all UG students at Mississippi State University.
- KI 8543 – Postural and Locomotor Rehab (3 credit hours) course – Core course in Masters in Kinesiology in Disability Studies Concentration (Core faculty member for this concentration).

<i>Teaching Evaluations from Students</i>	<i>Overall Average From Aug 2014 to Aug 2019</i>	<i>Overall Average Since Aug 2019</i>	<i>Overall Average From Aug 2014 to Aug 2024</i>
<i>Global Index (Old Format) (max score of 5)</i>	4.7 / 5-point scale	4.5 / 5-point scale	4.6 / 5-point scale
<i>Median Score from Q1.11 (New Format) (max score of 4) From Fall 2021</i>	3.9 / 4-point scale	3.85 / 4-point scale	3.86 / 4-point scale

Individual teaching evaluation for every class including student comments can be provided when needed.

STUDENT EVALUATIONS OF TEACHING FROM AUG (FALL) 2019 TO SPRING 2021 (OLD FORMAT)
GLOBAL INDEX AVERAGE SCORE = 4.5 / 5 (5-POINT SCALE)

Term	Year	Course	Cr. Hrs.	Course Title	Level	Global Index (5-point scale)	Students	Enrolled	Responses	The instructor created high expectations for the class.	The instructor conveyed the course content in an effective manner.	The instructor made the class interesting.	The instructor was enthusiastic about the subject matter. Strongly	The instructor was accessible outside of class time to respond to my questions or concerns.	I learned a great deal in this class.	The presentation of course content (lectures, web materials, and/or discussions, etc.) helped me learn in this class.	The tests were fair.	The tests reflected material presented in lecture and/or assigned reading.	Tests and/or assignments were graded within a reasonable period of time.	I would recommend this instructor to other students if they wanted to learn this subject.	
S	2021	KI 8543	3	Postural and Locomotor Rehab	G	5	7	1	5	5	5	5	5	5	5	5	5	5	5	5	5
S	2021	EP 3643	3	Applied Anatomy & Pathophys	UG	4.8	75	12	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
W	2020/21	KI 2603	3	Medical Terminology	UG	4.9	14	4	4.5	5	4.5	4.8	5	5	5	5	5	5	5	5	5
F	2020	EP 3643	3	Applied Anatomy & Pathophys	UG	4.6	92	22	4.5	4.7	4.5	4.7	4.6	4.7	4.6	4.6	4.6	4.6	4.7	4.8	4.8
F	2020	EP 3233	3	Anatomical Kinesiology	UG	4.3	168	40	4.6	4.4	4	4.3	4.5	4.1	4.2	4.1	4.3	4.6	4.2	4.2	4.2
F	2020	KI 1001	1	FYE - Need for Speed	UG	3.4	10	3	3.3	3.7	3.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
S	2020	EP 8503	3	Occupational Phys	G	4.8	14	5	4.8	4.8	4.8	5	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	5
S	2020	EP 3643	3	Applied Anatomy & Pathophys	UG	4.4	59	16	4.6	4.2	4.3	4.5	4.4	4.6	4.3	4.3	4.5	4.6	4.4	4.4	4.4
F	2019	EP 8443	3	Neuro Mech in Exercise	G	4.1	5	5	4.8	4	4	5	3.4	4.6	3.8	3.8	3.8	3.6	4.4	4.4	4.4
F	2019	EP 3643	3	Applied Anatomy & Pathophys	UG	4.5	48	22	4.6	4.7	4.7	4.8	4.6	4.7	4.4	4	4.3	4.4	4.5	4.5	4.5

STUDENT EVALUATIONS OF TEACHING FROM AUG (FALL) 2022 TO SPRING 2024 (NEW FORMAT)
Actual Positivity Ratings Percentage (Sum of ratings 3 & 4) & Weighted Average Hours for Question 8
Overall Recommend this Instructor (Q1.11 Average Median Score) = 3.85 / 4 (4-POINT SCALE)

