CURRICULUM VITAE

Jeffrey D. Eggleston, Ph.D.

Department of Kinesiology
University of Texas at El Paso
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El Paso, TX 79968
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EDUCATION

University of Nevada, Las Vegas, Las Vegas, NV
Degree: *Doctor of Philosophy (Ph.D.) in Interdisciplinary Health Studies;* May 2018
Specialized Coursework in Biomechanics and Interdisciplinary Research Methods
Dissertation Title: *Motor Impairments in Children with Autism: Insight into the Complexity of the Disorder*
Committee Chair: Janet S. Dufek, PhD, FACSM
Committee: Merrill R. Landers, PT, DPT, PhD, OCS, Barry T. Bates, PhD, Ed Nagelhout, PhD

Boise State University, Boise, ID
Degree: *Master of Science (M.S.) in Sport and Exercise Studies*; August 2014
Specialized Coursework in Biomechanics and Motor Learning
Thesis Title: *The Effect of Attentional Focus Instructions on Golf Swing Performance in Recreational Golfers*
Committee Co-chairs: Eric L. Dugan, PhD; Laura J. Petranek, PhD
Committee Member: Yong Gao, PhD

Western Oregon University, Monmouth, OR
Degree: *Bachelor of Science (B.S.) in Exercise Science;* June 2010
Specialized Coursework in Sport and Exercise Performance
Mentor: Brian Caster, PhD

ACADEMIC POSITIONS

The University of Texas at El Paso, El Paso, TX
Assistant Professor of Kinesiology, Department of Kinesiology, September 2018
Visiting Assistant Professor of Kinesiology, Department of Kinesiology, June 2018

University of Nevada, Las Vegas, Las Vegas, NV
Doctoral Graduate Research and Teaching Assistant, Department of Kinesiology and Nutrition Sciences (2015 – 2018)

Boise State University, Boise, ID
Adjunct Faculty, Department of Kinesiology (2014-2015)

RELEVANT PROFESSIONAL EXPERIENCES

Director, Stanley E. Fulton Biomechanics and Motor Behavior Laboratory, College of Health Sciences, Department of Kinesiology, University of Texas at El Paso (2018 – present)

Fellow, Summer Doctoral Research Fellowship, UNLV Graduate College (2017)

Laboratory Manager and Research Assistant, Center for Orthopaedic & Biomechanics Research, College of Health Sciences, Boise State University, Boise, ID (2014 – 2015)

Graduate Assistant, Boise State University, Boise, ID, Advisors: Drs. Eric Dugan & Laura J. Petranek (2013 – 2014)

TEACHING EXPERIENCE

University of Texas at El Paso, Department of Kinesiology

Undergraduate
KIN 3331 Anatomical Kinesiology
KIN 4313 Biomechanics

University of Nevada, Las Vegas, Department of Kinesiology & Nutrition Sciences

Graduate
KIN 743 Research Techniques in Biomechanics

Undergraduate
KIN 346 Biomechanics
KIN 346L Biomechanics Laboratory
KIN 446 Sport and Exercise Biomechanics

Boise State University, Department of Kinesiology

Undergraduate
KIN 370 Biomechanics
KIN 371 Biomechanics Laboratory

FUNDING

Funded Grant Proposals

1. **Eggleston, J.D.,** (2017). Summer Doctoral Research Fellowship, UNLV Graduate College, University of Nevada, Las Vegas, $7,000. **Role: Principle Investigator**
2. **Eggleston, J.D.,** Dufek, J.S., (2016). Summer Graduate Research Award, School of Allied Health Sciences, University of Nevada, Las Vegas, $1,500. **Role: Principle Investigator**
3. Dufek, J. S., **Eggleston, J. D.,** Hickman, R. A., and Shan, G (2015). Gait Variability in Children with Autism Spectrum Disorder: A Pilot Study. CTR-IN Mini-Grant, $21, 353.00. **Role: Co-Investigator**

Submitted Grant Proposals

1. Harry, J.R., Poston, B.J., Dotson, W., **Eggleston, J.D.** (2018). Non-invasive brain stimulation to improve motor function and mitigate behavioral symptoms in children with autism. *Simons Foundation Autism Research Initiative – Explorer Award*. $79,619. **Role: Co-Principle Investigator**

