

## **Kaitlin M. Gallagher, PhD**

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Updated: April 24, 2017

### **PROFESSIONAL EXPERIENCE**

Assistant Professor of Kinesiology

2015 – Present

Department of Health, Human Performance and Recreation  
University of Arkansas, Fayetteville, AR

#### Awards

#### **2016-2017 Rising STAR (service, teaching, advising, research)**

Award for outstanding all-around new faculty member in the College of Education and Health Professions

#### **Office of Nationally Competitive Awards Faculty Gold Medal**

for continued support of undergraduate research and scholarship opportunities

#### **2016-2017 Outstanding Faculty Award**

Department of Health, Human Performance, and Recreation

### **EDUCATION**

Doctor of Philosophy (Kinesiology – Biomechanics)

2010 – 2014

University of Waterloo, Faculty of Applied Health Science  
Waterloo, ON

*Thesis:* The relationship between lumbopelvic posture, movement patterns and transient low back pain development during prolonged standing

*Advisor:* Dr. Jack P. Callaghan

Master of Science (Kinesiology – Biomechanics)

2009 – 2010

University of Waterloo, Faculty of Applied Health Science  
Waterloo, ON

*Thesis:* N/A (Fast Track to PhD)

*Advisor:* Dr. Jack P. Callaghan

Bachelor of Science (Honours Kinesiology, Co-operative Education)

2004 – 2009

University of Waterloo, Faculty of Applied Health Science  
Waterloo, ON

**FUNDED GRANTS**

**2017:** \$9,500.00

**2016:** \$23,993.00

**2015:** \$5,000.00

2017	U of A Honors College	The influence of Virtual Reality headset use on neck kinematics and electromyography  Student: Tatianna Balis Mentor: <b>Kaitlin Gallagher</b>	\$2,250.00
2017	U of A Honors College	Does the use of handheld computer devices put people at risk for cervical spine injuries?  Student: Kate Tarver Mentor: <b>Kaitlin Gallagher</b>	\$3,500.00
2017	Arkansas Department of Higher Education	Student Undergraduate Research Fellowship (SURF) – Ethan Douglas (Student), <b>Dr. Kaitlin Gallagher</b> (Mentor)	\$3,750.00
2016	University of Arkansas	Faculty Development and Enhancement Collaborative Research Grant	\$2,000.00
2016	NIOSH ERC Pilot Projects	<i>Southwest Center for Occupational and Environmental Health</i> : Using walking breaks to reduce the biomechanical and cardio-metabolic risk factors related to prolonged occupational standing  PI: <b>Kaitlin Gallagher</b> Co PI: Matthew Ganio	\$10,000.00
2016	U of A Honors College Grant	Does the use of handheld computer devices put people at risk for cervical spine injuries?  Student: Ethan Douglas Mentor: <b>Kaitlin Gallagher</b>	\$3,500.00
2016	U of A Honors College Grant	The Influence of Upper Extremity Position on Balance and Abdominal Muscle Activity  Student: Jacob Smith	\$3,500.00

Mentor: **Kaitlin Gallagher**

2016	U of A Honors College Grant	The Influence of Anti-Fatigue Matting on Gluteus Medius Muscle Activity During Functional Reaches	\$2,250.00
		Student: Marcus Payne Mentor: <b>Kaitlin Gallagher</b>	
2016	Focal Upright Furniture	Office equipment provided in-kind	\$2743.00
2015	Teknion Ltd	Office equipment provided in-kind	~\$5,000.00
2013	CRE-MSD	Assessing the effectiveness of anti-fatigue matting in those shown to develop low back pain during prolonged standing PI: <b>Kaitlin Gallagher</b> Co-Investigators: Andrew Laing, Jack P. Callaghan	\$7,900.00
2012	CRE-MSD	Investigating the influence of an external tablet monitor arm in both sitting and standing office workstation scenarios PI: <b>Kaitlin Gallagher</b> Co-Investigators: Thomas Karakolis, Jack P. Callaghan	\$7,940.00
2012	CRE-MSD	Mobile application development and validation for field quantification of trunk kinematics PI: Thomas Karakolis Co-Investigators: <b>Kaitlin Gallagher</b> , Marcus Yung, Richard Wells, Jack P. Callaghan	\$4,870.00

**SUBMITTED GRANTS**

2017	National Athletic Trainer's Association Research and Education Foundation	Determining work-related musculoskeletal disorders and management strategies in student athletic trainers  PI: Taylor Lippert Mentor: <b>Dr. Kaitlin Gallagher</b>	\$1,000.00
2017	American Society of Biomechanics	Junior Faculty Research award: Cervical region passive tissue characteristics before and after prolonged neck flexion	\$4,425.00
2017	American Society of Biomechanics	Research Travel Award	\$1,000.00

## **PUBLICATIONS**

NOTE: underlined authors are those who were undergraduate students during project completion

\* = corresponding author

### **Articles in publication (n=18)**

1. Fewster, K.M., **Gallagher, K.M.**, Howarth, S., Callaghan, J.P\*. Center of pressure regularity is differentially influenced by low back pain development during prolonged standing. *Gait and Posture*.

