

ANDREW D. NORDIN

Texas A&M University, Division of Kinesiology
2929 Research Parkway, G. Gilchrist Building, Office 331, Lab 125
College Station, Texas, USA, 77843-4243

NCBI, Google Scholar, ORCID
office: 979-458-4017
nordinlab.com, nordina@tamu.edu

EDUCATION

Postdoc.	University of Michigan, MI, USA	2017	Human Neuromechanics
Ph.D.	University of Nevada, Las Vegas, USA	2015	Kinesiology, Biomechanics
M.S.	Lakehead University, ON, Canada	2011	Kinesiology, Biomechanics
H.B.K.	Lakehead University, ON, Canada	2009	Kinesiology
B.S.	Lakehead University, ON, Canada	2009	Physics

PROFESSIONAL EXPERIENCE

Affiliated Faculty, Department of Biomedical Engineering, Texas A&M University, 2021-present.
Graduate Faculty, Texas A&M Institute for Neuroscience, Texas A&M University, 2020-present.
Faculty, Center for Remote Health Technologies & Systems, Texas A&M University, 2020-present.
Assistant Professor, Division of Kinesiology, Texas A&M University, 2020-present.
Research Assistant Scientist, Department of Biomedical Engineering, U of Florida, 2017-2020.
Postdoctoral Researcher, School of Kinesiology, University of Michigan. 2015-2017.
UNLV Foundation President's Graduate Research Fellow, UNLV. 2014-2015.
Instructor, Department of Kinesiology and Nutrition Sciences, UNLV. 2014.
Graduate Assistant, Department of Kinesiology and Nutrition Sciences, UNLV. 2012-2014.
Graduate Assistant, School of Kinesiology, Lakehead University. 2009-2011.

PUBLICATIONS

Journal papers (undergraduate student researcher)

22. Song, S., Fernandes, N.J., **Nordin, A.D.** (2023). Characterizing Bodyweight-Supported Treadmill Walking On-Land and Underwater Using Foot-Worn Inertial Measurement Units and Machine Learning for Gait Event Detection. *Sensors*. 23(8). <https://doi.org/10.3390/s23187945>.
21. Song, S., **Nordin, A.D.** (2023). Balance perturbations in simulated low-gravity modulate human premotor and frontoparietal electrocortical theta, alpha, and beta band spectral power. *IEEE Open Journal of Engineering in Medicine and Biology*. 4, 195-203. <https://doi.org/10.1109/OJEMB.2023.3238319>.
20. Schlink, B.R., **Nordin, A.D.**, Diekfuss, J.A., Myer, G.D. (2022). Quantification of global myoelectric spatial activations to delineate normal hamstring function at progressive running speeds: a technical report. *Journal of Strength and Conditioning Research*. 36(3), 867-870. <https://doi.org/10.1519/JSC.0000000000004189>.
19. Song, S., **Nordin, A.D.** (2021). Mobile electroencephalography for studying neural control of locomotion. *Frontiers in Human Neuroscience, The Neural Control of Locomotion: Current Knowledge and Future Research*, 642. <https://doi.org/10.3389/fnhum.2021.749017>.
18. Schlink, B. R., **Nordin, A. D.**, Brooks, C. N., & Ferris, D. P. (2021). Fatigue induces altered spatial myoelectric activation patterns in the medial gastrocnemius during locomotion. *Journal of Neurophysiology*, 125(5), 2013-2023. <https://doi.org/10.1152/jn.00602.2020>.
17. Schlink, B.R., **Nordin, A.D.**, Ferris, D.P. (2020). Human myoelectric spatial activation differs among lower limb muscles and locomotion speeds. *Physiological Reports*. <http://dx.doi.org/10.14814/phy2.14652>.
16. Richer, N., Downey, R.J., Hairston, W.D., Ferris, D.P., **Nordin, A.D.** (2020). Motion and muscle artifact removal validation using an electrical head phantom, robotic motion platform, and dual layer mobile EEG. *IEEE Transaction on Neural Systems and Rehabilitation Engineering*. 28(8), 1825-1835. <https://doi.org/10.1109/tnsre.2020.3000971>.
15. Schlink, B.R., **Nordin, A.D.**, Ferris, D.P. (2020). Comparison of signal processing methods for reducing motion artifacts in high-density electromyography during human locomotion. *IEEE Open Journal of Engineering in Medicine and Biology*. <https://doi.org/10.1109/OJEMB.2020.2999782>.
14. **Nordin, A.D.**, Dufek, J.S. (2020). Footwear and footstrike change loading patterns in running. *Journal of Sports Sciences*. <https://doi.org/10.1080/02640414.2020.1761767>.
13. **Nordin, A.D.**, Hairston, W.D., Ferris, D.P. (2020). Faster gait speeds reduce sensorimotor alpha and beta EEG spectral power. *IEEE Transactions on Biomedical Engineering*. 3(67), 842-853. <https://doi.org/10.1109/TBME.2019.2921766>.

