Adam C. King, PhD

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Department of Kinesiology

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# ****Education****

# – 2013 Ph.D. in Kinesiology

# Pennsylvania State University, University Park, Pennsylvania

# Adviser: Karl Newell, PhD

# Dissertation Title: Motor Learning and Force Output Dynamics

# 2008 – 2010 M.S. in Kinesiology

# Pennsylvania State University, University Park, Pennsylvania

# Adviser: Karl Newell, PhD

# Thesis Title: Practice Schedules, Time Scales, and Motor Learning

# 1998-2002 B.A., Exercise Science and Fitness Management

# Concordia University – Chicago, River Forest, Illinois

# ****Professional Experiences****

2016-present **Associate Professor (2020-present), Assistant Professor (2016-2020); Department of Kinesiology, Texas Christian University**

* Director of the Motor Behavior Laboratory and developed a research program rooted in motor control, biomechanics, and neuromotor function.
* Mentored undergraduate, Master’s, and Doctoral Scholars
* Undergraduate and graduate curriculum teaching

2024-present **Health Science PhD Program Director, Harris College of Nursing and Health Science, Texas Christian University**

* Led PhD oversight committee that includes department chairs from across the college
* Oversee admissions, orientation, comprehensive exam process, and dissertation defense requirements
* Manage a budget covering adjunct teaching positions, grants (travel & research), and various events (opening dinner, graduation banquet)

2019-present **Interprofessional Education Coordinator, Department of Kinesiology, Texas Christian University**

* Develop and implement Interprofessional Education (IPE) activities within our Kinesiology curriculum
* Foster engagement from faculty to participate in IPE events
* Create a student certificate program to recognize engagement with IPE

2023-2024 **Meeting Chair, South Central American Society of Biomechanics Regional Meeting**

* Organize monthly meetings with committee members
* Plan and coordinate regional meeting schedule and registrations including student workshop and keynote speakers
* Developed Sponsorship packet and solicit funding support from vendors and departments/programs

2013-2016 **Assistant Professor (2013-2016), Department of Exercise and Health Sciences, Truman State University**

* Taught undergraduate course related to Motor Behavior and Human Anatomy
* Mentored undergraduate scholars

## Professional Positions

# 2016-present Graduate Research Faculty

# 2020-present Faculty Associate, Burnett School of Medicine, Department of Medical Education, Texas Christian University

# ****Academic Background: Work experience****

1. Adjunct Instructor, The Pennsylvania State University, Pennsylvania
	1. Graduate Teaching Assistant, The Pennsylvania State University, Pennsylvania
	2. Manager, Tribune Fitness Center, Chicago, Illinois

2002-2005 Performance Specialist, ProSport Training and Rehab Inc., Rolling Meadows, Illinois

**PEER-REVIEWED SCIENTIFIC PUBLICATIONS (**graduate student=underlined, undergraduate student=underlined/italics)

*Under Review*

Chen, K., & **King, A. C.** (2023). Multidirectional gait initiation: anticipatory postural adjustments and step kinematic alterations with an obstacle. *Journal of Applied Biomechanics.* (Revise and Re-submit, submitted December 2023)

**King, A.C.,** *Frazier, A.*, Werfel, K.L., & Lund, E. (2023). Examining the relation between postural control, fatigue, and literacy in children with hearing loss*. Journal of Language, Speech, and Hearing Research.* (submitted: January 2024).

*In Preparation*

Farivar, M., & **King, A.C.** (2024). Interlimb Coordination Impairments of Walking for People with Parkinson’s Disease. Journal – TBD (*target submission April)*.

**King, A. C.,** Voskuil, C., Chen, K., Thijs, Z., Porter, R., Watts, C., & Carr, J.C.(2024). Neuromuscular changes following a yearlong boxing exercise intervention for individuals with Parkinson’s Disease*. Tremor (target submission date: February).*

Chen, K., & **King, A. C.** (2024). The Reliability of a Novel Center of Pressure Visual Feedback on Postural Control in Young Adults. *Human Movement Sciences.* (*target submission May)*.

