

CURRICULUM VITAE

Name (complete with degrees): Robin Marie Queen (Harrell) PhD, FACSM
Primary academic appointment: Associate Professor
Primary academic department: Department Biomedical Engineering and Mechanics

<u>Education:</u>	<u>Institution</u>	<u>Date (Year)</u>
Doctor of Philosophy	Department of Biomedical Engineering School of Medicine University of North Carolina at Chapel Hill	2004
Master of Science	Department of Biomedical Engineering School of Medicine University of North Carolina at Chapel Hill	2001
Bachelor of Science, Applied Science Minor: Physics	College of Arts and Sciences, University of North Carolina at Chapel Hill	2000

Professional training and academic career

<u>Institution</u>	<u>Position/Title</u>	<u>Dates</u>
Department of Mechanical Engineering Virginia Tech, Blacksburg, VA	Affiliate Member	2018-present
Department of Orthopaedic Surgery Virginia Tech Carilion School of Medicine Roanoke, VA	Associate Professor	2016-present
Faculty of Health Sciences (FHS) Virginia Tech	Affiliate Member	2016-present
Institute for Society, Culture and Environment Virginia Tech, Blacksburg, VA	Affiliate Member	2016-present
Edward Via College of Osteopathic Medicine Blacksburg, VA	Adjunct Associate Professor	2015-present
Department of Biomedical Engineering and Mechanics Virginia Tech, Blacksburg, VA	Director Kevin P. Granata Biomechanics Lab	2015-present
Department of Biomedical Engineering and Mechanics Virginia Tech, Blacksburg, VA	Associate Professor	2015-present

Department of Orthopaedic Surgery Duke University Medical Center Durham, NC	Assistant Professor	2013-2015
Department of Orthopaedics Surgery Duke University Medical Center Durham, NC	Director Michael W. Krzyzewski Human Performance Lab	2010-2015
Department of Orthopaedic Surgery Duke University Medical Center Durham, NC	Medical Instructor	2010-2013
Division of Orthopaedics Department of Surgery Duke University Medical Center Durham, NC	Medical Instructor	2006-2010
Division of Orthopaedics Department of Surgery Duke University Medical Center Durham, NC	Director Michael W. Krzyzewski Human Performance Lab	2005-2010
Division of Orthopaedics Department of Surgery Duke University Medical Center Durham, NC	Research Associate	2004-2006
Department of Exercise and Sport Science College of Arts and Sciences University of North Carolina Chapel Hill, NC	Graduate Teaching Assistant Human Anatomy	2004
Division of Physical Therapy (Nike Supported) University of North Carolina Chapel Hill, NC	Project Coordinator (Jones' Fracture Project)	2002-2004
Department of Physical Therapy School of Medicine University of North Carolina Chapel Hill, NC	Graduate Teaching Assistant Motion Analysis	2002-2004
General Clinical Research Center (NIH-supported) University of North Carolina Chapel Hill, NC	Project Coordinator (Biomechanical Testing)	2001-2002

Publications:

Refereed journals:

1. SM Ulman, **RM Queen**, D Srinivasan. Gait Variability to Predict Motor Learning of a Novel Motor Task. *Medicine and Science in Sports and Exercise*. (In Review – July 2018)
2. AT Peebles, TK Miller, **RM Queen**. Functional knee bracing improves loading symmetry during hop testing in anterior cruciate ligament reconstructed athletes. *Journal of Orthopaedic Research*. (In Review – July 2018)
3. KE Renner, DSB Williams, **RM Queen**. The Reliability and Validity of the loadsol Under Various Walking Conditions. *Annals of Biomedical Engineering* (In Review – July 2018).
4. AT Peebles, KE Renner, TK Miller, JT Moskal, **RM Queen**. Distance and loading symmetry during hop testing in ACL reconstructed athletes. *Medicine and Science in Sports and Exercise*. (In Review – May 2018)
5. AT Peebles, TK Miller, JT Moskal, **RM Queen**. The effect of time since surgery and functional knee bracing on physical performance in anterior cruciate ligament reconstructed athletes. *Journal of Athletic Training* (In Review – July 2018)
6. **RM Queen**, and D Schmitt. *Sex-Specific Difference in Dynamic Balance Following Total Hip Replacement*. *Journal of Orthopaedic and Sports Physical Therapy* (In Review – July 2018)
7. A Peebles, KE Renner, LA Maguire, **RM Queen**. Validity and Repeatability of the Single Sensor loadsol During Landing. *Clinical Orthopaedics and Related Research* (In Review – June 2018)
8. JR Gladish, DW Powell, **RM Queen**, The Effects of Total Ankle Arthroplasty on Postural Stability and Loading Symmetry in Quiet Stance. *Journal of Biomechanics* (In Review, resubmission – July 2018)
9. CN Hughes-Oliver, D Srinivasan, D Schmitt, and **RM Queen**. *Quantifying Sex and Limb Effects on Gait Using Temporal Parameters*. *Gait and Posture* (In Review, resubmission – June 2018)
10. EI Goldfeld, D Schmitt, **RM Queen**, RJ Larsen. *Muscle activity during forehand tennis strokes using different grips*. *American Journal of Sports Medicine* (In Review – December 2017)
11. SR Raman, BG Hammill, **RM Queen**, SB Adams, LH Curtis. *Maximizing the value of health system-based registries: Linking an orthopaedic surgery registry to Medicare claims data*. *JBJS*. 100(12): 1016-1022, 2018
12. K Renner, CT Franck, TK Miller, **RM Queen**. *Limb Asymmetry During Recovery from Anterior Cruciate Ligament Reconstruction*. *Journal of Orthopaedic Research*. 36(7): 1887-1893, 2018
13. B Dai, WE Garrett, MT Gross, DA Padua, **RM Queen**, B Yu. *The Effect of Performance Demands on Lower Extremity Biomechanics during Landing and Cutting Tasks*. *Journal of Sport and Health Science*. In Press-epub

14. J Gladish, DW Powell, LE Allison, **RM Queen**. *Center of Pressure Profiles in Unilateral Compared to Bilateral End-Stage Ankle Osteoarthritis Patients*. Journal of Orthopaedic Research. 35(12): 2749-2754, 2017.
15. ED Merritt, CN Brown, **RM Queen**, KJ Simpson, JD Schmidt. *Concussion History and Time Since Concussion Do Not Influence Static and Dynamic Balance in Collegiate Athletes*. Journal of Sports Rehabilitation. 26(6): 518-523, 2017.
16. DR Sturnick, CA Demetracopoulos, SJ Ellis, **RM Queen**, J Burkett, JT Deland, JR Baxter. *Adjacent Joint Kinematics after Ankle Arthrodesis in Cadaveric Gait Simulation*. Foot and Ankle International. 38(11): 1249-1259, 2017.
17. **RM Queen**, C Franck, D Schmitt, SB Adams. *Are There Differences in Gait Mechanics in Patients With A Fixed Versus Mobile Bearing Total Ankle Arthroplasty? A Randomized Trial*. CORR. 475(10): 2599-2606, 2017.
18. **Queen, RM**. *Infographic: ACL injury reconstruction and recovery*. Bone Joint Res. 6(11): 621-622, 2017.
19. **RM Queen**. *Directing Clinical Care Using Lower Extremity Biomechanics in Patients with Ankle Osteoarthritis and Ankle Arthroplasty*. Journal of Orthopaedic Research. 35(11): 2345-2355, 2017.
20. SS Wellman, M Klement, **RM Queen**. *Performance Comparison of Single-Radius vs. J-Curve Femoral Component in TKA: A Prospective, Randomized Study Using the Lower-Quarter Y Balance Test*. Orthopedics. 40(6): e1074-e1080, 2017.
21. E Lee, MS Fragala, S Kavouras, **RM Queen**, JL Pryor, DJ Casa. *Biomarkers in sports and exercise: tracking health and performance in athletes*. Journal of Strength and Conditioning Research. 31(10): 2920-2937, 2017.
22. E McConnell, **RM Queen**. *Physical Performance and Patient Reported Outcomes are Necessary When Assessing Function Following Total Ankle Arthroplasty*. Foot and Ankle International. 38(2):115-123, 2017.
23. RJ Butler, G Bullock, T Arnold, P Plisky, **RM Queen**. *Competition level differences on the Lower Quarter Y Balance Test in Baseball Players*. Journal of Athletic Training. 51(12):997-1002, 2016.
24. RJ Butler, B Dai, N Huffman, WE Garrett, **RM Queen**. *Lower Extremity Movement Differences Persist After Anterior Cruciate Ligament Reconstruction and When Returning to Sports*. CJSM 26(5): 411-416, 2016.
25. **RM Queen**, TL Sparling, D Schmitt. *The effect of hip, knee, and ankle osteoarthritis on mechanical energy exchange*. CORR. 474(9): 2055–2063, 2016.
26. DW Powell, **RM Queen**, DS Williams. *Arch structure is associated with unique absolute and relative joint work contributions to landing*. Human Movement Science. 49: 141-147, 2016
27. AJ Grier, AC Schmitt, SB Adams Jr., **RM Queen**. *The Effect of Tibiotalar Alignment on*

- Coronal Plane Mechanics Following Total Ankle Replacement.* Gait & Posture: 48: 13–18, 2016
28. CK Ledford, PD Millikan, BT Nickel, C Green, SS Wellman, MP Bolognesi, **RM Queen**. *Percent Body Fat Is More Predictive of Function After Total Joint Arthroplasty Than Body Mass Index.* JBJS: 98(10):849-57, 2016
 29. PK Edwards, **RM Queen**, RJ Butler, MP Bolognesi, CL Barnes. *Are Range of Motion Measurements Needed When Calculating the Harris Hip Score?* Journal of Arthroplasty. 31(4): 815-819, 2016
 30. **RM Queen**, A Vap, CT Moorman, WE Garrett, RJ Butler. *Gender Differences in Plantar Loading during an Unanticipated Side-cut on Field Turf.* Clinical Journal of Sports Medicine. 26(2): 157-161, 2016.
 31. MJ Boyle, RJ Butler, **RM Queen** *Functional Movement Competency and Dynamic Balance After Anterior Cruciate Ligament Reconstruction in Adolescent Patients.* Journal of Pediatric Orthopaedics. 36(1):36-41, 2016
 32. CL Barnes, AJ Grier, RJ Butler, EA Heim, M Bushmiaer, **RM Queen**. *Using Liposomal Bupivacaine Instead of an Epidural Can Improve Outcomes Following Total Knee Arthroplasty.* Journal of Surgical Orthopaedic Advances 24(4):230–234, 2015.
 33. MJ Pellegrini, AP Schiff, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley II, ME Easley. *Conversion of Tibiotalar Arthrodesis to Total Ankle Arthroplasty.* JBJS. 97: 2004-2013, 2015.
 34. D Schmitt, A Vap, **RM Queen**. *The Effect of Severe Hip, Knee, and Ankle Osteoarthritis on Walking Mechanics.* Gait and Posture. 42(3):373-9, 2015
 35. C Demetracopoulos, SB Adams, **RM Queen**, JA Nunley, ME Easley, JK DeOrio. *Effect of Age on Outcomes in Total Ankle Arthroplasty.* Foot and Ankle International. 36(8):871-880, 2015.
 36. RJ Butler, RA Ruberte-Thiele, CL Barnes, MP Bolognesi, **RM Queen**. *Unipedal Balance is Affected by Total Joint Arthroplasty Procedure 1 Year Following Surgery.* Journal of Arthroplasty. 30(2):286-9, 2015.
 37. SW Mayer, **RM Queen**, DC Taylor, CT Moorman III, AP Toth, WE Garrett, RJ Butler. *Functional testing differences in Anterior Cruciate Ligament reconstruction patients released versus not released to return to sport.* American Journal of Sports Medicine. 43(7): 1648-1655, 2015.
 38. LA Johnston, RJ Butler, TL Sparling, **RM Queen**. *A single set of biomechanical variables cannot predict jump performance across various jumping tasks.* Journal of Strength and Conditioning Research. 29(2): 396-407, 2015.
 39. B Dai, WE Garrett, MT Gross, DA Padua, **RM Queen**, B Yu. *The Effects of Two Landing Techniques on Knee Kinematics, Kinetics, and Performance during Stop-jump and Side-Cutting Tasks.* AJSM. 43(2): 466-474, 2015
 40. **RM Queen**, DE Attarian, MP Bolognesi, RJ Butler. *Bilateral Symmetry in Gait Mechanics during Stair Ascent and Descent following a Total Hip Arthroplasty: A One-Year Longitudinal*