12. **Nordin, A.D.**, Hairston, W.D., Ferris, D.P. (2019). Human electrocortical dynamics while stepping over obstacles. *Scientific Reports*, 9(1), 4693. <https://rdcu.be/brDwr>.
11. **Nordin, A.D.**, Dufek, J.S. (2019). Reviewing the variability-overuse injury hypothesis: Does movement variability relate to landing injuries? *Research Quarterly for Exercise and Sport*. <https://doi.org/10.1080/02701367.2019.1576837>.
10. **Nordin, A. D.**, Hairston, W. D., & Ferris, D. P. (2018). Dual-electrode motion artifact cancellation for mobile electroencephalography. *Journal of Neural Engineering*, 15(5), 056024. <https://doi.org/10.1088/1741-2552/aad7d7>
9. Symeonidou, E.R., **Nordin, A.D.**, Hairston, W.D., Ferris, D.P. (2018). Effects of cables sway, electrode surface area, and electrode mass on EEG signal quality during motion. *Sensors*. 18(4), 1073. <https://doi.org/10.3390/s18041073>.
8. **Nordin, A.D.**, Rymer, W.Z., Biewener, A.A., Schwartz, A.B., Chen, D., Horak, F.B. (2017). Biomechanics and neural control of movement, 20 year later: what have we learned and what has changed? *Journal of NeuroEngineering and Rehabilitation*. 14:91. <https://doi.org/10.1186/s12984-017-0298-y>.
7. **Nordin, A.D.**, Dufek, J.S. (2017). Load accommodation strategies and movement variability in single-leg landing. *Journal of Applied Biomechanics*. <https://doi.org/10.1123/jab.2016-0097>.
6. **Nordin, A.D.**, Dufek, J.S. (2017). Lower extremity variability changes with drop landing height manipulations. *Research in Sports Medicine*. 25(2), 144-155. <http://dx.doi.org/10.1080/15438627.2017.1282353>
5. **Nordin, A.D.**, Dufek, J.S., James, C.R., Bates, B.T. (2017). Classifying performer strategies in drop landing activities. *Journal of Sports Sciences*. 35(18), 1858-1863. <http://dx.doi.org/10.1080/02640414.2016.1240876>
4. **Nordin, A.D.**, Dufek, J.S. (2016). Neuromechanical synergies in single-leg landing reveal changes in movement control. *Human Movement Science*, 49, 66-78. <https://doi.org/10.1016/j.humov.2016.06.007>
3. **Nordin, A.D.**, Dufek, J.S. (2016). Single-leg landing neuromechanical data following load and landing height manipulations. *Data in Brief*. <https://doi.org/10.1016/j.dib.2016.07.011>
2. **Nordin, A.D.**, Dufek, J.S., Mercer, J.A. (2015). Three-dimensional impact kinetics with foot-strike manipulations during running. *Journal of Sport and Health Science*. 6(4), 489-497. <https://doi.org/10.1016/j.jshs.2015.11.003>
1. McKay, B., Wulf, G., Lewthwaite, R., **Nordin, A.D.** (2015). The self: your own worst enemy? A test of the self-invoking trigger hypothesis. *The Quarterly Journal of Experimental Psychology*, 68(9), 1910-1919. <http://dx.doi.org/10.1080/17470218.2014.997765>

Conference papers

5. Treece, M., **Nordin, A.D.** (2023, July). Evaluating the influence of knee joint angle on maximum isometric belt squat performance. *International Society of Biomechanics in Sports 2023 Conference Proceedings Archive*, 4 pages.
4. **Nordin, A.D.**, Hairston, W.D., Ferris, D.P. (October, 2019). Faster gait speeds suppress human auditory electrocortical responses. *2019 IEEE International Conference on Systems, Man, and Cybernetics*. 6-pages. <https://doi.org/10.1109/SMC.2019.8914308>
3. Richer, N., Downey, R. J., **Nordin, A. D.**, Hairston, W. D., & Ferris, D. P. (2019, March). Adding neck muscle activity to a head phantom device to validate mobile EEG muscle and motion artifact removal. In *2019 9th International IEEE/EMBS Conference on Neural Engineering (NER)*. 4-pages. <https://doi.org/10.1109/NER.2019.8716959>
2. **Nordin, A.D.**, Kivi, D., Zerpa, C., & Newhouse, I.J. (2014, October). Comparison of methods for assessing vertical jump height performance. *International Society of Biomechanics in Sports 2023 Conference Proceedings Archive*. 4-pages.
1. **Nordin, A. D.**, Bailey, J. P., & Dufek, J. S. (2014, April). Implications of increased lower extremity movement variability on fall susceptibility at increased stride lengths during locomotion. In *ASME 2013 International Mechanical Engineering Congress and Exposition*. American Society of Mechanical Engineers Digital Collection. 4 pages. <https://doi.org/10.1115/IMECE2013-63804>

GRANTS & AWARDS

External grants (active)

1. Human brain and body dynamics during adaptation to lower-extremity physical augmentation
Principal Investigator: Andrew Nordin (Co-I: J. Courtney Bradford)

Agency: DEVCOM Army Research Laboratory (W911NF-23-S-0001)

Period: 05/01/2023-04/30/2026

Amount: \$113,209 Total Costs

Aim: To identify neural substrates of discrete and rhythmic locomotor control.

External grants funded (completed)

2. Wireless, mobile EEG with noise cancelling dual electrodes for ambulatory humans
Primary Investigator: Daniel Ferris (Co-Is: Andrew Nordin, W. David Hairston, J. Cortney Bradford)
Agency: Army Research Laboratory
Period: 05/01/2018 - 04/30/20
Amount: \$ 528,756 Total Costs
Aim: To develop a wireless, noise cancelling, mobile EEG system.
1. Near real-time removal of motion, muscle, and eye artifacts in EEG
Primary Investigators: Daniel Ferris (Co-Is: Andrew Nordin, W. David Hairston)
Agency: Army Research Laboratory
Period: 05/01/2018 - 04/30/20
Amount: \$ 352,654 Total Costs
Aim: To develop and test signal processing for motion, muscle, and eye artifact removal from EEG.

Internal grants funded (active)

1. Human brain and body dynamics during locomotion
Primary Investigator: Andrew Nordin
Mechanism: Kay & Jerry Cox Undergraduate Research Scholars Program, School of Education & Human Development
Period: 06/01/2023 - 04/30/2024
Amount: \$ 1,500 Total Costs
Aim: To support an undergraduate student research assistant studying neural control of human locomotion.