2. **Eggleston, J.D.,** Boyle, J.B., Harry, J.R., Manning, R., Dufek, J.S. (2018). The influence of sensory feedback mechanisms on task performance and motor pattern variability in children with autism. *Autism Research Program Idea Development Award, Department of Defense, Defense Health Program (W81XWH-18-ARP-IDA).* $500,000. **Role: Principle Investigator**

3. **Eggleston, J.D.,** Boyle, J.B., Manning, R.A. Meeuwsen, H.J. (2018). Using live animation biofeedback to elicit changes in motoric response patterns in children with Autism Spectrum Disorder. *J. Edward Stern and Helen M.C. Stern Foundation,* $15,000. **Role: Principle Investigator**

4. Diaz, C., Boyle, J.B., **Eggleston, J.D.,** Manning, R.A., Kennedy, D. (2018). Sensory integration and its role in neural plasticity in children diagnosed with autism spectrum disorder: An EMG study. *DeLuca Foundation Research Scholarship,* $14,995. **Role: Co-Investigator**

Not Funded Grant Proposals

1. **Eggleston, J.D.,** Harry, J.R., Boyle, J.B., Poston, B.J. (2018). Application of non-invasive brain stimulation to improve fine and gross motor impairments in Hispanic children with autism spectrum disorder. *Organization for Autism Research – Applied Research Competition,* $30,000. **Role: Principle Investigator**

2. Cereceres, P.A., Boyle, J.B., & **Eggleston, J.D.** (2018). Dodson Research Grant, Graduate School, University of Texas at El Paso, $3,000.00. **Role: Co-Mentor**

3. Harry, J.R., Poston, B., **Eggleston, J.D.,** & Dufek, J.S. Non-invasive brain stimulation for the improvement of movement quality in children with autism. *Thrasher Research Fund Early Career Award Concept*, $26,750, Letter of Intent. **Role: Consultant**

4. Dufek, J.S., Poston, B., Harry, J.R., Beasley, J.F., Shan, G., & **Eggleston, J.D.** Examination of transcranial direct current stimulation as an intervention for mitigation of movement disorders in person with autism. *Autism Research Program Idea Development Award, Department of Defense, Defense Health Program (W81XWH-17-ARP-IDA*). **Role: Consultant**

5. Poston, B., Dufek, J.S., Freedman Silvernail, J.A., Harry, J.R., **Eggleston, J.D.**, Lidstone, D.E. Non-invasive brain stimulation to improve movement coordination in children with Autism. *Clinical Translational Research Infrastructure Network, National Institutes of General Medical Sciences (U54 GM104944), Health Disparities Pilot Grant.* $60,000. **Role: Co-Investigator.**

6. Dufek, J.S., Trabia, M.B., Freedman Silvernail, J.A., **Eggleston, J.D.,** Harry, J.R., Hickman, R.A., Shan, G. Movement variability during stair ascent and descent as a diagnostic tool for children with Autism Spectral Disorder. Department of Defense, $500,000. **Role: Co-Investigator.**

7. Dufek, J. S., **Eggleston, J. D**., Harry, J. R., Hickman, R. A. 2016. Load carriage in children with autism spectrum disorder: Establishing maximum load values. Organization for Autism Research, $30,000. **Role: Co-Investigator.**

8. Gait and Clinical Movement Analysis Society Student Travel Scholarship, $400.00, 2015. **Role: Presenter.**

9. Dufek, J. S., Hickman, R. A., Freedman Silvernail, J., Shan, G., **Eggleston, J. D.,** Harry, J. R., 2015. Gait variability in adults with autism: A diagnostic for continued care?. Simons Foundation Autism Research Initiative-Explorer Award, $58,546.00. **Role: Co-Investigator.**

10. UNLV Foundation Southwest Airlines Student Travel Award.

11. Dufek, J. S., **Eggleston, J. D.,** Harry, J. R., Hickman, R. A., 2015. Variability in loaded and unloaded walking in children with autism: Implications of study design. Autism Speaks Suzanne and Bob Wright Trailblazer Award, $100,000. **Role: Co-Investigator.**