KMG was responsible for study design, data acquisition, and providing final approval of the submitted manuscript.

2. Douglas, E., **Gallagher, K.M.\***. (2017) The influence of trunk angle on head and neck posture while reading a tablet computer – a comparison to the cervical spine flexion-relaxation phenomenon. *Applied Ergonomics*. 60, 342-347.  
Doi:10.1016/j.apergo.2016.12.013

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the submitted manuscript.

3. Fewster, K.M., **Gallagher, K.M.**, Callaghan, J.P\*. (2017) The effect of standing interventions on low back posture and muscle activation patterns. *Applied Ergonomics*. 58, 281-86.  
<http://dx.doi.org/10.1016/j.apergo.2016.07.002>

KMG was responsible for study design, data acquisition, interpretation of the results, and providing final approval of the submitted manuscript.

4. Riddell, M.F., **Gallagher, K.M.**, McKinnon, C.D., Callaghan, J.P\*. (2016) Influence of input device, work surface angle, and task on spine kinematics. *Work*. 55(4), 773-782.

KMG was responsible for study design, analysis, interpretation of the results, editing of the manuscript, and providing approval for the final submitted manuscript.

5. **Gallagher, K.M.**, Sehl, M., Callaghan, J.P\*. (2016). A radiographic assessment of lumbar spine posture in four different upright standing positions. *Clinical Biomechanics*, 37, 131-136. <http://dx.doi.org/10.1016/j.clinbiomech.2016.07.004>

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the submitted manuscript.

6. **Gallagher, K.M.**, Callaghan, J.P\*. (2016). Standing on a declining surface reduces transient prolonged standing induced low back pain development. *Applied Ergonomics*. 56, 76-83.

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the published manuscript.

7. **Gallagher, K.M.**, Callaghan, J.P\*. (2016) The influence of an oblique path of staircase descent on toe placement and foot clearance. *Journal of Occupational Safety and Health*, 22(4), 580-6. <http://dx.doi.org/10.1080/10803548.2016.1181891>.

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the published manuscript.

8. Kingston D.C., Riddell M.F., McKinnon C.D., **Gallagher K.M.**, Callaghan J.P\*. (2016) Influence of Input Hardware and Work Surface Angle on Upper Limb Kinematics in a Hybrid Workstation. *Human Factors*. 58(1), 107-19. <http://dx.doi.org/10.1177/0018720815607317>.

KMG was responsible for developing study design, assisting with the setup of data acquisition, and providing final approval of the published manuscript.

9. **Gallagher, K.M.**, Callaghan, J.P\*. (2015) Early static standing is associated with prolonged standing induced low back pain. *Human Movement Science*, 44, 111-121.

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the published manuscript.

10. Callaghan, J.P.\*, De Carvalho, D.E., **Gallagher, K.M.**, Karakolis, T., Nelson-Wong, E. (2015). Is standing the solution to sedentary office work? *Ergonomics in Design*, 23(3).

This invited paper featured work from KMG's doctoral research.

11. **Gallagher, K.M.**, Campbell, T., Callaghan, J.P\*. (2014). The influence of a seated break on prolonged standing induced low back pain development. *Ergonomics*, 57(4), 555-62.

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the published manuscript.

12. **Gallagher, K.M.**, VandenBussche, J., Callaghan, J.P\*. (2013) Gait adaptations to different paths of stair descent. *Gait and Posture*, 38, 691-95.

KMG was responsible for study design, data acquisition, analysis, interpretation of the results, drafting the manuscript, and providing final approval of the published manuscript.

13. **Gallagher, K.M.**, Wong, A., Callaghan, J.P\*. (2013). Possible mechanisms for the reduction of low back pain associated with standing on a sloped surface. *Gait & Posture*, 37, 313-8.

KMG was responsible for study design, data acquisition, analysis, interpretation, drafting the manuscript and providing final approval of the published manuscript.

14. Howarth, S.J., **Gallagher, K.M.**, Callaghan, J.P\*. (2013) Postural influence on short-range passive properties of the porcine cervical spine under anterior shear loading. *Medical Physics Engineering*, 35, 910-18.