Internal grants funded (completed)

4. Human brain and body dynamics during locomotion in hyper and hypogravity
Primary Investigator: Andrew Nordin
Mechanism: College of Education & Human Development, R3 (Renew, Reinvest, & Resubmit)
Period: 09/01/2021 - 04/29/2022
Amount: \$ 26,000 Total Costs
Aim: To identify neural adaptations to altered loading conditions during treadmill gait.
3. Human brain and body dynamics during locomotor movements
Primary Investigator: Andrew Nordin
Mechanism: Sydney & J.L. Huffines Institute for Sports Medicine & Human Performance Seed Grant
Period: 07/01/2021 - 06/30/2022
Amount: \$7,500 Total Costs
Aim: To develop methods, collect pilot data, and better understand human locomotor control.
2. Human brain processes during complex locomotor navigation
Primary Investigator: Andrew Nordin
Mechanism: Undergraduate Student Research Initiative, College of Education & Human Development, Department of Health & Kinesiology
Period: 09/01/2021 - 04/29/2022
Amount: \$3,500 Total Costs
Aim: To support an undergraduate student research assistant studying neural control of human locomotion.
1. Human brain processes during complex locomotor navigation
Primary Investigator: Andrew Nordin (Co-PI: Heather Burte, Co-I: Ann McNamara)
Mechanism: School of Innovation, Innovation-X Program
Period: 09/01/2021 - 04/29/2022
Amount: \$20,000 Total Costs
Aim: To support nine undergraduate students working with three graduate students studying neural control of human locomotion.

External Awards

4. **Nordin, A.D.** 2020 Mobile Brain Imaging (MoBI) Award. *Brain Products GmbH*. Spring, 2020.

3. **Nordin, A.D.** 2015 Regents' Graduate Scholar Award. *Nevada System of Higher Education (NSHE)*, \$5000, Spring, 2015.
2. **Nordin, A.D.** Characterizing impact kinetics with changes in footwear and foot-strike using principal component analysis. *New Balance Footwear Research Award*. Production Footwear Award Category, Spring, 2014.
1. **Nordin, A.D.** Changes in impact kinetics with altered foot strike patterns in running. *Southwest Chapter of the American College of Sports Medicine (SWACSM)*, Norman James Research Award, \$500, Fall, 2013.

Internal Awards

8. **Nordin, A.D.** UNLV Foundation President's Graduate Research Fellowship, *UNLV Graduate College*, University of Nevada, Las Vegas, \$23,000, Fall 2014- Spring 2015.
7. **Nordin, A.D.** UNLV Summer Session Scholarship, *UNLV Graduate College*, University of Nevada, Las Vegas, \$2000, Summer, 2014.
6. **Nordin, A.D.** UNLV Summer Session Scholarship, *UNLV Graduate College*, University of Nevada, Las Vegas, \$2000, Summer, 2013.
5. **Nordin, A.D.** Associating kinematic and kinetic synergies with movement control strategies in drop landing. *Graduate & Professional Student Association (GPSA) Sponsorship Funding*, University of Nevada, Las Vegas, \$800, Summer, 2014.
4. **Nordin, A.D.** Implications of increased lower extremity movement variability on fall susceptibility at increased stride lengths during locomotion. *Graduate & Professional Student Association (GPSA) Sponsorship Funding*, University of Nevada, Las Vegas, \$400, Fall 2013.
3. **Nordin, A.D.** Nebraska Biomechanics Core Facility Nonlinear Analysis Summer Workshop 2013. *Graduate & Professional Student Association (GPSA), School of Allied Health Sciences, and Department of Kinesiology and Nutrition Sciences Sponsorship Funding*, University of Nevada, Las Vegas, \$1120, Summer 2013.
2. **Nordin, A.D.** Continuous variability assessment of vertical ground reaction forces during landing. *Graduate & Professional Student Association (GPSA) Sponsorship Funding*, University of Nevada, Las Vegas, \$210, Spring 2013.
1. **Nordin, A.D.** Kinetic variability during walking in casual footwear as a function of speed. *Graduate & Professional Student Association (GPSA) Sponsorship Funding*, University of Nevada, Las Vegas, \$300, Summer 2012.

PRESENTATIONS

Invited talks:

13. **Nordin, A.D.** Next-generation neurotechnologies for studying human locomotor control. *Department of Kinesiology, University of Waterloo*, Waterloo, ON, CAN, January 2023.
12. **Nordin, A.D.** Leveraging neural signals for the control of locomotor assistive devices. *Department of Kinesiology, University of Waterloo*, Waterloo, ON, CAN, January 2023.
11. **Nordin, A.D.** Human electrical brain dynamics during locomotion. *Department of Psychological and Brain Sciences, Texas A&M University*, College Station, TX, USA, October, 2021.
10. **Nordin, A.D.** Sensory processing in the brain during human locomotion. *Department of Health and Kinesiology, Texas A&M University*, College Station, TX, USA, October 2020.
9. **Nordin, A.D.** Real world mobile brain and body imaging using high-density EEG. *Department of Biomedical Engineering, Texas A&M University*, College Station, TX, USA, September 2020.
8. **Nordin, A.D.** Department of Kinesiology and Health Education, University of Texas at Austin, Austin, TX, USA, January 2020.
7. **Nordin, A.D.** Real world mobile brain and body imaging using high-density EEG. *Department of Health and Kinesiology, Texas A&M University*, College Station, TX, USA, December 2019.
6. **Nordin, A.D.** Overcoming obstacles in mobile brain imaging. *Department of Kinesiology, University of Waterloo*, Waterloo, ON, CAN, June 2019.
5. **Nordin, A.D.** Neural control of movement: where do we begin? *Department of Kinesiology, University of Waterloo*, Waterloo, ON, CAN, June 2019.
4. **Nordin, A.D.** Overcoming obstacles in mobile brain imaging and locomotion. *Department of Applied Physiology and Kinesiology, University of Florida*, Gainesville, FL, USA, January 2019.
3. **Nordin, A.D.** Overcoming obstacles in mobile EEG. *Department of Kinesiology, McMaster University*, Hamilton, ON, CAN, October 2018.

2. **Nordin, A.D.** Neuromechanics. Department of Kinesiology, McMaster University, Hamilton, ON, CAN, October 2018.
1. **Nordin, A.D.** Overcoming obstacles in mobile brain imaging and locomotion. *Coulter Seminar Series, Joint Department of Biomedical Engineering, University of North Carolina-NC State*, Raleigh, NC, USA, January 2018.