Study. Clinical Biomechanics. 30(1): 53-58, 2015

41. SB Adams, Jr, NA Viens, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. *Early to Mid-Term Results of Fixed-Bearing Total Ankle Arthroplasty Using a Modular Intramedullary Tibial Component*. JBJS, 96(23):1983-1989, 2014
42. B Dai, RJ Butler, WE Garrett, Jr, **RM Queen** *Using Ground Reaction Force to Predict Knee Kinetic Asymmetry in Adolescent Patients following ACL Reconstruction*. Scand Journal of Medicine and Science in Sport. 24(6): 974-981, 2014
43. CK Ledford, RA Ruberte-Thiele, JS Appleton, RJ Butler, SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi. *Percent Body Fat More Associated with Perioperative Risks after Total Joint Arthroplasty than BMI*. JOA – AAHKS Supplement. 29(9):150–154, 2014.
44. **RM Queen**, AJ Grier, RJ Butler, JA Nunley, ME Easley, SB Adams, JK DeOrio. *The Influence of Concomitant Triceps Surae Lengthening at the time of Total Ankle Arthroplasty on Post-operative Outcomes*. Foot and Ankle International. 35(9) 863–870, 2014.
45. RJ Butler, J Arms, MP Reiman, P Plisky, K Kiesel, D Taylor, **RM Queen**. *Gender Differences in Dynamic Closed Kinetic Chain Upper Quarter Function in Collegiate Swimmers*. J. Athletic Training. 49(3): 442-446, 2014.
46. RJ Butler, HS Myers, D Black, PJ Plisky, CT Moorman 3rd, **RM Queen**. *Bilateral differences in the upper quarter function of high school aged baseball and softball players*. International Journal of Sports Physical Therapy. 9(4): 518-24, 2014.
47. **RM Queen**, AN Abbey, R Verma, RJ Butler, JA Nunley. *Plantar Loading During Cutting While Wearing a Rigid Carbon Fiber Insert*. Journal of Athletic Training. 49(3): 297-303, 2014.
48. JS Lewis Jr., SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley II, ME Easley. *Outcomes after Total Ankle Replacement in Association with Ipsilateral Hindfoot Arthrodesis*. Foot and Ankle International. 35(6):535-542, 2014.
49. **RM Queen**, TL Sparling, R Butler, S Adams, J DeOrio, M Easley, J Nunley. *Patient Reported Outcomes, Function, and Gait Mechanics After Fixed and Mobile-Bearing Total Ankle Replacement*. JBJS. 96(12):987-993, 2014
50. TL Sparling, D Schmitt, CE Miller, F Guilak, FJ Keefe, **RM Queen**. *Energy Recovery in Individuals with Knee Osteoarthritis*. Osteoarthritis and Cartilage. 22(6):747-755, 2014.
51. RJ Butler, B Dai, WE Garrett, **RM Queen**. *Changes in landing mechanics in patients following anterior cruciate ligament reconstruction when wearing an extension constraint knee brace*. Sports Health. 6(3):203-209, 2014
52. RJ Butler, **RM Queen**, B Wilson, J Stephenson, CL Barnes. *The effect of extension constraint knee bracing on dynamic balance, gait mechanics and joint alignment*. PM & R. 6; 309-315, 2014.
53. **RM Queen**, RJ Butler, SB Adams, JK DeOrio, ME Easley, JA Nunley. *Bilateral Differences in Gait Mechanics Following Total Ankle Replacement: a Two Year Longitudinal Study*. Clinical

Biomechanics. 29: 418-422, 2014.

54. **RM Queen**, JS Appleton, RJ Butler, ET Newman, SS Kelley, DE Attarian, MP Bolognesi. *Total Hip Arthroplasty Surgical Approach Does Not Alter Postoperative Gait Mechanics One Year After Surgery*. PM&R. 6: 221-226, 2014.
55. RJ Butler, ME Russell, **RM Queen**. *Effect of soccer footwear on landing mechanics*. Scand J Med Sci Sports. 24(1):129-135, 2014.
56. **RM Queen**, R Verma, AN Abbey, JA Nunley, RJ Butler. *Plantar loading during jumping while wearing a rigid carbon graphite footplate*. Gait and Posture. 39(2): 707–711, 2014.
57. SB Adams, Jr, NA Viens, JK. DeOrio, ME. Easley, **RM Queen**, JA Nunley, II. *Comparison of Extramedullary Versus Combined Extramedullary and Intramedullary Referencing for Tibial Component Alignment in Total Ankle Arthroplasty*. FAI. 34(12). 1624-1628, 2013.
58. RJ Butler, **RM Queen**, B Beckman, KB Kiesel, PJ Plisky. *Comparison of dynamic balance in adolescent male soccer players from Rwanda and the United States*. IJSPT. 8(6): 749-755, 2013.
59. **RM Queen**, SB Adams, NA Viens, JK Friend, ME Easley, JK DeOrio, JA Nunley. *Differences in Outcomes Following Total Ankle Replacement in Patients with a Neutral versus a Malaligned Tibiotalar Joint*. Journal of Bone and Joint Surgery. 95(21):1927-1934, 2013.
60. **RM Queen**, J Schaeffer, RJ Butler, C Berasi, SS Kelley, DE Attarian, MP Bolognesi. *Does Surgical Approach during Total Hip Arthroplasty Alter Gait Recovery During the First Year Following Surgery?* Journal of Arthroplasty. 28(9): 1639-1643, 2013.
61. JC De Biasio, ME Russell, RJ Butler, JA Nunley, **RM Queen**. *Changes in Plantar Loading Based on Shoe Type and Sex During a Jump-Landing Task*. Journal of Athletic Training, 48(5):601–609, 2013
62. **RM Queen**, RJ Butler, B Dai, CL Barnes. *Difference in Peak Weight Transfer and Timing based on Golf Handicap*. Journal of Strength and Conditioning Research. 27(9): 2481-2486, 2013.
63. KM Schweitzer, SB Adams, NA Viens, **RM Queen**, ME Easley, JK DeOrio, JA Nunley. *Early Prospective Clinical Results of a Modern Fixed-Bearing Total Ankle Arthroplasty*. Journal of Bone and Joint Surgery. 95(11):1002-1011, 2013
64. **RM Queen**, E Newman, AN Abbey, TP Vail, MP Bolognesi. *Stair Ascending and Descending in Hip Resurfacing and Large Head Total Hip Arthroplasty Patients*. J Arthroplasty 28(4): 684-689, 2013
65. KA Taylor, HC Cutcliffe, **RM Queen**, GM Utturkar, CE Spritzer, WE Garrett, LE DeFrate. *In vivo measurement of ACL length and relative strain during walking*. Journal of Biomechanics, 46(3): 478–483, 2013.
66. RJ Butler, JD Wilson, DE Fowler, **RM Queen**. *Gender differences in landing mechanics vary depending on the type of landing* Clinical Journal of Sports Medicine. 23(1):52-57, 2013

67. B Dai, RJ Butler, WE Garrett, Jr, **RM Queen**. *ACL Reconstruction in Adolescent Patients: Limb Asymmetry and Functional Knee Bracing*. American Journal of Sports Medicine. 40(12): 2756-2763, 2012.
68. TT Eckel, AN Abbey, RJ Butler, JA Nunley, **RM Queen**. *Effect of increased weight on ankle mechanics and spatial temporal gait mechanics in healthy controls*. Foot and Ankle International. 33(11): 979-983, 2012.
69. **RM Queen**, JC De Biasio, RJ Butler, JK DeOrio, ME Easley, JA Nunley. *Changes in Pain, Function, and Gait Mechanics Two Years Following Total Ankle Arthroplasty Performed With Two Modern Fixed-Bearing Prostheses*. Foot and Ankle International. 33(7): 535-542, 2012
70. TJ Somers; JA Blumenthal; F Guilak; VB Kraus; DO Schmitt; MA Babyak; LW Craighead; DS Caldwell; JR Rice; DC McKee; RA Shelby; LA Campbell; JJ Pells; EL Sims; **RM Queen**; JW Carson; M Connelly; KE Dixon; LJ LaCaille; JL Huebner; WJ Rejeski; FJ Keefe. *Pain Coping Skills Training and Lifestyle Behavioral Weight Management in Patients with Knee Osteoarthritis: A Randomized Controlled Study*. Pain. 153 (6): 1199-1209, 2012. (PMCID: PMC3358356)
71. WC Hembree, J Wittstein, E Vinson, **RM Queen**, C LaRose, K Singh, and ME Easley. *Clinical and Magnetic Resonance Imaging Features of Osteochondral Lesions of the Talus*. Foot and Ankle International. 33(7): 591-597, 2012.
72. GG Fedorcik, **RM Queen**, AN Abbey, CT Moorman, DS Ruch. *Differences in Wrist Kinematics between Low and High Handicap Golfers*. Journal of Science and Medicine in Sport. 15 (3): 250-254, 2012.
73. **RM Queen**, J Carter, SB Adams, ME Easley, JK DeOrio, JA Nunley. *Coronal Plane Hindfoot Alignment, Gait, and End-stage Ankle Osteoarthritis*. Osteoarthritis and Cartilage. 19 (11): 1338-1342, 2011
74. **RM Queen**, RJ Butler, TS Watters, SS Kelley, DE Attarian, MP Bolognesi. *The Effect of Total Hip Arthroplasty Surgical Approach on Post-operative Gait Mechanics*. Journal of Arthroplasty. 26(6 Suppl): 66-71, 2011
75. KA Taylor, ME Terry, GM Utturkar, CE Spritzer, **RM Queen**; LA Iribarra, WE Garrett, LE DeFrate. *The Measurement of In Vivo ACL Strain During Dynamic Jump Landing*. Journal of Biomechanics. 44(3): 365-371, 2011. (PMCID: PMC3053134)
76. **RM Queen**, TS Watters, AN Abbey, VJ Sabesan, TP Vail, MP Bolognesi. *Gait Symmetry A Comparison of Hip Resurfacing and Jumbo Head Total Hip Arthroplasty Patients*. Journal of Arthroplasty. 26(5):680-685, 2011.
77. J Wittstein, **RM Queen**, AN Abbey, AP Toth, CT Moorman. *Isokinetic Strength, Endurance, and Subjective Outcomes After Biceps Tenotomy Versus Tenodesis: A Postoperative Study*. American Journal of Sports Medicine. 39(4): 857-865, 2011
78. C Cook, **RM Queen**, E Slaven JK DeOrio, ME Easley, JA Nunley. *Dimensionality of Measures for Severe Unilateral Ankle Arthritis*. Archives of Physical Medicine and Rehabilitation. 2(11): 987-994, 2010.

79. J Wittstein, **RM Queen**, AN Abbey, CT Moorman. *Isokinetic testing of biceps strength and endurance in dominant versus non-dominant upper extremities*. Journal of Shoulder and Elbow Surgery, 19(6): 874-877, 2010.
80. **RM Queen**, JA Nunley. *Fifth metatarsal stress fractures: The role of plantar loading in understanding injury risk factors*. Lower Extremity Review. September 2009. <http://lermagazine.com/article/fifth-met-stress-fracture-load-based-risk-factors>
81. JE Bischof, LE Defrate, **RM Queen**, JA Nunley. *Bilateral Jones Fractures in Two Elite Soccer Players*. Foot and Ankle International, 31(5):441-447, 2010.
82. JE Bischof, AN Abbey, B Chuckpaiwong, JA Nunley, **RM Queen**. *Three-dimensional ankle kinematics and kinetics during running in women*. Gait and Posture. 31: 502-505, 2010.
83. MK Kaeseta, **RM Queen**, CT Moorman. *Traumatic Closed Transection of the Triceps Brachii: A Case Report*. Journal of Surgical Orthopaedic Advances. 19 (3): 149-152, 2010.
84. **RM Queen**, JA Nunley. *The Effect of Footwear on Pre-operative Gait Mechanics in A Group of Total Ankle Replacement Patients*. Journal of Surgical Orthopaedic Advances 19 (3): 170-173, 2010.
85. EL Sims, FJ Keefe, VB Kraus, F Guilak, **RM Queen** and DO Schmitt. *Racial Differences in Gait Mechanics Associated with Knee Osteoarthritis*. Aging Clinical and Experimental Research. **21**: 463-469, 2010. (PMCID: PMC3138724)
86. **RM Queen**, AN Abbey, JI Weigerinck, JC Yoder, and JA Nunley. *Effect of Shoe Type on Plantar Pressure: A Gender Comparison*. Gait and Posture. 31: 18-22, 2010.
87. MB Nebel, EL Sims, FJ Keefe, VB Kraus, F Guilak, DS Caldwell, JJ Pells, **RM Queen**, and DO Schmitt. *The Relationship of Self-Reported Pain and Functional Impairment to Gait Mechanics in Overweight and Obese Persons With Knee Osteoarthritis*. Archives of Physical Medicine and Rehabilitation. 90: 1874-79, 2009. (PMCID: PMC3144251)
88. BL Charnock, CL Lewis, WE Garrett, **RM Queen**. *Adductor Longus Vulnerability in the Maximal Effort Soccer Kick*. Sports Biomechanics. 8(3): 223-234, 2009
89. JI Wiegerinck, J Boyd, JC Yoder, AN Abbey, JA Nunley, **RM Queen**. *Differences in Plantar Loading between Training Shoes and Racing Flats at a Self-Selected Running Speed*. Gait and Posture. 29: 514-519, 2009.
90. **RM Queen**, NA Mall, JA Nunley, B Chuckpaiwong. *Differences in Plantar Loading between Flat and Normal Feet During Different Athletic Tasks*. Gait and Posture. 29: 582-586, 2009.
91. B Chuckpaiwong, JA Nunley, **RM Queen**. *Correlation between Static Foot Type Measurements and Clinical Assessments*. Foot and Ankle International. 30(3):205-212, 2009
92. B Yu, **RM Queen**, AN Abbey, Y Liu, CT Moorman, WE Garrett. *Hamstring Muscle Kinematics and Activation During Overground Sprinting*. Journal of Biomechanics. 41: 3121-3126, 2008.

