*Curriculum Vitae*

**AARON D. LIKENS, PH.D.**

*Center for Research on Human Movement Variability*

*Department of Biomechanics*

*University of Nebraska Omaha*

*6001 Dodge St., Omaha NE 68182-0202*

*(405) 200-9755 • aaronlikens@gmail.com*

**EDUCATION**

* 2016 Ph.D. Perception, Action, & Cognition, Arizona State University
* 2010 M.A. Experimental Psychology, University of Central Oklahoma
* 2008 B.A. Psychology, University of Central Oklahoma

**EMPLOYMENT**

 **Research Positions**

* 2025 - **Associate Professor**

Center for Research on Human Movement Variability

Department of Biomechanics

University of Nebraska at Omaha

* 2020 – 2025 **Assistant Professor**

Center for Research on Human Movement Variability

Department of Biomechanics

University of Nebraska at Omaha

* 2024 - **Director**

Quantitative Analysis Research Core

Center for Research on Human Movement Variability

Department of Biomechanics

University of Nebraska at Omaha

* 2021 - 2024 **Director**

Nonlinear Analysis Core

Center for Research on Human Movement Variability

Department of Biomechanics

University of Nebraska at Omaha

* 2018 – 2020 **Research Associate**

Center for Research on Human Movement Variability

Department of Biomechanics

University of Nebraska at Omaha

* 2016 – 2018 **Postdoctoral Scholar**

Science of Learning and Education Technology Lab

Institute of the Science of Teaching and Learning

Arizona State University

* 2010 – 2016 **Graduate Research Associate**

Arizona State University

* 2008 – 2010 **Graduate Research Assistant**

University of Central Oklahoma

**GRANTS AND FELLOWSHIPS**

**Current Funding**

* 2025 - 2026 **Principal Investigator**

United States Congress Direct Funding Request

*Optimization of the Warfighters’ Musculoskeletal Health and Performance in Cold Weather Environments*

Total awarded: $2,500,000

* 2024 - 2026 **Co-Principal Investigator**

Congressionally Directed Medical Research Programs

*Increasing soft tissue remodeling after lateral ankle sprain by deploying exoskeleton integrated boots to support longer term rehabilitation protocols in return to duty*

Total awarded: $427,948

* 2024 - 2025 **Biostatistician**

University of Nebraska Collaboration Initiative

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

Total awarded: $100,000

* 2021 - 2025 **Co-Principal Investigator**

National Science Foundation

*Gaitprints as Predictors of Disease and Disability for Effective Rehabilitation Engineering*

Total awarded: $446,711

* 2023 - 2025 **Co-Principal Investigator**

University of Nebraska Collaborative Initiative

*Enhancing thermal insulation with nanofibrous materials*

Total awarded: $149,592

**Current Supervised Funding (Student/Employee Grants)**

* 2024 **Advisor**

 Awardee: Tyler M. Wiles (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2024 **Advisor**

Awardee: Kolby Brink (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2024 **Advisor**

Awardee: Kolby Brink (PhD Student)

NASA Space Grant Fellowship FY25 UNO

Total awarded: $6,000

* 2024 **Advisor**

 Awardee: Maria Eleni Kalaitzi Manifrenti (Masters Student)

UNO GRACA Funding

Total awarded: $5,000

* 2024 **Advisor**

 Awardee: Seung Kyeom Kim (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2024 **Advisor**

 Awardee: Anaëlle Charles (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2024 **Advisor**

Awardee: Mehrnoush Haghighatnejad (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2024 **Advisor**

Awardee: Mehrnoush Haghighatnejad (PhD Student)

UNO UCRCA Funding

Total awarded: $500

* 2024 **Advisor**

Awardee: Mehrnoush Haghighatnejad (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2024 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2024 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO UCRCA Funding

Total Awarded: $500

* 2024 **Advisor**

 Awardee: Narges Shakerian (PhD Student)

UNO UCRCA Funding

Total awarded: $500

* 2024 **Advisor**

 Awardee: Narges Shakerian (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2023 **Advisor**

 Awardee: Tyler Wiles (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2023 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2023 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

NASA Space Grant Fellowship FY24 UNO

Total awarded: $6,000

* 2023 **Supervisor**

Awardee: Joel Sommerfeld (Staff Member)

UNO Professional Development Fund

Total awarded: $1,699

* 2023 **Advisor**

 Awardee: Tyler M. Wiles (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2023 **Advisor**

 Awardee: Tyler M. Wiles (PhD Student)

UNO Graduate Studies Conference Funding

Total awarded: $500

* 2023 **Advisor**

UNO College of Education Conference Funding

Total awarded: $500

* 2023 **Advisor**

 Awardee: Seung Kyeom Kim (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2023 **Advisor**

 Awardee: Seung Kyeom Kim (PhD Student)

UNO Graduate Studies Conference Funding

Total awarded: $500

* 2023 **Advisor**

 Awardee: Seung Kyeom Kim (PhD Student)

UNO UCRCA Funding

Total awarded: $500

* 2023 **Advisor**

 Awardee: Kolby Brink (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

Total awarded: $500

* 2023 **Advisor**

 Awardee: Anaelle Charles (PhD Student)

UNO Graduate Studies Conference Funding

Total awarded: $500

* 2023 **Advisor**

 Awardee: Anaelle Charles (PhD Student)

UNO UCRCA Funding

Total awarded: $500

**Previous Funding**

* 2020 - 2024 **Principal Investigator**

National Strategic Research Institute

*Repeated Bouts of Physical Stress: A Lab Based Simulated Multiday Mission Scenario*

Total awarded: $360,744

* 2021 - 2023 **Co-Principal Investigator**

University of Nebraska Collaborative Initiative

Team Seed Grant

*Harnessing walking variability to reduce falls in older adults*

Total awarded: $149,570

* 2020 - 2021 **Principal Investigator**

University of Nebraska Collaborative Initiative

Planning Grant

*Investigation of the Impact of Augmented Reality in Human Gait Variability and Medical Care*

Total awarded: $20,000

* 2018 – 2020 **Principal Investigator**

The National Institutes of Health

Center for Research on Human Movement Variability

Pilot Project Award

*Embedded Visuomotor Coordination*

Total awarded: $100,000

* 2011 **Security and Defense Systems Initiative Fellow**

College of Liberal Arts and Sciences

Arizona State University

Total awarded: $18,000

* 2010 **Doctoral Enrichment Fellow**

Arizona State University

Total awarded: $41,000

* 2009 **Principal Investigator**

University of Central Oklahoma, Office of Research and Grants

Research, Creative, and Scholarly Activities Student Grant

*Hysteresis in Visual Search*

Total awarded: $2,400

* 2009 **Principal Investigator**

University of Central Oklahoma, Office of Research and Grants

Research, Creative, and Scholarly Activities Student Grant

*Eye movements reveal the fractal nature of visual search*

Total awarded: $2,400

**Previous Supervised Funding (Student Grants)**

* 2022 - 2023 **Advisor**

 Awardee: Tyler Wiles (PhD Student)

NASA Space Grant Fellowship

*Nanofibers for Improving Thermal Insulation*

Total awarded: $6,000

* 2023 - 2024 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2023 - 2024 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

NASA Space Grant Fellowship

*Movement Constraints Influence Heaviness Perception*

Total awarded: $6,000

* 2022 - 2023 **Advisor**

Awardee: Kolby Brink (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2022 - 2023 **Advisor**

Awardee: Anaelle Charles (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2021 - 2022 **Advisor**

 Awardee: Kolby Brink (PhD Student)

NASA Space Grant Fellowship FY22

Total awarded: $6,000

* 2021 **Supervisor**

 UNO Professional Development Fund

Total awarded: $2,000

* 2020 - 2021 **Advisor**

Awardee: Kolby Brink (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

* 2023 **Advisor**

Awardee: Alli Grunkemeyer (PhD Student)

UNO CEHHS Travel Support

Total awarded: $500

* 2023 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO Graduate Studies Conference Funding