Session Presentations:

International

5. **Nordin, A.D.** Balance Perturbations in Simulated Low-Gravity Modulate Human Premotor and Frontoparietal Electrocardiac Theta, Alpha, and Beta Band Spectral Power. *IEEE OJEMB Healthcare for Space, Space for Healthcare Webinar*, September 2023.
4. Song, S., **Nordin, A.D.** Human Electrical Brain and Muscle Activity during Underwater Standing Balance. *XXIX Congress of International Society of Biomechanics, XXIX Congress of Japanese Society of Biomechanics*, Fukuoka, Japan, August 2023.
3. **Nordin, A.D.** Human electrocardiac dynamics while stepping over obstacles. *2020 Mobile Brain Imaging (MoBI) Award Virtual Symposium*. June 2020.
2. **Nordin, A.D.**, Hairston, W.D., Ferris, D.P. Faster gait speeds suppress human auditory electrocardiac responses. *2019 IEEE International Conference on Systems, Man, and Cybernetics*, Bari, Italy, October 2019.
1. **Nordin, A.D.** Overcoming obstacles in mobile EEG. Next steps in real-life brain monitoring: technologies for wearable EEG, *40th International Conference of the IEEE Engineering in Medicine and Biology Society*, Honolulu, HI, USA, July 2018.

National

3. Schlink, B.R., **Nordin, A.D.**, Ferris, D.P. High-Density Electromyography Motion Artifact Removal During Running. *2019 Biomedical Engineering Society (BMES) Annual Meeting*, Philadelphia, PA, USA, October 2019.
2. **Nordin, A.D.**, Ferris, D.P. Novel Approaches for Assessing Real-world Motion Artifact. Real-World Neuroimaging area project review, *U.S. Army Research Laboratory (ARL) Cognition and Neuroergonomics (CaN) Collaborative Technology Alliance (CTA) All Hands Meeting 2015*, La Jolla, CA, USA, November 2015.
1. **Nordin, A.D.**, Dufek, J.S. Loading patterns vary by direction, footwear, and foot-strike. *39th Annual Meeting of the American Society of Biomechanics (ASB)*, Columbus, OH, USA, August 2014.

Regional (undergraduate student researcher)

4. Phillips, S., **Nordin, A.D.** Electrocardiac signal recovery using tripolar concentric ring electrode recordings and an electrical head phantom testbed. *Texas A&M Institute for Neuroscience 11th Annual Symposium*. College Station, TX, USA, May 2022.
3. Song, S., Peters, B., Patel, S., **Nordin, A.D.** Human electrocardiac and myoelectric dynamics during underwater treadmill locomotion. *Texas A&M Chapter of the Society for Neuroscience Winter Symposium 2021*. College Station, TX, USA, December 2021.
2. Schlink, B.R., **Nordin, A.D.**, Diekfuss, J.A., Myer, G.D. Mapping myoelectric spatial activations to better understand neuromuscular mechanisms for dynamic hamstring strains. *14th Annual Emory Sports Medicine Symposium*. Emory University School of Medicine, Atlanta, GA, USA, March 2021.
1. **Nordin, A.D.**, Castro, S.B., Dufek, J.S., Mercer, J.A. Changes in impact kinetics with altered foot strike patterns in running. *Southwest Chapter of the American College of Sports Medicine (SWACSM) 32nd Annual Meeting*, Student Research Award Presentation, Norman James Research Award Winner 2013, Newport Beach, CA, USA, October 2013.

Local (undergraduate student researcher)

4. Fernandes, N., Song, S., **Nordin, A.D.** Underwater treadmill gait event detection using inertial measurement unit sensors, *Texas A&M University, Student Research Week*, College Station, TX, USA, March, 2022.
3. **Nordin, A.D.** Overcoming obstacles in neuroimaging and locomotion. *5th Annual Motor Neuroscience and Biomechanics Research Summit*, University of Florida, Gainesville, FL, USA, December 2017.
2. **Nordin, A.D.**, Dufek, J.S. Minimalist vs. cushioned running shoes: impact loads vary with foot-strike pattern. University of Nevada, Las Vegas, *Graduate & Professional Student Research Forum, Dental Medicine, Nursing and Science Platform Session*, Las Vegas, NV, USA, March 2015.

1. **Nordin, A.D.**, Dufek, J.S., Mercer, J.A. Foot-strike kinetics in running: making an impact via 3D analysis. University of Nevada, Las Vegas, *Graduate & Professional Student Research Forum, Dental Medicine, Nursing and Science Platform Session*, Las Vegas, NV, USA, March 2014.

Refereed poster presentations:

International (undergraduate student researcher)