12. AMTI Force and Motion Academic Scholarship, $10,000, 2015. **Role: Primary Investigator**

RESEARCH

IF = Impact factor during year of publication; N/A = Not Available

Published or In Press Manuscripts

1. Dufek, J. S., Harry, J. R., **Eggleston, J. D.,** Hickman, R. A. (2018, Epub ahead of print). Walking mechanics and intra-subject variability in monozygotic twins with autism spectrum disorder. *Journal of Developmental and Physical Disabilities, 5,*1-13 doi: 10.1007/s10882-018-9620-2. IF = 1.3

2. Harry, J.R., Barker, L.A., **Eggleston, J.D.,** & Dufek, J.S. (2018; Published Ahead of Print). Evaluating performance during maximal effort vertical jump landings. *Journal of Applied Biomechanics.* IF = 1.05

3. Harry, J.R., **Eggleston, J.D.,** Dunnick, D.D., Edwards, H.T., & Dufek, J.S. (2018). Effects of task difficulty on kinematics and task performance while using a walking workstation. *Translational Journal of the American College of Sports Medicine, 3*(11): 74-84. doi: 10.1249/TJX.0000000000000062. IF = N/A

4. **Eggleston, J.D.,** Landers, M.R., Bates, B.T., Nagelhout, E., & Dufek, J.S. (2018). Examination of gait parameters during perturbed over-ground walking in children with autism spectrum disorder. *Research in Developmental Disorders, 74,* 50-56. doi: 10.1016/j.ridd.2018.01.004. IF = 1.6

5. Dufek, J.S., Ryan-Wenger, N.A., **Eggleston, J.D.,** & Mefferd, K. (2017). A novel approach to assess pediatric patient fall injury severity. *Journal of Pediatric Healthcare, 32*(2), e59-e66. doi: 10.1016/j.pedhc.2017.09.012. IF = 1.5

6. **Eggleston, J. D.,** Harry, J. R., Hickman, R. A., & Dufek, J. S. (2017). Analysis of gait symmetry during over-ground walking in children with autism spectrum disorder. *Gait and Posture, 55*, 162-166. doi:10.1016/j.gaitpost.2017.04.026. IF = 2.4

7. Dufek, J. S., **Eggleston, J. D.**, Harry, J. R., & Hickman, R. A. (2017). A comparative evaluation of gait between children with autism and typically developing matched controls. *Medical Sciences, 5*(1), 1. doi:10.3390/medsci5010001. IF = N/A

8. Bates, B. T., Dufek, J. S., James, C. R., Harry, J. R., & **Eggleston, J. D.** (2016). The influence of experimental design on the detection of performance differences. *Measurement and Evaluation in Physical Education and Exercise Science, 20*(4), 200-2007. doi: 10.1080/1091367X.2016.1198910. IF = 3.5

Manuscripts Submitted or Under Review

1. Harry, J.R., **Eggleston, J.D.,** Dufek, J.S., & James, C.R. (In preparation). Single-Subject Comparison of Barefoot, Minimal, and Conventional Footwear Conditions during Countermovement Vertical Jumps. Target Journal: *Journal of Sports Science.*

2. Harry, J.R., **Eggleston, J.D.,** Lidstone, D., & Dufek, J.S. (Submitted for review). Effects of a weighted vest on gait smoothness during walking in children with Autism Spectrum Disorder. Target Journal: *Translational Journal of the American College of Sports Medicine*.

3. Alley, C.J., **Eggleston, J.D.,** & Radzak, K.N. (2018; In review). Stride leg ground reaction forces pre- and post-fatigue in collegiate baseball pitchers. Target Journal: *Sports Biomechanics*.