KMG was responsible for data acquisition, which was performed with SJH, editing the manuscript, and providing final approval for publication.

15. Wong, A.\*, **Gallagher, K.M.**, Callaghan, J.P. (2012) Computerized system for measurement of muscle thickness based on ultrasonography. *Computer Methods in Biomechanics & Biomedical Engineering*. <http://dx.doi.org/10.1080/10255842.2011.617003>

KMG provided the ultrasound data (Gallagher et al. (2013) Gait and Posture) used to validate and demonstrate the use of the proposed method. KMG also drafted the

sections of the manuscript relating to the methods used in the laboratory to test this new algorithm for muscle thickness measurement and results relevant to the collected data. Lastly, KMG was involved in editing of the manuscript and providing final approval for publication.

16. **Gallagher, K.M.**, Fischer, S.L, Howarth, S.J., Albert, W., Callaghan, J.P\*. (2011) Surrogate representation of a task as a method for data reduction in calculating cumulative spinal loading. *Theoretical Issues in Ergonomics Science*, 12(6), 558-72.

KMG was responsible for the conceptualization of the study based on an issue found with the data analysis during my summer 2007 co-op term. Data was taken from a previous study and KMG was responsible for data analysis, interpretation of results alongside SJH and SLF, drafting the manuscript and providing final approval for publication.

17. **Gallagher, K.M.**, Nelson-Wong, E., Callaghan, J.P\*. (2011) Do individuals who develop transient low back pain exhibit different postural control strategies than non-pain developers during prolonged standing. *Gait & Posture*, 34, 490-5.

KMG was responsible for the data processing, analysis, and interpretation of the results of data previously collected by ENW. KMG was also responsible for drafting the manuscript and providing final approval for publication.

18. **Gallagher, K.M.**, Howarth, S.J., Callaghan, J.P\*. (2010) Effects of anterior shear displacement rate on the structural properties of the porcine cervical spine. *Journal of Biomechanical Engineering*, 132(9), 091004.

KMG was responsible for data collection, which was performed with SJH, involved in data analysis and interpretation with the help of SJH, drafting of the manuscript, and providing final approval for publication.

### **Articles Submitted (n=2)**

1. Viggiani, D., **Gallagher, K.M.**, Sehl, M., Callaghan, J.P. The distribution of lumbar intervertebral angles in upright standing and extension is related to low back pain developed during standing. Submitted to *Spine*.

KMG was responsible for data collection, data acquisition, and providing final approval of the submitted manuscript.

2. Douglas, E.C, **Gallagher, K.M.** Does neck angle approach the angle of onset of the cervical extensor muscle flexion-relaxation phenomenon when reading a tablet?. Submitted to *IIE Transactions on Occupational Ergonomics and Human Factors*.

KMG was responsible for study design, student mentoring, and providing feedback on the final manuscript.

### **Conference contributions (refereed, n=27)**

1. Fewster, K.M., Riddell, M., **Gallagher, K.M.**, Callaghan, J.P. (2016). The impact of an elevated standing intervention on low back pain development and muscle activation patterns. *Association for Canadian Ergonomists Annual Conference*, October 2016, Niagara Falls, Ontario. *Awarded first place in the Doctoral Presentation Category*