24. Treece, M., **Nordin, A.D.** Evaluating the influence of knee joint angle on maximum isometric belt squat performance. *International Society of Biomechanics in Sports 2023*, Milwaukee, WI, USA, July 2023.
23. Phillips, S., **Nordin, A.D.** Myoelectric EEG artifact removal validation using tripolar concentric ring electrodes and canonical correlation analysis. *11th International IEEE EMBS Conference on Neural Engineering*, Baltimore, MD, USA, April 2023.
22. Song, S., **Nordin, A.D.** Electrical brain activity during mechanical bodyweight-supported walking does not differ between sexes. *11th International IEEE EMBS Conference on Neural Engineering*, Baltimore, MD, USA, April 2023.
21. Song, S., **Nordin, A.D.** Mechanical bodyweight support during gait increases human sensorimotor electrocortical alpha and beta band spectral power. *2023 Neural Control of Movement meeting, Society for the Neural Control of Movement*, Victoria, BC, Canada, April 2023.
20. Y.P. Cheng, **Nordin, A.D.** Spatial navigation in projected virtual reality reduces human frontoparietal electrocortical spectral power. *Neuroscience 2022, Society for Neuroscience*, San Diego, CA, USA, November 2022.
19. Phillips, S., **Nordin, A.D.** EEG noise removal using tripolar concentric ring electrodes and canonical correlation analysis. *2022 Biomedical Engineering Society (BMES) Annual Meeting*, San Antonio, TX, USA, October 2022.
18. Song, S., **Nordin, A.D.** Human lower limb myoelectric dynamics during underwater treadmill walking. *North American Congress on Biomechanics*, Ottawa, ON, Canada, August 2022.
17. Song, S., **Nordin, A.D.** Underwater balance perturbations modulate human frontoparietal theta and alpha band spectral power. *4th International Mobile Brain/Body Interaction Conference*, San Diego, CA, USA, June 2022.
16. Song, S., Long, A., Patel, S., Peters, B., Treece, M., **Nordin, A.D.** Mobile technologies for monitoring real world human ambulatory brain, muscle, and body dynamics. *IEEE EMBS Conference on Healthcare Innovations & Point of Care Technologies*, Houston, TX, USA, March 2022
15. Richer, N., Downey, R.J., Hairston, W.D., Ferris, D.P., **Nordin, A.D.** Validating motion and muscle artifact removal using an electrical head phantom. *1st International Mobile Brain/Body Interaction Virtual Gathering*. June 2021.
14. **Nordin, A.D.**, Hairston, W.D., Ferris, D.P. Gait speed alters human sensorimotor electrocortical activity. *9th International IEEE EMBS Conference on Neural Engineering*, San Francisco, CA, USA, March 2019.
13. Downey, R.J., Richer, N., **Nordin, A.D.**, Ferris, D.P. Removing neck muscle artifact from EEG: Phantom study. *9th International IEEE EMBS Conference on Neural Engineering*, San Francisco, CA, USA, March 2019.
12. **Nordin, A.D.**, Ferris, D.P. EEG motion artifact assessment and attenuation. *Biomechanics and Neural Control of Movement (BANCOM) 2016*, Mt. Sterling, OH, USA, June 2016.
11. **Nordin, A.D.**, Dufek, J.S. Joint-specific kinetic adjustments following landing height manipulations. *American College of Sports Medicine (ACSM) 62nd Annual Meeting, 6th World Congress on Exercise is Medicine and World Congress on the Basic of Exercise Fatigue*, San Diego, CA, USA, May 2015.
10. Dufek, J.S., **Nordin, A.D.**, James, C.R., Bates, B.T. Does landing strategy change with increased mechanical task demands? *American College of Sports Medicine (ACSM) 62nd Annual Meeting, 6th World Congress on Exercise is Medicine and World Congress on the Basic of Exercise Fatigue*, San Diego, CA, USA, May 2015.
9. Freedman Silvernail, J., **Nordin, A.D.**, Dufek, J.S. Alterations in movement coordination due to increasing landing height. *American College of Sports Medicine (ACSM) 62nd Annual Meeting, 6th World Congress on Exercise is Medicine and World Congress on the Basic of Exercise Fatigue*, San Diego, CA, USA, May 2015.
8. **Nordin, A.D.**, Bailey, J.P., Dufek, J.S., Mercer, J.A. A novel approach to characterizing 3D impact kinetics during foot-strike manipulations in running. *International Calgary Running Symposium*, Calgary, AB, CAN, August 2014.
7. **Nordin, A.D.**, Dufek, J.S. Associating kinematic and kinetic synergies with movement control strategies in drop landing. *7th World Congress of Biomechanics*, Boston, MA, USA, July 2014.

6. **Nordin, A.D.**, Kivi, D.K., Zerpa, C.Z., Newhouse, I.J. Comparison of methods for assessing vertical jump height performance. *32nd Conference of the International Society of Biomechanics in Sports (ISBS)*, Johnson City, TN, USA, July 2014.
5. Bailey, J.P., **Nordin, A.D.**, Dufek, J.S. Effects of stride length perturbations on anterior-posterior components during the stance phase of walking. *American College of Sports Medicine (ACSM) 61st Annual Meeting, 5th World Congress on Exercise is Medicine and World Congress on the Role of Inflammation in Exercise, Health and Disease*, Orlando, FL, USA, May 2014.
4. **Nordin A.D.**, Bailey, J., Dufek, J.S. Implications of increased lower extremity movement variability on fall susceptibility at increased stride lengths during locomotion. *2013 American Society of Mechanical Engineers (ASME) International Mechanical Engineering Congress and Exposition (IMECE)*, San Diego, CA, USA, November 2013.
3. **Nordin, A.D.**, Dufek, J.S. Investigating lower extremity functioning via frontal plane movement variability asymmetries during landing. *43rd annual meeting of the Society for Neuroscience (SfN)*, San Diego, CA, USA, November 2013.
2. **Nordin, A.D.**, Dufek, J.S. Examining lower extremity range of motion and movement variability changes due to focus of attention during landing. *International Society of Motor Control (ISMC), Progress in Motor Control IX*, Montreal, QC, CAN, July 2013.
1. **Nordin, A.D.**, Dufek, J.S. Continuous variability assessment of vertical ground reaction forces during landing. *Computer Methods in Biomechanics and Biomedical Engineering (CMBBE) 2013, 11th International Symposium*, Salt Lake City, UT, USA, April 2013.

National

7. Ferris, D.P., **Nordin, A.D.** Dual electrode wireless EEG for mobile brain imaging. *5th Annual BRAIN Initiative Investigators Meeting*, Washington, DC, USA. March 2019.
6. **Nordin, A.D.**, Dufek, J.S. Subject-specific landing strategies identify changes in movement control. *39th Annual Meeting of the American Society of Biomechanics*, Columbus, OH, USA, August 2015.
5. Bailey, J.P., **Nordin, A.D.**, Dufek, J.S. Step length perturbations alter variations in center of mass horizontal velocity. *2013 Meeting of the American Society of Biomechanics (ASB)*, Omaha, NE, USA, September 2013.
4. **Nordin A.D.**, Bailey, J., Dufek, J.S. Variations in leg stiffness and lower extremity range of motion variability from stride length perturbations during gait. *2013 Meeting of the American Society of Biomechanics (ASB)*, Omaha, NE, USA, September 2013.
3. **Nordin A.D.**, Dufek, J.S. Gender difference in frontal plane lower extremity kinetic variability during landing. *2013 Meeting of the American Society of Biomechanics (ASB)*, Omaha, NE, USA, September 2013.
2. **Nordin, A.D.**, Dufek, J.S. Kinetic variability during walking in casual footwear as a function of speed. *17th Biannual Canadian Society of Biomechanics/Societe Canadienne de Biomechanique (CSB/SBC)*, Burnaby, BC, CAN, June 2012.
1. **Nordin, A.D.**, Kivi, D.M.R., Newhouse, I.J., Zerpa, C. Comparing maximum and takeoff centre of mass velocities during jumping in female university volleyball players. *2011 Canadian Society for Exercise Physiology (CSEP) Annual General Meeting*, Quebec City, QC, CAN, October 2011.