*Published*

1. Farivar M., *Harris S.*, Agana A., **King A.C.** (2024). Lower Limb Cross-Over Effects on Postural Control: Impact of Proximal and Distal Muscle Fatigue. *Biomechanics*. 4(1):50-62. <https://doi.org/10.3390/biomechanics4010004>
2. Carr, J.C., & **King, A.C.** (2024). Sex differences in the fractal dynamics of force control during maximal handgrip. *Neuroscience Letters*, 820, 137588. <https://doi.org/10.1016/j.neulet.2023.137588>
3. *Rivera, D.*, *Robinson, T.*, & **King, A.C.** (2023). The Effects of Differential Training on Standing Broad Jump. *Perceptual & Motor Skills, (*accepted, available online). <https://doi.org/10.1177/00315125231218465>
4. Watts, C. R., Thijs, Z., **King, A.C.**, Carr, J. C., & Porter, R. (2023). A Pilot Study of the Effect of a Non-Contact Boxing Exercise Intervention on Respiratory Pressure and Phonation Aerodynamics in People with Parkinson’s Disease. *Journal of Clinical Medicine*, 12(14), 4806. <https://doi.org/10.3390/jcm12144806>
5. Baldridge, J., & **King, A. C.** (2022). Postural Sway and Muscle Activity Dynamics of Upright Standing on Sloped Surfaces. *Motor Control*. *26(4), 591-607.*  [https://doi.org/10.1123/mc.2022-0005](https://urldefense.com/v3/__https%3A/doi.org/10.1123/mc.2022-0005__;!!K6Z8K8YTIA!HdRI51RqZXFrabH_1bOoOazdxrIPHtecwhwK2uvORcwct_OETcSzvb3wZdEdE-0m6UieIIaTuO0WVkc$).
6. Hannan, K. B., & **King, A. C.,** (2022) Lower Limb Ground Reaction Force and Center of Pressure Asymmetry during Bodyweight Squats. *International Journal of Sports Physical Therapy.* *7(6):1075-1082*. <https://doi.org/10.26603/001c.37861>.
7. Harrison, K., Potts, E., **King, A. C.,** & Trocchio, R. B. (2021). The Effectiveness of Virtual Reality on Anxiety and Performance in Female Soccer Players. *Sports*, *9*(167). <https://doi.org/10.3390/sports9120167>
8. *Power, M.,* & **King, A. C.** (2021). The Role of Attainability and External Focus of Attention on Standing Long Jump Performance. *Brazilian Journal of Motor Behavior*. *15*(3), 207-215. <https://doi.org/10.20338/bjmb.v15i3.232>
9. **King, A. C.,** Patton, J., Dutt-Mazumder, A., & Newell, K. M. (2020). Center-of-Pressure Dynamics of Upright Standing as a function of Sloped Surfaces and Vision. *Neuroscience Letters*, *737*. <https://doi.org/10.1016/j.neulet.2020.135334>
10. **King, A. C.,** & Hannan, K. B. (2019). Segment Coordination Variability During Double Leg Bodyweight Squats at Different Tempos. *International Journal of Sports Medicine*. *40(11), 725-731*. <https://doi.org./10.1055/a-0965-7358>
11. Stone, J. D., **King, A. C.,** Mata, J. D., Goto, S., Hannan, J., Garrison, J. C., … Oliver, J. M. (2019). Joint-Level Analyses of the Back Squat with and without Intra-Set Rest in Trained Men. *International Journal of Sports Physiology and Performance*, *14*, 583–589. <https://doi.org/10.1123/ijspp.2018-0662>
12. **King, A. C.** (2019). Recovery trajectory of postural control impairments following a concussion: a case study. *Journal of Sports Rehabilitation*. *29*(3), 346-351. <https://doi.org/10.1123/jsr.2018-0440>
13. Dutt-Mazumder, A., **King, A. C**., & Newell, K. M. (2019). Recurrence Dynamics Reveals Differential Control Strategies to Maintain Balance on Sloped Surfaces. *Gait & Posture*, *69*, 169–175. <https://doi.org/10.1016/j.gaitpost.2019.01.040>
14. **King, A. C.** (2018). The effect of movement and load on the dynamic coupling of abdominal electromyography. *Neuroscience Letters*, *675*, 64–67. <https://doi.org/10.1016/j.neulet.2018.03.058>
15. Askow, A. T., Stone, J. D., Arndts, D. J., **King, A. C.,** Goto, S., Hannon, J. P., … Oliver, J. M. (2019). Validity and Reliability of a Commercially-Available Velocity and Power Testing Device. *Sports*, *6*(4), 170–178. [**https://doi.org/10.3390/sports6040170**](https://doi.org/10.3390/sports6040170)
16. **King, A. C.,** & Wang, Z. (2017). Asymmetrical stabilization and mobilization exploited during static single leg stance and goal directed kicking. *Human Movement Science*, *54*, 182–190. <https://doi.org/10.1016/j.humov.2017.05.004>
17. *Stark, L*., *Pickett, K.*, Bird, M., & **King, A. C**. (2016). Influence of Knee-to-Feet Jump Training on Vertical Jump and Hang Clean Performance. *The Journal of Strength & Conditioning Research*, *30*(11), 3084–3089. <https://doi.org/10.1519/JSC.0000000000001403>
18. **King, A. C.,** & Newell, K. M. (2015). Selective visual scaling of time-scale processes facilitates broadband learning of isometric force frequency tracking. *Attention, Perception, & Psychophysics*, *77*(7), 2507–2518. <https://doi.org/10.3758/s13414-015-0936-z>
19. Studenka, B. E., **King, A. C**., & Newell, K. M. (2014). Differential time scales of change to learning frequency structures of isometric force tracking. *Journal of Experimental Psychology: Human Perception and Performance*, *40*(4), 1629.
20. **King, A. C.,** & Newell, K. M. (2014). Practice and transfer of the frequency structures of continuous isometric force. *Human Movement Science*, *34*, 28–40.
21. **King, A. C.,** & Newell, K. M. (2013). The learning of isometric force time scales is differentially influenced by constant and variable practice. *Experimental Brain Research*, *227*(2), 149–159.
22. *Joseph, M. E.,* **King, A. C.,** & Newell, K. M. (2013). Task difficulty and the time scales of warm-up and motor learning. *Journal of Motor Behavior*, *45*(3), 231–238.
23. **King, A. C.,** Wang, Z., & Newell, K. M. (2012). Asymmetry of recurrent dynamics as a function of postural stance. *Experimental Brain Research*, *220*(3-4), 239–250. <https://doi.org/10.1007/s00221-012-3133-5>
24. **King, A. C.,** Ranganathan, R., & Newell, K. M. (2012). Individual differences in the exploration of a redundant space-time motor task. *Neuroscience Letters*, *529*(2), 144–149.
25. **King, A. C.,** Challis, J. H., Bartok, C., Costigan, F. A., & Newell, K. M. (2012). Obesity, mechanical and strength relationships to postural control in adolescence. *Gait & Posture*, *35*(2), 261–265.