93. **RM Queen**, AN Abbey, B Chuckpaiwong, JA Nunley. *Plantar Loading Comparisons between Women with a History of Second Metatarsal Stress Fractures and Normal Controls*. American Journal of Sports Medicine. 37(2): 390-395, 2009.
94. B Chuckpaiwong, JA Nunley, NA Mall, **RM Queen**. *The Effect of Foot Type on In-shoe Plantar Pressure During Walking and Running*. Gait and Posture. 28 (3): 405-411, 2008.
95. B Chuckpaiwong, **RM Queen**, ME Easley, JA Nunley. *Distinguishing Jones and Proximal Diaphyseal Fractures of the Fifth Metatarsal: Why Bother?* Clinical Orthopaedics and Related Research 466 (8): 1966-1970, 2008.
96. EL Sims, WM Hardaker, **RM Queen**. *Gender Differences in Plantar Pressure Loading During Three Soccer-specific Tasks*. British Journal of Sports Medicine. 42 (4): 272-277, 2008.
97. **RM Queen**, BL Charnock, WE Garrett, WM Hardaker, EL Sims, CT Moorman. *A Comparison of Cleat Types During Two Football-Specific Tasks on FieldTurf*. British Journal of Sports Medicine. 42 (4): 278-284, 2008.
98. LC Feeney, C Lin, DJ Marcellin-Little, AR Tate, **RM Queen**, B Yu. *Validation of two-dimensional Kinematic Analysis of Walking and Sit-to-Stand Motions in Labrador Retrievers*. American Journal of Veterinary Research. 68 (3): 277-282, 2007.
99. B Yu, J Preston, **RM Queen**, WM Hardaker, IR Byrum, MT Gross, M Davis, TN Taft, WE Garrett. *Effects of Wearing Foot Orthosis with Medial Arch Support on the 5th Metatarsal Loading in Selected Basketball Tasks*. Journal of Orthopaedic and Sports Physical Therapy, 37(4): 186-191, 2007.
100. **RM Queen**, BB Haynes, WM Hardaker, WE Garrett, Jr. *Forefoot Loading During Three Athletic Tasks*. American Journal of Sports Medicine; 35(4): 630-636, 2007.
101. **RM Queen**, NA Mall, WM Hardaker, JA Nunley II. *Describing the Medial Longitudinal Arch Using Footprint Indices*. Foot and Ankle International, 28 (4): 456-462, 2007.
102. NA Mall, WM Hardaker, JA Nunley II, **RM Queen**. *The Reliability and Reproducibility of Foot Type Measurements using a Mirrored Foot Photo Box and Digital Photography Compared to Caliper Measurements*. Journal of Biomechanics, 40 (5), 1171-1176, 2007.
103. **RM Queen**, TT Crowder, H Johnson, D Ozumba, and AP Toth. *Treatment of Metatarsal Stress Fractures: Case Reports*. Foot and Ankle International, 28 (4): 506-510, 2007.
104. **RM Queen**, MT Gross, H Liu. *Reliability of lower Extremity Kinetics and Kinematics for Standardized and Self-Selected Running Speeds*. Gait and Posture 23(3), 282-287, 2006.
105. MT Gross, B Yu, **RM Queen**. *Posterior Heel Flare and Chronic Exertional Anterior Compartment Syndrome: A Case Study*. Orthopaedic Physical Therapy Practice. 17 (4), 8-13, 2005.
106. **RM Queen**, PS Weinhold, DT Kirkendall, B Yu. *Theoretical Study of the Effect of Ball Properties on Impact Force in Soccer Heading*. Medicine and Science in Sports and Exercise. 35(12), 2069-2076, 2003.

107. **RM Harrell**, J Tong, PS Weinhold, and LE Dahnens. *Comparison of the Mechanical Properties of Different Tension Band Materials and Suture Techniques*. Journal of Orthopaedic Trauma. 17(2), 2003.

Non-refereed publications:

1. **RM Queen**. *Fifth Metatarsal Stress Fractures*. ACC Webpage (Sports Science Section), February 2005.
2. **RM Harrell**, Paul S. Weinhold, Bing Yu, and Don Kirkendall. *Proper Heading is Safe – But there are precautions to be taken, especially with children*. Soccer Journal. 47(5), 2002.

Chapters in books:

1. Robin Queen and Michael Orendurff. Amputee Gait: Normal and Abnormal. In: JI Krajchich, MS Pinzer, BK Potter, and PM Stevens, eds. *Atlas of Amputations and Limb Deficiencies*, ed. 4. Chicago, IL: American Academy of Orthopedic Surgeons, 2016: 69-80.
2. Robin Queen and Robert Butler. Walking Mechanics Following Surgical Interventions for Ankle Arthritis. In: DeOrion, JK and Parekh, SG, eds. *Total Ankle Replacement An Operative Manual*. Philadelphia, PA: Wolters Kluwer – Lippincott Williams & Wilkins, 2014: 1-4.
3. Robin Queen. Biomechanics Research. In: Moorman, CT and Kirkendall, DT, eds. *Sports Medicine and Athlete Health*. Santa Barbara, CA: Praeger; 2011:85-99.

Books: (Indicate authors or editor.): None

Non-authored publications: (Faculty member formally acknowledged in the publication.)

1. Marchant, MH, Stubbs, AJ, Basamania, CJ. *Technique and Early Results of Intramedullary Pressure-Guided Core Decompression of the Humeral Head for Nontraumatic Osteonecrosis*. Techniques in Shoulder & Elbow Surgery. 9(1):23-30, 2008.
2. Guskiewicz, KM. *Mild Traumatic Brain Injury in Youth Soccer*. Submitted to the Department of Health and Human Services Maternal and Child Health Bureau, 2002

Selected abstracts

1. A Sanders, S Ellis, G Saito, C Demetracopoulos, A Kraszewski, **R Queen**, H Hillstrom. Differences in gait and stair ascent after ankle arthrodesis and total ankle arthroplasty. AOFAS Specialty Day 2019. (In Review)
2. C Hughes Oliver and **R Queen**. Landing Differences between Surgical and Non-Surgical Limbs with Brace Wear after ACL Reconstruction. Biomedical Engineering Society Annual Meeting 2018.
3. A. Peebles and **R Queen**. Using the loadsol to Predict Knee Extension Moment Asymmetry during a Stop Jump. Biomedical Engineering Society Annual Meeting 2018.
4. **R Queen**, K Renner, S Ranganathan and D Srinivasan. Predicting Measures of Physical

- Performance from Gait Mechanics in Patients with Ankle Osteoarthritis. American Society of Biomechanics Annual Meeting 2018.
5. S Ulman, **RM Queen**, D Srinivasan. Gait Variability to Predict Motor Learning of a Novel Motor Task. American Society of Biomechanics Annual Meeting 2018.
 6. A Peebles, K Renner, TK Miller, **RM Queen**. Hop Distance and Loading Symmetry in ACL Reconstructed Athletes During Return to Sport Testing. American Society of Biomechanics Annual Meeting 2018.
 7. **RM Queen**, K Renner, J Zhu, L Sands. Association of Walking Speed with Gait Mechanics Following Total Ankle Arthroplasty. American Society of Biomechanics Annual Meeting 2018.
 8. C Hughes-Oliver, D Srinivasan, M McCullough, **R Queen**. Correlation Between Gait Asymmetry and Motor Variability. American Society of Biomechanics Annual Meeting 2018.
 9. A Peebles, K Renner, **RM Queen**. The loadsol is a Valid and Reliable Device for Evaluating Force During Landing Tasks. World Congress on Biomechanics 2018.
 10. S Shultz, K Sheerin, G Handsfield, D Wells, K Hebert-Losier, P Fink, J Clarke, M Bussey, **RM Queen**. Finding the balance between education outreach and research goals. World Congress on Biomechanics 2018.
 11. JF Drazan, A Loya, B Horne, JE Bechtold, **RM Queen**. Using Sports to Engage Youth in Science, Technology, Engineering and Math (STEM) Outreach. World Congress on Biomechanics 2018.
 12. A Kraszewski, G Saito, H Hillstrom, **R Queen**, S Ellis, C Demetracopoulos. Differences in mechanics during stair ascent after ankle arthrodesis and total ankle arthroplasty. International Foot and Ankle Biomechanics Meeting 2018.
 13. GH Saito, AP Kraszewski, SI Backus, **RM Queen**, SJ Ellis, HJ Hillstrom, CA Demetracopoulos. Differences in gait mechanics after total ankle arthroplasty and ankle arthrodesis. International Foot and Ankle Biomechanics Meeting 2018.
 14. D Schmitt, C Hughes-Oliver, A Zeininger, **RM Queen**. The effect of ankle arthritis and total ankle arthroplasty on COP position at toe-off. International Foot and Ankle Biomechanics Meeting 2018.
 15. JF Drazan, A Loya, B Horne, J Bechtold, **RM Queen**. Low Cost Sports Biomechanics Lab for Accessible STEM Outreach. International Foot and Ankle Biomechanics Meeting 2018.
 16. **RM Queen**, A Peebles, K Renner, TK Miller. Functional Knee Bracing Improves Loading Symmetry Following ACL Reconstruction. American College of Sports Medicine Annual Meeting 2018.
 17. K Renner, A Peebles, TK Miller, **RM Queen**. Correlation of Hop Distance and Loading Symmetry during Return to Sport Testing in Healthy Subjects. American College of Sports

Medicine Annual Meeting 2018.

18. S Ulman, **RM Queen**, D Srinivasan. Changes in Anticipatory Postural Adjustments Preceding Gait Initiation during Learning of a Novel Motor Task. Orthopaedic Research Society Annual Meeting 2018.
19. **RM Queen**, C Hughes-Oliver, S Ranganathan, D Srinivasan. Ankle Arthritis Alters Joint Moment Contributions During Locomotion. Orthopaedic Research Society Annual Meeting 2018.
20. B Baumgartner, R Baumgartner, T Somers, F Keefe, **RM Queen**, F Guilak, V Kraus, D Schmitt. Effect of Coping Skills Training and Behavioral Weight Loss Therapy on Self-selected Walking Speed in Knee Osteoarthritis Patients. American Academy of Orthopaedic Surgeons Annual Meeting 2018 (In Review)
21. C Hughes-Oliver, D Srinivasan, **RM Queen**. Sex-Specific Differences of Temporal Gait Patterns in Ankle Osteoarthritis Patients. Biomedical Engineering Society Annual Meeting 2017.
22. K Renner, E McConnell, A Black, L Young, **RM Queen**. Effect of Achilles Taping on Joint Contributions to Work and Power. Biomedical Engineering Society Annual Meeting 2017.
23. TP Trentadue, **RM Queen**, D Schmitt. Fourier Analysis of the Vertical Ground Reaction Forces Distinguishes Gait Patterns within Habitually Unshod Persons in Madagascar. American Society of Biomechanics Annual Meeting 2017.
24. JR Gladish, DW Powell, **RM Queen**. Simplified Center of Mass Tracking in Ankle Osteoarthritis Patients. American Society of Biomechanics Annual Meeting 2017.
25. E McConnell, TK Miller, JR Gladish, **RM Queen**. Effects of Functional Knee Brace on Symmetry During Landings in ACL-R Patients. American Society of Biomechanics Annual Meeting 2017.
26. C Hughes-Oliver, D Schmitt, **RM Queen**. Quantifying Limp Using Temporal Gait Variables. American Society of Biomechanics Annual Meeting 2017
27. **RM Queen**, D. Schmitt, S Ranganathan. Assessing Movement Asymmetry Using the Normalized Symmetry Index in ACL Patients. American Society of Biomechanics Annual Meeting 2017.
28. K Renner and **RM Queen**. Changes in Limb Symmetry during a Two Mile Outdoor Run. American Society of Biomechanics Annual Meeting 2017.
29. DW Powell, LE Allison, **RM Queen**. Recovery of Center of Pressure Variability Following Total Ankle Arthroplasty. American College of Sports Medicine Annual Meeting 2017.
30. E McConnell, P Hernandez, **RM Queen**. Effects of Achilles Tendon Taping on Joint Energetics in Jumping and Landing. American College of Sports Medicine Annual Meeting 2017.