Total awarded: $500

* 2023 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO UCRCA Funding

Total awarded: $500

* 2022 - 2023 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

NASA Space Grant Fellowship

*Stochastic Resonance Influences Heaviness Perception*

Total awarded: $7,500

* 2021 - 2022 **Advisor**

 Awardee: Alli Grunkemeyer (PhD Student)

UNO GRACA Funding

Total awarded: $5,000

**MANUSCRIPTS**

**Refereed Journals (Published and in press)**

1. Wiles, T. M., Kim, S., Stergiou, N., & **Likens, A. D.** (2024). Pattern Analysis Using Lower Body Human Walking Data to Identify the Gaitprint. *Computational and Structural Biotechnology Journal.* **Impact Factor 4.4**
2. Wiles, T. M., Grunkemeyer, A., Stergiou, N., & **Likens, A. D.** (In Press) A Systematic Review of Human Odometry. *Psychological Research*. **Impact Factor 2.3**
3. Brink, K. J., Kim, S. K., Sommerfeld, J. H., Amazeen, P. G., Stergiou, N., & **Likens, A. D.** (2024). Pink noise promotes sooner state transitions during bimanual coordination. Proceedings of the National Academy of Sciences, 121(31), e2400687121. **Impact Factor 9.4**
4. Hinton, E. H., Bierner, S., Reisman, D. S., Likens, A., & Knarr, B. A. (2024). Paretic propulsion changes with handrail se in individuals post-stroke. *Heliyon*, *10*(5). **Impact Factor: 3.4**
5. Hinton, Erica H., Bierner, S., Reisman, D. S., **Likens, Aaron D.,** & Knarr, B. A. (2024). Peak propulsive force does not change with handrail use in individuals post-stroke. In press at *Gait and Posture*. **Impact Factor: 2.2**
6. Brink, K., McKenzie, K., Straight, C., O’Fallon, K., Kim, S., & **Likens, A.** (2024). Altered Movement Dynamics in Soldiers Undergoing Multiple Bouts of Load Carriage. *Applied Ergonomics*. **Impact Factor 3.1**
7. **Likens, A. D.,** Mangalam, M., Charles, A., Wong, A. Y., Mills, C. M. (2024, Accepted). Better than Detrended Fluctuation Analysis? A Bayesian method for estimating the Hurst exponent in behavioral time series. Accepted to Psychological Methods. **Impact Factor: 7.6**
8. Mangalam, M., Kelty-Stephen, D. G., Seleznov, I., Popov, A., Likens, A. D., Kiyono, K., & Stergiou, N. (2024). Older adults and individuals with Parkinson’s disease control posture along suborthogonal directions that deviate from the traditional anteroposterior and mediolateral directions. Scientific Reports, 14(1), 4117. **Impact Factor: 4.3**
9. Wiles, T. M., Kim, S. K., Brink, K. J., Charles, A. E., Grunkemeyer, A. A., Kalaitzi Manifrenti, M. K, Mastorakis, S., Stergiou, N., & **Likens, A. D.** (2023). NONAN GaitPrint: An IMU gait database of healthy young adults. *Nature Scientific Data*. **Impact Factor 8.9**
10. Wilson, T. J., Mangalam, M., Stergiou, N., & **Likens, A. D.** (2023). Multifractality in stride-to-stride variations reveals that walking involves more movement tuning and adjusting than running. *Frontiers in Network Physiology*, *3*, 1294545. **Impact Factor: 3.2**
11. Brink, K. J., **Likens, A**. **D.**, & Stergiou, N. (2023). The Evolution of Scholarship of Biomechanics and Motor Control Within the Academy: The Past, The Present, and The Future. *Kinesiology Review*. **Impact Factor 1.36**
12. Mangalam, M., Kelty-Stephen, D. G., Sommerfeld, J. H., Stergiou, N., & Likens, A. D. (2023). Temporal organization of stride-to-stride variations contradicts predictive models for sensorimotor control of footfalls during walking. *PLoS One*, 18(8), e0290324. **Impact Factor 2.9**
13. Blyton, S. J., Snodgrass, S. J., Pizzari, T., Birse, S. M., Likens, A. D., Edwards, S. (2023). The impact of previous musculoskeletal injury on running gait variability: a systematic review. *Gait and Posture.* **Impact Factor 2.2**
14. Mangalam, M., Skiadopoulos, A., Sim, K., Likens, A. D., & Stergiou, N. (2023). Leveraging a virtual alley with continuously varying width modulates step width variability during self-paced treadmill walking. *Neuroscience Letters, 793*,136966. **Impact Factor: 2.5**
15. Raffalt, P., Sommerfeld, J., Stergiou. N., & Likens, A. D. (2023). Stride-to-stride time intervals are independently affected by the temporal pattern and probability distribution of visual cues. *Neuroscience Letters, 792*, 136909. **Impact Factor: 2.5**
16. Wilson, T. J., & **Likens, A. D.** (2023). Running gait produces long range correlations: A systematic review. *Gait & Posture*. **Impact Factor 2.7**
17. Brink, K. J., McKenzie, K. L., **Likens, A.** **D.** (2022). Nonlinear Analyses Distinguish Load Carriage Dynamics in Walking and Standing: A Systematic Review. *Journal of Applied Biomechanics, 1*(aop), 1-14. **Impact Factor: 1.1**
18. Hinton, E. H., Likens, A., Hsiao, H. Y., Binder-Markey, B. I., Binder-Macleod, S. A., & Knarr, B. A. (2022). Ankle stiffness modulation during different gait speeds in individuals post-stroke. *Clinical Biomechanics, 99*, 105761. **Impact Factor: 1.4**
19. McCarthy, K. S., Roscoe, R. D., Allen, L. K., Likens, A. D., & McNamara, D. S. (2022). Automated writing evaluation: Does spelling and grammar feedback support high-quality writing and revision? *Assessing Writing*, 52, 100608. **Impact Factor: 4.2**
20. Meade, Z. S., **Likens, A. D.**, Kent, J. A., Takahashi, K. Z., Wurdeman, S. R., Jacobsen, A. L., ... & Stergiou, N. (2022). Subthreshold Vibration Influences Standing Balance but Has Unclear Impact on Somatosensation in Persons With Transtibial Amputations. *Frontiers in physiology*, *13*, 71. **Impact Factor: 3.2**
21. Raffalt, P. C., Stergiou, N., Sommerfeld, J. H., & **Likens, A. D.** (2021). The temporal pattern and the probability distribution of visual cueing can alter the structure of stride-to-stride variability. *Neuroscience Letters, 763*, 136193. **Impact Factor: 2.5**
22. Mastorakis, S., Skiadopoulos, A., Shannigrahi, S., **Likens, A.**, Nour, B., & Stergiou, N. (2021). Networking and computing in biomechanical research: Challenges and directions. *IEEE Communications Magazine*, *59*(6), 103-109. **Impact Factor: 8.3**
23. **Likens, A. D.**, Kent, J. A., Sloan, C. I., Wurdeman, S. R., & Stergiou, N. (2020). Stochastic resonance reduces sway and gait variability in individuals with unilateral transtibial amputation: a pilot study. *Frontiers in Physiology*, *11*, 573700. **Impact Factor: 3.2**
24. **Likens, A. D.**, & Wiltshire, T. J. (2021). Windowed multiscale synchrony: modeling time-varying and scale-localized interpersonal coordination dynamics. *Social Cognitive and Affective Neuroscience*, *16*(1-2), 232-245. **Impact Factor: 3.9.**
25. Gibbons, C. T., Amazeen, P. G., & **Likens, A. D.** (2020). Distinguishing two types of variability in a sit to a stand task. *Motor Control*, *24*(1), 168-188*.* **Impact Factor: 0.9**
26. Patten, K. J., Greer, K., Likens, A. D., Amazeen, E. L., & Amazeen, P. G. (2020). The trajectory of thought: Long-tailed distributions in memory foraging promote efficiency. *Memory & Cognition*, *48*,772-787. **Impact Factor: 2.4**
27. Allen, L. K., **Likens, A. D.**, & McNamara, D. S. (2019). Writing flexibility in argumentative essays: A multidimensional analysis. *Reading and Writing*, *32*, 1607-1634*.* **Impact Factor: 2.8**
28. **Likens, A.** **D.**, Amazeen, P. G., West, S. G., Gibbons, C. T. (2019). Statistical properties of multiscale regression analysis. Simulation and application to human postural control. *Physica A: Statistical Mechanics and its Applications, 532*, *121580*), 1-17*.* **Impact Factor: 2.8**
29. Demir, M., **Likens, A. D.**, McNeese, N., Cooke, N. J., & Amazeen, P. G. (2019). Team coordination and effectiveness in human-autonomy teaming. *IEEE Transactions on Human-Machine Systems, 49(2),* 150-159*.* **Impact Factor: 3.5**
30. Gibbons, C. T., Amazeen, P. G., & **Likens, A. D.** (2019). Effects of foot placement on postural sway in the anteroposterior and mediolateral directions. *Motor Control, 23*(*2*), 149-170. **Impact Factor: 0.9**
31. McCarthy, K. M., **Likens, A. D.**, Johnson, A. M., Guerrero, T. A., & McNamara, D. S. (2018). Metacognitive overload!: Positive and negative effects of metacognitive prompts within an intelligent tutoring system. *International Journal of Artificial Intelligence in Education, 28*(3), 420-438*.* **Impact Factor: 4.7**
32. Gorman, J. C., Martin, M. L., Dunbar, T. A., Stevens, R. H., Galloway, T. L., Amazeen, P. G., & **Likens, A. D.** (2016). Cross-level effects between neurophysiology and communication during team training. *Human Factors*: *The Journal of the Human Factors and Ergonomics Society, 58*(1), 181-199. **Impact Factor: 2.9**
33. Waddell, M. L., Fine, J. M., **Likens, A. D.**, Amazeen, E. L., & Amazeen, P. G. (2016). Perceived Heaviness in the Context of Newton’s Second Law: Combined Effects of Muscle Activity and Lifting Kinematics. *Journal of Experimental Psychology: Human Perception and Performance, 42*(3)*,* 363-374.**Impact Factor: 3.3**
34. Fine, J. M., **Likens, A. D.**, Amazeen, E. L., & Amazeen, P. G. (2015). Emergent complexity matching in interpersonal coordination: Local dynamics and global variability. *Journal of Experimental Psychology: Human Perception and Performance, 41(3), 723-737.* **Impact Factor: 2.6**
35. **Likens, A. D.**, Fine, J. M., Amazeen, E. L., & Amazeen, P. G. (2015). Experimental control of scaling behavior: What is not fractal? *Experimental Brain Research, 233*(10), 2813-2821*.* **Impact Factor: 1.8**
36. Snow, E. L., **Likens, A. D.**, Allen, L. K., & McNamara, D. S. (2015). Taking control: Stealth assessment of deterministic behaviors within a game-based system. *The* *International Journal of Artificial Intelligence in Education,* *26*(4), 1011-1032. **Impact Factor: 4.7**
37. **Likens, A. D.**, Amazeen, P. G., Stevens, R., Galloway, T., & Gorman, J. C. (2014). Neural signatures of team coordination are revealed by multifractal analysis. *Social Neuroscience, 9*(3)*,* 219-234. **Impact Factor: 1.9**
38. Stevens, R., Gorman, J. C., Amazeen, P., **Likens, A. D.**, & Galloway, T. (2013). The organizational neurodynamics of teams. *Nonlinear Dynamics, Psychology, and Life Sciences*, *17*(1), 67-86. **Impact Factor: 0.6**