Regional (undergraduate student researcher)

12. Long, A., Lopez, L., Cheng, Y.P., **Nordin, A.D.** Human electrocortical dynamics during obstacle navigation in projected virtual reality. *Annual Texas A&M Institute for Neuroscience Student Symposium*. College Station, TX, USA, May 2023.
11. Treece, M., Hartman, C., **Nordin, A.D.** High-density electromyography for assessing lower limb spatial electrical muscle activity during maximal isometric performance testing. *Annual Texas A&M Institute for Neuroscience Student Symposium*. College Station, TX, USA, May 2023.
10. Ghebranious, M., Patel, S., Song, S., **Nordin, A.D.** Mechanical bodyweight support increases human electrocortical alpha and beta band spectral power during gait. *Texas A&M Chapter of the Society for Neuroscience Winter Symposium 2022*. College Station, TX, USA, December 2022.
9. Treece, M., Phillips, S., **Nordin, A.D.** High-density electromyography for assessing lower limb spatial electrical muscle activity during human locomotion. *Texas A&M Chapter of the Society for Neuroscience Winter Symposium 2022*. College Station, TX, USA, December 2022.
8. Phillips, S., **Nordin, A.D.** Electrocortical signal recovery using tripolar concentric ring electrode recordings and an electrical head phantom testbed. *Texas A&M Institute for Neuroscience 11th Annual Symposium*. College Station, TX, USA, May 2022.

7. Song, S., Peters, B.R., Patel, S., **Nordin, A.D.** Human electrocortical and myoelectric dynamics during underwater treadmill locomotion. *Texas A&M Chapter of the Society for Neuroscience Winter Symposium 2021*. College Station, TX, USA, December 2021.
6. Wilson, J.N., **Nordin, A.D.**, Dufek, J.S. Do landing strategies vary with increased system energy? *Southwest Chapter of the American College of Sports Medicine (SWACSM) 32nd Annual Meeting*, Newport Beach, CA, USA, October 2013.
5. Holt, J.L., **Nordin, A.D.**, Dufek, J.S. Effects of added mass and horizontal displacement on landing strategies. *Southwest Chapter of the American College of Sports Medicine (SWACSM) 32nd Annual Meeting*, Newport Beach, CA, USA, October 2013.
4. Coupe, A., Montes, A., **Nordin, A.D.**, Dufek, J.S. Effect of simulated obesity on the double support phase of gait. *Southwest Chapter of the American College of Sports Medicine (SWACSM) 32nd Annual Meeting*, Newport Beach, CA, USA, October 2013.
3. **Nordin, A.D.**, Dufek, J.S. Knee joint moment variability during landing for females. *Noraxon Fall 2012 Research Symposium*, Las Vegas, NV, USA, October 2012.
2. Bailey, J., **Nordin, A.D.**, Lee, D., Dufek, J.S. Kinematic effects of stride length perturbations on system COM horizontal velocity during locomotion. *Southwest Chapter of the American College of Sports Medicine (SWACSM) 31st Annual Meeting*, Newport Beach, CA, USA, October 2012.
1. **Nordin, A.D.**, Dufek, J.S. Examining lower extremity joint range of motion variability during landing. *Southwest Chapter of the American College of Sports Medicine (SWACSM) 31st Annual Meeting*, Newport Beach, CA, USA, October 2012.

Local (undergraduate student researcher)

4. Long, A. **Nordin, A.D.** Dual-layer mobile EEG to monitor human brain activity during gait, *Texas A&M University, Student Research Week*, College Station, TX, USA, March, 2022.
3. Patel, S., Peters, B.R., Song, S., **Nordin, A.D.** Underwater fluid forces increase theta band spectral power from human parietal cortex during standing balance, *Texas A&M University, Student Research Week*, College Station, TX, USA, March, 2022.
2. **Nordin, A.D.**, Dufek, J.S. Exploring movement control strategies via principal component analysis in landing. *7th Annual Interdisciplinary Research & Scholarship Day (IRSD)*, University of Nevada, Las Vegas, NV, USA, April 2014.
1. **Nordin, A.D.**, Dufek, J.S., Mercer, J.A. Inter-axis changes in impact kinetics with foot-strike manipulations in running. *7th Annual Interdisciplinary Research & Scholarship Day (IRSD)*, 3rd place Student Poster Award, University of Nevada, Las Vegas, NV, USA, April 2014.

TEACHING EXPERIENCE

Instructor:

Graduate

KINE 689	Research Methods in Biomechanics & Neural Control of Human Movement	S-22
KINE 627	Exercise Biomechanics	S-23

Undergraduate

KIN 346	Biomechanics	SI-14
KINE 426	Exercise Biomechanics	F-20-23, S-22-24, SI-23

Graduate Assistant:

Graduate

KIN 743	Research Techniques in Biomechanics	S-13, S-14
---------	-------------------------------------	------------

Undergraduate

KIN 346	Biomechanics	SI-12, 14, S-12-14, F-12-13
KINE* 1010	Introduction to Kinesiology	W-10, W-11
KINE* 1035	Physical Growth and Motor Development	W-10
KINE* 1711	Movement Observation and Assessment	W-10
KINE* 2015	Introduction to Biomechanics	F-10
KINE* 2711	Qualitative Analysis	W-11
KINE* 3230	Research Processes	F-10
KINE* 4310	Ergonomics	F-09, F-10
KINE* 4714	Clinical Exercise Therapy	F-10

KINE* Kinesiology, School of Kinesiology, Lakehead University, Thunder Bay, ON, CAN.