4. **Eggleston, J.D.,** Landers, M.R., Bates, B.T., Nagelhout, E., & Dufek, J.S. (2018, Resubmitted). Weighted walking influences lower extremity coordination in children with autism: A group and single-subject design. *Perceptual and Motor Skill.*

5. **Eggleston, J.D.,** Harry, J.R., Dufek, J.S. (2018, Resubmitted). Lower extremity joint stiffness during over-ground walking in children with Autism Spectrum Disorder. *Human Movement Science.*

Manuscripts in Preparation

1. **Eggleston, J.D.,** Chavez, E.A., Manning, R.A., Boyle, J.B., Harry, J.R., & Dufek, J.S. (In preparation). Examination of spatio-temporal gait characteristics in children with autism through variability analyses. Target Journal: *Clinical Biomechanics.*

2. **Eggleston, J.D.,** Borgia, B., Alley, C.J., Radzak, & K.N. (In preparation). The influence of fatigue on knee stiffness and elbow torque during over-hand baseball pitching. Target Journal: *Journal of Applied Biomechanics.*

3. **Eggleston, J.D.,** James, C.R., Barker, L.A., Harry, J.R., Casale, E.M., Hunt, A.R. & Dufek, J.S. (In preparation). Load accommodation strategies during over-ground walking with upper extremity-carried weight in individuals with autism. Target Journal: *Journal of Applied Biomechanics.*

4. **Eggleston, J.D.,** Barker, L.A., Harry, J.R., Hunt, A.R., Casale, E., & Dufek, J.S. (In preparation). Shoes or no shoes? A methodological consideration for gait analysis in individuals with autism. Target Journal: *Clinical Biomechanics.*

5. **Eggleston, J.D.,** Harry, J.R., Dunnick, D.D., Edwards, H.T., & Dufek, J.S. (In preparation). Symmetrical lower extremity gait accommodations during walking workstation use. Target Journal: *Human Movement Science.*

6. Harry, J.R., Roper, J.L., **Eggleston, J.D.,** Dufek, J.S. (In preparation). Assessment of inter-limb knee joint mechanics and ground reaction forces in individuals with patella femoral pain. Target Journal: *Journal of Applied Biomechanics*.

Conference Proceedings

1. Lidstone, D., **Eggleston, J.D.,** Dufek, J.S. (2018). Effect of visual rhythmic cueing and visual feedback on motor control in children with autism. Poster presentation, American Society of Biomechanics Annual Meeting, Rochester, MN, August 2018.

2. **Eggleston, J.D.,** Flores, L., Mamauag, M., Lidstone, D.E., Harry, J.R., Dufek, J.S. (2017). Influence of a weighted backpack and weighted vest on gait kinematics in children with autism spectrum disorder. Poster presentation, Northwest Biomechanics Symposium, Eugene, OR, May 2017.

3. Flores, L.A., **Eggleston, J.D.,** Mamauag, M., Lidstone, D.E., Dufek, J.S. (2017). Effects of load carriage on lower extremity joint patterns in children with autism spectrum disorder. Podium Presentation, Northwest Biomechanics Symposium, Eugene, OR, May 2017.

4. Mamauag, M., **Eggleston, J.D.,** Flores, L.A., Dufek, J.S. (2017). Examining the influence of backpack weight on stride kinematics among children with autism spectrum disorder. Poster Presentation, Northwest Biomechanics Symposium, Eugene, OR, May 2017.

5. Dufek, J.S., **Eggleston, J.D.,** Harry, J.R. (2017). Movement differences between children with autism and children with typical development: Evidence for evaluating the individual before the group. Poster presentation, Gait and Clinical Movement Analysis Society Annual Meeting, Salt Lake City, UT, May 2017.

6. Alley, C.J., **Eggleston, J.D.,** Radzak, K.R. (2017). Stride leg ground reaction forces pre-and post-fatigue in collegiate baseball pitchers. Poster presentation, Far West Athletic Trainers' Association Annual Meeting and Clinical Symposium, Las Vegas, NV, April 2017.

7. **Eggleston, J. D.,** Harry, J. R., Hickman, R. A., Dufek, J. S. (2016). Evaluation of gait symmetry in children with autism spectrum disorder. Poster presentation, American Society of Biomechanics Annual Conference, Raleigh, NC. August 2016.

8. Harry, J. R., **Eggleston, J. D.,** Hickman, R. A., Dufek, J. S. (2016). Walking mechanics and within-subject variability in monozygotic twins with autism spectrum disorder. Poster presentation, American Society of Biomechanics Annual Conference, Raleigh, NC. August 2016.