## Presentation/Posters

### Completed/Published

1. Chen, K., Voskuil, C., Thijs, Z., Porter, R., Carr, J., Watts, C., & **King, A. C.,** (2023). *Rambling And Trembling Trajectories Are a Feasible Postural Control Assessment Tool for Individuals With Parkinson’s Disease.* South Central American Society of Biomechanics*.* Fort Worth, TX.
2. *Rivera, D., Robinson, T.* & **King, A.C.,** (2023). *Individual Differences for Novice Jumpers Following Differential and Repetition-Based Training Approaches.* South Central American Society of Biomechanics.Fort Worth, TX.
3. Farivar, M., *Harris, S.,* & **King, A.C.** (2023) *The Cross-Over Influence of Unilateral Lower Limb Muscular Fatigue on Postural Control.* South Central American Society of Biomechanics.Fort Worth, TX.
4. Agana, A.J. & **King, A.C.,** (2023) *Acute Cross-Over Effects of Lower Limb Muscle Fatigue on Movement Strategies Of Young Adults During Upright Standing.* South Central American Society of Biomechanics*.* Fort Worth, TX.
5. *Frazier, A.,* Lund, E., Werfel, K.L., & **King, A.C.,** (2023). *Dynamic Balance Assessment in Children with and without Hearing Loss.* South Central American Society of Biomechanics*.* Fort Worth, TX.
6. Chen, K., Thijs, Z., Porter, R., Carr, J., Watts, C., & **King, A. C.,** (2022). *Reliability and Validity of Mobility and Postural Sway in Parkinson’s Disease*. International Society of Posture and Gait Research. Montreal, Canada.
7. Agana, A. & **King, A.C.,** (2022). *Designing a study to examine acute crossover effects of lower limb muscle fatigue during upright standing in young adults*, JPS (John Peter Smith) Health Network, Fort Worth, TX.
8. Chen, K., & **King, A. C.** (2022). *Reliability of Center of Pressure Visual Feedback on Postural Control in Young Adults.* North American Society for the Psychology of Sport and Physical Activity. Waikoloa Beach, HI.
9. **King, A. C.,** Thijs, Z., Porter, R., Carr, J., Watts, C. (2022). *Functional Mobility and Postural Control in People with Parkinson’s Disease: Using a Multiple Baseline Design.* North American Society for the Psychology of Sport and Physical Activity. Waikoloa Beach, HI.
10. *Rivera, D.*, *Robinson, T*., & **King, A. C.** (2022). *The Effects of Differential Training on Learning in a Standing Broad Jump Task.* North American Society for the Psychology of Sport and Physical Activity. Waikoloa Beach, HI.
11. Harrison, K., Potts, E., **King, A. C.,** & Trocchio, R. B. (2022). *The Effects of Virtual Reality on Anxiety and Performance in Female Soccer Players*. North American Society for the Psychology of Sport and Physical Activity. Waikoloa Beach, HI.
12. Voskuil, C. Thijs, Z. **King, A. C.,** Porter, R., Watts, C., Carr, J. (2022) *Hand strength and force steadiness asymmetries in patients with Parkinson disease,* International Society of Electrophysiology and Kinesiology Conference, Quebec, Canada.
13. Agana, A. & **King, A. C.,** (2022). *Designing a study to examine acute cross-over effects of lower limb muscle fatigue during upright standing*, UNTHSC Research Appreciation Day, Fort Worth, TX.
14. Henige, J., Willilams,K., Dierckman, K., Thijs, Z. **King, A. C.,** Watts, C., Carr, J., Porter, R. (2022) *Physical Activity Behavior in Persons with Parkinson’s Disease,* International Journal of Exercise Science - American College of Sports Medicine – Texas Chapter Annual Conference, Waco, TX.
15. Patton-Baldridge, J., & **King, A. C.** (2020, June). *Stabilization Control of Single Leg Standing Balance on Inclined and Declined Sloped Surfaces*. *North American Society for the Psychology of Sport and Physical Activity*. Virtual.
16. Maynard, S., Lindley, H., Hannan, K. B., Goto, S., Hannon, J., Bothwell, J., … **King, A. C.** (2019, June). *Kinematic Variability of Female ACL Reconstruction and Healthy Athletes During the Drop Landing Task*. *North American Society for the Psychology of Sport and Physical Activity (NASPSPA)*. Baltimore, MD.