31. **RM Queen** and TK Miller. Limb Asymmetry During Anterior Cruciate Ligament Reconstruction Recovery. American College of Sports Medicine Annual Meeting 2017.
32. K Renner, B Thakkar, DSB Williams, **RM Queen**. Validation of Single Sensor Wireless In-shoe Force Insoles during Running. American College of Sports Medicine Annual Meeting 2017.
33. LE Allison, E McConnell, **RM Queen**, DW Powell. Changes in Center of Pressure Excursion Velocities During Recovery from Total Ankle Arthroplasty. American College of Sports Medicine Annual Meeting 2017.
34. A Fitzsimons, MC Granatosky, **RM Queen**, P Lemelin, A Zeininger, H Chapman, D Schmitt. Gait asymmetry in humans and other animals: How much is normal and why does it exist? American Association of Physical Anthropology Annual Meeting 2017.
35. DR Sturnick, JR Baxter, CA Demetracopoulos, **RM Queen**, SJ Ellis, JT Deland. Effects of replacing versus fusion the ankle on hindfoot kinematics during simulated gait. Orthopaedic Research Society Annual Meeting 2017
36. B Thakkar, DSB Williams, **RM Queen**. Gait Symmetry Metrics Provide Different Outcomes in Patients with Ankle Osteoarthritis. Orthopaedic Research Society Annual Meeting 2017
37. **RM Queen**, CT Franck, SB Adams. Implant Selection for Total Ankle Arthroplasty Does Not Substantially Alter Post-operative Walking Mechanics. Orthopaedic Research Society Annual Meeting 2017
38. **RM Queen** and CT Franck. Side-to-Side Asymmetry During Recovery Following Anterior Cruciate Ligament Reconstruction. Orthopaedic Research Society Annual Meeting 2017
39. E McConnell, D Schmitt, **RM Queen**. Impact of Tibiotalar Alignment on COP Trajectory in Patients with Severe Ankle Arthritis. Biomedical Engineering Society Annual Meeting 2016.
40. M Wenrick, **RM Queen**. Changes in Side-to-side Symmetry During a 2 Mile Run. Biomedical Engineering Society Annual Meeting 2016.
41. **RM Queen**, D Schmitt. Power Variation at the Hip and Ankle Associated with Severe Hip Osteoarthritis. Biomedical Engineering Society Annual Meeting 2016.
42. S Wellman and **RM Queen**. A Prospective, Randomized Comparison of Single-Radius and J-Curve Total Knee Implant Designs. Eastern Orthopedic Society Annual Meeting 2016
43. S Wellman and **RM Queen**. A Prospective, Randomized Comparison of Single-Radius and J-Curve Total Knee Implant Designs. International Society for Technology in Arthroplasty Annual Meeting 2016.
44. DW Powell, and **RM Queen**. Recovery of Balance Following Total Ankle Arthroplasty. American Society of Biomechanics Annual Meeting 2016.
45. B Thakkar, DSB Williams, K Harrison, J Morgan, **RM Queen**. Vertical Ground Reaction Force Asymmetry During Uphill, Level and Downhill Running. American Society of

Biomechanics Annual Meeting 2016.

46. K Harrison, B Thakkar, J Morgan, DSB Williams, **RM Queen**. Intralimb Co-ordination in Level vs. Uphill Running. American Society of Biomechanics Annual Meeting 2016.
47. J Morgan, B Thakkar, K Harrison, **RM Queen** and DSB Williams. Lower Extremity Stiffness During Uphill and Level Running. American Society of Biomechanics Annual Meeting 2016.
48. RJ Larsen, **RM. Queen**, and D Schmitt. Foot Strike Potentially Mediates Limb Stiffness During a Drop Step While Running. American Society of Biomechanics Annual Meeting 2016.
49. E McConnell, DSB Williams, **RM Queen**. The use if a Limb Symmetry Index to Compare Landing Mechanics in ACL- Reconstructed Patients in Braced and Non-Braced Conditions. American Society of Biomechanics Annual Meeting 2016.
50. DW Powell, E McConnell, **RM Queen**. Unique Joint Contributions to Jumping and Landing in ACL Reconstructed Compared to Healthy Athletes. American Society of Biomechanics Annual Meeting 2016.
51. **RM Queen**, E McConnell, DW Powell. Differences in Joint Work and Power During jumping and Landing in ACL reconstructed patients and healthy controls. American Society of Biomechanics Annual Meeting 2016.
52. DS Williams, **RM Queen**. Quantifying Knee Movement Symmetry During Functional Tasks. American Society of Biomechanics Annual Meeting 2016.
53. DW Powell, JL Easley, MA Mize, RN Plummer, BA Windsor, **RM Queen**, DS Williams. Absolute and Relative Joint Contributions to Landing in High- Compared to Low-Arched Athletes. American College of Sports Medicine Annual Meeting 2016.
54. BA Windsor, JL Easley, MA Mize, RN Plummer, **RM Queen**, DS Williams, DW Powell. High-arched Athletes Exhibit Greater Vertical Stiffness than Low-arched athletes During Landing. American College of Sports Medicine Annual Meeting 2016.
55. E McConnell, **RM Queen**. Movement and Loading Symmetry Changes when Wearing a Functional Knee Brace Following ACL Reconstruction. American College of Sports Medicine Annual Meeting 2016.
56. **RM Queen**, S Lage, DW Powell. Unique Center of Pressure Profiles in Unilateral Compared to Bilateral End-Stage Ankle Arthritis Patients. American College of Sports Medicine Annual Meeting 2016.
57. **RM Queen**, D Schmitt. Increased Ankle Power Compensates For Loss of Hip Power in Patients with Advanced Hip Osteoarthritis. Orthopaedic Research Society Annual Meeting 2016.
58. **RM Queen**, D Schmitt. Sex-Specific Difference in Dynamic Balance Following Total Hip Replacement. Orthopaedic Research Society Annual Meeting 2016.

59. **RM Queen**, AC Schmitt, SB Adams. Revision Total Ankle Arthroplasty Results in Similar Outcomes to Primary Total Ankle Arthroplasty. Orthopaedic Research Society Annual Meeting 2016.
60. **RM Queen**, E Merenda, D Powell, and DS Williams. Using Sample Entropy on Continuous and Discontinuous Data to Assess Jumping and Landing. American Society of Biomechanics 2015
61. SR Raman, BG Hammill, **RM Queen**, LH Curtis. Linking Orthopedic Registry Data to Medicare Claims Data. NC TraCS/RTI/DCRI - Comparative Effectiveness Symposium 2015
62. AL Carpenter, JD Smith, **RM Queen**. Assessing Postural Control in Individuals with Severe Ankle Osteoarthritis. American College of Sports Medicine Annual Meeting 2015.
63. RJ Butler, G Bullock, T Arnold, PJ Plisky, **RM Queen**. Competition level differences on the Lower Quarter Y Balance Test in Baseball Players. American College of Sports Medicine Annual Meeting 2015.
64. E Menninger, AL Carpenter, D Schmitt, **RM Queen**. Center of Pressure Symmetry in Individuals with Severe Ankle Osteoarthritis. American College of Sports Medicine Annual Meeting 2015.
65. EP Merenda, DS Williams, AL Carpenter, **RM Queen**. Movement Repeatability During Landing Following Anterior Cruciate Ligament Reconstruction. American College of Sports Medicine Annual Meeting 2015.
66. **RM Queen**, AL Carpenter, RJ Butler. Gait Asymmetries as Predictors of Walking Speed Five Years Following Total Ankle Arthroplasty. American College of Sports Medicine Annual Meeting 2015.
67. **RM Queen**, AL Carpenter, RJ Butler, SB Adams. Gait and Functional Outcomes 5 years After Total Ankle Replacement. Orthopaedic Research Society Annual Meeting 2015
68. **RM Queen**, AJ Grier, RJ Butler, SS Wellman, MP Bolognesi, DE Attarian. Differences Between Observed and Patient-Reported Functional Status Following Primary Total Joint Arthroplasty. Orthopaedic Research Society Annual Meeting 2015
69. **RM Queen**, TL Sparling, AL Carpenter, D Schmitt. Changes in Energy Recovery Following Total Ankle Replacement. Orthopaedic Research Society Annual Meeting 2015
70. A Bell, S Cole, J Holskey, S Morris, D Overcash, **RM Queen**, RJ Butler. Rotational Hip Mobility Does Not Alter Sagittal Plane Landing Mechanics. APTA Combined Sections Meeting 2015.
71. RJ Butler, AL Carpenter, K D'Amelio, **RM Queen**. Lower Extremity Loading Across Different Postures: Implications for Stress Fracture Rehabilitation. APTA Combined Sections Meeting 2015
72. H Myers, **RM Queen**, AL Carpenter, RJ Butler. Relationship between the Lower Quarter Y-

- Balance Test Scores and Isokinetic Strength Testing in Patients status post ACL Reconstruction. APTA Combined Sections Meeting 2015.
73. **RM Queen**, RJ Butler, EA Heim, M Bushmiaer, CL Barnes. Outcome Improvements Following Total Knee Arthroplasty When Using Liposomal Bupivacaine Instead of an Epidural. Knee Society Closed Meeting 2015
 74. M Pellegrini, A Schiff, SB Adams, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. Tibiotalar arthrodesis takedown with Total Ankle Arthroplasty. American Academy of Orthopaedic Surgeons Annual Meeting 2015.
 75. MJ Boyle; RJ Butler; **RM Queen**. Functional Movement Recovery After Anterior Cruciate Ligament Reconstruction in Adolescent Patients. American Academy of Orthopaedic Surgeons Annual Meeting 2015.
 76. JM Roth, MJ Boyle; RJ Butler; K Stabile, **RM Queen**. Functional Movement Deficits in Secondary Anterior Cruciate Ligament Tears. Society of Military Orthopaedic Surgeons Annual Meeting 2014.
 77. **RM Queen**, RJ Butler, EA Heim, M Bushmiaer, CL Barnes. Improvements in Outcomes Following Total Knee Arthroplasty When Using Liposomal Bupivacaine Instead of an Epidural. International Society for Technology in Arthroplasty Annual Meeting 2014.
 78. RJ Butler, **RM Queen**, A Dooley, P Edwards, M Bushmiaer, CL Barnes. Comparison of Gait Mechanics in a Young Total Hip Arthroplasty Group Compared to Older Patients and Healthy Controls: A Case Control Study. International Society for Technology in Arthroplasty Annual Meeting 2014.
 79. **RM Queen**, AL Carpenter, WE Garrett, RJ Butler. Plantar Loading Differences Between Genders During an Unanticipated Side-cut. ESM Annual Meeting 2014.
 80. M Pellegrini, A Schiff, SB Adams, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. Tibiotalar arthrodesis takedown with Total Ankle Arthroplasty. American Orthopaedic Foot and Ankle Society Annual Meeting 2014.
 81. **RM Queen**, AL Carpenter, SB Adams, ME Easley, JA Nunley, JK DeOrio, RJ Butler. Differences in Walking Mechanics Between Ankle Disarthrodesis and Primary Total Ankle Replacement. American Orthopaedic Foot and Ankle Society Annual Meeting 2014.
 82. **RM Queen**, TL Sparling, AL Carpenter, RJ Butler, D Schmitt. The Effect of Total Ankle Replacement on Energy Recovery During Walking. Southern Orthopaedic Association Annual Meeting 2014.
 83. EA Heim, M Bushmiaer, **RM Queen**, RJ Butler, GW Byram, CL Barnes. Potential Benefits of Using Liposomal Bupivacaine Instead of Epidurals in Total Knee Arthroplasty. Southern Orthopaedic Association Annual Meeting 2014.
 84. AJ Grier, RJ Butler, SS Wellman, DE Attarian, MP Bolognesi, **RM Queen**. Differences Between Observed and Patient-Reported Functional Status Following Primary Total Joint Arthroplasty. Southern Orthopaedic Association Annual Meeting 2014.