**Book Chapters**

1. Wiles, T. M., **Likens, A. D.,** & Stergiou, N. (In Preparation). Biomechanics. In T. Housh (6th ed). *Introduction to Exercise Science.* Routledge.
2. Charles, A. C., Wiles, T. M., & **Likens, A. D.** (In Preparation). Fractal Regression. In N. Stergiou (2nd ed). *Nonlinear Analysis for Human Movement Variability.* Taylor & Francis.
3. Wiles, T. M., & **Likens, A. D.** (In Preparation). Largest Lyapunov Exponent. In N. Stergiou (2nd ed). *Nonlinear Analysis for Human Movement Variability.* Taylor & Francis.
4. Wiles, T. M., Kim, S., & **Likens, A. D.** (In Preparation). State Space Reconstruction. In N. Stergiou (2nd ed). *Nonlinear Analysis for Human Movement Variability.* Taylor & Francis.
5. Brink, K., Kim, S., Grunkemeyer, A.A., & **Likens, A. D.** (In Preparation). Recurrence Quantification Analysis. In N. Stergiou (2nd ed). *Nonlinear Analysis for Human Movement Variability.* Taylor & Francis.
6. **Likens, A. D.,** & Stergiou, N. (2020). A tutorial on fractal analysis of human movements. In N. Stergiou (ed). *Biomechanics and Gait Analysis.* London: Academic Press.
7. **Likens, A. D.**, & Stergiou, N. (2020). Basic biomechanics. In N. Stergiou (ed). *Biomechanics and Gait Analysis.* London: Academic Press.
8. **Likens, A. D.,** & Stergiou, N. (2020). Coordination and Control: A dynamical systems approach to the analysis of human gait. In N. Stergiou (ed). *Biomechanics and Gait Analysis.* London: Academic Press.
9. Rowen, D., **Likens, A. D.,** & Stergiou, N. (2020). Revisiting a classic: Muscles, reflexes, and locomotion by TA McMahon. In N. Stergiou (ed). *Biomechanics and Gait Analysis.* London: Academic Press.
10. Wiltshire, T. J., Steffensen, S. V., & **Likens, A. D.** (2020). Challenges for using coordination-based measures to augment collaborative social interactions. In *Selbstorganisation–ein Paradigma für die Humanwissenschaften* (pp. 215-230). Springer, Wiesbaden.
11. Allen, L. K., **Likens, A. D.,** McNamara, D. S. (2019). Modeling the dissemination of misinformation through discourse dynamics. In Kendeou, Robinson, & McCrudden (eds). *Misinformation and fake news in education.* Charlotte, NC: Information Age Publishing, Inc.