2. Viggiani, D., **Gallagher, K.M.**, Sehl, M., Callaghan, J.P. (2016). Intervertebral angle distributions during standing postures in those who do and do not develop low back pain during standing. *Canadian Society for Biomechanics Conference*, Hamilton, ON, CA, July 2016.
3. Fewster, K.M., **Gallagher, K.M.**, Howarth, S.J., Callaghan, J.P. (2016) Changes in center of pressure regularity following prolonged standing. *Canadian Society for Biomechanics Conference*, Hamilton, ON, CA, July 2016.
4. **Gallagher, K.M.**, Callaghan, J.P. (2016). A comparison of the lumped in vivo lumbar spine passive tissue properties in prolonged standing induced low back pain developers and non-pain developers. *Canadian Society for Biomechanics Conference*, Hamilton, ON, CA, July 2016.
5. Douglas, E.C., **Gallagher, K.M.** (2016). A comparison of three seated tablet reading postures and cervical spine flexion-relaxation. *The 40<sup>th</sup> American Society of Biomechanics Conference*, Raleigh, NC. August 2016.
6. Payne, M., Weaver, T., Laing, A., Callaghan, J.P., **Gallagher, K.M.** (2016). The effects of anti-fatigue matting stiffness on gluteus medius muscle activity during functional reaches. *The 40<sup>th</sup> American Society of Biomechanics Conference*, Raleigh, NC. August 2016.
7. **Gallagher, K.M.**, Douglas, E.C. (2016). Trunk posture influences neck angle when reading a tablet computer. *Human Factors and Ergonomics Society Meeting*, Washington, DC. September 2016.
8. Fewster, K., **Gallagher, K.M.**, Callaghan, J.P. (2015). The effect of standing aides on low-back posture and muscle activation patterns. *The Proceedings of the 46<sup>th</sup> Association for Canadian Ergonomists Conference*, Waterloo, Ontario, Canada, October 2015.
9. Riddell, M.F., Fewster, K., **Gallagher, K.M.**, Callaghan, J.P. (2015). Early and consistent leg movement during prolonged standing, via a standing aid, to reduce the development of low back pain. *The 46<sup>th</sup> Association for Canadian Ergonomists Conference*, Waterloo, Ontario, Canada. October 2015.
10. **Gallagher, K.M.**, Callaghan, J.P. (2015). Low back pain status and prolonged standing alter center of pressure profiles during constrained standing. *The 39<sup>th</sup> American Society of Biomechanics Conference*, Columbus, Ohio. August 2015.
11. **Gallagher, K.M.**, Callaghan, J.P. (2015). Standing in ankle plantarflexion reduces low back pain reports during prolonged standing. Submitted to the *39<sup>th</sup> American Society of Biomechanics Conference*, Columbus, Ohio. August 2015.
12. Riddell, M.F., **Gallagher, K.M.**, McKinnon, C.D., Callaghan, J.P. (2015). Influence of input device, work surface angle, and, and task on spine kinematics during simulated office work. *The 39<sup>th</sup> American Society of Biomechanics Conference*, Columbus, Ohio. August 2015.
13. **Gallagher, K.M.**, Sehl, M., Callaghan, J.P. (2014). Lower limb position influence on the lumbar spine: Implications for pain development during prolonged standing. *7<sup>th</sup> World Congress of Biomechanics*. July 2014, Boston, MA.

14. Kingston, D.C., Riddell, M.F., McKinnon, C.D., **Gallagher, K.M.**, Callaghan, J.P. (2014). Influence of tablet versus computer usage and work surface angle on upper limb kinematics. *7<sup>th</sup> World Congress of Biomechanics*. July 2014, Boston, MA.
15. **Gallagher, K.M.**, Callaghan, J.P. (2013). A comparison of local and whole body movement patterns in low back pain developers during prolonged standing. *The 42<sup>nd</sup> Annual Association for Canadian Ergonomists*. October 2013, Whistler, BC.
16. **Gallagher, K.M.**, Callaghan, J.P. (2013). Sit-stand workstations: Does posture rotation affect pain development? *The 42<sup>nd</sup> Annual Association for Canadian Ergonomists*. October 2013, Whistler, BC.
17. **Gallagher, K.M.**, Campbell, T, Callaghan J.P. (2013). Does promoting changes in posture using a sit-stand workstation mitigates low back pain during prolonged standing? *The 37<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, September 2013, Omaha, NE.
18. **Gallagher, K.M.**, Wong, A., Callaghan, J.P. (2012). Lumbopelvic kinematics and trunk muscle thickness during prolonged standing on a sloped surface. *17<sup>th</sup> Biennial Conference for the Canadian Society for Biomechanics*, June 2012, Vancouver, BC.
19. **Gallagher, K.M.**, VandenBussche J., Callaghan, J.P. (2011). Gait adaptations to changes in angle of descent on a staircase. *42<sup>nd</sup> Annual Conference of the Association of Canadian Ergonomists*. October 2011, London, ON.
20. Frank, N., **Gallagher, K.M.**, Callaghan, J.P. (2011). Standing with inverted and everted foot postures: Implications for low back pain prevention. *42<sup>nd</sup> Annual Conference of the Association of Canadian Ergonomists*. October 2011, London, ON.
21. **Gallagher, K.M.**, Nelson-Wong, E, Callaghan, J.P. (2011). Does the development of transient low back pain affect postural changes during prolonged standing? *35<sup>th</sup> Annual Meeting of the American Society for Biomechanics*, August 2011, Long Beach, CA.  
*\*\*Awarded an AMTI Force and Motion Foundation Travel Scholarship\*\**
22. VandenBussche J., **Gallagher, K.M.**, Parkinson, R.J., Young, J., Callaghan, J.P. (2011). Foot placement in oblique stair descent. In *The Proceedings of the 55<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society*, September 2011, Las Vegas, NV.
23. MacLean, K.F.E., **Gallagher, K.M.**, Maly, M.R., Callaghan, J.P. (2011). Comparing knee joint kinematics, kinetics and cumulative load between healthy-weight and obese young adults. *35<sup>th</sup> Annual Meeting of the American Society for Biomechanics*, August 2011, Long Beach, CA.
24. **Gallagher, K.M.**, Fischer, S.L., Howarth, S.J., Albert, W., Callaghan, J.P. (2010). On the use of a scaling factor to estimate cumulative spinal loading. *16th Biennial Conference for the Canadian Society for Biomechanics*, June 2011, Kingston, ON.
25. **Gallagher, K.M.**, Howarth, S.J., Callaghan, J.P. (2009). The effects of anterior shear displacement rate on the viscoelastic properties of the porcine cervical spine. *The 31<sup>st</sup> Annual Meeting for the American Society of Biomechanics*, August 2009, State College, PA.



