

# Curriculum Vitae

**Aaron A. Griffith, MS**  
**Exercise Science**  
**Neuroscience/Biomechanics**  
**Mississippi State University**

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180 Magruder St, Mississippi State, MS 39762

## Education Training

- Aug 2021- Present    **Doctor of Philosophy, Kinesiology**, Mississippi State University  
Starkville, Mississippi
- 2020                    **Master of Science, Neuroscience**, Delaware State University, Dover,  
Delaware
- Thesis Project: *Characterizing Internal and External Work of the Foot and  
Ankle Complex During Sports Specific Movements on Different Surfaces and  
Footwear Combinations*
- 2017                    **Bachelor of Science, Movement Science**, Delaware State University,  
Delaware
- 2015                    Delaware Technical Community College, Newark, Delaware

## Research Experience/Educational Experience

- 2022-Present        iCanShine, Bike Technician
- 2022-2024           Graduate Research & Mentoring Scholar, University of Mississippi  
Medical Center
- 2022- Present        MSU Athlete Engineering, Mississippi State University
- 2020-2022           HX Innovations Inc, Research Assistant, Middletown, Delaware
- 2018-2020           NSF Graduate Research Fellow, Bridge to Doctorate, Philadelphia, PA
- 2018-2020           Graduate Lab Assistant Dept of Biological Sciences, Delaware State  
University
- 2018                   Barry School of Podiatric Medicine Foot & Ankle Institute(Shadower)
- 2017                   Undergraduate Lab Assistant, Dept of Public and Allied Health,  
Delaware State University
- 2016                   Cardio Kinetics Intern, Wilmington, Delaware

### Certifications

Pediatric & Adult CPR/First Aid/AED  
Teaching & Learning, Mississippi State University

### Teaching Experience/Curriculum:

2023-Present	Lecturer, Mississippi State University
2021-2023	Graduate Teaching Assistant Department of Kinesiology, Mississippi State University
2022	Lecturer Department of Kinesiology, Mississippi State University
2019-2021	Guest Lecturer, Delaware State University

### Classes Taught- Instructor of Record

- PE 1051: Strength Training (2 sections): Fall 2021
- PE 1151: Walking & Jogging Fall 2021
- EP 4504 Mechanical Analysis of Human Movement Lab (undergraduate biomechanics course): Fall 2021, Spring 2022, Spring 2023, Spring 2024
- EP 4504 Mechanical Analysis of Human Movement Lecture (undergraduate biomechanics course): Fall 2022, Fall 2023
- PE 4283: Sport Biomechanics Summer II 2022, Spring 2023, Spring 2024
- PE 1211: (2 Sections): Basketball Fall 2022, Spring 2024
- PE 4853: Motor Learning & Skill Analysis Fall 2023

### Honors and Awards

2024	3 <sup>RD</sup> Place Recipient. College of Education Graduate Symposium, Mississippi State University
2022-2024	Robert Smith MD, Graduate Scholar in Jackson Heart Study Graduate Training and Education Center and the University of Mississippi Medical Center, NHLBI <ul style="list-style-type: none"> <li>• Awarded 15,000</li> </ul>
2021-2024	Dr. Harold Grier Doctoral Scholar Southern Region Education Board <ul style="list-style-type: none"> <li>• Awarded \$4,000</li> </ul>
2018	LSAMP-Bridge to Doctorate Scholarship Recipient <ul style="list-style-type: none"> <li>• Awarded \$32,000</li> </ul>
2017	<b>Undergraduate Lab Assistant</b> , Delaware Neuroscience Research Organization
2017	Ida Mary Scholar Recipient <ul style="list-style-type: none"> <li>• Awarded \$1,500</li> </ul>
2014	Delaware Technical Community College Leadership Conference Recipient

### Invited Presentations/Speaker & Guest Lecturer

“Utilizing Research to Open Doors” 5<sup>th</sup> Annual Health & Fitness Leaders Day April 5, 2019