**Manuscripts in Preparation and Under Review (Mean Impact Factor: 5.35)**

1. Sommerfeld, J.H., Kim, S., Wiles, T. W., Wiltshire, T., & **Likens, A.D.** (In preparation). nonanR: An R package for nonlinear time series analysis. To be submitted to *Journal of Open Source Software*. **Impact Factor 5.2**
2. Charles, A.E., Stergiou N. S., **& Likens, A. D**. (Under Review). Walking to Pink Noise Metronome Reduces Metabolic Cost Compared to Invariant Metronomes. *Under Review at Nature Scientific Reports.* **Impact Factor: 4.3.**
3. Grunkemeyer, A. A., **Likens, A.D.,** Kelty-Stephen, D. (Under Review). Stochastic Resonance Influences Heaviness Perception. *Journal of Experimental Psychology: Human Perception and Performance.* **Impact Factor: 3.332**
4. Haghighatnejad, M., Sommerfeld, J. H., Stergiou, N. S., & Likens, A. D. (2023). The variability of stride-to-stride time intervals of both legs are similar during paced walking with visual cues. (In preparation) Journal TBD. **Impact Factor NA**
5. Kim, S., Stergiou, N., & **Likens, A. D.** (Under Revision). Inter-team Team Coordination Dynamics during Basketball. Journal TBD. **Impact Factor: NA**
6. Kim, S., Riggan, B. R., Stergiou, N., & **Likens, A. D.** (In preparation). Bounding Box as a Promising Tool for Gait Identification. Journal TBD. **Impact Factor: NA**
7. Kim, S., Kalaitzi Manifrenti, M., Wiles, T. M., Kingston, D., Stergiou, N., & **Likens, A. D.** (In preparation). Complexity Matching of Arm Swing and Leg Swing during Gait. Journal TBD. **Impact Factor: NA**
8. Mangalam, M. & **Likens, A. D.** (Under Revision). Optimizing a Bayesian method for estimating the Hurst exponent in behavioral sciences. Submitted to Nature Scientific Reports. **Impact Factor 3.87**
9. Wiles, T. M., Kim, S. K., Brink, K. J., Charles, A. E., Grunkemeyer, A. A., Kalaitzi Manifrenti, M. K, Mastorakis, S., Stergiou, N., & **Likens, A. D.** (In Preparation). NONAN GaitPrint: An IMU gait database of healthy middle-aged adults. *Nature Scientific Data*. **Impact Factor 8.9**
10. Wiles, T. M., Kim, S. K., Brink, K. J., Charles, A. E., Grunkemeyer, A. A., Kalaitzi Manifrenti, M. K, Mastorakis, S., Stergiou, N., & **Likens, A. D.** (Under Review). NONAN GaitPrint: An IMU gait database of healthy older adults. *Nature Scientific Data*. **Impact Factor 8.9**
11. Wiles, T. M., Kim, S. K., Brink, K. J., Stergiou, N., & **Likens, A. D.** (In Preparation) Comparing Overground Gait Variability and Speed in Matched Young and Older Adults. *Journal of Biomechanics*. **Impact Factor 2.4**
12. Wiles, T. M., Kim, S. K., Brink, K. J., Kalaitzi Manifrenti, M. K, Stergiou, N., & **Likens, A. D.** (In Preparation) What Can 350 Miles of Overground Walking Tell us About the Individuality of Gait? *Journal TBD*
13. Wong, A.Y.\*, Charles, A.E\*., Stergiou N. S., Mills, C & **Likens, A. D**. (Under Revision). Human Movement Patterns Predict Task-Unrelated Thought. Under Review at *Cognition*. **Impact Factor: 2.8**
14. Shakerian, N., Wiles, T. M., Kim, S., Stergiou, N., & **Likens, A. D.** (In preparation). Age Moderates the Relationship between Body Mass Index and Gait Variability. *Journal TBD.* **Impact Factor: NA**
15. Shakerian, N., Amazeen, E., **Likens, A. D**. (In preparation). Decoding Visual Search Dynamics: The Interplay of Set Size and Task Conditions. *Journal TBD.* **Impact Factor: NA**
16. Grunkemeyer, A. A., **Likens, A.D.,** (In preparation). Lighten Up: How Aging Weighs Down Perceived Heaviness. *Journal of Experimental Psychology: Human Perception and Performance.* **Impact Factor: 2.6**
17. Grunkemeyer, A. A., Mylonas, V., **Likens, A.D.** (In preparation). Systematic Review of Stochastic Resonance. *Journal of TBD.* **Impact Factor: NA**

**Workshops and Colloquia**

1. ***Likens, A.D.,*** *Brink K.J., Kim S.K., Wiles T.M.* (August 2024). Recurrence Quantification Analysis in Movement Science. Workshop presented at the Canadian Society of Biomechanics, Edmonton, AB.
2. ***Likens, A.D.,*** *Brink K.J., Kim S.K., Wiles T.M.* (August 2024). Recurrence Quantification Analysis in Movement Science. Workshop presented at the 48th Annual American Society of Biomechanics, Madison, WI.
3. ***Likens, A.D.****, Brink K.J., Kalaitzi Manifrenti M., Sommerfeld J.H* (August 2023). *Basic Fractal Analysis in Movement Science.* Workshop presented at the 47th Annual American Society of Biomechanics, Knoxville, Tennessee.
4. ***Likens, A. D.*** (July, 2023). Nonlinear Analysis Workshop. Hosted by the Nonlinear Analysis Core, Department of Biomechanics, University of Nebraska at Omaha.
5. ***Likens, A. D.*** (July, 2022). Nonlinear Analysis Workshop. Hosted by the Nonlinear Analysis Core, Department of Biomechanics, University of Nebraska at Omaha.
6. ***Likens, A. D.****, & Charles, A.E. (August, 2022). Multifractal Methods for Movement Science. Pre-Congress Workshop presentation at the 2022 North American Congress on Biomechanics Conference. Ottawa, Canada.*
7. ***Likens, A. D.****, Wiles, T., & Charles, A.E. (July, 2022). Multivariate and Bivariate Methods for Gait and Posture Analysis. Pre-Congress Workshop presentation at the 2022 International Society of Posture and Gait Research Biomechanics Conference. Montreal, Canada.*
8. **Likens, A. D.** (July, 2021). *Wavelets and multifractal analysis.* Workshop presented at the 31st Annual International Conference of the Society for Chaos Theory in Psychology and Life Sciences, Online Conference.
9. **Likens, A. D.** (July, 2020). *Recurrence quantification analysis.* Workshop presented at the 30th Annual International Conference of the Society for Chaos Theory in Psychology and Life Sciences, Online Conference.

**Refereed Conference Proceedings (Peer Reviewed)**

1. Blyton, S., Snodgrass, S., Pizzari, T., Birse, S., **Likens, A.**, & Edwards, S. (2022). Movement variability in runners with a current or recent musculoskeletal injury: a systematic review. *Journal of Science and Medicine in Sport*, *25*, S24. **Impact Factor: 4.6**
2. Charles, A., Stergiou, N., & **Likens, A.** (2022). Steps Synchronization to Unstructured Visual Cues Increases Metabolic Rate. In *JOURNAL OF SPORT & EXERCISE PSYCHOLOGY* (Vol. 44, pp. S33-S34). **Impact Factor: 2.6**
3. Mironiuc, C., Wiltshire, T., **Likens, A.**, Hogenhaug, S., Bloch, M. (2021). Gesture Dynamics and Therapeutic Success in Patient-Therapist Dyads (Published) Proceedings of the Cognitive Science Society, 45, 1949-1955.
4. **Likens, A.**, Mastorakis, S., Skiadopoulos, A., Kent, J., Al Azad, M. W., Stergiou, N. (2021). Irregular Metronomes as Assistive Devices to Promote Healthy Gait Patterns (Published) 18th IEEE Annual Consumer Communications & Networking Conference (CCNC). **Winner: Best Paper Award.**
5. McCarthy, K. S., Roscoe, R. D., **Likens, A. D.,** & McNamara, D. S. (2019, June). Checking It Twice: Does Adding Spelling and Grammar Checkers Improve Essay Quality in an Automated Writing Tutor? In International Conference on Artificial Intelligence in Education (pp. 270-282). Springer, Cham.
6. Allen, L. K., **Likens, A. D.***,* & McNamara, D. S. (2018). A multi-dimensional analysis of writing flexibility in an automated writing evaluation system. In A. Pardo, K. Bartamote-Aufflick, & G. Lynch (Eds.), Proceedings of the 8th International Conference on Learning Analytics & Knowledge (LAK 18) in Sydney, NSW, Australia, (pp. 111-120). New York, NY: ACM.
7. Bracken, B. K., Amazeen, P. G., **Likens, A. D**., Demir, M., & Gibbons, C. T. (2018). Comparison of a custom functional near-infrared spectroscopy sensor, a peripheral Sp02 sensor, and a standard laboratory sensor (BIOPAC) for RR interval assessment. In H. Gamboa, S. Badia, G. Saggio, A. Fred (Eds.), BIOSIGNALS 2018 - 11th International Conference on Bio-Inspired Systems and Signal Processing, Proceedings (pp. 281-285).
8. **Likens, A. D.**, McCarthy, K. M., Allen, L. K., & McNamara, D. S. (2018). Recurrence Quantification Analysis as a Method for Studying Text Comprehension Dynamics. In A. Pardo, K. Bartamote-Aufflick, & G. Lynch (Eds.), Proceedings of the 8th International Conference on Learning Analytics & Knowledge (LAK 18) in Sydney, NSW, Australia, (pp. 111-120). New York, NY: ACM.
9. Allen, L. K., **Likens, A.,** & McNamara, D. S. (2017). Recurrence Quantification Analysis: A technique for the dynamical analysis of student writing. In Z. Markov & V. Rus (Eds.), Proceedings of the 30th Annual Florida Artificial Intelligence Research Society International Conference (FLAIRS). Marco Island, FL: AAAI Press.
10. Allen, L. K., Perret, C., **Likens, A. D.,** McNamara, D. S. (2017). What’d you say again? Recurrence quantification analysis as a method for analyzing the dynamics of discourse in a reading strategy tutor. In A. Wise, P. Winne, G. Lynch, X. Ochoa, I. Molenaar, & S. Dawson (Eds.), Proceedings of the 7th International Conference on Learning Analytics & Knowledge (LAK 17) in Vancouver, BC, Canada, (pp. 373-382). New York, NY: ACM.
11. Demir, M., Amazeen, P. G., McNeese, N. J., **Likens, A. D.**, & Cooke, N. J. (2017, September). Team Coordination Dynamics in Human-Autonomy Teaming. In Proceedings of the Human Factors and Ergonomics Society Annual Meeting (Vol. 61, No. 1, pp. 236-236). Sage CA: Los Angeles, CA: SAGE Publications.
12. **Likens, A. D.**, Allen, L. K., & McNamara, D. S. (2017). Keystroke dynamics predict essay quality. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. Davelaar (Eds.), Proceedings of the 39th Annual Meeting of the Cognitive Science Society (CogSci 2017), London, UK (pp. 2573 - 2578). Austin, TX: Cognitive Science Society.
13. Gibbons, C. T., **Likens, A. D.**, & Amazeen, P. G. (2015). Multifrequency coordination in dyads. In J. Weast-Knapp, M. Malone & D. Abney (Eds.), *Studies in Perception & Action XVIII.*  Minneapolis, MN: Taylor & Francis Group, LLC.
14. Waddell, M. L., Fine, J. M., **Likens, A. D.**,Amazeen, E. L., & Amazeen, P. G. (2015). Muscle activity and lifting kinematics combine in the perception of weight by dynamic touch. In J. Weast-Knapp, M. Malone & D. Abney (Eds.), *Studies in Perception & Action XVIII.*  Minneapolis, MN: Taylor & Francis Group, LLC.
15. Snow, E. L., McNamara, D. S., Jacovina, M. E., Allen L. K., Johnson, A., Perret C. E., Dai, J., Jackson, G. T., **Likens A. D.**, Russell, D. G., & Weston, J. L. (2015). Promoting metacognitive awareness within a game-based intelligent tutoring system. In *Proceedings of the 17th International Conference on Artificial Intelligence in Education.*
16. Snow, E. L., **Likens, A. D.**, Jackson, G. T., & McNamara, D. S. (2013). Students’ walk through tutoring: Using a random walk analysis to profile students. In *Proceedings of the 2013 Educational Data Mining Conference.* Berlin / Heidelberg, Germany: Springer.
17. Cooke, N. J., Amazeen, P. G., Gorman, J. C., Guastello, S. J., **Likens, A. D.**, & Stevens, R. (2012). Modeling the Complex Dynamics of Teamwork from Team Cognition to Neurophysiology. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 56, No. 1, pp. 183-187). SAGE Publications.