9. Dufek, J. S., Harry, J. R., **Eggleston, J. D.,** Bates, B. T. (2016). A novel data analysis approach for identification of performance differences during locomotion. Poster presentation, Gait and Clinical Movement Analysis Annual Conference, Memphis, TN, May 2016.

10. **Eggleston, J. D.,** Harry, J. R., Hickman, R. A., Dufek, J. S. (2015). A comparative evaluation of gait between children with autism and typically developing matched controls: Insight gained via single subject design. Poster Presentation, Southwest Chapter of the American College of Sports Medicine, Costa Mesa, CA, October 2015.

11. Dugan, E.L., Combs-Miller, S.A., **Eggleston, J.D.,** Masterson, C.M., & Berlin C.M. (2015). Complexity of gait post stroke. Poster Presentation, American Society of Biomechanics Annual Conference, Columbus, OH, August 2015.

12. **Eggleston, J. D.,** Dugan, E. L., Petranek, L. (2014). The effect of attentional focus instruction on golf swing performance in recreational golfers. Poster presentation, Rocky Mountain Regional American Society of Biomechanics Conference, Estes Park, CO, April 2014.

13. **Eggleston, J. D**., Jones, J. R., & Armstrong, W. J. (2010) Wireless e-technology accelerometry in the measurement of mechanomyography. Poster presentation, National Conference on Undergraduate Research, Missoula, MT, April 2010.

14. Jones, J. R., **Eggleston, J. D.,** & Armstrong, W. J. (2010). Anthropometric measures for sensor placement in e-textile based mechanomyography. Poster presentation, National Conference on Undergraduate Research, Missoula, MT, April 2010.

<u>University Conferences</u>

1. **Eggleston, J.D.** (2017). The autism movement: Understanding movement in autism. Podium Presentation, UNLV 3-Minute Thesis Competition, University of Nevada, Las Vegas, Las Vegas, NV, November 2017.

2. **Eggleston, J.D.,** Flores, L.A., Mamauag, M. Lidstone, D.E., Harry, J.R., Dufek, J.S. (2017). Influence of a weighted backpack and weighted vest on gait kinematics in children with autism spectrum disorder. Poster Presentation, UNLV Office of Undergraduate Research Research Week Gala, University of Nevada, Las Vegas, Las Vegas, NV, October 2017.

3. Flores, L.A., **Eggleston, J.D.,** Mamauag, M., Lidstone, D.E., Dufek, J.S. (2017). Effects of load carriage on lower extremity joint patterns in children with autism spectrum disorder. Poster Presentation, Undergraduate Research Forum, University of Nevada, Las Vegas, Las Vegas, NV, April 2017.

4. **Eggleston, J.D.,** Harry, J.R., Dufek, J.S. (2017). Influence of a weighted backpack and weighted vest on gait kinematics in children with autism spectrum disorder. Poster Presentation, Graduate and Professional Student Association Research Forum, University of Nevada, Las Vegas, Las Vegas, NV, April 2017.

5. Harry, J.R., **Eggleston, J.D.,** Hickman, R.A., Dufek, J.S. (2016). Walking mechanics and within subject variability between monozygotic twins with autism spectrum disorder. Poster presentation, Division of Health Sciences Interdisciplinary Research and Scholarship Day, University of Nevada, Las Vegas, Las Vegas, NV, April 2016.

6. **Eggleston, J.D.,** Harry, J.R., Hickman, R.A., Dufek, J.S. (2016). Evaluation of gait symmetry in children with autism spectrum disorder. Poster presentation, Division of Health Sciences Interdisciplinary Research and Scholarship Day, University of Nevada, Las Vegas, Las Vegas, NV, April 2016.

7. Dufek, J.S., Harry, J.R., **Eggleston, J.D.,** Bates, B.T. (2016). A novel data analysis approach for identification of performance differences during locomotion. Poster presentation, Division of Health Sciences Interdisciplinary Research and Scholarship Day, University of Nevada, Las Vegas, Las Vegas, NV, April 2016.