- (F: Fall semester, W: Winter semester, -Year)
- KIN Kinesiology, Department of Kinesiology and Nutrition Sciences, School of Allied Health Science, University of Nevada, Las Vegas, NV, USA.
- (F: Fall semester, S: Spring semester, Sl: Summer semester 1, - Year)
- KINE Kinesiology, Department of Health & Kinesiology, Texas A&M University, College Station, TX, USA.
- (F: Fall semester, S: Spring semester, -Year, Sl: Summer semester 1)

Trainee Supervision: Trainee, *Institution*, Project description – Award/Fellowship/Scholarship

Postdoctoral researchers

- Dr. Natalie Richer, *University of Florida*, Muscle artifact removal from mobile EEG
- 2nd Place, 2022 Mobile Brain Imaging (MoBI) Award, *Brain Products GmbH*
- Dr. Ryan J. Downey, *University of Florida*, Wireless, noise-cancelling mobile EEG
- Dr. Yann Thibaudier, *University of Florida*, Electrical head phantom for EEG artifact removal

Doctoral graduate students

- Yu-Po Cheng, *Texas A&M University Institute for Neuroscience*, Neural control of human locomotion
- Government Scholarship to Study Abroad, \$32,000 (USD). *Human electrical brain dynamics during visually-guided locomotion in virtual reality*, Ministry of Education, Taiwan.
 - Huffines Student Research Grant, \$1448.80. *Human brain processes during visually guided walking in virtual reality*. The Sydney & J.L. Huffines Institute for Sports Medicine & Human Performance, Texas A&M University.
- Madison Treece, *Texas A&M University*, Sports biomechanics & athletic performance
- Student Research Grant, €1000, *Human Spatial Electrical Muscle Dynamics During Running*. International Society of Biomechanics in Sports.
 - Graduate Research Grant, \$1000, School of Education & Human Development, Texas A&M University
 - Sport Science Fellow, Texas A&M University Athletics
- Seongmi Song, *Texas A&M University*, Mobile brain and body imaging during human gait
- IEEE SMC Conference Grant, \$500. Institute of Electrical and Electronics Engineers, Systems, Man, and Cybernetics Society.
 - Huffines Student Research Grant, \$1500. *Building holistic knowledge of human brain and muscle dynamics during hypo-gravity aqua walking*. The Sydney & J.L. Huffines Institute for Sports Medicine & Human Performance, Texas A&M University.
 - Graduate Research Grant, \$1000. *Human electrical brain and muscle dynamics during bodyweight supported walking*. School of Education & Human Development, Texas A&M University
 - National Science Foundation Fellowship to attend the 19th International Summer School BIO-X on Data Science & Engineering in Engineering in Medicine & Biology in Crete, Greece.
 - Journeyman Fellow, Oak Ridge Associated Universities, US Army Research Laboratory.
 - Ethel Ashworth-Tsutsui Memorial Award- Research, Texas A&M Women in Science and Engineering.
- Bryan Schlink, *University of Florida*, High-density EMG artifact removal during running
- International Society of Electromyography and Kinesiology De Luca Award.
- Evangelia-Regkina Symeonidou, *University of Florida*, Mobile EEG motion artifact mechanisms
- Krista Kernodle, *University of Michigan*, Mobile EEG motion artifact removal validation
- Steven M. Peterson, *University of Michigan*, Mobile EEG motion artifact removal validation

Master's graduate students

- Scott Phillips, *Texas A&M University*, Neural control of human locomotion
- 2nd Place, Best Oral Presentation, Texas A&M Institute for Neuroscience 11th Annual Symposium
 - BME Graduate Student Scholarship, Department of Biomedical Engineering, Texas A&M University

Undergraduate students

- Ariana Taylor, *Texas A&M University*, Exercise Biomechanics
- Sean Young, *Texas A&M University*, Exercise Biomechanics
- Haily Kim, *Texas A&M University*, Exercise Biomechanics
- Carter Hartman, *Texas A&M University*, Motor Behavior
- Lorenzo Lopez, *Texas A&M University*, Human locomotor brain dynamics
- Matthew Ghebranious, *Texas A&M University*, Neuroscience Undergraduate Program
- Amanda Mockaitis, *Texas A&M University*, Honors Program, Exercise Biomechanics
- Cesar Garza, *Texas A&M University*, Innovation[X]: Human locomotor brain dynamics
- Evelyn Fung, *Texas A&M University*, Innovation[X]: Human locomotor brain dynamics
- Nathaniel Fernandes, *Texas A&M University*, Innovation[X]: Human locomotor brain dynamics

- 3rd Place Oral Presentation, Texas A&M University Student Research Week, Earth, Chemical & Material Sciences Section

Suahani Patel, *Texas A&M University*, Innovation[X]: Human locomotor brain dynamics

Sai Juttu, *Texas A&M University*, Innovation[X]: Human locomotor brain dynamics

Blaine Peters, *Texas A&M University*, Innovation[X]: Human locomotor brain dynamics

Alex Long, *Texas A&M University*, Undergraduate Student Research Initiative, Mobile brain imaging

Sanjana Roy, *Texas A&M University*, Undergraduate Student Research Initiative, Mobile brain imaging

Sergio B. Castro, *University of Nevada, Las Vegas*, Overground running impact kinetics

Jared N. Wilson, *University of Nevada, Las Vegas*, Motor strategies in loaded drop landing

Jonathan L. Holt, *University of Nevada, Las Vegas*, Motor strategies in horizontal jump-landing

Michael R. Isaacs, *University of Nevada, Las Vegas*, Dynamics of overground locomotion

Arturo Montes, *University of Nevada, Las Vegas*, Motor strategies in loaded walking

Tudor Comanescu, *University of Nevada, Las Vegas*, Mechanics of step length adjustments

Joshua P. Bailey, *University of Nevada, Las Vegas*, Dynamics of overground locomotion

Graduate Student Committees: Student, *Institution*, Degree program, Advisor

Jared Gibson, *Texas A&M University*, PhD Biomedical Engineering, Dr. Taylor Ware