17. Patton, J., Lindley, H., & **King, A. C.** (2019, June). *Dynamic structure of COP trajectories and heading change as a potential marker of postural control impairments following a concussion*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity (NASPSPA)*. Baltimore, MD.
18. **King, A. C.,** Patton, J., & Lindley, H. (2019, June). *A Detrended Fluctuation Analysis of Postural Sway during Prolonged Sloped Standing*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity (NASPSPA)*. Baltimore, MD.
19. Stone, J. D., Arndts, D. J., Askow, A. T., **King, A. C.,** Goto, S., Hannon, J., … Oliver, J. M. (2018). *Velocity-based visual biofeedback enhances back squat performance at different levels of fatigue.* *International National Strength and Conditioning Association Conference (NSCA)*. Madrid, Spain.
20. Arndts, D. J., Stone, J. D., Askow, A. T., **King, A. C.,** Goto, S., Hannon, J., … Oliver, J. M. (2018). *Analyzing the effect of velocity-based biofeedback on lower limb joint angles during the back squat*. *International National Strength and Conditioning Association Conference (NSCA)*. Madrid, Spain.
21. Askow, A. T., Stone, J. D., Arndts, D. J., **King, A. C.,** Goto, S., Hannon, J., … Oliver, J. M. (2018). *Validity and reliability of a commercially-available velocity and power testing device.* *National Strength and Conditioning Association Conference (NSCA)*. Indianapolis, IN.
22. Hannan, K. B., Stone, J., Ardnts, D., Anzalone, A., Oliver, J. M., Bothwell, J. M., & **King, A. C**. (2018, August). *Segment Coordination Variability Changes During Back Squats with Biofeedback*. *American Society of Biomechanics*. Rochester, MN.
23. Arndts, D. J., Stone, J. D., Askow, A. T., **King, A. C.**, Goto, S., Hannon, J., … Oliver, J. M. (2018). *Effect of Biofeedback on Muscle Activity During Fatiguing Sets of the Back Squat*. *National Strength and Conditioning Association Conference (NSCA)*. Indianapolis, IN.
24. Stone, J. D., **King, A. C.,** Mata, J. D., Goto, S., Hannon, J., Garrison, J. C., … Oliver, J. M. (2018). *A joint-level analysis of the back squat during traditional and cluster strength set configurations in trained men*. *National Strength and Conditioning Association Conference (NSCA)*. Indianapolis, IN.
25. Jennings, W. J., Stone, J. D., Mata, J. D., Garrison, J. C., Goto, S., Jones, M. T., **King, A. C.,** Oliver, J. M. (2018). *Cluster Sets Attenuate Power Loss at Higher Intensities During the Back Squat Exercise*. *American Society of Sport Medicine*. Minneapolis, MN.
26. Lindley, H. N., Goto, S., Hannan, J., Garrison, C., Bothwell, J. M., & **King, A. C.,** (2018, August). *Biomechanical Variability Among Individuals Following ACL Reconstruction and Rehabilitation*. *American Society of Biomechanics*. Rochester, MN.
27. Hannan, K.B., J, M. D., Oliver, J. M., J, B. M., & **King, A. C.** (2018, June). *Lower Extremity Coordination Patterns Between Traditional and Cluster Training During Back Squat.* *North American Society for the Psychology of Sport and Physical Activity*. Denver, CO.
28. Jennings, W., Arndts, D. J., Dechant, Z., Plum, D. L., Fritz, R. K., Valle, E. R., **King, A. C.,** … Oliver, J. M. (2018). *Effect of verbal cue on muscle activation in men and women during the "Y" exercise.* *National Strength and Conditioning Association Conference (NSCA)*. Indianapolis, IN.
29. **King, A. C.,** Besand, K. B., Bothwell, J. M., Garrison, J. G., Hannon, J. P., & Goto, S. (2017). *Effect of Different Sports on Hip and Knee Biomechanics in Adolescent Females during a Jump-Landing*. *American Society of Sports Medicine Conference (ACSM)*. Denver, CO.
30. **King, A. C.,** Stone, J. D., Arndts, D. J., Anzalone, A. J., Goto, S., Hannon, J., … Oliver, J. M. (2017). *The Effects of Velocity-Based Bioefeedback on Performance During Fatiguing Sets of Back Squat: A Preliminary Investigation*. *National Strength and Conditioning Association Conference (NSCA)*. Las Vegas, NV.