26. Howarth, S.J., **Gallagher, K.M.**, Callaghan, J.P. (2009). Changes in posture do not affect the functional range of motion for the porcine cervical spine under shear loading. *The 31<sup>st</sup> Annual Meeting for the American Society of Biomechanics*, August 2009, State College, PA.
27. Noble, J., Singer, J.S., **Gallagher, K.M.**, and Prentice, S. (2008). The effect of drywall stilts on the control of quiet standing. *The 4<sup>th</sup> North American Conference on Biomechanics*, August 2008, Ann Arbor, MI.

#### **Conference contributions (non-refereed, n=24)**

1. Douglas, E., Gallagher, K.M. U of A Honors College Research Symposium.
2. Douglas, E., **Gallagher, K.M.** Cervical spine kinematics in various tablet reading postures. South Central American Society of Biomechanics Regional meeting, Plano, TX, March 2017. **Awarded best undergraduate student presentation**
3. Daniels
4. Smith, J., **Gallagher K.M.** (2017). The influence of prolonged tablet use on repositioning errors. South Central American Society of Biomechanics Regional meeting, Plano, TX, March 2017.
5. Nunley, B., **Gallagher K.M.** (2017). Does the neck flexion angle when using a smart phone approach the cervical flexion-relaxation angle of onset? South Central American Society of Biomechanics Regional meeting, Plano, TX, March 2017.
6. Payne, M.\*, Daniels, B.\*, Caldwell, A., Ganio, M., **Gallagher, K.M.** (2017). The influence of a walking break during a bout of prolonged standing on lumbar spine kinematics. South Central American Society of Biomechanics Regional meeting, Plano, TX, March 2017.
7. Smith, J., **Gallagher K.M.** The influence of prolonged tablet use on repositioning errors. South Central American Society of Biomechanics Regional meeting, Plano, TX, March 2017.
8. Viggiani, D., **Gallagher, K.M.**, Sehl, M., Callaghan, J.P. (2016). Contributions to lumbar lordosis in standing postures are influenced by the development of low back pain during standing. *Rocky Mountain American Society of Biomechanics Conference*, April 2016, Denver, Colorado.
9. Payne, M., Weaver, T., Laing, A., Callaghan, J.P., **Gallagher, K.M.** (2016). The influence of anti-fatigue matting on gluteus medius muscle activity during functional reaches. *The South Central American Society of Biomechanics Conference*, April 2016, Denton, TX.
10. Abbott, L., Callaghan, J.P., **Gallagher, K.M.** (2016). The relationship between qualitative and quantitative pain descriptors of prolonged standing induced low back pain. *The South Central American Society of Biomechanics Conference*, April 2016, Denton, TX. **Awarded 3<sup>rd</sup> place in the undergraduate presentation awards category.**