**Conference Podium Presentations**

1. Wiles, T. M., Kim, S. K., Stergiou, N., & **Likens, A. D.** (2024, August) The Individuality of Gait Is Retained Within Young, Middle, and Older Adults. Canadian Society of Biomechanics Annual Conference. Edmonton, AB.
2. Kim, S., Kalaitzi Manifrenti, M., Wiles, T. M., Kingston, D., Stergiou, N., & **Likens, A. D.** (2024, August) *Arm Swing and Leg Swing during Gait Match Trends of Variability over Time*. Presented at the Canadian Society of Biomechanics Biannual Conference. Edmonton, AB.
3. Kim, S., Wiles, T. M., Stergiou, N., & **Likens, A. D.** (2024, May) Bridge *between Predictability and Complexity in Human Gait*. Presented at Human Movement Variability Conference. Omaha, NE.
4. Brink, K. J., Wiles T. W., Stergiou, N., & **Likens A. D.** (2024, August) Increased Entropy in Movements May Enhance Sensorimotor Coordination. Presented at the Canadian Society of Biomechanics Biannual Conference. Edmonton, AB.
5. Brink, K. J., McKenzie, K. L., Straight, C. R., O’Fallon, K. S., Kim, S.K., & **Likens, A. D.** (2024, August). A Novel Biomarker for Detecting Fatigue in Soldiers During Loaded Walks. Presented at the American Society of Biomechanics Annual Conference. Madison, WI.
6. Marilena Kalaitzi Manifrenti, Polemnia G. Amazeen, Jamie C. Gorman, **Aaron D. Likens**. (2024, May) *Multifrequency Coordination Between People Is Captured by the Two-Frequency Resonance Map.* Human Movement Variability Conference. Omaha, NE.
7. Marilena Kalaitzi Manifrenti, Polemnia G. Amazeen, Jamie C. Gorman, **Aaron D. Likens**. (2024, March) *Predicting Tapping Coordination Between Partners With the Two-Frequency Resonance Map.* University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
8. Grunkemeyer, A.A., **Likens, A.D.** (2024, March) Heaviness Perception of Older Adults. *University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.*
9. Charles, A.E., Wong, A.Y., Mills, C, Stergiou N. S., & **Likens, A. D.** (2023, June) A Wandering Mind Decreases the Temporal Structure of Human Movement. Human Movement Variability Conference. Omaha, NE USA.
10. Charles, A.E., Wong, A.Y., Mills, C, Stergiou N. S., & **Likens, A. D**. (2023, March). A Wandering Mind Reduces the Structure of Movement Variability. UNO Research and Creative Activity Fair. Omaha, NE USA.
11. Wiles, T. M. Stergiou, N., & **Likens A. D.** (2023, June) Low IMU Sampling Rates Bias Largest Lyapunov Exponent Calculations During Overground Walking. Presented at the North American Society for the Physiology of Sport and Physical Activity Conference. Toronto, Canada.
12. Kim, S., Stergiou, N., **Likens, A. D.**, (2023, June) Coordination Dynamics of Winners and Losers in the 2015-2016 NBA Season. Podium presentation at the *2023 International Conference on Perception and Action*. Guadalajara, Mexico.
13. Kalaitzi Manifrenti M, **Likens A.D.** (2023, March) An Interrupted Time Series Analysis Reveals Effects of Mechanical Perturbations on Gait Variability. Podium presentation at the *2022 Student Research and Creative Activity Fair*.Omaha, NE.
14. Grunkemeyer, A., **Likens, AD.** (2023, June) Stochastic Resonance Influences Heaviness Perception. Podium presentation at the 2023 *Human Movement Variability and Great Plains Biomechanics Joint Conferences*. Omaha, NE.
15. Grunkemeyer, A., **Likens, AD.** (2023, March) Stochastic Resonance Influences Heaviness Perception. Podium presentation at the 2023 *Student Research and Creative Activity Fair.* Omaha, NE.
16. Charles, A.E., Stergiou N. S., & **Likens, A. D**. (2022, August). Walking Metabolic Cost Increases When Synchronizing Steps to Unstructured Visual Cues. Podium presentation at the 2022 *North American Congress on Biomechanics Conference*. Ottawa, Canada.
17. Brink, K. J., Stergiou N. S., Sommerfeld, J. H., & **Likens, A. D.** (2022, May). Irregular Metronomes Alter Bimanual Coordination Dynamics. *Podium presentation at the 2022 North American Society for the Psychology of Sport and Physical Activity Conference.* Waikoloa, Hawaii.
18. Brink, K. J., Stergiou N. S., Sommerfeld, J. H., & **Likens, A. D.** (2022, May). Irregular Metronomes Alter Bimanual Coordination Dynamics. *Podium presentation at the 2022 Human Movement Variability and Great Plains Conference.* Omaha, NE.
19. Charles, A.E., Stergiou N. S., & **Likens, A. D**. (2022, May). Walking Synchronization to Unstructured Visual Cues Increases Metabolic Cost. Podium presentation at the 2022 *Human Movement Variability and Great Plains Conference*. Omaha, NE USA
20. Charles, A.E., Stergiou N. S., & **Likens, A. D.** (2022, May). Steps Synchronization to Unstructured Visual Cues Increases Metabolic Rate. Podium presentation at the 2022 *North American Society for the Psychology of Sport and Physical Activity Conference.* Waikoloa, Hawaii.
21. Brink, K. J., Sommerfeld, J. H., & **Likens, A. D.** (2022, April). Irregular Metronome Training to Enhance Sensorimotor Precision*. Poster presentation at the 2022 Student Research and Creative Activity Fair.* Omaha, NE.
22. Brink, K. J., Stergiou N. S., Sommerfeld, J. H., & **Likens, A. D.** (2022, April). Irregular Metronomes Alter Bimanual Coordination Dynamics. *Podium presentation at the 2022 Rocky Mountain American Society of Biomechanics Conference.* Estes Park, CO.
23. Charles, A.E., Stergiou N. S., & Likens, A. D. (2022, March). *Metabolic Rate Increases When Synchronizing Steps to Non-structured Visual Cues. Podium presentation at the 2022 Student Research and Creative Activity Fair.* Omaha, NE USA.
24. Brink, K. J., Stergiou N. S., Sommerfeld, J. H., & **Likens, A. D.** (2022, March). Irregular Metronomes Alter Bimanual Coordination Dynamics. *Podium presentation at the 2022 Student Research and Creative Activity Fair.* Omaha, NE.
25. Brink, K. J., **Likens, A. D**., Sommerfeld, J., & Stergiou N. S. (2021, March). Modeling Spatial Asymmetry in Visuomotor Coordination. *Podium presentation at the 2021 Student Research and Creative Activity Fair.* Omaha, NE.
26. Charles. A, Antonellis. P, Stergiou. N, **Likens. A. D** (2021, November). Walking metabolic cost increases when synchronizing your steps to invariant or white noise visual cues but not pink noise. *Poster Presentation*. Society of Neuroscience, Chicago, IL, United States.
27. Sloan, C. I., **Likens, A. D.**, Sommerfeld, J., & Stergiou, N. S. (2020, September). Autocorrelation and Probability Distributions In Gait-Metronome Synchronization. Podium presentation at the 5th annual Human Movement Variability Conference, Omaha, NE.
28. Rowen, D. R., Silva, L., **Likens, A. D.**, Vaz, J., & Stergiou, N. S. (2019, July). Do older adults synchronize their strides to different visual stimuli? Poster presented at the 2019 International Society of Biomechanics Conference.
29. **Likens, A. D.**, McCarthy, K. S., Allen, L. K., & McNamara, D. S. (2017, December). Recurrence quantification analysis as method for measuring text comprehension dynamics. *Paper presented at the 8th ASU/U of A Cognitive Science Conclave*, Tucson, AZ.
30. Allen, L. K., **Likens, A. D.,** & McNamara, D. S. (2017, November). An examination of students’ adaptive writing behaviors. *Paper presented at the 2017 Annual Meeting of the Society for Computers in Psychology.*
31. **Likens, A. D.**, McCarthy, K. M., Allen, L. K., & McNamara, D. S. (2017, November). Let’s walk about that: Random walk analyses contextualize performance in an intelligent tutoring system. *Paper presented at the 2017 Annual Meeting of the Society for Computers in Psychology.*
32. **Likens, A. D.** (2015, December). Fractal steering volatility. *Paper presented at the 6th ASU/U of A Cognitive Science Conclave*, Tucson, AZ.
33. Snow, E. L**.,** Varner, L. K., **Likens, A, D.**, Jackson, G. T., & McNamara, D. S. (2013, November). We're watching you: Using random walks and probability trajectories to profile system users. *Paper presented at the 43rd annual meeting of the Society for Computers in Psychology*, Toronto, Canada.
34. **Likens, A. D.**, & Vanhoy, M. (2011, July). Multifractal scaling in eye movements. *Paper presented at the 21st Annual Conference of the Society for Chaos Theory in Psychology and Life Sciences*, Orange, CA.
35. **Likens, A. D.** (2010, April). Hysteresis in visual search. *Paper presented at the annual meeting of the Oklahoma Psychological Society*, Edmond, OK.
36. Vanhoy, M., & **Likens, A. D.** (2009, July). Eye movements reveal the fractal nature of visual search. *Paper presented at the 19th Annual International Conference of the Society for Chaos Theory in Psychology and Life Sciences,* Milwaukee, WI.