31. **King, A. C.,** Besand, K. B., Bothwell, J. M., Garrison, J. G., Goto, S., & Hannon, J. P. (2017). *Lower Extremity Segment Coordination Following Anterior Cruciate Ligament Reconstruction*. *American Society for Biomechanics (ASB)*. Boulder, CO.
32. **King, A. C.,** (2017). *Asymmetrical Intra-Limb Coordination at Return to Sport following Anterior Cruciate Ligament Reconstruction*. *Gait & Clinical Movement Analysis Society Conference (GCMAS)*. Salt Lake City, UT.
33. Mata, J. D., Stone, J. D., Hannon, J., Garrison, J. C., Bothwell, J., … **King, A. C.** (2017). *The Effect of Cluster Sets on Hip and Knee Joint Angles During the Back Squat Exercise*. *National Strength and Conditioning Association Conference (NSCA)*. Las Vegas, NV.
34. **King, A. C.,** *Wittmeyer, S*., *McWilliams, A*., & Bird, M. (2016). *Drop-Landing Kinematic, Kinetic, and Strength Correlates for Women*. *American Society of Biomechanics (ASB)*. Raleigh, NC.
35. **King, A. C.,** *Meyer, R.,* *Sextro, A*., & Bird, M. (2016). *Dynamic Curve Analysis of Surface EMG Patterns of Abdominal Muscle as a Function of Exercise and Load*. *International Society of Electrophysiology and Kinesiology (ISEK) Congress*. Chicago, Illinois.
36. **King, A. C.** (2015). *Asymmetrical Balance Control during a Simple Kicking Movement*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity*. Portland, OR.
37. **King, A. C.,** *Stark, L*., *Pickett, K*., & Bird, H. M. (2014). *An exploration of the effect of knee-to-feet jump training on performance*. *International Society of Biomechanics (ISB)*. Johnson City, TN.
38. **King, A. C.,** *Stark, L.,* *Pickett, K.,* & Bird, H. M. (2014). *Applying the specificity of training to athletic power movements*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity (NASPSPA)*. Minneapolis, MN.
39. **King, A. C.** (2013). *Constant and Variable Practice Differentially Influences the Local and Global Dynamics of Isometric Force Tracking for Irregular Target Paths*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity*. New Orleans, LA.
40. **King, A. C.,** & Newell, K. M. (2012). *Specificity and variability of practice differentially influence the time scales of learning isometric force targets*. *Society for Neuroscience*. New Orleans, LA.
41. **King, A. C.,** Wang, Z., & Newell, K. M. (2011). *Recurrence analysis of COPleft, COPright, and COPnet trajectories as a function of posture and visual information*. *Progress in Motor Control*. Cincinnati, OH.
42. **King, A. C.,** Challis, J. H., Bartok, C. J., Costigan, F. A., & Newell, K. M. (2011). *Strength decreases postural variability in obese adolescents*. *American Society of Biomechanics (ASB)*. Long Beach, California.
43. **King, A. C.,** Challis, J. H., Bartok, C. J., Costigan, F. A., & Newell, K. M. (2011). *Obesity mediates strength and physical parameters variables of postural control*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity*. Burlington, VT.
44. **King, A. C.,** Newell, K. M., Challis, J. H., Bartok, C. J., & Costigan, F. A. (2011). *Growth and Obesity during Adolescence: Inertial Constraints on Physical  Activity*. *National Conference for the American Alliance of Health,  PhysicalEducation, Recreation and Dance*. San Diego, CA.
45. **King, A. C.,** Challis, J. H., Bartok, C. J., Costigan, F. A., & Newell, K. M. (2011). *Obesity and strength influences on postural control in the adolescent growth spurt*. *Research Summit for the Pennsylvania State University Institute of Diabetes and Obesity*. University Park, PA.
46. **King, A. C.,** & Newell, K. M. (2010). *Practice schedules and times scales of motor learning*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity*. Tucson, AZ.
47. **King, A. C.,** & Newell, K. M. (2009). *Dimensional learning in an integrated space-time function*. *Society for Neuroscience*. Chicago, IL.
48. **King, A. C.,** & Newell, K. M. (2009). *Approach strategies influence pathways of change in a speed-accuracy trade-off task*. *National Conference for the North American Society for the Psychology of Sport and Physical Activity (NASPSPA)*. Austin, TX.