11. Glinka, M., **Gallagher, K.M.**, Weaver, T.M., Laing, A., Callaghan, J.P. (2016) The effect of anti-fatigue matting on low back discomfort and postural behaviour. *The 13<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2016, Barrie, ON.
12. **Gallagher, K.M.**, Callaghan, J.P. (2015). The influence of posture on prolonged standing induced low back pain. *South Central American Society of Biomechanics Regional Meeting*. March 2015, Fort Worth, TX.
13. Fewster, K.M., **Gallagher, K.M.**, Howarth, S.J., Callaghan, J.P. (2015). Can Lyapunov Exponents identify low back pain developers prior to prolonged standing? *The 12<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2015, Barrie, ON.
14. Riddell, M., Fewster, K.M., **Gallagher, K.M.**, Callaghan, J.P. (2015). Does proactive cyclic movement during prolonged standing prevent the development of low back pain when imposed early? *The 12<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2015, Barrie, ON.
15. **Gallagher, K.M.**, Sehl, M., Callaghan, J.P. (2014). The influence of lower limb position on the lumbar spine in three upright standing positions. *The 11<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2014, Barrie, ON.
16. Kingston, D.C., Riddell, M.F., McKinnon, C.D., **Gallagher, K.M.**, Callaghan, J.P. (2014). Influence of Tablet or computer and work surface angle on upper limb kinematics. *The 11<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2014, Barrie, ON.
17. Riddell, M.F., **Gallagher, K.M.**, McKinnon, C.D., Callaghan, J.P. (2014). Influence of input device, desk configuration, and task on spine kinematics. *The 11<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2014, Barrie, ON.
18. **Gallagher, K.M.**, Campbell, T., Callaghan, J.P. (2013). Incorporating a sitting break during a prolonged standing task does not lessen low back pain development. *2013 AHS Graduate Student Research Conference*, May 2013, University of Waterloo, Waterloo, ON.
19. **Gallagher K.M.**, Callaghan, J.P. (2013). The relationship between pain development during prolonged standing and lumbopelvic posture and movement patterns. *The 10<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2013, Barrie, ON
20. VandenBussche J., **Gallagher, K.M.**, Parkinson, R.J., Young, J., Callaghan, J.P. (2011) Foot placement in oblique stair descent. *The 8<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2011, Barrie, ON.
21. **Gallagher, K.M.**, Nelson-Wong, E., Callaghan, J.P. (2011) Postural control and the development of transient low back pain. *The 8<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2011, Barrie, ON.
22. Callaghan, J.P., **Gallagher, K.M.**, Gooyers, C.E., Karakolis, T. (2010). Prevention of low back pain: Understanding the mechanistic sources of pain. *In Proceedings of the 2010 Canada Research Chairs Conference – Thinking ahead for a strong future*. Toronto, Ontario.

23. **Gallagher, K.M.**, Fischer, S.L., Howarth, S.J., Albert, W., Callaghan, J.P. (2010) Estimation of cumulative spinal loading using a scaling factor. *The 7<sup>th</sup> Annual Ontario Biomechanics Conference*, March 2010, Barrie, ON.
24. **Gallagher, K.M.**, Howarth, S.J, Callaghan, J. P. (2009) Effects of displacement rate on acute anterior shear failure of the porcine cervical spine. *The 6<sup>th</sup> Annual Ontario Biomechanics Conference*, Barrie, ON. **\*\*Finalist for the Canadian Society for Biomechanics Masters/Undergraduate Award\*\***

#### **Other contributions (refereed)**

**Gallagher, K.M.** NextGen Voices Results (2012): Definition of Success (Supplementary Online Material). *Science*. 336(6077), pp. 32-34.

- Short essay on the question, "What is your definition of a successful scientist? How has this definition changed between your mentor's generation and your own?"
- Published online as one of the Top 50 submission received.

#### **Other contributions (non-refereed)**

Koehoorn, M.(PI), Van Driel, R., Trask, C., Teschke, K., Johnson, P.W., Callaghan, J.P., Gallagher, K.M. (2010). Evaluating Methods to use the Virtual Corset™ Inclinometer for Trunk Posture and Spinal Compression Measurements. A technical report funded by WorkSafeBC (RS2007-DG02).

**Gallagher, K.M.** (2006) Ergonomics: Progress and the Future. In, Volvo Motor Graders, *The Leading Edge*. Goderich, ON: Volvo Motor Graders Inc.

#### **INVITED TALKS**

- |      |   |
|------|---|
| 2016 | "Sitting vs. Standing vs. Variability. A review of current biomechanics and physiology research". Pat Walker Health Center Meetings   |
| 2016 | "Should I sit or should I stand? A review of current biomechanics and physiology research". Razorback Symposium, Fayetteville, AR.  |
| 2015 | "How Engineering and Kinesiology Departments can work together to establish strong research collaborations". Biomedical Engineering Group (BMEG) Seminar. University of Arkansas. |
| 2015 | "Research in Biomechanics". Biological Anthropology Journal Club. Department of Anthropology. University of Arkansas  |
| 2015 | "New Kid on the Block – Return of Biomechanics in HHPR". Health, Human Performance, and Recreation Seminar. University of Arkansas.   |
| 2014 | "Applying, interviewing for, and negotiating a tenure-track job offer". Kinesiology Graduate Seminar. University of Waterloo  |
| 2014 | "Influencing movement and posture in constrained tasks". Functional Neuroimaging, Cognitive and Mobility Lab. University of Michigan Medical School                               |