8. Turner, S., **Eggleston, J.D.** (2015). Comparison of shear forces in high-top and low-top basketball shoes during lateral cutting movement. Poster presentation, Undergraduate Research Conference, Boise State University, Boise, ID.

9. Nesbitt, D., Szakacs, R., Mireles, A., **Eggleston, J.D.** (2015). The difference between genders in ground reaction forces during the back handspring. Poster presentation, Undergraduate Research Conference, Boise State University, Boise, ID.

Abstracts

1. Hill, R. D., Amstrong, W. J., Stegenga, N. A., Forro, D., Bangert, K., **Eggleston, J. D**. (2010). Mechanomyography and H-reflex responses to electrical stimulation. *Medicine and Science in Sport and Exercise*, *42*(5); S10, 2010.

Non-Peer-Reviewed Publications

1. **Eggleston, J.D.,** Dufek, J.S. (2018). Autism linked to between-limb asymmetries across the gait cycle: Gait pattern ID could help target therapy. In *Lower Extremity Review: Pediatrics*; Interview conducted by Keith Loria. Publication link.

SCHOLARLY AWARDS & HONORS

1. UNLV Graduate College Medallion Program recipient, 2018.
2. Graduate College and Graduate & Professional Student Association Annual Research Forum, Honorable Mention: Influence of a Weighted Backpack and Weighted Vest on Gait Kinematics in Children with Autism Spectrum Disorder (**Eggleston,** Flores, Mamauag, Lidstone, & Dufek), 2017.
3. Interdisciplinary Research and Scholarship Day, Second Place Research Presentation: Evaluation of Gait Symmetry in Children with Autism Spectrum Disorder (**Eggleston,** Harry, Hickman, & Dufek), 2016.
4. Interdisciplinary Research and Scholarship Day, Third Place Research Presentation: A Novel Data Analysis Approach for Identification of Performance Differences During Locomotion (Dufek, Harry, **Eggleston**, & Bates), 2016.

INVITED PRESENTATIONS

1. Concepts of Linear Kinematics in Human Motion. Presented in KIN 346 – Biomechanics, University of Nevada, Las Vegas, May 2017.
2. Utilization of Cranial Remolding Helmets in Children. Presented in KIN 736 – Biomechanical Applications in Kinesiology, University of Nevada, Las Vegas, September 2015.

SERVICE

Department, College/School, University

2018 – Judge and Session Moderator, Office of Undergraduate Research, Undergraduate Research Conference

2018 – Student Representative, UNLV Graduate College, Washington D.C. Graduate Education Congressional Lobby

2017 – Judge, Office of Undergraduate Research, Research Undergrad SLAM, UNLV

2017 – Panelist, Summer Research EXperience Workshop, UNLV

Professional

2018 – Present	Manuscript Reviewer, PLOS One
2018 – Present	Manuscript Reviewer, Perceptual and Motor Skills
2017	Abstract Reviewer, Gait and Clinical Movement Analysis Society Annual Meeting
2017 – Present	Manuscript Reviewer, Journal of Sport and Health Science
2017 – Present	Manuscript Reviewer, Journal of Autism and Developmental Disorders

Professional Memberships

2015 – Present	Gait and Clinical Motion Analysis Society, Member
2015 – Present	American Society of Biomechanics, Member

2015 – Present American College of Sports Medicine, Member

Certifications

2017 – 2018 Research Certificate, Graduate College, University of Nevada, Las Vegas, Las Vegas, NV

2016 – 2017 Mentorship Certificate, Graduate College, University of Nevada, Las Vegas, Las Vegas, NV

STUDENT MENTORSHIP

University of Texas at El Paso

Graduate Students
Patrick Cereceres – PhD, Co-chair
Emily Chavez – MS, Chair
Heather Vanderhoof – MS, Chair

Undergraduate Students
Marlyn Orozco
Juan Dorantes
Nadia Marquez
Christian Sanchez

University of Nevada, Las Vegas

Graduate Students
Courtney Alley – MS, Consultant

Undergraduate Students
Melissa Aure
Emily Casale
Alicia Hunt
Luis Flores
Mieko Mamauag

Boise State University

Undergraduate Students
Derek Nesbit
Scott Turner