85. SW Mayer, EM Okafor, RJ Butler, **RM Queen**, WE Garrett. Comparison of Clinical Testing and Functional Movement Testing in Patients Following Anterior Cruciate Ligament Reconstruction: Improving Return To Sport Guidelines. Southern Orthopaedic Association Annual Meeting 2014.
86. PK Edwards, **RM Queen**, RJ Butler, MP Bolognesi, CL Barnes. Are the Range of Motion Measurements Needed when Calculating the Harris Hip Score? Southern Orthopaedic Association Annual Meeting 2014.
87. RJ Butler, L Laver, WE Garrett, CT Moorman, D Taylor, **RM Queen**. Effect of Meniscal Injury on Functional Performance Testing following ACL Rehabilitation. American College of Sports Medicine Annual Meeting 2014.
88. TL Sparling, RJ Butler, D Schmitt, **RM Queen**. Energy Recovery is Decreased During Walking in Patients with End-stage Hip, Knee, and Ankle Arthritis. American College of Sports Medicine Annual Meeting 2014.
89. **RM Queen**, L Plaman, K Campbell, C Holt, K Howenstine, J Shaughnessy, RJ Butler. The influence of static balance on walking mechanics in patients with end-stage ankle osteoarthritis. American College of Sports Medicine Annual Meeting 2014
90. **RM Queen**, TL Sparling, RJ Butler, DO Schmitt. Energy Recovery During Walking is Decreased in Patients with End-stage Arthritis. Orthopaedic Research Society 2014.
91. **RM Queen**, RJ Butler, AL Carpenter, B Dai, WE Garrett. Changes in Landing Mechanics between 6 and 12 months following ACL Reconstruction When Using a Functional Knee Brace. Orthopaedic Research Society 2014.
92. J Lewis, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley, ME Easley. Does a Hindfoot Arthrodesis Affect the Results of Total Ankle Replacement? American Academy of Orthopaedic Surgery Annual Meeting 2014.
93. **RM Queen**, RJ Butler, SB Adams, ME Easley, JA. Nunley, JK DeOrio. Does Achilles Tendon Lengthening Improve the Results in Total Ankle Replacement? American Academy of Orthopaedic Surgery Annual Meeting 2014.
94. **RM Queen**, RJ Butler, SB Adams, ME Easley, JA. Nunley, JK DeOrio. Does Achilles Tendon Lengthening Improve the Results in Total Ankle Replacement? Orthopaedic Research Society (AAOS Exchange Poster) Annual Meeting 2014.
95. CK Ledford, RA Ruberte-Thiele, RJ Butler, JS Appleton, SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi. Percent Body Fat More Associated with Perioperative Outcomes After Total Joint Arthroplasty than BMI. American Academy of Orthopaedic Surgery Annual Meeting 2014.
96. CK Ledford, RA Ruberte-Thiele, RJ Butler, JS Appleton, SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi. Percent Body Fat More Associated with Perioperative Outcomes After Total Knee Arthroplasty than BMI. Knee Society Closed Meeting 2014.

97. RJ Butler, EG Cook, N Wald, M Reiman, RC Mather, WE Garrett, **RM Queen**. Combining Dry Needling and Functional Exercises to resolve FAI attributed pain in a Professional Soccer Player. APTA Combined Sections Meeting 2014.
98. RJ Butler, S Myers, D Taylor, CT Moorman, A Toth, WE Garrett, **RM Queen**. Functional testing differences in ACL reconstruction patients cleared vs. not cleared to return to sports on using clinical impairment measures. APTA Combined Sections Meeting 2014.
99. B. Buzzell, E. Strube, C. Mansfield, G. Wilmoth, D. Beltramo, T. Sparling, **R. Queen**, R.J. Butler. Association of ankle range of motion on functional testing and landing mechanics. North Carolina Physical Therapy Association Fall meeting & Duke University School of Medicine Clinical Research Day 2013.
100. CK Ledford, RA Ruberte-Thiele, RJ Butler, JS Appleton, SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi. Percent Body Fat More Associated with Perioperative Outcomes After Total Joint Arthroplasty than BMI. American Association of Hip and Knee Surgery Annual Meeting 2013.
101. CK Ledford, RA Ruberte-Thiele, RJ Butler, JS Appleton, SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi. Percent Body Fat More Associated with Perioperative Outcomes After Total Joint Arthroplasty than BMI. North Carolina Orthopaedic Association Annual Meeting 2013.
102. J Lewis, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley, ME Easley. Does a Hindfoot Arthrodesis Affect the Results of Total Ankle Replacement? Eastern Orthopaedic Association Annual Meeting 2013
103. RA Ruberte-Thiele, CK Ledford, RJ Butler, JS Appleton, Jr., SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi. Percent Body Fat Is More Discriminatory than BMI for Perioperative Outcomes After Total Joint Arthroplasty. Eastern Orthopaedic Association Annual Meeting 2013.
104. B Dai, WE Garrett, MT Gross, DA Padua, **RM Queen**, B Yu. The Effects of Performance Demands on ACL Loading During a Stop-Jump Task. American Society of Biomechanics Annual Meeting, 2013.
105. **RM Queen**, WE Garrett, Jr., DC Taylor, RJ Butler. Early detection of movement related risk factors for second knee injuries in ACL reconstruction patients. Southern Orthopaedic Association Annual Meeting 2013.
106. RJ Butler, WE Garrett, Jr., DC Taylor, **RM Queen**. Functional deficits remain from 6 to 12 months following ACL surgery. Southern Orthopaedic Association Annual Meeting 2013.
107. RJ Butler, M Lehr, KB Kiesel, **RM Queen**, WE Garrett, PJ Plisky. An economical model for in the field ACL injury screening in college athletes. Southern Orthopaedic Association Annual Meeting 2013.
108. RJ Butler, MP Bolognesi, S Wellman, CL Barnes, **RM Queen**, DE Attarian. Static balance differences one year following a single joint arthroplasty compared to patients following multiple joint arthroplasties. Southern Orthopaedic Association Annual Meeting 2013.

109. **RM Queen**, S Wellman, DE Attarian, MP Bolognesi, RJ Butler. Dynamic balance differences between isolated TKA patients and patients with multiple arthroplasties one year following TKA. Southern Orthopaedic Association Annual Meeting 2013.
110. Adams SB Jr., Demetracopoulos CA, **Queen RM**, Easley ME, DeOrio JK, Nunley JA Early to Mid-Term Outcomes of Fixed-Bearing Total Ankle Arthroplasty Using a Modular Intramedullary Tibial Component. Southern Orthopaedic Association Annual Meeting 2013.
111. J Lewis, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley, ME Easley. Does a Hindfoot Arthrodesis Affect the Results of Total Ankle Replacement? Southern Orthopaedic Association Annual Meeting 2013. (SOA Presidents' Resident Award Winner 2013)
112. Adams SB Jr., Demetracopoulos CA, **Queen RM**, Easley ME, DeOrio JK, Nunley JA Early to Mid-Term Outcomes of Fixed-Bearing Total Ankle Arthroplasty Using a Modular Intramedullary Tibial Component. American Orthopaedic Foot and Ankle Society Annual Meeting 2013.
113. J Lewis, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley, ME Easley. Does a Hindfoot Arthrodesis Affect the Results of Total Ankle Replacement? American Orthopaedic Foot and Ankle Society Annual Meeting 2013.
114. CA Demetracopoulos, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley, ME Easley. Influence of Age on Outcome in Total Ankle Arthroplasty. American Orthopaedic Foot and Ankle Society Annual Meeting 2013.
115. **RM Queen**, RJ Butler, SB Adams, ME Easley, JA Nunley, JK DeOrio. Does a Concomitant Gastrocnemius Recession Improve Ankle Mechanics in Total Ankle Replacement Patients? American Orthopaedic Foot and Ankle Society Annual Meeting 2013.
116. **RM Queen**, SB Adams, ME Easley, JK DeOrio, JA Nunley, RJ Butler. Total Ankle Replacement Does Not Alter Lower Extremity Kinematics During Sit-to-Stand Movement. American Orthopaedic Foot and Ankle Society Annual Meeting 2013.
117. **RM Queen**, C Anghong, K Siorpaes, JA Nunley. A Full-length Rigid Insert Does Not Reduce Loading Beneath the Metatarsals in Midfoot Arthritis Patients. American Orthopaedic Foot and Ankle Society Annual Meeting 2013.
118. RJ Butler, B Dai, WE Garrett, **RM Queen**. Changes in lower extremity mechanics during a stop jump from 6 to 12 months following ACL reconstruction. American College of Sports Medicine Annual Meeting 2013.
119. ME Russell, RJ Butler, T Sparling, **RM Queen**. Is there a single set of biomechanical variables that predicts jump performance? American College of Sports Medicine Annual Meeting 2013.
120. **RM Queen**, T Sparling, ME Easley, JK DeOrio, JA Nunley, RJ Butler. Pre-operative gait speed as an indicator of subjective and functional recovery following total ankle replacement. American College of Sports Medicine Annual Meeting 2013.

121. B Dai, WE Garrett, MT Gross, DA Padua, **RM Queen**, B Yu. ACL Loading And Jump Performance Are Decreased With Increased Knee Flexion Landing And Soft Landing. American College of Sports Medicine Annual Meeting 2013.
122. **RM Queen**, RJ Butler, SB Adams, ME Easley, JK DeOrio, JA Nunley. The Influence of Gender on Walking Mechanics Following Total Ankle Replacement Orthopaedic Research Society Annual Meeting 2013.
123. **RM Queen**, RJ Butler, SB Adams, ME Easley, JK DeOrio, JA Nunley. The Effect of Hindfoot Alignment on Frontal Plane Mechanics Following Total Ankle Replacement. (Best Foot and Ankle Poster – Also presented at AAOS 2013) Orthopaedic Research Society Annual Meeting 2013.
124. **RM Queen**, SB Adams, ME Easley, JK DeOrio, JA Nunley, RJ Butler. Understanding Changes in Hip and Knee Mechanics following Total Ankle Replacement. Orthopaedic Research Society Annual Meeting 2013.
125. RJ Butler, DE Attarian, MP Bolognesi, CL Barnes, JA Nunley, **RM Queen**. Is unilateral balance symmetrical following total joint arthroplasty? Mid-American Orthopaedic Association Annual Meeting 2013.
126. **RM Queen**, MP Bolognesi, S Wellman, RJ Butler, DE Attarian, CL Barnes. Do Multiple Joint Arthroplasties Affect Unilateral Balance Ability Six Months Following Surgery in Total Hip and Total Knee Arthroplasty Patients? Mid-American Orthopaedic Association Annual Meeting 2013.
127. **RM Queen**, RJ Butler, SB Adams, JK DeOrio, ME Easley, JA Nunley. Patient Reported Outcomes, Function, and Gait Mechanics After Fixed and Mobile-Bearing Total Ankle Replacement. American Academy of Orthopaedic Surgeons Annual Meeting 2013.
128. **RM Queen**, RJ Butler, SB Adams, JK DeOrio, ME Easley, JA Nunley. Bilateral differences in gait mechanics following Total Ankle Replacement: a two year longitudinal study. American Academy of Orthopaedic Surgeons Annual Meeting 2013.
129. J Shutt, **RM Queen**, KB Kiesel, PJ Plisky, G Rose, RJ Butler. Relationship between Upper Quarter Function and Golf Kinematics. Sports Section of the Combined Sections Meeting of the American Physical Therapy Association 2013.
130. RJ Butler, V Salinas, **RM Queen**, WE Garrett, Phillip J. Plisky. Hypermobility and dynamic balance in junior soccer players from Spain. Sports Section of the Combined Sections Meeting of the American Physical Therapy Association 2013.
131. TT Eckel, JA Nunley, **RM Queen**. The Effects Of Gender And Bodyweight On Ankle Mechanics And Spatial Temporal Gait Mechanics In Healthy Controls. Society of Military Orthopaedic Surgeons Annual Meeting. Naples, FL, 2012.
132. **RM Queen**, SB Adams, ME Easley, JK DeOrio, JA Nunley. Radiographic Analysis of Subsidence in Total Ankle Replacement: 2-year Follow-up. Society of Military Orthopaedic Surgeons Annual Meeting. Naples, FL, 2012.