Term	Year	Course	Cr. Hrs.	Course Title	Level	Overall recommend this instructor	Students	Enrolled	Responses	I knew what was expected of me in this class.	I understood how the assignments and/or exams connected with the learning objectives of the class.	Instructional activities and assignments (such as lectures, discussions, demonstrations, tests and exams, papers, field studies, homework, projects, etc.) accomplished inside and outside of class.	My participation in class was welcomed and respected by the instructor.	If I had questions or needed help, the instructor or teaching assistant was available and responsive inside of class or during posted office hours and/or normal University operating hours.	Feedback and grades on tests and assignments helped me to improve.	In this class, I have gained knowledge and skills that I can use in future	Outside of class time, approximately how much time each week did you spend engaging with the course content (reading, studying, completing assignments, etc.)? (hours)	I felt that the instructor presented and explained the course material clearly.	I felt that the instructor wanted all of us to succeed.	Overall, I would recommend this instructor to other students if they wanted to learn this subject
S	2024	KI 8543	3	Postural and Locomotor Rehab	G	4	10	3	100%	100%	100%	100%	100%	100%	100%	100%	5.5	100%	100%	100%
W	2023/24	KI 2603	3	Medical Terminology	UG	3.5	28	2	100%	100%	100%	100%	100%	100%	100%	100%	8.0	100%	100%	100%
F	2023	EP 8443	3	Neuro Mech in Exercise	G	4	10	5	100%	100%	100%	100%	80%	80%	80%	80%	5.8	100%	100%	100%
F	2023	HON 1091	1	Honors Forum II	UG	4	12	3	100%	100%	100%	100%	100%	100%	100%	100%	0.0	100%	100%	100%
S	2023	EP 8503	3	Occupational Phys	G	3	4	1	100%	100%	100%	100%	100%	100%	100%	100%	0.8	100%	100%	100%
S	2023	EP 3643	3	Applied Anat & Pathophys	UG	4	57	8	100%	100%	100%	100%	100%	100%	100%	100%	3.1	100%	100%	100%
W	2022/23	KI 2603	3	Medical Terminology	UG	4	19	3	100%	100%	100%	100%	100%	100%	100%	100%	4.4	100%	100%	100%
F	2022	EP 3233	3	Anatomical Kinesiology	UG	4	91	18	100%	100%	83%	100%	100%	100%	95%	88%	3.6	89%	100%	82%
F	2022	EP 3643	3	Applied Anat & Pathophys	UG	4	49	6	100%	100%	100%	100%	100%	100%	100%	100%	2.7	100%	100%	100%
F	2022	HON 1091	1	Honors Forum II - Need for Speed	UG	4	11	3	100%	100%	100%	100%	100%	100%	100%	100%	1.0	100%	100%	100%
S	2022	KI 8543	3	Postural and Locomotor Rehab	G	4	3	1	100%	100%	100%	100%	100%	100%	100%	100%	1.3	100%	100%	100%
S	2022	EP 3643	3	Applied Anat & Pathophys	UG	4	49	10	100%	100%	100%	100%	100%	100%	100%	100%	4.6	100%	100%	100%
W	2021/22	KI 2603	3	Medical Terminology	UG	4	17	3	100%	100%	100%	100%	100%	100%	100%	100%	2.0	100%	100%	100%
W	2021/22	PE 4853	3	Motor Lrng and Skill Ana	UG	3	25	3	67%	67%	67%	67%	67%	67%	67%	67%	1.5	67%	67%	67%
F	2021	EP 8443	3	Neuro Mech in Exercise	G	4	10	4	75%	100%	100%	100%	100%	100%	75%	100%	6.5	100%	100%	100%
F	2021	EP 3643	3	Applied Anat & Pathophys	UG	4	68	20	100%	100%	100%	100%	100%	100%	100%	100%	4.9	100%	100%	100%
F	2021	KI 1001	1	FYE - Need for Speed	UG	4	13	4	100%	100%	100%	100%	100%	100%	100%	100%	2.0	100%	100%	100%

STUDENT MENTORSHIP

Faculty Advisor and Research Committee Service:

Advisor and Mentor	<i>From Aug 2014 to Aug 2019</i>	<i>Since Aug 2019</i>	<i>From Aug 2014 to Aug 2024</i>
<i>Graduate - Doctoral (PhD)</i>	Chair/Co-Chair: 3 Committee: 1	Chair: 5 Committee: 11	Chair: 8 Students Committee Member: 12 Students
<i>Graduate - Masters (MS)</i>	Chair: 5 Committee: 1 Chair DIS & Non-Thesis: 3 Committee: 12	Chair: 1 Committee: - 1 Chair DIS & Non-Thesis: 1 Committee: 2	Chair: 6 Students Committee: 2 Students Chair DIS & Non-Thesis: 4 Students Committee: 14 Students
<i>Undergraduate - Bachelors (BS)</i>	Chair for DIS: 8 Chair Intern: 2 Chair Research: 19 Advisor: ~ 90	Chair for DIS: 8 Chair Intern: 4 Chair Research: 18 Advisor: ~ 50	Chair Directed Individual Study: 16 Students Chair for Internship: 6 Students Chair for Research: 37 Students Advisor: ~ 60 Students
<i>High School</i>	-	Chair: 2 (MSU – Base Pair)	Chair 2 Students (Base Pair Students)

Lab Alumni:

- Dr. Hunter Derby – Affiliate Researcher – Athlete Engineering Institute, Mississippi State University (Chair)
- Dr. Sachini Kodi - Assistant Professor - Weber State University (Chair)
- Dr. Alana Turner - Assistant Professor - Coastal Carolina University (Chair)
- Dr. Hunter DeBusk - Director of Ergonomics - Americas – Michelin (Chair and Co-Chair)
- Dr. Chris Hill - Assistant Professor - Louisiana State University (Chair and Co-Chair)
- Dr. Jeffrey Simpson - Associate Professor - University of West Florida (Committee Member)
- Hannah Freeman - Doctor of Occupational Therapy Student - University of Alabama-Birmingham (Chair)

Graduate Students:

- Hunter Derby – PhD Student (Chair)
- Nate Conner – PhD Student (Chair)
- Aaron Griffith – PhD Student (Committee Member)
- Kristy Gourley – PhD Student (Committee Member)
- Sally Barfield – MS Student (Committee Member)
- Sam Searless – MS Student (Committee Member)
- Megan Moorhead – MS Student (Chair) Non-Thesis DIS
- Nisarga Chandakavadi – MS Student (Chair)
- Jacob Hurwitz – PhD Student (Committee Member)
- Russell Lowell – PhD Student (Committee Member)
- Alana Turner – PhD (Chair)
- Sachini Kodithuwakku – PhD (Chair)
- Russell Lowell – PhD Student (Committee Member)
- Robert Booker – PhD Student (Committee Member)
- Ethan Stewart – PhD Student (Chair)
- Brandon Miller – PhD Student (Chair)
- Jeffrey Simpson – PhD (Committee Member)
- Hannah Freeman – MS (Chair)
- Kyana Ramsey – MS (Chair) – Non-Thesis DIS
- Kristy Gourley – MS (Committee Member) – Non-Thesis DIS
- Alana Turner – MS (Chair)
- Philip Sutton – MS (Committee Member / Co-Chair) – Non-Thesis DIS
- Hayes Salancy – MS (Committee Member) – Non-Thesis DIS
- Sachini Kodithuwakku – MS (Committee Member/ Co-Chair)
- Prakash Dandapani – MS (Chair) – Non-Thesis Internship
- Peyton Jenson – MS (Chair) – Non-Thesis Internship

- Hunter DeBusk – MS (Chair), PhD (Committee Member)
- Chris Hill – MS (Chair), PhD (Committee Member)
- Austin Harris – MS (Committee Member) – Non-Thesis Internship
- John Smith – MS (Committee Member) – Non-Thesis Internship
- Korakot Simsiriwong – MS (Chair)
- Matt Crahan – MS (Committee Member) – Non-Thesis DIS
- Dimitri Gayden – MS (Committee Member)
- Ty Stewart – MS (Committee Member) – Non-Thesis DIS
- Tony Luczak – MS Student (Committee Member) – Non-Thesis DIS
- Jenna Wooten – MS (Committee Member) – Non-Thesis DIS
- Ffion Price – MS (Committee Member)