**Conference Poster Presentations**

1. Kim, S. K., Wiles, T. M., Stergiou, N., **Likens, A. D.** (2024, August) *Filling the Gap between Predictability and Complexity of Human Movement*. Presented at the Canadian Society of Biomechanics Annual Conference. Edmonton, AB.
2. Wiles, T. M., Kim, S. K., Stergiou, N., & **Likens, A. D.** (2024, August) What Can 350 Miles of Overground Walking Tell us About the Individuality of Gait? American Society of Biomechanics Annual Conference. Madison, WI.
3. Kim, S. K., Brink, K. J., Carboni, M. G., Hardin, T. D., **Likens, A. D.** (2024, August) *Head Supported Mass Load Configuration Moderates Neck Muscle Coordination*. Presented at the American Society of Biomechanics Annual Conference. Madison, WI.
4. Kim, S. K., Kalaitzi Manifrenti. M., Wiles, T. M., Kingston, D., Stergiou, N., **Likens, A. D.** (2024, August) *Arm Swing and Leg Swing during Gait Match Trends of Variability over Time*. Presented at the American Society of Biomechanics Annual Conference. Madison, WI.
5. Kim, S. K., Wiles, T. M., Stergiou, N., **Likens, A. D.** (2024, August) *Distilling Laws of Human Gait Kinematics*. Presented at the American Society of Biomechanics Annual Conference. Madison, WI.
6. Kim, S. K., Riggan, B. R., Stergiou, N., **Likens, A. D.** *Bounding Box can Streamline Human Gait Recognition*. Presented at the American Society of Biomechanics Annual Conference. Madison, WI.
7. Wiles, T. M., Kim, S. K., Stergiou, N., & **Likens, A. D.** (2024, August) What Can 350 Miles of Overground Walking Tell us About the Individuality of Gait? American Society of Biomechanics Annual Conference. Madison, WI.
8. Kim, S. K., Wiles, T. M., Stergiou, N., **Likens, A. D.** (2024, March) *Bridge between Predictability and Complexity in Human Gait*. Presented at the University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
9. Brink, K. J. & **Likens A.** (2024, August) Higher Complexity in Movements Indicate Better Sensorimotor Precision. Presented at the American Society of Biomechanics Annual Conference. Madison, WI.
10. Brink, K. J. & **Likens A.** (2024, June) Higher Complexity in Movements Indicate Better Sensorimotor Precision. Presented at the University of Nebraska at Omaha Human Movement Variability Conference. Omaha, NE.
11. Brink, K. J., McKenzie, K. L., Straight, C. R., O’Fallon, K. S., Kim, S.K., & **Likens, A. D.** (2024, June). A Novel Biomarker for Detecting Fatigue in Soldiers During Loaded Walks. Presented at the University of Nebraska at Omaha Human Movement Variability Conference. Omaha, NE.
12. Brink, K. J., Wiles, T., Stergiou, N., & **Likens A.** (2024, March) Higher Complexity in Movements Indicate Better Sensorimotor Precision. Presented at the University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
13. Marilena Kalaitzi Manifrenti, Polemnia G. Amazeen, Jamie C. Gorman, **Aaron D. Likens**. (2024, August)*The two-frequency resonance map predicts multifrequency coordination in dyads.* American Society of Biomechanics. Madison, WI.
14. Shakerian, N., Wiles, T. M., Kim, S., Stergiou, N., & **Likens, A. D**. (2024, August). Age Moderates the Relationship between Body Mass Index and Gait Variability American Society of Biomechanics. Madison, WI, USA.
15. Shakerian, N., Wiles, T. M., Kim, S., Stergiou, N., & **Likens, A. D**. (2024, March). Bridging Age, Body Mass Index, and Gait Variability: Differential Effects on Stride Interval Dynamics. Student Research & Creative Activity Fair. Omaha, NE USA.
16. Shakerian, N., Wiles, T. M., Kim, S., Stergiou, N., **& Likens, A. D**. (2024, May). Age Moderates the Relationship between Body Mass Index and Gait Variability Human Movement Variability Conference. Omaha, NE USA.
17. Grunkemeyer, A.A., **Likens, A.D.** (2024, May) Heaviness Perception of Older Adults. *Human Movement Variability Conference. Omaha, NE USA.*
18. Grunkemeyer, A.A., **Likens, A.D.** (2024, August) Heaviness Perception of Older Adults. *American Society of Biomechanics. Madison, WI.*
19. **Likens, A.D.**, Haghighatnejad M., Wiles, T. M, Kim, S., Stergiou N. S. (2024, March) Joint Coordination Predicts Stride Variability in Human Walking, *American Society of Biomechanics. Madison, WI.*
20. **Likens, A.D.**, Haghighatnejad M., Wiles, T. M, Kim, S., Stergiou N. S. (2024, May) Joint Coordination Predicts Stride Variability in Human Walking, Human Movement Variability Conference. Omaha, NE USA.
21. Haghighatnejad M., Wiles, T. M, Kim, S., Stergiou N. S., **Likens, A.D.** (2024, March) Inter-Joint variability and Age-Related Changes in Human Walking, Student Research & Creative Activity Fair. Omaha, NE USA.
22. Charles, A.E\*., Wong, A.Y., Mills, C, Stergiou N. S., & **Likens, A. D.** (2023, August) A Negative Relationship Between Human Movement Variability and Mind Wandering. Presented at the American Society of Biomechanics Annual Conference Knoxville, TN, USA.
23. Wiles, T. M., Kim, S., Stergiou, N. & **Likens, A. D.** (2023, August) Biometrics Using Full Body Human Movement Variability Gait Data. Presented at the American Society of Biomechanics Annual Conference. Knoxville, TN.
24. Brink, K., Wiles, T., Stergiou, N., & **Likens A.** (2023, August) Time Evolution is a Source of Bias in the Wolf Algorithm for Largest Lyapunov Exponents. Presented at the American Society of Biomechanics Annual Conference. Knoxville, TN.
25. Kim, S., Stergiou, N., **Likens, A. D.**, (2023, August) Relative Phase Reveals Distinct Coordination Dynamics Between Winning and Losing Teams. Presented at the American Society of Biomechanics Annual Conference. Knoxville, TN.
26. Brink, K., McKenzie, K., & **Likens, A.** (2023, June) Prolonged Load Carriage with Soldiers Increases the Uncertainty of Movement Dynamics. Presented at the American College of Sports Medicine. Denver, CO.
27. Wiles, T. M., Mangalam, M., Sommerfeld, J. H., Kim, S. K., Brink, K. J., Charles, A. E., Grunkemeyer, A. A., Manifrenti, M. K., Mastorakis, S., Stergiou, N., & **Likens, A. D.** (2023, July) NONAN GaitPrint: A public repository of overground walking data. Virtual presentation at the International Society of Posture & Gait Research Conference. Brisbane, Australia.
28. Kalaitzi Manifrenti M, **Likens A.D.** (2023, March) An Interrupted Time Series Analysis Reveals Altered Gait Structure Following a Mechanical Perturbation. Presented at University of Nebraska at Omaha Human Movement Variability Conference. Omaha, NE.
29. Brink, K., Wiles, T., Stergiou, N., & **Likens A.** (2023, June) Time Evolution is a Source of Bias in the Wolf Algorithm for Largest Lyapunov Exponents. Presented at the University of Nebraska at Omaha Human Movement Variability Conference. Omaha, NE.
30. Wiles, T. M., Stergiou, N., & **Likens, A.D.** (2023, June) Low IMU Sampling Rates Bias Largest Lyapunov Exponent Calculations During Overground Walking. Presented at the University of Nebraska at Omaha Human Movement Variability Conference. Omaha, NE.
31. Kim, S., Stergiou, N., **Likens, A. D.**, (2023, June) Relative Phase Reveals Distinct Coordination Dynamics Between Winning and Losing Teams. Presented at the University of Nebraska at Omaha Human Movement Variability Conference. Omaha, NE.