133. ET Newman, RJ Butler, PH Horne, S Wellman, DE Attarian, MP Bolognesi, **RM Queen**. The Y-Balance Test and WOMAC scores: assessment of a novel functional testing protocol in postoperative arthroplasty patients. North Carolina Orthopaedic Association Meeting. Pinehurst, NC 2012.
134. **RM Queen**, RJ Butler, JK DeOrio, ME Easley, JA Nunley. Changes in Patient Balance and Function 2 years Following Total Ankle Replacement. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012.
135. **RM Queen**, JE Carter, SB Adams, ME Easley, JK DeOrio, JA Nunley. Radiographic Analysis of Subsidence in Total Ankle Replacement: 2-year Follow-up. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012
136. **RM Queen**, RJ Butler, SB Adams, JK Friend, JK DeOrio, ME Easley, JA Nunley. Differences in Gait Mechanics and Clinical Outcomes between Fixed and Mobile-Bearing Total Ankle Replacements. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012
137. **RM Queen**, RJ Butler, SB Adams, JK DeOrio, ME Easley, JA Nunley. Gait Symmetry Changes following Total Ankle Replacement. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012
138. **RM Queen**, MP Bolognesi, CL Barnes, JA Nunley, RJ Butler. Unilateral balance in Total Joint Patients One year following Surgery. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012.
139. **RM Queen**, RJ Butler, John M. Stephenson, Becky Wilson, CL Barnes. Does an extension constraint brace reduce knee motion? Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012.
140. RJ Butler, WE Garrett, B Dai, **RM Queen**. Do lower extremity mechanics correlate between a jump landing and a deep squat? Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012.
141. **RM Queen**, RJ Butler, JK DeOrio, ME Easley, JA Nunley. Changes in Patient Balance and Function 2 years Following Total Ankle Replacement. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012
142. **RM Queen**, RJ Butler, S Wellman, MP Bolognesi, ET Newman, DE Attarian. Assessing unilateral function following Total Joint Replacement: a novel testing protocol. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012
143. RJ Butler, DE Attarian, MP Bolognesi, CL Barnes, JA Nunley, **RM Queen**. Unilateral balance in Total Joint Patients One year following Surgery. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012
144. RJ Butler, **RM Queen**, JM Stephenson, Becky Wilson, CL Barnes. Effect of extension constraint knee braces on dynamic balance. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012

145. RJ Butler, WE Garrett, D Taylor, B Dai, **RM Queen**. Functional testing following ACL rehabilitation: Are our patients “normal” at discharge? Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012.
146. GE Garrigues, PP Gorman, PJ Plisky, KB Kiesel, H Myers, D Black, **RM Queen**, RJ Butler. Differences on the Upper Quarter Y Balance test between high school and college baseball players. American College of Sports Medicine, San Francisco, CA 2012.
147. **RM Queen**, RJ Butler, ME Russell, MP Bolognesi, JA Nunley. Differences in Walking Mechanics between End-stage Ankle and Hip Osteoarthritis. American College of Sports Medicine, San Francisco, CA 2012.
148. C Irwin, RJ Butler, CT Moorman, WE Garrett, **RM Queen**. Gender Differences in Plantar Loading during an Unanticipated Side-cut on FieldTurf. American College of Sports Medicine, San Francisco, CA 2012.
149. ME Russell, B Dai, RJ Butler, **RM Queen**. Changes in Plantar Loading During the Lower Quarter Y Balance Test. American College of Sports Medicine, San Francisco, CA 2012.
150. DE Fowler, RJ Butler, W Oslesby, CT Moorman, WE Garrett, **RM Queen**. Gender Differences in Lower Extremity Kinematics during an Unanticipated Side-cut. American College of Sports Medicine, San Francisco, CA 2012.
151. RJ Butler, B Dai, MP Reiman, WE Garrett, **RM Queen**. Are Fundamental Movement Patterns Meaningful In Identifying Patients At Risk For Sustaining A Second ACL Tear? American College of Sports Medicine, San Francisco, CA 2012.
152. RJ Butler, B Dai, WE Garrett, **RM Queen**. Asymmetry in Stop Jump Mechanics Correlates to Asymmetry in Deep Squat Mechanics in Patients 6 Months Following ACL Reconstruction. American College of Sports Medicine, San Francisco, CA 2012.
153. B Dai, RJ Butler, WE Garrett, and **RM Queen**. Using ground reaction forces to predict knee kinetic asymmetries in adolescent patients post ACL reconstructions. ACL Research Retreat VI. Greensboro, NC 2012.
154. D Brown; K Taylor; G Utturkar; C Spritzer; **RM Queen**; WE Garrett; L DeFrate. Modification of In Vivo ACL Strain Patterns during Jump Landing Through Verbal Instruction. ORS, San Francisco, California, 2012.
155. RJ Butler, **RM Queen**, KB Kiesel, PJ Plisky. Field Testing Dynamic Balance in Rwanda. APTA Combined Sections Meeting, Chicago, IL, 2012.
156. A Spontelli; A Arundale; L Ballengee; E Richardson; M Yanik; JA Nunley; RJ Butler; **RM Queen**. The influence of increased BMI on sagittal plane gait mechanics between genders. APTA Combined Sections Meeting, Chicago, IL, 2012.
157. RJ Butler, H Myers, D Black, **RM Queen**, PP Gorman, KB Kiesel, PJ Plisky. Bilateral differences on the Upper Quarter Y Balance Test in throwing athletes. APTA Combined Sections Meeting, Chicago, IL, 2012.

158. WC Hembree, JR Wittstein, EN Vinson, **RM Queen**, CR LaRose, K Singh, ME Easley. Clinical and Magnetic Resonance Imaging Features of Osteochondral Lesions of the Talus. American Academy of Orthopaedic Surgeons, San Francisco, CA 2012.
159. KM Schweitzer , SB Adams, Jr., NA Veins, **RM Queen**, ME Easley, JK DeOrio, JA Nunley, II. Early Prospective Clinical Results of a Modern Fixed-Bearing Total Ankle Replacement. American Academy of Orthopaedic Surgeons, San Francisco, CA 2012.
160. **RM Queen**, J De Biasio, RJ Butler, JK DeOrio, ME Easley, JA Nunley. Changes in Pain, Function, and Gait Mechanics Two Years Following Total Ankle Replacement. American Academy of Orthopaedic Surgeons, San Francisco, CA 2012.
161. RJ Butler, JD Wilson, DE Fowler III, **RM Queen**. Gender differences in landing mechanics vary depending on the type of landing. *99th Annual Meeting of the Clinical Orthopaedic Society*, Charleston, SC. September 2011.
162. B Dai, RJ Butler, WE Garrett, **RM Queen**. Limb Asymmetries During a Side-cutting Task in Adolescent Patients 6-12 months Following ACL Reconstruction. American Society of Biomechanics, Long Beach, CA 2011
163. **RM Queen**, AN Abbey, TP Vail, MP Bolognesi. Hip Joint Mechanics during Stair Ascending and Descending following Total Hip Replacement and Hip Replacement Arthroplasty. Southern Orthopaedic Association. Big Island, HI 2011
164. **RM Queen**, ME Russell, RJ Butler, SS Kelley, DE Attarian, MP Bolognesi. Effect of Surgical Approach on Gait Mechanics following Total Hip Arthroplasty. Southern Orthopaedic Association. Big Island, HI 2011
165. **RM Queen**, ME Russell, RJ Butler, SS Kelley, DE Attarian, MP Bolognesi. Stair Climbing Symmetry Following Total Hip Arthroplasty Based on Surgical Approach. Southern Orthopaedic Association. Big Island, HI 2011
166. **RM Queen**, J De Biasio, RJ Butler, JK DeOrio, ME Easley, JA Nunley. Changes in Gait Mechanics Two Years Following Total Ankle Replacement. Southern Orthopaedic Association. Big Island, HI 2011.
167. **RM Queen**, AN Abbey, RJ Butler, JA Nunley. Does increased weight alter ankle mechanics and spatial temporal gait mechanics in healthy controls? American Orthopaedic Foot and Ankle Society Annual Meeting. Keystone, CO 2011
168. **RM Queen**, J De Biasio, RJ Butler, JK DeOrio, ME Easley, JA Nunley. Changes in Gait Mechanics Two Years Following Total Ankle Replacement. American Orthopaedic Foot and Ankle Society Annual Meeting. Keystone, CO 2011
169. **RM Queen**, RJ Butler, B Dai, WE Garrett. Functional Bracing and Limb Symmetry Following ACL Reconstruction in Adolescent Patients. American College of Sports Medicine Annual Meeting. Denver, CO 2011.
170. AN Abbey, JA Nunley, RJ Butler, **RM Queen**. Does increased weight alter frontal plane mechanics in healthy controls? American College of Sports Medicine Annual Meeting.

- Denver, CO 2011.
171. ME Russell, RJ Butler, JA Nunley, **RM Queen**. Effect of Shoe Type and Gender on Loading During a Jump Landing Task. American College of Sports Medicine Annual Meeting. Denver, CO 2011.
 172. KA Taylor; HC Cutcliffe, **RM Queen**, ME Terry, GM Utturkar; CE Spritzer, WE Garrett; LE DeFrate. Measurement of In Vivo ACL Elongation During Gait. Orthopaedic Research Society, Long Beach, CA, 2011.
 173. KA Taylor; ME Terry, GM Utturkar; CE Spritzer; **RM Queen**; LA Iribarra, WE Garrett; LE DeFrate. Measurement of In Vivo ACL Elongation During Dynamic Jump Landing. Orthopaedic Research Society, Long Beach, CA, 2011
 174. **RM Queen**, SB Adams, Jr, JK Friend, ME Easley, JK DeOrio, and JA Nunley. Total Ankle Replacement in Extreme Varus or Valgus Tibiotalar Alignment. American Academy of Orthopaedic Surgeons, San Diego, CA, 2011.
 175. SB Adams, Jr, NA Viens, JK DeOrio, ME Easley, **RM Queen**, JA Nunley. Comparison of Intramedullary and Extramedullary Alignment Techniques for Tibial Component Placement in Total Ankle Arthroplasty. American Academy of Orthopaedic Surgeons, San Diego, CA, 2011.
 176. SB Adams, Jr, NA Viens, JK DeOrio, ME Easley, JA Nunley, **RM Queen**. Correlation of Component Position with Gait and Clinical Outcomes After Total Ankle Arthroplasty. American Academy of Orthopaedic Surgeons, San Diego, CA, 2011.
 177. RJ Butler, M Elpers, **RM Queen**. Acute changes in frontal plane gait mechanics during pregnancy as simulated by the Empathy Belly. APTA Combined Sections Meeting, New Orleans, LA, 2011
 178. **RM Queen**, TS Watters, ME Terry, SS Kelley, DE Attarian, MP Bolognesi. The Effect of Total Hip Arthroplasty Surgical Approach on Post-operative Gait Mechanics. American Association of Hip and Knee Surgery Annual Meeting, Dallas, TX, 2010.
 179. **RM Queen**, ME Terry, SS Kelley, DE Attarian, MP Bolognesi. Effect of Surgical Approach on Gait Event Timing Symmetry 6 Weeks After Total Hip Arthroplasty. 2010 Summer Meeting of The Hip Society, HSS, New York, New York, 2010
 180. **RM Queen**, TS Watters, ME Terry, SS Kelley, DE Attarian, MP Bolognesi. Gait Symmetry Following Total Hip Arthroplasty Based on Surgical Approach. Southern Orthopaedic Association Annual Meeting, Fajardo, Puerto Rico 2010.
 181. **RM Queen**, TS Watters, ME Terry, SS Kelley, DE Attarian, MP Bolognesi. The Effect of Total Hip Arthroplasty Surgical Approach on Post-operative Gait Mechanics. Southern Orthopaedic Association Annual Meeting, Fajardo, Puerto Rico 2010.
 182. SB Adams, Jr, NA Viens, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. Early Clinical Results of the Salto® Talaris Total Ankle Replacement Prosthesis. Southern Orthopaedic Association Annual Meeting, Fajardo, Puerto Rico 2010.

183. SB Adams, Jr, NA Viens, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. Early Clinical Results of the INBONE™ Total Ankle Replacement Prosthesis. Southern Orthopaedic Association Annual Meeting, Fajardo, Puerto Rico 2010.
184. SB Adams, Jr, NA Viens, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. Early Clinical Results of the Salto® Talaris Total Ankle Replacement Prosthesis. American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
185. SB Adams, Jr, NA Viens, **RM Queen**, JK DeOrio, ME Easley, JA Nunley. Early Clinical Results of the INBONE™ Total Ankle Replacement Prosthesis. American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
186. **RM Queen**, JI Wiegerinck, JC Yoder, AN Abbey, ME Terry, JA Nunley. Should we train in racing flats or cushioning training shoes. American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
187. **RM Queen**, C Cook, JK DeOrio, ME Easley, JA Nunley. Physical Performance Changes at Year One for Patients Who Receive a Total Ankle Replacement. American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
188. **RM Queen**, C Cook, JK DeOrio, ME Easley, JA Nunley. Validity of Four Measures for Severe Ankle Arthritis. American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
189. JR Wittstein, **RM Queen**, AN Abbey, AP Toth, CT Moorman. Subjective outcomes, isokinetic strength, and endurance following biceps tenotomy versus tenodesis. American Orthopaedic Society for Sports Medicine, Providence, RI 2010.
190. AN Abbey, JA Nunley, **RM Queen**. Effect of Carbon Graphite Foot Plate on Loading During Different Cutting Tasks. American College of Sports Medicine, Baltimore, MD, 2010
191. **RM Queen**, AN Abbey, JA Nunley. Effect of Carbon Graphite Foot Plate on Loading During Jumping and Landing. American College of Sports Medicine, Baltimore, MD, 2010
192. RJ Butler, M Elpers, **RM Queen**. Acute Effects of Gait Change During Simulated Pregnancy using the Empathy Belly. American College of Sports Medicine, Baltimore, MD, 2010
193. **RM Queen**, C Cook, JK DeOrio, ME Easley, JA Nunley. Does Coronal Plane Hindfoot Alignment Adversely Affect Gait Mechanics and Functional Assessment in Patients with End Stage Ankle Arthritis. Orthopaedic Research Society Annual Meeting, New Orleans, LA, 2010.
194. **RM Queen**, K Siorpaes, ME Terry, JA Nunley. Effect of Rigid Inserts on Plantar Loading During Level Walking. Orthopaedic Research Society Annual Meeting, New Orleans, LA, 2010.
195. **RM Queen**, AN Abbey, V Sabesan, D Covington, TP Vail, MP Bolognesi. Gait Symmetry: Hip Resurfacing vs. Total Hip Arthroplasty. American Association of Orthopaedic Surgeons Annual Meeting, New Orleans, LA, 2010.