**SCHOLARSHIPS**

2014		Ontario Graduate Scholarship	\$15,000
2011	AMTI	Force and Motion Foundation Conference Travel Scholarship	\$500 USD
2010-2013	NSERC	Alexander Graham Bell Canadian Graduate Scholarship	\$105,000
2009-2014	University of Waterloo	President's Graduate Scholarship	\$50,000
2009-2010	NSERC	Alexander Graham Bell Canadian Graduate Scholarship	\$17,500
2009-2010		Ontario Graduate Scholarship	\$15,000 (Declined)
2009	NSERC	Undergraduate Student Research Award	\$4,500
2008	NSERC	Undergraduate Student Research Award	\$4,500
2004-2005	University of Waterloo	Applied Health Science Dean's Entrance Scholarship	\$1,000
2004-2005	University of Waterloo	Applied Health Science Entrance Scholarship	\$1,000

Travel grants for conferences received from the **Canadian Society for Biomechanics (2)** and the **Center for Research Expertise – Musculoskeletal Disorders (4)**

**SUPERVISORY EXPERIENCE**

*University of Arkansas – MSc Students Independent Study*

2016-2017	Taylor Lippert, Katie Johnson, Tyler Campbell	Athletic Training
2016	Cody Lemmons	Athletic Training
2015-2016	Patrick Ebke, Anne Westbrook	Athletic Training
2015	Ethan Bagwell	Exercise Science

*University of Arkansas – Honors Thesis Project Advisor*

Conference Presentations by Honors Students:

National Meetings: 2                      Regional Meetings: 2

First Author Peer Review Publications by Honors Students: 1

**2015-                      Kate Tarver                      Undergraduate Student, U of A**

- Received 2017 Honors College Research Grant

**2016-                      Tatianna Balis                      Undergraduate Student, U of A**

- Received 2017 Honors College Research Grant

**2015-2017                      Ethan Douglas                      Graduate Student, Penn**

- Awarded best undergraduate presentation at the 2017 South Central American Society of Biomechanics meeting
- Received 2017 Student Undergraduate Research Fellowship
- Received 2016 Honors College Research Grant
- Received Honors College Travel Grant to present at 2016 ASB conference

**2016-2017                      Jacob Smith                      Medical Student, UAMS**

- Received 2016 Honors College Research Grant
- Received Honors College Travel Grant to present at 2016 South Central ASB conference

**2015-2016                      Laura Abbott                      DPT Candidate, University of Central Arkansas**

- Awarded 3<sup>rd</sup> place in the undergraduate presentation group at the 2016 South Central American Society of Biomechanics Conference
- Received Honors College Travel Grant to present at 2016 South Central ASB conference

**2015-2016                      Marcus Payne                      MSc Student, U of A**

- Received 2016 Honors College Research Grant
- Received Honors College Travel Grant to present at 2016 South Central ASB conference

*University of Arkansas – Honors Thesis Committee Member*

2017                      Patricia Ramos                      Biological Anthropology

2016-2017                      Benjamin Harris                      Exercise Science

2016-2017                      Lauren Tilley                      Exercise Science

*University of Arkansas – Undergraduate Independent Study Students*

Kaitlin M. Gallagher

2016 (11) Ali Guthrie, Elliot Berry, Ryan Richard, Haley Cook, Steele Reeder, Spencer Miller, Kaitlin Davis, Kelly Owen, Zachary Pazdera, Kainna Rambo, Katelyn Carman

2015 (1) Natalie Driscoll

*University of Waterloo – Undergraduate Students*

2014	Dan Martell	MSc Student, University of Waterloo
2013	Maureen Riddell	Research Scientist, Herman-Miller
2012	Troy Campbell	Research Assistant, Hamilton Health Sciences
2011	Nicholas Frank	Research Scientist, NIKE
2011	Jessica VandenBussche	Occupational Therapist, Ontario, CA

**CERTIFICATES**

2016	Business Project Management Basics, Walmart-Global Sourcing
2012	Fundamentals in University Teaching Certificate, University of Waterloo
2006	Physical Demands Descriptions Training Certificate, Taylor'd Ergonomics

**TEACHING EXPERIENCE**

***University of Arkansas***

*Undergraduate*

EXSC 3353/H	Mechanics of Human Movement
EXSC 2733	Seminar in Exercise Science

*Graduate*

EXSC 5323	Biomechanics I
EXSC 5333	Instrumentation in Biomechanics

***University of Waterloo***

2012-2013	KIN 612 - Biological Instrumentation Lab Demonstrator 7-12 Graduate Students per year
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***Guest Lectures***

2015-present	Introduction to Exercise Science, University of Arkansas Topic: Careers in Biomechanics Given each Spring/Fall semester since Spring 2015
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Kaitlin M. Gallagher