32. Wiles. T. M., Fadeev, A., Razian, S. A., Pipinos, A. I., & **Likens, A. D.** (2023, June) Enhancing Thermal Insulation with Nanofibrous Materials. Presented at the University of Nebraska Great Plains Biomechanics Conference. NE.
33. Wiles. T. M., Fadeev, A., Razian, S. A., Pipinos, A. I., & **Likens, A. D.** (2023, April) Enhancing Thermal Insulation with Nanofibrous Materials. Presented at the Nebraska Academy of Sciences Annual Meeting. NE.
34. Fadeev, A., Salkovskiy, Y., Wiles, T. M., & **Likens, A. D.** (2023, March) Nanomanufacturing of Flexible Nonwoven Materials with Low Thermal Conductivity. Presented at the University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
35. Kim, S., Stergiou, N., **Likens, A. D.**, (2023, March) Complex Inter-team Team Coordination Dynamics in the 2015-2016 NBA Season. Presented at the University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
36. Brink, K., Wiles, T., Stergiou, N., & **Likens A. (**2023, March) Time Evolution is a Source of Bias in the Wolf Algorithm for Largest Lyapunov Exponents. Presented at the University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
37. Wiles, T. M., Stergiou, N., & L**ikens, A. D.** (2023, March) Low IMU Sampling Rates Bias Largest Lyapunov Exponent Calculations During Overground Walking. Presented at the University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE.
38. Grunkemeyer, A., **Likens, A.D.** (2023, August) Stochastic Resonance Influences Heaviness Perception. *Poster presentation at the American Society of Biomechanics Conference. Knoxville, TN.*
39. Grunkemeyer, A., **Likens, A.D.** (June, 2023) Stochastic Resonance Influences Heaviness Perception. *Poster presentation at the International Conference of Perception and Action. Guadalajara, MX.*
40. Grunkemeyer, A., **Likens, A.D.** (April, 2023) Stochastic Resonance Influences Heaviness Perception. *Poster presentation at The Nebraska Academy of Sciences.**Virtual.*
41. Grunkemeyer, A., **Likens, A.D.** (March, 2023) Stochastic Resonance Influences Heaviness Perception. *Poster presentation at the UNO Research and Creative Activity Fair. Omaha, NE.*
42. Brink, K. J., Stergiou N. S., Sommerfeld, J. H., & **Likens, A. D.** (2022, August). Irregular Metronomes Alter Bimanual Coordination Dynamics. *Poster presentation at the 2022 North American Congress on Biomechanics Conference.* Ottawa, Canada.
43. Wilson, T., Stergiou, N., **Likens, A.,** August 2022, Surface and Task Affects on Mono- and Multifractal Characteristics in Gait, North American Congress on Biomechanics, Ottawa, Canada.
44. Grunkemeyer, A., **Likens, A.,** March 2022, Team Coordination Dynamics of Winning NBA Teams, Research Creative and Activity Fair, Omaha, Nebraska.
45. Grunkemeyer, A., **Likens, A.,** May 2022, Team Coordination Dynamics of Winning NBA Teams, Human Movement and Variability, Omaha, Nebraska.
46. Grunkemeyer, A., **Likens, A.,** August 2022, Team Coordination Dynamics of Winning NBA Teams, North American Congress on Biomechanics, Ottawa, Canada.
47. Brink, K., **Likens, A.**, August 2021, Modeling Spatial Asymmetry in Visuomotor Coordination, American Society of Biomechanics, Virtual.
48. Brink, K. J., **Likens, A. D**., Sommerfeld, J., & Stergiou N. S. (2021, August). Modeling Spatial Asymmetry in Visuomotor Coordination. *Poster presentation at the 2021 American Society of Biomechanics Conference.* Virtual.
49. Brink, K. J., **Likens, A. D**., Sommerfeld, J., & Stergiou N. S. (2021, July). Modeling Spatial Asymmetry in Visuomotor Coordination. *Poster presentation at the 2021 International Society of Biomechanics Conference.* Virtual.
50. Grunkemeyer, A., **Likens, A.**, March 2021, Stochastic Resonance and Heaviness Perception of an Occluded Object, Research Creative and Activity Fair, Virtual.
51. Grunkemeyer, A., **Likens, A.**, May 2021, Stochastic Resonance and Heaviness Perception of an Occluded Object, Human Movement Variability, Virtual.
52. Grunkemeyer, A., **Likens, A.**, August 2021, Stochastic Resonance and Heaviness Perception of an Occluded Object, American Society of Biomechanics, Virtual.
53. Grunkemeyer, A., **Likens, A.**, August 2021, Stochastic Resonance and Heaviness Perception of an Occluded Object, International Society of Biomechanics, Virtual
54. **Likens, A. D.**, Skiadopoulos, A., & Stergiou, N. (2020, September). A simulation based investigation of unbiased detrended fluctuation analysis. Poster presentation at the 5th annual Human Movement Variability Conference, Omaha, NE.
55. **Likens, A. D.**, Skiadopoulos, A., & Stergiou, N. (2019, November). Unbiased detrended fluctuation analysis for short psychological time series. *To be presented at the 2019 Meeting of the Society for Computers in Psychology.*
56. **Likens, A. D.**, Silva, L., Vaz, J. & Stergiou, N. (2019, August). Multifractal correlation reveals variation in complexity matching across metronome types. *Poster presented at the 2019 International Society of Biomechanics Conference.*
57. Silva, L., **Likens, A. D.**, Rowen, D., Vaz, J., Knarr, B. & Stergiou, N. (2019, August). Multifractal analysis of visually cued stride intervals. *Poster presented at the 2019 International Society of Biomechanics Conference.*
58. Silva, L., **Likens, A. D.**, Rowen, D., Vaz, J., Knarr, B. & Stergiou, N. (2019, August). Synchronization between stride time intervals and external visual cueing. *Poster presented at the 2019 International Society of Biomechanics Conference.*
59. Sloan, C. I., Kent, J. A., **Likens, A. D.**, Takahashi, K. Z. & Stergiou, N. (2019, August). Subthreshold vibration influences the posture and gait of transtibial amputees. *Poster presented at the 2019 International Society of Biomechanics Conference.*
60. Sommerfeld, J. H., Likens, A. D., & Stergiou, N. (2019, August). Isolating aspects of gait through the use of pacing signals. *Poster presented at the 2019 International Society of Biomechanics Conference.*
61. Gibbons, C. T., & **Likens, A. D.**, Amazeen, P. G. (2013, December).  Dynamics of motion perception. *Poster presented at the 4th ASU/U of A Cognitive Science Conclave*, Tucson, AZ.
62. Patten, K. J., **Likens, A. D.**, & Puglisi, C. (2012, May). Walk this way: Ecological attenuation of facing bias in point light walkers*. Poster presented at the 24th Annual Association for Psychological Science Conference*, Chicago, IL.
63. Patten, K. J., **Likens, A. D.**, & Puglisi, C. (2011, December). Attenuation of facing bias in point light walkers. *Poster presented at 2nd annual ASU/U of A Cognitive Science Conclave*, Tucson, AZ.
64. **Likens, A. D.** (2012, December). The dynamics of team readiness. *Poster presented at the 3rd Annual ASU/UofA Cognitive Science Conclave*, Tempe, AZ.
65. **Likens, A. D.**, & Vanhoy, M. (2009, May). Hysteresis in eye movement patterns. *Poster presented at the 21st Annual Conference of the Association for Psychological Science*, San Francisco, CA.
66. Preddy, D., Vanhoy, M., **Likens, A. D.**, & DiGiovanni, R. (2009, May). Memory in post-attentive visual search. *Poster presented at the 21st Annual Conference of the Association for Psychological Science*, San Francisco, CA.