196. **RM Queen**, AN Abbey, V Sabesan, D Covington, TP Vail, MP Bolognesi. Gait Symmetry: Hip Resurfacing vs. Total Hip Arthroplasty. American Association of Hip and Knee Surgery Annual Meeting, Dallas, TX, 2009.
197. V Sabesan, **RM Queen**, AN Abbey, DB Covington, MP Bolognesi. Gait Analysis of Patients with Hip Resurfacing Arthroplasty compared to Large Head Total Hip Arthroplasty. American Orthopaedic Association Annual Meeting, Bonita Springs, FL, 2009
198. V Sabesan, **RM Queen**, AN Abbey, TS Watters, DB Covington, MP Bolognesi. Gait Analysis of Patients with Hip Resurfacing Arthroplasty Compared to Large Head Metal on Metal Total Hip Arthroplasty at 1-2 years Postoperative. Southern Orthopaedic Association. Amelia Island, FL, 2009.
199. **RM Queen**, AN Abbey, ME Easley, JK DeOrio, JA Nunley. Improvement in Ankle Kinetics and Kinematics after Total Ankle Replacement in Patients with Hindfoot Deformity. American Orthopaedic Foot and Ankle Society Annual Meeting, Vancouver, BC, 2009
200. **RM Queen**, AN Abbey, JI Wiegerinck, JC Yoder, JA Nunley. Plantar Pressure Differences Between Genders When Comparing Racing Flats and Traditional Training Shoes. American College of Sports Medicine, Seattle, WA, 2009
201. AN Abbey, RJ Butler, **RM Queen**. Effect of Footwear on Lower Extremity Secondary Plane Movements During a Soccer Specific Jumping. American College of Sports Medicine, Seattle, WA, 2009
202. WE Garrett, CT Moorman, **RM Queen**, DE Fowler, B Yu. Hamstring Kinematics During Sprinting: a Possible Injury Mechanism. Annual Meeting of the Herodicus Society, Isle of Palms, SC. 2009
203. **RM Queen**, JC Yoder, JI Wiegerinck, J Boyd, AN Abbey, JA Nunley. Plantar Loading differences between Racing Flats and Training Shoes at a Self-Selected Running Speed. North American Congress on Biomechanics, Ann Arbor, MI, 2008.
204. **RM Queen**, BL Charnock, WE Garrett, Jr. Hip Kinematics During Three Soccer Kicking Tasks. North American Congress on Biomechanics, Ann Arbor, MI, 2008.
205. **RM Queen**, AN Abbey, B Chuckpaiwong, JA Nunley. Plantar Loading Comparison between Men and Women and Women with a Previous 2nd or 3rd Metatarsal Stress Fracture. American Orthopaedic Foot and Ankle Society, Denver, CO, 2008
206. **RM Queen**, B Chuckpaiwong, JA Nunley. A Comparison of Ankle Mechanics and Ground Reaction Forces in Women with a Metatarsal Stress Fracture and Matched Controls. American Orthopaedic Foot and Ankle Society, Denver, CO, 2008
207. B Chuckpaiwong, JA Nunley, **RM Queen**. Correlation between Static Foot Type Measurements and Clinical Assessment. American Orthopaedic Foot and Ankle Society, Denver, CO, 2008

208. **RM Queen**, JA Nunley, JK Richardson. Pre-operative versus Post-operative Comparison of Gait in STAR Patients American Orthopaedic Foot and Ankle Society, Denver, CO, 2008
209. **RM Queen**, GG Fedorcik, AN Abbey, CT Moorman, III, DS Ruch. Differences in Wrist Kinematics between Low and High Handicap Golfers. *Medicine and Science in Sports and Exercise*. **Volume 40 (S5): 2008.**
210. BL Charnock, CL Lewis, WE Garrett, Jr., **RM Queen**. Adductor Longus Vulnerability in the Maximal Effort Soccer Kick. *Medicine and Science in Sports and Exercise*. **Volume 40 (S5): 2008.**
211. M Malinzak, RF Kay, EL Sims, and **RM Queen**. Characterization of primate head accelerations during locomotion: a novel application of 3D motion analysis with comparative implications. American Association of Physical Anthropology Annual Meeting, Columbus, OH, 2008
212. RJ Butler and **RM Queen**. The Effect of Footwear on Landing Mechanics During a Soccer Specific Jumping Task. APTA Combined Sections Annual Meeting (Sports Section), Nashville, TN, 2008
213. B Chuckpaiwong, JA Nunley, NA Mall, **RM Queen**. The Effect of Foot Type on Plantar Pressure in Four Sport Specific Tasks. Swiss National Meeting, 2007.
214. **RM Queen**, B Chuckpaiwong, NA Mall, JA Nunley. The Effect of Foot Type on Plantar Pressure in Four Sport Specific Tasks. American Orthopaedic Foot & Ankle Society Annual Meeting, Toronto, ON, 2007.
215. B Chuckpaiwong, **RM Queen**, JA Nunley. Jones and Proximal Diaphyseal Fractures of the 5th Metatarsal. American Orthopaedic Foot & Ankle Society Annual Meeting, Toronto, ON, 2007.
216. **RM Queen**, JA Nunley, JK Richardson. The Effect of Footwear on Pre-operative Gait Mechanics in a Clinical Population. American Orthopaedic Foot & Ankle Society Annual Meeting, Toronto, ON, 2007.
217. B Chuckpaiwong, JA Nunley, NA Mall, **RM Queen**. The Effect of Foot Type on In-shoe Plantar Pressure During Walking and Running. *Medicine and Science in Sports and Exercise*. **Volume 39 (S5): 2007.**
218. BL Charnock, M Williams, EL Sims, WE Garrett, **RM Queen**. Proprio 5000: A New Method for Assessing Dynamic Balance. *Medicine and Science in Sports and Exercise*. **Volume 39 (S5): 2007.**
219. **RM Queen**, Y Makihara, CT Moorman, DE Fowler, WE Garrett. Kinematic Analysis of the Lower Extremity During Sprinting at Maximum and Sub-maximum Speeds. *Medicine and Science in Sports and Exercise*. **Volume 39 (S5): 2007.**
220. Y Makihara, **RM Queen**, CT Moorman III, DE Fowler III, WE Garrett Jr. Kinematic Analysis of Hamstring Strain Injuries during Sprinting at Maximum and Sub-maximum Speeds. The 53rd Annual Meeting of the Orthopaedic Research Society, La Jolla, CA, 2006.

221. **RM Queen**, EL Sims, BB Haynes, WE Garrett, Jr. Differences in Forefoot Loading During Three Athletic Tasks on FieldTurf. American Society of Biomechanics Annual Meeting, Blacksburg, VA, 2006.
222. NA Mall, WM Hardaker, **RM Queen**, JA Nunley, II. Gender Differences and Dominant/Non-Dominant Asymmetry in Measurements of the Foot and Medial Longitudinal Arch. American Orthopaedic Foot & Ankle Society, La Jolla, CA, 2006.
223. NA Mall, CT Moorman, JA Nunley, II, **RM Queen**. Who's Right? The Differences in Clinical Assessment of Arch Height within and Across Health Care Provider Specialties. American Orthopaedic Foot & Ankle Society, La Jolla, CA, 2006.
224. NA Mall, **RM Queen**, RR Glisson, JA Nunley, II. A Biomechanical Study of Failure Using Intramedullary Screw Fixation of Jones Fractures. American Orthopaedic Foot & Ankle Society, La Jolla, CA, 2006.
225. NA Mall, CT Moorman, JA Nunley, II, **RM Queen**. The Reliability of Measuring the Medial Longitudinal Arch: The Need for a Standardized Method. American Orthopaedic Foot & Ankle Society, La Jolla, CA, 2006.
226. WE Garrett, Jr, CT Moorman, III, WM Hardaker, **RM Queen**. Plantar Pressure Differences between Cleat Plate Configurations During a Side-Cut Task on FieldTurf. Medicine and Science in Sports and Exercise. **Volume 38 (S5): 2006**
227. **RM Queen**, WM Hardaker, WE Garrett, CT Moorman. The Effect of Cleat Plate Configuration on Lower Extremity Kinematics and Performance on Field Turf. Medicine and Science in Sports and Exercise. **Volume 38 (S5): 2006**
228. NA Mall, **RM Queen**, RR Glisson, JA Nunley, II. Compression of Fully Threaded Tapered and Partially Threaded Lag Screws in Fifth Metatarsal Fixation. American Academy of Orthopaedic Surgeons National Meeting. Chicago, IL, 2006
229. NA Mall, WM Hardaker, JA Nunley, and **RM Queen**. The Reliability And Reproducibility Of Foot Measurements Using a Mirrored Foot Photo Box Compared To Caliper Measurements. Presented at the American Society of Biomechanics National Meeting. Cleveland, OH, 2005
230. **RM Queen**, MT Gross, and H Liu. Reliability of Lower Extremity Kinetics and Kinematics for Constrained and Self-Selected Running Speeds. Medicine and Science in Sports and Exercise. **Volume 37(S5): S,2005**
231. **RM Queen**, MT Gross, and B Yu. Effect of Positive Posterior Heel Flare on Lower Extremity Kinematics During Running Gait. Presented at the American Society of Biomechanics National Meeting. Portland, OR, September 10, 2004.
232. **RM Queen**, MT Gross, and B Yu. Effect of Positive Posterior Heel Flare on Kinetics and Tibialis Anterior Muscle Activation During Running Gait. Presented at the American Society of Biomechanics National Meeting. Portland, OR, September 9, 2004.

233. B Yu, **RM Queen**, and LA Schrodtt. Effect of Marker Sets on Between-day Reproducibility of Knee Kinematics and Kinetics in Stair Climbing and Level Walking. Presented at the American Society of Biomechanics National Meeting. Toledo, OH, September 25, 2003.
234. **RM Harrell**, PS Weinhold, B Yu, DT Kirkendall. Modeling the Impact of Heading: Influence of inflation pressure, contact mass, ball size and velocity. *Medicine and Science in Sports and Exercise*. 34(S1): S185, 2002.
235. **RM Harrell**, J Tong, PS Weinhold, LE Dahners. A Comparison Study of the Mechanical Properties of Different Surgical Fixation Materials. *Annals Biomed. Engr.* 29(S1):S35, 2001.

c: Editorials, position, and background papers

1. RA Vander Griend, ASE Younger, K Buedts, CP Chiodo, C Coetzee, WR Ledoux, MS Pinzur, KSRK Prasad, **RM Queen**, CL Saltzman, DB Thordarson. Total Ankle Arthroplasty: Minimum Follow-up Policy for Reporting Results and Guidelines for Reporting Problems and Complications Resulting in Reoperation. *Foot and Ankle International*. 38 (7): 703-704, 2017.

Consultant appointments: (Include US government, state, private organizations, etc.)

Quest Diagnostics (Newark, NJ) May 2014 – Present
Medical and Scientific Advisory Board

HipKnee Arkansas (Little Rock, AR) August 2010 – 2015
Project Consultant

Motion Analysis Corporation (Santa Rosa, CA) - 2007
Consultant on Technical Support and System Installation

Professional awards and special recognitions:

2017 AAOS Kappa Delta Young Investigator Award “Using Lower Extremity Biomechanics in Patients with Ankle Osteoarthritis and Ankle Arthroplasty to Direct Clinical Care”

2014 Duke Science & Society SciComm Fellows Program (Inaugural Year): Provides an opportunity for faculty to develop communication skills and put those skills into action. Fellows will: (1) Explore the empirical benefits of communicating science, (2) Develop speaking, writing, and storytelling practices for diverse audiences, (3) Learn to answer difficult, controversial, and critical questions from the media. (4) Tweet, blog, write op-eds and present their research to the public, (5) Prepare policy briefs, (6) Engage with policymakers and funders in Washington D.C.