- 2015 University Perspectives, University of Arkansas  
Topic: Planning your courses over the next four years
- 2015 Movement Science I Biomechanics and MS Gait (DPT Program),  
University of Arkansas Medical Sciences – Northwest Campus  
Topic: Electromyography
- 2015 Ergonomics (Undergraduate), University of Arkansas  
Topic: Biomechanics and Ergonomics  
Spring and Fall 2015
- 2014 Occupational Biomechanics (Undergraduate), University of Waterloo  
Topic: The Seated and Standing Workplace
- 2013 Biomechanics of Human Movement (Undergraduate), University of  
Waterloo  
Topic: Angular Momentum

### **SERVICE EXPERIENCE**

- 2017-2019 College of Education and Health Professions Rep, Faculty Senate
- 2016-2019 Member, American Society of Biomechanics Education Committee
- 2016-present Member, Walmart Footwear Technical Collaboration Board
- 2015-present Member, Exercise Science Master's Comprehensive Exam Committee
- 2015-present Faculty Sponsor, Kinesiology Student Association, University of Arkansas
- 2016-2017 Scientific Chair, South Central American Society of Biomechanics Conference
- 2016-2017 Member, Professor and Program Director Occupational Therapy Search  
Committee, Department of Health, Human Performance, and Recreation,  
University of Arkansas
- 2016 Reviewer, Honors College Research Grants
- 2016 Abstract Reviewer (3): Human Factors and Ergonomics Society, 40<sup>th</sup> American  
Society of Biomechanics Conferences, Canadian Society for Biomechanics  
Conference
- 2015-2016 Member, Assistant Professor (Tenure Track) in Exercise Science Search  
Committee, Department of Health, Human Performance, and Recreation,  
University of Arkansas
- 2015-2016 Awards Committee, South Central American Society of Biomechanics  
Conference
- 2015 Human Performance Lab Representative, Occupational Therapy Program  
Consultation for the proposed joint University of Arkansas and UAMS –  
Northwest Arkansas Occupational Therapy Program

Kaitlin M. Gallagher

- 2015 Participant, Departmental and Divisional Leadership Proposal Development for NSF ADVANCE Institutional Transformation Grant
- 2015 Abstract Reviewer, 39<sup>th</sup> American Society of Biomechanics Conference
- 2013 Session Chair, Ontario Biomechanics Conference
- 2012-2014 Wiley Science Advisor (<http://blogs.wiley.com/scienceadvisors/>)
- 2012-2014 Full-time writer, GradHacker blog ([www.gradhacker.org](http://www.gradhacker.org))
- 2011-2012 Communications Rep, Kinesiology Graduate Student Association
- 2011-2012 AHS Rep, Graduate Student Association Funding Committee
- 2011 Session Chair, Ontario Biomechanics Conference
- 2011 Awards Judge, University of Waterloo Graduate Student Research Conference
- 2010-2012 Lab Demonstrator, Discovery Days
- 2010 Instructor, Kinesiology Lab Days
- 2010 Awards Judge, University of Waterloo Graduate Student Research Conference
- 2010 Session Chair, University of Waterloo Graduate Student Research Conference
- 2009-2010 Secretary, Collaborating Across Disciplines

#### *Manuscript Reviewer*

**2017:** Clinical Biomechanics, Gait and Posture, Applied Ergonomics

**Previous years:** Human Factors, Gait and Posture, Spine, Human Movement Science, International Journal of Exercise Science, Journal of Electromyography and Kinesiology, Applied Ergonomics, Journal of Morphology, Ergonomics, Behavioural Sciences, Clinical Biomechanics

#### **PROFESSIONAL AFFILIATIONS**

Member, Human Factors and Ergonomics Society  
Member, Canadian Society for Biomechanics  
Member, American Society of Biomechanics

#### **IN THE MEDIA**

Research Review: Research on effects of standing to low back pain risk. October 2015. Canadian Chiropractic Magazine, pp 30.

Is a standing office workstation the cure to “sitting disease”? April 8, 2014. The 30-Inch View Blog. Humantech. <http://www.humantech.com/blog/is-a-standing-office-workstation-the-cure-to-sitting-disease/>



## **NEW MEDIA**

**GradHacker** – a collaborative blog written by graduate students and dedicated to creating a community of grad students who can benefit from hearing the stories, tips, and challenges of others who are experiencing the same things. Posts hosted on the main GradHacker website ([www.gradhacker.org](http://www.gradhacker.org)) and InsideHigherEd (<http://www.insidehighered.com/blogs/gradhacker>)

### Selected Articles:

“Envy in Grad School” – September 30, 2013

“7 Reasons to Write from the Start” – February 11, 2013

“The PhD Thesis – A Crash Course in Project Management” – November 16, 2012

“The Use of Checklists in Research” – October 22, 2012

“Managing Deadlines in Grad School” – August 27, 2012