### Submitted

## Proceedings Publication

### Completed/Published

1. Augsburger, G., Soloveva, A., Watts, C. R., **King, A. C**., Castleberry, T., & Carr, J. (2021). An Examination of Rapid Force and EMG Rise in the Morning Versus the Evening. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 2, p. 75).
2. Patton-Baldridge, J., & **King, A. C.** (2020). Center of Pressure Position and Velocity Control During Single Leg Standing on Sloped Surfaces. In *International Journal of Exercise Science: Conference Proceedings* (Vol. 2, p. 91). Texas - ACSM conference. <https://digitalcommons.wku.edu/ijesab/vol2/iss12/91>
3. **King, A. C.,** *Day, B*., Patton, J., Maynard, S., *Wright, E*., & Bird, M. (2019). The Effect of Jump Direction and Planning on Drop Landing Mechanics in Female Athletes. In *International Society of Biomechanics for Sport*.
4. *Stark, L*., *Pickett, K.,* **King, A.C.,** & Bird, M. (2014). An Exploration of the Effect of Knee-to-Feet Jumps on Performance. In *International Society for Biomechanics of Sports (ISBS) -Conference Proceedings Archive*.
5. **King, A. C.** (2013). Motor learning and force output dynamics.
6. Newell, K. M., Challis, J. C., Bartok, C., Costigan, F. A., & **King, A. C.** (2011). Growth and Obesity During Adolescence: Inertial Constraints on Physical Activity. In *Research Quarterly for Exercise and Sport* (Vol. 82).
7. **King, A. C.,** Costigan, A., Challis, J. H., Bartok, C. J., & Newell, K. M. (2011). Obesity mediates strength and physical parameters factors of postural control. In *Journal of Sport & Exercise Psychology* (Vol. 33).
8. **King, A.C**., & Newell, K. (2009). Approach strategies influence pathways of change in a speed-accuracy tradeoff task. In *Journal of Sport & Exercise Psychology* (Vol. 31).

## Other Contributions

### Completed/Published

King, A. C. (2010). Practice Schedules, Time Scales and Motor Learning. *Graduate School*.

# ****Research Grants and Contracts****

### *Pending*

### External

## Funded - Completed

1. American Society of Biomechanics Regional Meeting Grant (2023-2024). South Central ASB 2024 Meeting. Role: PI, $2,000.
2. Houston Astros (2018-2019). “Validation of Wearable Sensors to Detect Pitching Mechanics Relative to Motion Capture System”. Role: PI, $20,000. Research team: Jonathan Oliver (TCU, Co- PI), Max Power, Dylan Hoover.
3. Abdominal Exerciser (2015-2016). “Independent testing of a novel abdominal device through assessment of electromyography of five abdominal muscles”. Role: Co-I, $17,500.00. Research team: Michael Bird (Truman State University), Alex Sextro, Rachel Meyer.

**Internal**

***Funded – In progress***

1. Texas Christian University, Julian Carr Aliber Endowed Fund, 2021-2022, “The Effects of Differential Learning on Non-dominant Hand Dexterity”, Role: Faculty Mentor, $750, Research team Haden Ray (PI).
2. Texas Christian University, Invest in Scholarship (IS) grant, 2023-2024, “Early Intervention to Improve Quadriceps Function Following ACL Injury”, Role: Co-I, $20,000. Research team: Joshua Carr (TCU, PI).

### Under Review

### Funded - Completed

1. Texas Christian University, Research & Creative Activity Fund (RCAF), 2022-2023, “Examining the relation between postural control, fatigue, and literacy in children with hearing loss”, Role: Co-I, $5,890. Research team: Emily Lund (TCU, Co-I).
2. Texas Christian University, Julian Carr Aliber Endowed Fund, 2021-2022, “Differential Training on Learning in a Standing Broad Jump -Presentation Travel”, Role: Faculty Mentor, $500, Research team Diego Rivera (PI).
3. Texas Christian University, Julian Carr Aliber Endowed Fund, 2020-2021, “The Effects of Differential Training on Learning in a Standing Broad Jump”, Role: Faculty Mentor, $500, Research team Diego Rivera (Co-PI), Tanner Robinson (Co-PI).
4. Texas Christian University, Research & Creative Activity Fund, 2017-2018,” Asymmetrical Coordination Patterns following Anterior Cruciate Ligament Reconstruction”, Role: PI, $4,000, Research team: Kelci Hannon.
5. Texas Christian University, Junior Faculty Summer Research Program, 2017, “Asymmetrical Coordination Patterns following Anterior Cruciate Ligament Reconstruction”, Role: PI, $6,000, Role: PI.
6. Truman State University, Grants-in-Aid of Scholarship and Research, 2016, “Effect of Boredom on Muscular Strength”, Role: Co-I, $750, Research team: Michael Bird (Truman State University, Co-I).