“Junior Achievement Career Fusion” Central Middle School Dover, Delaware May 19,2017

“EMG and Y-Balance Test for assessment of neuromuscular control of the lower extremities in collegiate athletes” Research Day April 15, 2019 Delaware State University

US Track and Field Coaches Association Speaker on Sports Biomechanical Principles of Running

Guest Lecturer BIOL-207: Introduction to Motor Learning and Control Delaware State University

### Peer-Reviewed Journal Articles

1. 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.. doi:10.3390/healthcare10071271
2. Chander, H.; McCrory, A.; Chandler, S.J.; Freeny, S.; **Griffith, A.**; Burch, R.; Strawderman, L.; Knight, A.C. Noise Interference Impacts Simple and Choice Response Times during a Lower Extremity Cognitive–Motor Task. *Clin. Transl. Neurosci.* **2023**, 7, 4. <https://doi.org/10.3390/ctn7010004>
3. Arachchige, S. N. K., Chander, H., Turner, A. J., Shojaei, A., Knight, A. C., **Griffith, A.**, ... & 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.
4. 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.

### Peer-Reviewed Journal Articles in Review

1. **Griffith, A.**, Barfield, S., Gillen, Z., Chander, H., & Knight, A. C. (2024). Assessment of dynamic balance among Division 1 collegiate soccer and track & field athletes. *Sports Medicine and Health Science*.

**Published Abstract and Conference Presentations**

1. **Griffith, A.** Homer, V., Harrington, M., Mason, RC. Kuperavage, A., Sorochan, J., Zhang, S. (2022) Characterizing Primary Stabilizers of the Foot and Ankle Through Foot Orthotic Application During a Dynamic Task
2. Homer, V., Harrington M., **Griffith, A.**, Mason, RC., Kuperavage, A., Hafer-Macko, C., Macko, R., Forrester, R., Anindo, R., Sorochan. J., Zhang, S., Anwar, Z. (2020) Characterization of Distal Lower Extremity Balance Measuring Neuromuscular Effort and Amplitude Probability Distribution Function in Healthy and Unhealthy Neuromuscular Systems
3. Henry, C., **Griffith, A.**, Williamson N., Reid, B., Morales, F, Mason RC, Homer, V. (2019). Measuring Muscular Maximal Voluntary Contraction (MVC) of the Tibialis Anterior and Medial Gastrocnemius during Sport Specific Movements on Various Surfaces Shod and Unshod using EMG
4. Morales, F., Reid, B., Williamson, N., Henry, C., **Griffith, A.**, Mason, RC, Homer, V. (2019). Examining the Efficacy of Insite Contour Insole and Work Shoe Combination on Neuromuscular Efficiency While Under Fatigue
5. Reid, B., Morales, F, Henry, C., Williamson, N., Edouard, L., **Griffith, A.**, Olsen, J., Mason, RC, Homer, V. (2019). Characterizing the Neuromuscular Effect Breast Have on Postural Stability in Healthy Women
6. Williamson, N., Mason, RC, **Griffith, A.**, Morales, F., Reid, B., Henry, C., Homer, V. (2019). Measuring blood oxygenation components of joint torque and muscular efficiency
7. **Griffith A.**, Homer, V., Mason, RC, Kuperavage, A., Macko C., Macko R. (2018). Characterization of distal lower extremity balance measuring neuromuscular effort and amplitude probability distribution function in healthy and unhealthy neuromuscular systems. Society for Neuroscience San Diego, CA
8. **Griffith, A.**, Homer, V., Mason, RC, and Kuperavage, A. (2017). EMG and Y-Balance Test for assessment of neuromuscular control of the lower extremities in collegiate athletes. Mid-Atlantic Region Conference of The American College of Sports Medicine. Harrisburg, PA
9. **Griffith, A.**, Homer, V., Mason, RC, and Kuperavage, A. (2017). EMG and Y-Balance Test for assessment of neuromuscular control of the lower extremities in collegiate athletes. International Journal of Exercise Science Volume 9, Issue 6
10. **Griffith, A.**, Homer, V., Mason, RC, and Kuperavage, A. (2017). EMG and Y-Balance Test for assessment of neuromuscular control of the lower extremities in collegiate athletes. Delaware State University Summer Research Symposium. Dover, DE