External Committee Member for Graduate Students:

- Phong Phan – PhD Ag & Biomedical Engineering - Graduated
- Purva Talegaonkar – PhD Industrial and Systems Engineering - Graduated
- Eboni Smith – PhD Industrial and Systems Engineering - Graduated
- Samaneh Davarzani – PhD Industrial and Systems Engineering - Graduated
- Michael Carter – PhD Student Industrial and Systems Engineering
- Matt Reese – PhD Student Industrial and Systems Engineering - Graduated
- Will Carroll – MS Electrical and Computer Engineering - Graduated

Undergraduate Students (Directed Individual Study/Internship in Lab):

- Faith Hagan
- Jacob Hull
- Sally Hatten
- Rosemary Borland
- Annalee Turner
- Riley Adams
- Anna Minga
- Sydney Carter
- Emma Conley
- Jordan Doherty
- Courtney Smith
- Daniel Young
- Luke Alexander
- Abbey McCrory
- Sunny Jo Chandler
- Seth Freeny
- Savannah Kate-Trigg
- Luke Ramsey
- Hannah Freeman
- Skylar Belton
- Lexie Fallon
- Abbie Scott
- Tanner Bevill
- Hannah Hall
- McKenzie Buckner
- Corinne Cobb
- Bo Balducci
- Lauren Young
- Kacey Byrd
- Allison Essary
- Alana Turner
- Jonathan Swain
- Kamaron Malone
- Russell Lowell
- Justin McDaniel
- Justin Taylor
- Ben Cochran
- Montia Pace

High School Students – BASE Pair Program Research

- Agatha Taquino (Chair)
- Hasini Yamagowni (Chair)

Community Service:

With support from the College of Education and the Mississippi Council on Developmental Disabilities (MSCDD), I am currently creating a service-based rehabilitation program focused on neuromotor training while collecting research metrics for children with special needs and by working with pediatric clinics and rehabilitation centers in our community. This is an ongoing project and will come to fruition soon.

Memberships:

- 2023 – Present Professional Member, International Society of Posture and Gait Research
- 2014 – Present Professional Member, American Society of Biomechanics
- 2011 – Present Professional Member, Southeast: American College of Sports Medicine
- 2015 – 2017 Professional Member, International Council of Motor Sports
- 2015 – 2016 Professional Member, Gait and Clinical Movement Analysis Society
- 2008 – Present Life Member, Indian Association of Physiotherapists

Certifications:

- Licensed Physical Therapist – Indian Association of Physiotherapists
- Certified Manual Therapist – Orthopedic Manipulative Rehabilitation
- Certified Instructor for CPR/AED; Adult, Children & Infant, American Red Cross

Invited Presentation / Talks / Lectures:

- Invited Speaker MS EBSCOR / IDeA Conference at MSU, July 23, 2024, Starkville, MS.
- Invited Speaker MS American Physical Therapy Chapter (APTA) at UMMC, May 18, 2024, Jackson, MS.
- Invited Keynote Speaker, Biomechanics Interest Group (BIG), SEACSM, Feb 17-19, 2022, Greenville, SC.
- Invited Speaker, MSU / MCCTR Wearable Technology Collaboration, UMMC, July 6th, 2022.
- Invited Panelist, Smart Fabrics Summit, March 28-29, 2022, Raleigh, NC.
- Invited Panelist in Athlete Engineering Panel at the Vibration Institute Conference, July 2021, Arlington, TX.
- Invited Panelist in Athlete Engineering Panel at the Tactical Athlete Summit, October 2021, Auburn, AL.
- Deep South NIOSH ERC Research Symposium 2020, Birmingham, AL.
- Invited Guest Speaker – UTHSC Department of Physical Therapy – Sept 2019
- Invited Conference Moderator (Clinical Biomechanics) – Mid-South Biomechanics Conference – Feb 2018.
- Deep South NIOSH ERC Research Symposium 2017, Auburn, AL.
- Ergonomics Assessment of Engine Assembly Tasks 2017 – PACCAR, Inc.
- The University of Memphis 2017 – Why do we Fall?
- Center for American Veterans, Mississippi State University 2016 – Military Research
- Ergonomics Assessment of Workplace Setting, Ole Miss Theatre, University of Mississippi, USA, 2013
- Ergonomics Awareness and Workplace Safety, Schwing Stetter India Pvt. Ltd, Chennai, India, 2013