**Not Funded**

1. Association of Schools Advancing Health Professions (Interprofessional Collaboration Research Grant). (2022) “Neuromuscular, Functional, and Perceived Asymmetries in Parkinson's Disease - An Interprofessional Approach. Role: Co-PI, 1 year, $24,948. Research team: Josh Carr  (TCU, Co-PI), Chris Watts (TCU, Co-PI), Ryan Porter (TCU, Co-PI), Caleb Voskuil (TCU).
2. Texas Christian University, Invests in Scholarship, 2022, “Asymmetrical Neuromotor Function in Parkinson's Disease”, Role: PI, $18,710, Research team: Josh Carr (TCU, Co-PI), Chris Watts (TCU, Co-PI), Ryan Porter (TCU, Co-PI).
3. Texas Christian University, Invests in Scholarship, 2021, “Punching out Parkinson's: A Longitudinal Analysis of Neuromotor Function in Parkinson's Disease”, Role: PI, $25,967, Research team: Josh Carr (TCU, Co-PI), Chris Watts (TCU, Co-PI), Ryan Porter (TCU, Co-PI).
4. Texas Christian University, Invests in Scholarship, 2019, “Biofeedback Training to Alter Lower Extremity Neuromuscular Coordination”, Role: PI, $20,000.
5. Texas Christian University, Instructional Development Grant, 2016, “Facilitating Interprofessional Education through Team-Based Learning in a Biomechanics Course”, Role: PI, $1,595.

**Service**

## Department

2021–present Curriculum Committee, Kinesiology, Committee Member

2020-present Department Advisory Committee, Kinesiology, Chair

2019-present Interprofessional Education Coordinator, Kinesiology

2019-present Student Kinesiology Association, Faculty Sponsor

2021-2022 Faculty Search Hiring Committee for Departmental Chair, Kinesiology, Committee Member

2021-2022 Faculty Search Hiring Committee for Athletic Training Professional Practice, Kinesiology, Committee Member

2020 Kinesiology MS accreditation reviewer, Graduate Program

2019-2020 Faculty Search Hiring Committee for Exercise Physiology (2 positions), Kinesiology, Committee Member

2018-2019 Faculty Search Hiring Committee for Sport/Exercise Psychology, Kinesiology, Committee Member

2018 Graduate Program Director, Kinesiology

2016-2017 Truman State University, Exercise Science Program Review, Committee Member & Co-author,

2013-2014 Search committee member for Athletic Training Program Director, Truman State University, Committee Member

## College/School

2020-2024 College Advisory Committee, Harris College of Nursing & Health Sciences, Departmental Representative

2020-present InterProfessional Education and Practice, Harris College of Nursing & Health Sciences, Committee Member

2022-2023 Faculty Search Hiring Committee (6 positions), Nursing, External Committee Member

2021-2023 Strategic Planning, Harris College of Nursing &Health Sciences, Committee Member

2020-2023 Harris Research Committee, Harris College of Nursing & Health Sciences, Departmental Representative

2020 IPE - Research Event, Harris College of Nursing &Health Sciences, Faculty Facilitator

2019 Outstanding Thesis Committee, Harris College of Nursing & Health Sciences, Committee Member

2018-2019 College Curriculum Committee, Harris College of Nursing & Health Sciences, Committee Member

2018 Harris College Fellows Branding Competition Judge, Harris College of Nursing &Health Sciences, Committee Member

2017-2018 Leadership Development Committee, Harris College of Nursing & Health Sciences, Committee Member

2018 Intermediate Interprofessional Education Team Activity, Harris College of Nursing & Health Sciences, Departmental Facilitator

2017-2018 Student Research Symposium Committee, Texas Christian University, Faculty Reviewer

2016-2017 Search Committee for Dean of the School of Science and Mathematics, Truman State University, Committee Member

## University

2022-2025 Faculty Senate, Harris College of Nursing & Health Sciences Senator

2022-2023 Subcommittee: Educational Evaluation Committee

2023-2024 Subcommittee: Faculty Relations Committee

2018-2021 Traffic Regulations and Appeals, Texas Christian University, Faculty Representative

## Professional Service

## 2023-2025 North American Society for the Psychology of Sport and Physical Activity, Motor Development, Learning, and Control Online Research Seminar Series, Committee Member

## 2023-2024 South Central American Society of Biomechanics Regional meeting, Meeting Chair

## 2022-2023 South Central American Society of Biomechanics Regional meeting, Program Committee Member

## Community Service

2022-present School Health Advisory Council, FWISD, Parent Representative

2015-2016Health Partners, A.T. Still University, Faculty Facilitator

## Journal Reviewer

*Acta Psychologica*

*BMC – Neuroscience*

*Brazilian Journal of Motor Behavior*

*Entropy*

*European Journal of Applied Physiology*

*Experimental Brain Research*

*Gait & Posture*

*Human Movement Science*

*International Journal of Foot and Ankle*

*Journal of Applied Physiology*

*Journal of Biomechanics*

*Journal of Clinical Biomechanics*

*Journal of Motor Behavior*

*Journal of Neuroscience*

*Journal of Sport Rehabilitation*

*Neurorehabilitation & Neural Repair*

*Perceptual & Motor Skills*

*PLOS ONE*

*Scientific Reports*

*Somatosensory & Motor Research*

Conference Abstract Reviewer

2022 Motor Learning and Control Program Committee, North American Society for the Psychology of Sport and Physical Activity (NASPSPA)