11. **Griffith, A.**, Homer, V., Mason, RC, and Kuperavage, A. (2017). EMG and Y-Balance Test for assessment of neuromuscular control of the lower extremities in collegiate athletes. Black Doctoral Network Conference Inc. Atlanta, GA
12. **Griffith, A.**, Homer, V., Mason, RC, and Kuperavage, A. (2017). EMG and Y-Balance Test for assessment of neuromuscular control of the lower extremities in collegiate athletes. Annual Biomedical Research Conference For Minority Students. Phoenix, AZ
13. Characterization of Distal Lower Extremity Balance Measuring Neuromuscular Effort and Amplitude Probability Distribution Function in Healthy and Unhealthy Neuromuscular Systems
14. **Griffith A.**, Homer, V., Mason, RC, Kuperavage, A., Macko C., Macko R. (2022). Characterization of distal lower extremity balance measuring neuromuscular effort and amplitude probability distribution function in healthy and unhealthy neuromuscular systems. South-Eastern Region Conference of The American College of Sports Medicine.
15. Hatten S., Hull J., **Griffith A.**, Knight A, Chander H. (2023) Characterizing neuromuscular effort in primary ankle stabilizers in soccer players when performing a dynamic balance test. Mississippi State University Undergraduate and Graduate Symposium and Showcase
16. **Griffith A.**<sup>1</sup>, Homer V<sup>2</sup>, Mason RC<sup>2</sup>, Harrington M<sup>2</sup>, Conner N<sup>1</sup>, Derby H<sup>1</sup>, Chander H<sup>1</sup>, Knight A<sup>1</sup> (2024) The Y-Balance Test as a Measure of Dynamic Stability Among Collegiate American Football Players. South-Eastern Region Conference of The American College of Sports Medicine.
17. 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).
18. **Griffith, A.**, Heitman, E., Affuso, O., Zhu, X., & Spankovich, C. (2024). ASSOCIATION BETWEEN TINNITUS AND PHYSICAL ACTIVITY AMONG PARTICIPANTS IN THE JACKSON HEART STUDY. Interdisciplinary Association for Population Health Sciences

### White Paper(s)

Homer V., Anwar Z., Norris M., Mason RC., **Griffith A.** (2019). Building Return to Play Regression Algorithms from the characterization of Distal Lower Extremity Balance measuring Neuromuscular Effort and Amplitude Probability Distribution Function in Healthy and Unhealthy Neuromuscular Systems

### Skills

Motion Capture (TheMotionMonitor), Microsoft office (Excel, Word, PowerPoint), R Studio (Limited Proficiency), Python (Limited Proficiency) SPSS, Functional Movement Screen (FMS), Electromyography (EMG), C-Motion Biomechanics, Neurophysiology, Kinesiology, Clinical Research, Market Research

**Committees Served**

Southeastern American College of Sports Medicine Biomechanics Interest Group Student Representative

**Memberships**

American Heart Association  
American College Sports Medicine SEACSM  
National Strength and Conditioning Association  
American Society of Biomechanics  
Interdisciplinary Association for Population Health Science

**Volunteer**

2016 “The Movement” Community Clean-Up, Dover, DE  
2015-2016 McCullough Middle School Basketball Coach  
2014-2015 Food Bank of Delaware, Newark, DE  
2012 Pencader Charter Girls Soccer Manager

**Service/In the news/Media/University Website:**

Technical.ly: <https://technical.ly/startups/hx-innovations-footwear/>  
Delaware State University Public Health and Fitness Leaders Day:  
<https://www.desu.edu/news/2019/04/public-health-fitness-leaders-day>  
Essential Podcast Episode 4: <https://youtu.be/FO98ZHjCYWk>