**MENTORING**

**Ph.D. Committees**

**Graduates**

1. 2020 – 2024 Samantha Birse, Exercise and Sport Science, University of Newcastle

Role: Committee Member

1. 2020- 2023 Ryan Meidinger, Biomechanics and Exercise Science, University of Nebraska at Omaha

Role: Committee Chair

**In Progress**

1. 2024 – Vasileios Mylonas, Biomechanics, UNO

Role: Chair

1. 2024 – Marilena Kalaitzi Manifrenti, Biomechanics, UNO

Role: Chair

1. 2023 – Mehrnoush Haghighatnejad, Biomechanics, UNO

Role: Chair

1. 2023 – Narges Shakerian, Biomechanics, UNO

Role: Chair

1. 2022 – Alli Grunkemeyer, Biomechanics, UNO

Role: Chair

1. 2022 – Kolby Brink, Biomechanics, UNO

Role: Chair

1. 2022 – Seung Kyeom Kim, Biomechanics, UNO

Role: Chair

1. 2021 – Tyler Wiles, Biomechanics and Kinesiology, UNO

Role: Chair

1. 2020 – 2024 Anaelle Charles, Biomechanics, UNO

Role: Chair (Anticipated, October, 2024 completion)

**M.S. Thesis Committees**

**Graduates**

1. 2022 – Marilena Kalaitzi, Biomechanics

Role: Chair

1. 2021 – Kolby Brink, Biomechanics.

Role: Chair

1. 2021 – Allison Grunkemeyer, Biomechanics.

Role: Chair

1. 2021 – Taylor Wilson, Biomechanics.

Role: Chair

1. 2019 – Joel Sommerfeld, Biomechanics.

Role: Chair

**Other graduate Student Mentoring**

1. Taylor Kinney
2. Colleen Vogel
3. Darko Radakovic
4. Cecile Perret
5. Morgan Waddell
6. Cameron Gibbons
7. Mustafa Demir

**Undergraduate Students**

1. Isabella Arrayales
2. Jonathan Sabirianov
3. Caenis Bryan
4. Ian Sloan

**SERVICE**

**Committee Memberships (past and present)**

1. CEHHS Academic Standards and Policy
2. Great Plains Biomechanics and Human Movement Variability Conference Organizing Committee

***Grant Reviewer***

1. NIH R61
2. NIH RO1/R34
3. US/Israel Binational Science Foundation

***Editorial Boards***

1. Nature Scientific Data
2. Nonlinear Dynamics Psychology and Life Sciences

**Ad-hoc Reviewer for**

* 1. *Behavior Research Methods*
	2. *Biological Psychology*
	3. *Brain and Behavior*
	4. *Chaos, Solitons, & Fractals*
	5. *Gait and Posture*
	6. *Frontiers in Psychology*
	7. *Frontiers in Physiology*
	8. *Human Factors*
	9. *Human Movement Science*
	10. *IEEE Transactions on Neural Systems & Rehabilitation Engineering*
	11. *Journal of Applied Biomechanics*
	12. *Journal of Biomechanics*
	13. *Journal of Neuroscience*
	14. *Journal of Prosthetics and Orthotics*
	15. *Journal of the Royal Society*: *Interface*
	16. *Medicine and Science in Sports and Exercise*
	17. *Motor Control*
	18. *Nature Scientific Reports*
	19. *Neurodegenerative Disease Management*
	20. *Neurorehabilitation and Neural Repair*
	21. *Neuroscience Letters*
	22. *Nonlinear Dynamics, Psychology, & Life Sciences*
	23. *PLOS ONE*
	24. *Reading and Writing*
	25. *Social Neuroscience*
	26. *Studies on Educational Evaluation*
	27. *Topics in Cognitive Science*
	28. *Transactions on Neural Systems and Rehabilitation Engineering*

**Society Memberships (Current and Past)**

1. American Society of Biomechanics
2. Cognitive Science Society
3. International Society of Biomechanics
4. International Society for Ecological Psychology
5. Psychonomics Society
6. Society for Chaos Theory in Psychology and Life Sciences
7. Society for Computation in Psychology
8. Society for Neuroscience