2019 Motor Learning and Control Program Committee, North American Society for the Psychology of Sport and Physical Activity (NASPSPA)

2018 Motor Learning and Control Program Committee, North American Society for the Psychology of Sport and Physical Activity (NASPSPA)

2016 Gait & Clinical Movement Analysis Society (GCMAS)

Students Mentored

*PhD*

2022- Morteza Farvivar, Dissertation Chair

2022-2023 Calib Voskuil, Committee Member

2019-2021 Cheng-Ju (Texas Women’s University), External Committee Member

*Master’s Thesis*

2022-2024 Rebekah Gay, Committee Member

2021-2023 Kuanting Chen, Thesis Chair

2021-2023 Channing Burning, Committee Member

2020 Emily Potts, Thesis Chair

2019-2021 Kaitlyn Harrison, Thesis Committee Member

2018-2019 Sheena Maynard-Turner, Thesis Chair

2018-2020 Jacey Patton-Baldridge, Thesis Chair

2018 Matt Tynan, Treatise Committee Member

2017-2018 Kyla Collins, Thesis Committee Member

2017-2018 Tyler Pazik, Thesis Committee Member

2017-2018 Hadley Lindley, Thesis Chair

2017-2017 Raelene Agostini, Thesis Chair

2016-2017 Jason Stone, Thesis Committee Member

2016-2018 Kelci Hannon, Thesis Chair

2016-2017 JD Mata, Thesis Committee Member

*Medical School*

2021-2024 Anton Agana

*Undergraduates*

2023-2025 Haden Ray, Undergraduate Research Assistant

2023-2025 Andrew Brizzell, Honors Thesis Committee Chair

2023-2024 Evan Robinson, Honors Thesis Committee Member

2023-2024 Ellie Jackson, Honors Thesis Committee Member

2019-2023 Diego Rivera, STEM Scholar, McNair Research, Honors Thesis Committee Chair, \*\*1st place Harris College Boller Presentation

2022-2023 Abby Frazier, Undergraduate Research Assistant

2023 Emma Bair & Alisha Yoo, Undergraduate Research Assistant

2022 Olivia Kuhn, Undergraduate Research Assistant

2021-2022 Jeremiah Hines, McNair Research

2021 Daniel Triana, Senior Research

2021 Alyssa Morris, Honors Thesis Committee Member

2020-2021 Jacob James, Honors Thesis Committee Member

2019-2020 Max Butcher, Josie Mootz, Brooke Wetzberger, Senior Research

2019-2021 Sara Harris, Honors Thesis Committee Chair, \*\*1st place Harris College Boller Presentation

2019-2020 Margaret Koopman, Honors Thesis Committee Member

2019-2021 Tanner Robinson, Undergraduate Research Assistant

2018-2019 Tahlia Wilson-Nealy, McNair Scholar

2018-2020 Jayne Kernodle, Honors Thesis Chair

2018-2019 Max Power, Undergraduate Research Assistant

2017-2018 Dylan Hoover, Undergraduate Research Assistant

2017-2018 Ariana Grabowski, Honors Thesis Chiar

2017-2018 Daniel Arndts, Honors Thesis Committee Member

2016-2017 Claire Hanrahan, Honors Thesis Committee Member

2016-2017 Maddie Curran, Honors Thesis Committee Member

2015-2016 Adam Grosskruetz, Natalie Nealon, Lucas Knoche, Molly Turnure , Undergraduate Research Assistants, \*\*Poster presentation at 2016 Student Research Conference at Truman State University

2016 Rachel White, Undergraduate Research Assistant, \*\*Poster presentation at 2016 Student Research Conference at Truman State University

2015 Eric Trapp , Undergraduate Research Assistant

2015-2016 Haley Bruns, Undergraduate Research Assistant, \*\*Poster presentation at 2016 Student Research Conference at Truman State University

2015-2016 Nicholas Kahn, Undergraduate Research Assistant

2013-2014 Trudi Gatteys, Undergraduate Research Assistant, \*\*Poster presentation at 2014 TruScholars Research Symposium

2013-2014 Laura Stark, Taylor Dinyer , Undergraduate Research Assistant, \*\*Oral presentation at 2014 Truman State University Student Research Conference

2011 Morina Joseph, Undergraduate Research Assistant