Jordan Ankersen, *Texas A&M University*, PhD Biomedical Engineering, Dr. Michael Moreno

Aaron Henry, *Texas A&M University*, PhD Interdisciplinary Engineering, Dr. Michael Moreno

Chiara Palmisano, *Politecnico di Milano & Julius Maximilians Universität Würzburg*, PhD Bioengineering, Dr. Ioannis Isaias

PROFESSIONAL SERVICE

Grant reviewer

Neurological Foundation of New Zealand, 2021 B

Editorial Board Member

Scientific Reports, 2019-present

Guest Editor

Sensors, Special Issue: "Wearable Sensors for Human Locomotion Monitoring", 2023-24

Manuscript reviewer

(26.) *iScience*, (25.) *Sports Medicine Open*, (24.) *Micromachines*, (23.) *Journal of Biomechanical Engineering*, (22.) *Journal of Neural Engineering*, (21.) *Waves in Random and Complex Media*, (20.) *Journal of Cognitive Neuroscience*, (19.) *The Lancet*, (18.) *Journal of Applied Physiology*, (17.) *European Journal of Neuroscience*, (16.) *IEEE Transactions on Biomedical Engineering*, (15.) *IEEE Transactions on Human-Machine Systems*, (14.) *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, (13.) *Medicine and Science in Sports and Exercise*, (12.) *Journal of Biomechanics*, (11.) *Journal of Applied Biomechanics*, (10.) *Neuroscience Letters*, (9.) *Motor Control*, (8.) *Integrative and Comparative Biology*, (7.) *Neuropsychologia*, (6.) *Medical Engineering & Physics*, (5.) *Neurorehabilitation and Neural Repair*, (4.) *Brain Sciences*, (3.) *Sensors*, (2.) *Frontiers in Human Neuroscience*, (1.) *Frontiers in Bioengineering and Biotechnology*

Conference abstract reviewer

(5.) 2023 Biomedical Engineering Society Annual Meeting, (4.) 2023 International Conference on Environmental Systems, (3.) 2022 IEEE Engineering in Medicine and Biology Society Neural Engineering Conference (2.) 2020 IEEE Engineering in Medicine and Biology Society Neural Engineering Conference, (2.) 2020 IEEE International Symposium on Circuits & Systems

Conference student award reviewer

3.) Annual Texas A&M Chapter of the Society for Neuroscience Student Symposium Award Judge, Oral Sessions A & B, Poster Sessions A & B, (2.) Texas A&M Chapter of the Society for Neuroscience Winter Symposium 2021-23 Poster Awards, (1.) 2021 Human Movement Variability and Great Plains Biomechanics Joint Conferences, Promising Graduate Student Award

Committee member

- Biomechanics working group, Department of Kinesiology & Sports Management, Texas A&M University; 2022-2023.
- Sydney & JL Huffines Institute for Sports Medicine, Executive Board, Texas A&M University; 2020-2022.
- University of Nevada, Las Vegas, Graduate & Professional Student Association (GPSA), Department of Kinesiology & Nutrition Sciences Representative, Elections Committee; 2013.

- University of Nevada, Las Vegas, Rebel Science, Technology, Engineering, & Math (STEM) Academy, School of Allied Health Sciences: Biomechanics Lab Representative; 2012-2013.

Meetings & Workshops

- M-Gait Operator Level 1, Motek a DIH Brand, College Station, USA, November 2021.
- Real-World Human Neuroscience: Moving Neuroimaging out of the Lab and into Complex, Naturalistic Environments and Tasks, *9th International IEEE EMBS Conference on Neural Engineering*, San Francisco, USA, March 2019.
- U.S. Army Research Laboratory (ARL) Cognition and Neuroergonomics (CaN) Collaborative Technology Alliance (CTA) Research Management Board (RMB) 2018 Meeting, Aberdeen Proving Ground, USA, April 2018.
- U.S. Army Research Laboratory (ARL) Cognition and Neuroergonomics (CaN) Collaborative Technology Alliance (CTA) All Hands Meeting, Gainesville, USA, October 2017.
- University of Michigan Medical School Office of Research, Grant Writers' Seminars and Workshops, "*Writing Winning NIH R01 Grant Proposals*", February 2017.
- U.S. Army Research Laboratory (ARL) Cognition and Neuroergonomics (CaN) Collaborative Technology Alliance (CTA) All Hands Meeting, San Antonio, USA, October 2016.
- U.S. Army Research Laboratory (ARL) Cognition and Neuroergonomics (CaN) Collaborative Technology Alliance (CTA) Research Management Board (RMB) 2016 Meeting, Aberdeen Proving Ground, USA, April 2016.
- U.S. Army Research Laboratory (ARL) Cognition and Neuroergonomics (CaN) Collaborative Technology Alliance (CTA) All Hands Meeting, San Diego, USA, November 2015.
- 12th Motor Control Summer School (MCSS-XII), Pennsylvania, USA, May 2015.
- Nebraska Biomechanics Core Facility (NBCF) Nonlinear Analysis Summer Workshop, University of Nebraska, Omaha, USA, June 2013.

PROFESSIONAL ORGANIZATIONS

Current

Biomedical Engineering Society (BMES); 2022-present
 International Society of Biomechanics in Sports (ISBS); 2013-2015, 2022-present
 Institute of Electrical and Electronic Engineers (IEEE); 2018-present
 IEEE Engineering in Medicine and Biology Society; 2018-present
 Society for Neuroscience (SfN); 2013-present
 American Society of Biomechanics (ASB); 2012-2017, 2020-present

Past

(6.) American College of Sports Medicine (ACSM); 2012-2015, **(5.)** International Society of Motor Control (ISMC); 2013-2015, **(4.)** International Society of Biomechanics (ISB); 2012-2015, **(3.)** American Society of Mechanical Engineers (ASME); 2013-2015, **(2.)** Canadian Society for Biomechanics (CSB); 2012-2015, **(1.)** Southwest Chapter of the American College of Sport Medicine (SWACSM); 2012-2015.