On Campus Collaborations:

- All Divisions of Kinesiology
- Athlete Engineering
- Center for Advanced Vehicular Systems (CAVS)
- Industrial Systems and Engineering
- Electrical and Computer Engineering
- Computer Science and Engineering
- Mechanical Engineering
- Agriculture and Biomedical Engineering
- Fashion Design and Merchandising
- Entrepreneurial Center (E-Center)
- Building Construction Science

Off-Campus Collaborations:

- University of Mississippi
- University of Mississippi Medical Center
 - School of Population Health
 - Mississippi Center for Clinical & Translational Research
- University of Alabama-Birmingham
- Troy University
- Texas State University
- University of North Alabama
- University of West Florida
- Georgia Southern University
- Northern Illinois University
- California State University-San Bernardino
- Coastal Carolina University
- Weber State University

IN THE NEWS/MEDIA

- **Chander H.** Mississippi State University, We Ring True - <https://www.youtube.com/watch?v=FLI61crW8ic>
- **Chander H.** Mississippi State University, Office of Public Affairs – True Leadership - <https://www.youtube.com/watch?v=m0m3LLnplzw>
- **Chander H.** Alumnus Magazine, Neuromechanics Laboratory. <http://www.alumnus.msstate.edu/winter20/neuromechanics.html>
- **Chander H.** MSU “Our People” Faculty Spotlight. <https://www.msstate.edu/our-people/2019/01/harish-chander/>
- **Chander H.** MSU TV FORWARD - https://www.youtube.com/watch?v=Yu6GF_J4Fkc&t=182s
- **Chander H.** Undergraduate Research and Creative Discovery. <https://www.urcd.msstate.edu/news/2023/01/abbey-mccrory-second-author-publication>
- **Chander H.** Research and Outreach, College of Education Newsletter, 2023, Vol. VI. https://www.educ.msstate.edu/sites/www.educ.msstate.edu/files/2023%20Forward_0.pdf
- Turner AJ & **Chander H.** Kinesiology Graduate Student Finds Success in Fall Prevention Research. <https://www.educ.msstate.edu/news/kinesiology-graduate-student-finds-success-fall-prevention-research/>
- **Chander H.** Featured on “Faculty Spotlight” in the 2016 COE newsletter.
- **Chander H.** Featured on the 2016 Kines Newsletter.
- **Chander H.** Infinite Impact MSU Foundation. Story by Watson Paige.
- <http://www.educ.msstate.edu/news/chander-knight-represent-college-education-infinite-impact-campaign-event/>
- **Chander H** and Knight AC. NM Lab Insights. <https://www.youtube.com/watch?v=4yUSqNUIQIA&t=20s>
- **Chander H** and Knight AC. NM Lab represents at ASB 2016. <http://www.kinesiology.msstate.edu/headlines/neuroconference.php>
- **Chander H** and Knight AC. NM Lab at SEACSM 2016. <http://www.kinesiology.msstate.edu/headlines/headline/stewart.php>
- **Chander H.** Interview for news article on balance performance in *Dr. Oz’s Good Life Magazine*. <http://www.drozthegoodlife.com/fitness/strength-cardio-exercise/how-to/a1951/balance-workout/>
- **Chander H.** Interview for news article on balance performance in *Women’s Health Magazine*.

REFERENCES

John C. Garner III, Ph.D., CSCS*D

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The University of Mississippi Medical Center (UMMC)
2500 North State Street
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Reuben Burch, Ph.D.

Associate Vice President for Research | ORED
Jack Hatcher Endowed Chair for Engineering Entrepreneurship
Associate Professor | Industrial & Systems Engineering
Associate Director of Athlete Engineering | CAVS
Mississippi State University
301 Research BLVD, Starkville, MS 39759
Email: burch@research.msstate.edu, Phone: (901) 305-3561

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