2014 Featured in the Spotlight on Women for the Orthopaedic Research Society

2014 Fellow of the American College of Sports Medicine

2013 LEADERS Program: The LEADER program is an interactive learning program designed to equip junior faculty researchers with the knowledge and professional competencies to

- effectively lead dynamic scientific research enterprises. Competitive application based program.
- 2013 Resident Research Award (1st place) at 2013 North Carolina Orthopaedic Association Annual Meeting. Percent Body Fat More Associated with Perioperative Outcomes After Total Joint Arthroplasty than BMI. . CK Ledford, RA Ruberte-Thiele, RJ Butler, JS Appleton, SS Wellman, DE Attarian, **RM Queen**, MP Bolognesi.
- 2013 Semi-Finalist for the Roger Mann Award – Best Clinical Paper American Orthopaedic Foot and Ankle Society. *Early to Mid-Term Outcomes of Fixed-Bearing Total Ankle Arthroplasty Using a Modular Intramedullary Tibial Component*. Adams SB Jr., Demetracopoulos CA, **Queen RM**, Easley ME, DeOrio JK, Nunley JA
- 2013 SOA Presidents’ Resident Awards: *Does a Hindfoot Arthrodesis Affect the Results of Total Ankle Replacement?* J Lewis, SB Adams Jr., **RM Queen**, JK DeOrio, JA Nunley, ME Easley.
- 2013 Best Foot and Ankle Poster 2013 Orthopaedic Research Society: *The Effect of Hindfoot Alignment on Frontal Plane Mechanics Following Total Ankle Replacement*. **RM Queen**, RJ Butler, SB Adams, ME Easley, JK DeOrio, JA Nunley
- 2011 Association of Bone and Joint Surgeons CORR Subspecialty Award: *Early Prospective Clinical Results of Total Ankle Arthroplasty with Two Modern Fixed-Bearing Prostheses Available in the United States*. ME Easley, SB Adams, NA Viens, JK DeOrio, **RM Queen**, JA Nunley.
- 2011 Goldner Award – Best Basic Science Paper 2011 American Orthopaedic Foot and Ankle Society: *Changes in Gait Mechanics Two Years Following Total Ankle Replacement*. **RM Queen**, J De Biasio, RJ Butler, JK DeOrio, ME Easley, JA Nunley.
- 2010 Aircast Award for Clinical Science - American Orthopaedic Society for Sports Medicine: “Subjective Outcomes, Isokinetic Strength, and Endurance Following Biceps Tenotomy versus Tenodesis” Jocelyn R. Wittstein, **RM Queen**, AN Abbey, Alison Toth, Claude Moorman.

Organizations and participation: (Offices held, committee assignments, etc.)

- | | |
|----------------|---|
| 2015 – present | Biomedical Engineering Society |
| 2014 - present | American Orthopaedic Foot and Ankle Society |
| 2012 - present | Orthopaedic Research Society |
| 2010 - present | American Academy of Orthopaedic Surgeons |
| 2005 - present | International Foot and Ankle Biomechanics Community (I-Fab) |
| 2005 - present | International Society of Biomechanics |
| 2005 - present | Footwear Biomechanics Technical Group |
| 2002 - present | American College of Sports Medicine |
| 2004 - present | American Society of Biomechanics |
| 2001 - 2002 | Biomedical Engineering Society |

Committee Assignments: ASB: Awards Committee (2015)

ORS: Women's Leadership Forum Committee (2013 – 2017)
Committee Chair 2015-2017
ACSM: SHI: Youth Health and Sports Committee (2013 – 2019)
ACSM: Exhibits Advisory Committee (2014 - 2020)
ACSM: Exhibits Advisory Committee Chair (2018 - 2020)
ORS: Annual Meeting Committee (2015-2017)
ORS: Basic Science Committee (2015-2019)
AAOS: Women's Health Advisory Board (2015-2019)
ASB: Executive Board (2017-present)
ASB: Diversity Chair (2017-present)
BMES: Ethics Subcommittee (2017-2020)

Manuscript Reviewer: Medicine and Science in Sports and Exercise, (Sept. 2004- Present)
Journal of Biomechanics (December 2004 – Present)
Journal of Orthopedic & Sports Physical Therapy (November 2005-Present)
Foot and Ankle International (February 2006-Present)
Journal of Applied Biomechanics (July 2006 – Present)
Journal of Athletic Training (May 2007-Present)
International Journal of Sports Medicine (July 2008-Present)
Gait and Posture (May 2009-Present)
Sports Biomechanics (July 2009- Present)
Journal of Orthopaedic Research (September 2010-Present)
American Journal of Sports Medicine (November 2012 – Present)
BMC Musculoskeletal Disorders (April 2014 – Present)
European Journal of Sports Science (June 2014 – Present)
Arthritis Care and Research (July 2014 – Present)
Clinical Orthopedics and Related Research (July 2014-Present)
Annals of Biomedical Engineering (August 2015-Present)
Osteoarthritis and Cartilage (August 2016-Present)
Clinical Biomechanics (January 2017 – Present)

Associate Editor: Foot and Ankle International (June 2013 – Present)
Journal of Orthopaedic Research (March 2018 – Present)

Assistant Editor (Gait): Foot and Ankle International (March 2007-November 2012)

Editorial Board: Foot and Ankle International (November 2012 - Present)
Journal of Orthopaedic Research (March 2018 – Present)
Bone and Joint Research (March 2015 – March 2018)

Grant Reviewer:

US Army Medical Research and Materiel Command (MRMC): DOD
(May 2018)

ORS – Stryker ORS Women's Research Fellowship
(January 2018)

NSF – DARE – CAREER Panel
(September 2017)

CDMRP – PRORP - Defense Health Program: DOD (Panel Chair)

(November 2017)
CDMRP - PRORP – Defense Health Program: DOD
(September 2017)
CDMRP - PRORP – Defense Health Program: DOD
(February 2017)
CDMRP - PRORP – Defense Health Program: DOD (pre-award panel)
(August 2016)
CDMRP - PRORP – Defense Health Program: DOD
(December 2015)
CDMRP - PRORP – Defense Health Program: DOD
(October 2014)
Orthopaedic Research and Education Foundation (Annual Review)
(July 2014 – Present)
Arthritis Foundation
(February 2011 – Present)
Injury Prevention Research Center - University of North Carolina Chapel Hill
(March 2005 – March 2007)

Grant Review Section Chair:

CDMRP – PRORP – Defense Health Program: DOD
(February 2016)
CDMRP – PRORP – Defense Health Program: DOD
(November 2017)

Service:

2019 Abstract Reviewer – International Society of Biomechanics, August 2019

2018 Session Moderator – JOB/COB Awards Session American Society of Biomechanics Annual Meeting, Rochester, MN August 2018

2018-2019 International Scientific Advisory Board – International Society of Biomechanics for the 2019 Annual Meeting

2018 Session Moderator – Thematic Poster Session (Jumping and Landing) American College of Sports Medicine Annual Meeting, Minneapolis, MN June 2018

2018 American Society of Biomechanics 2018 Program Committee Member

2018 Session Moderator – Total Ankle Arthroplasty (special session) International Foot and Ankle Biomechanics (I-FAB) 2018 Annual Meeting, New York, NY.

2018 International Foot and Ankle Biomechanics (I-Fab) 2018 Meeting Program Committee Member

2018 Session Organizer and Presenter – Women in Science Event, American Society of Biomechanics Annual Meeting 2018

2018 Session Organizer and Presenter – Diversity Event, American Society of

Biomechanics Annual Meeting 2018

- 2018 Session Moderator and Planner – Sports Biomechanics Can Revolutionize and Diversify STEM at the American Society of Biomechanics Meeting, August 2018.
- 2018 Session Planner and Presenter – Scientific Exhibit (The Knee: Sex-Based Differences throughout the Life Span) at the American Academy of Orthopaedic Surgeons Annual Meeting, San Diego, CA
- 2018 Abstract Reviewer – International Foot and Ankle Biomechanics Annual Meeting 2018
- 2018 Abstract Reviewer – American College of Sports Medicine Annual Meeting 2018
- 2018 Abstract Reviewer for the Ankle Topic Committee – Orthopaedic Research Society Annual Meeting 2018
- 2017 Session Moderator – Thematic Poster Session (Neuromechanics of Ankle Instability) American College of Sports Medicine Annual Meeting, Denver, CO June 2017
- 2017 Abstract Reviewer – American College of Sports Medicine Annual Meeting 2017
- 2017 Session Organizer and Presenter – Women in Science Event, American Society of Biomechanics Annual Meeting 2017
- 2017 Session Organizer and Presenter – Diversity Event, American Society of Biomechanics Annual Meeting 2017
- 2017 Abstract Reviewer – American Society of Biomechanics Annual Meeting 2017
- 2017 Session Planner and Presenter – Scientific Exhibit (The Hip: Sex-Based Differences throughout the Life Span) at the American Academy of Orthopaedic Surgeons Annual Meeting, San Diego, CA
- 2017 Session Planner and Presenter– Professional Advancement Session (Negotiating for Success) at the Orthopaedic Research Society Annual Meeting, San Diego, CA.
- 2017 Session Moderator and Planner – Workshop (Osteoarthritis: From Bench to Bedside and Back) at the Orthopaedic Research Society Annual Meeting, San Diego, CA.
- 2017 Session Moderator and Planner – Professional Advancement Session (Having a high-impact NIH Biosketch) at the Orthopaedic Research Society Annual Meeting, San Diego, CA.
- 2017 Session Moderator and Planner – Professional Advancement Session (Commercialization in Orthopedics) at the Orthopaedic Research Society Annual Meeting, San Diego, CA.
- 2017 Abstract Reviewer for the Ankle Topic Committee – Orthopaedic Research Society Annual Meeting 2017

- 2016 Webinar Organizer (ORS webinar series) – How to choose the right method to use for motion capture. September 2016
- 2016 Session Moderator – Thematic Poster Session (ACL) American Society of Biomechanics Annual Meeting, Raleigh, NC August 2016
- 2016 Session Moderator – Thematic Poster Session (ACL) American College of Sports Medicine Annual Meeting, Boston, MA June 2016
- 2016 OREF Grant Task Force – RFA development for Post-op Rehabilitation Grant Program (Member)
- 2016 Abstract Reviewer – American Society of Biomechanics Annual Meeting 2016
- 2016 Thematic Poster Session Moderator – American College of Sports Medicine Annual Meeting, Boston, MA
- 2016 Via College of Osteopathic Medicine Annual Research Day – Best Poster Judge
- 2016 Organizer and Faculty Mentor for the ORS 2016 Perry Initiative
- 2016 Podium Session Moderator: Lower Limb Biomechanics at the Orthopaedic Research Society Annual Meeting
- 2016 Session Planner and Moderator– Professional Advancement Session (What does your CV/Resume say about you) at the Orthopaedic Research Society Annual Meeting
- 2016 Session Moderator and Session Planner– Workshop (Should we believe the hype? The influence of Vitamin D in musculoskeletal health and beyond) at the Orthopaedic Research Society Annual Meeting
- 2016 Session Planner– Professional Advancement Session (Pathways to Promotion: Clinical, Research and Industry) at the Orthopaedic Research Society Annual Meeting
- 2015 Abstract Reviewer for the Hip and Knee Arthroplasty Topic Committee – Orthopaedic Research Society Annual Meeting 2016
- 2015 Session Moderator and Planner - Changing the Landscape of Injury Prevention at the American Society of Biomechanics Meeting, August 2015.
- 2015 American Society of Biomechanics – Abstract Reviewer 2015 Annual Meeting
- 2015 Session Planner– Professional Advancement Session (Leadership Success in Academics for the Women’s Leadership Forum Committee) at the Orthopaedic Research Society Annual Meeting
- 2015 Session Moderator and Session Planner– Workshop (Trials, Tribulations and

Triumphs of Conducting Prospective Clinical Research Studies: The How and Why for the Women's Leadership Forum Committee) at the Orthopaedic Research Society Annual Meeting

- 2015 Abstract Reviewer for the Foot and Ankle Topic Committee – Orthopaedic Research Society Annual Meeting 2015
- 2014 Poster Awards Committee – ESM Annual Meeting, Boston, MA
- 2014 Podium Session Moderator – ESM Annual Meeting, Boston, MA
- 2014 Thematic Poster Session Moderator – American College of Sports Medicine Annual Meeting, Orlando, FL
- 2014 Session Moderator and Session Planner– Professional Advancement Session (Work-Life Balance for the Women's Leadership Forum Committee) at the Orthopaedic Research Society Annual Meeting
- 2014 Poster Walking Tour Leader – Foot and Ankle: Orthopaedic Research Society Annual Meeting 2014
- 2014 Abstract Reviewer for the Hip Topic Committee – Orthopaedic Research Society Annual Meeting 2014
- 2013 Podium Session Moderator – American College of Sports Medicine Annual Meeting, Indianapolis, IN
- 2013 Student Award Committee Biomechanics Interest Group – American College of Sports Medicine
- 2006-2007 Organizing Committee Member: Human Movement Science Research Day. Local student conference hosted by Duke University and the University of North Carolina at Chapel Hill. University of North Carolina at Chapel Hill, Chapel Hill, NC. March 2, 2007
- 2006-2007 Program Chair and Meeting Chair for the Southeast Biomechanics Conference (SEBC), regional meeting of the American Society of Biomechanics. Duke University, Durham, NC. April 19-21, 2007
- 2005-2006 Organizing Committee Member: Human Movement Science Research Day. Local student conference hosted by Duke University and the University of North Carolina at Chapel Hill. University of North Carolina at Chapel Hill, Chapel Hill, NC. March 3, 2006

Teaching responsibilities:

Courses:

Undergraduate

- ESM 4204 Musculoskeletal Biomechanics – Fall 2015
- ESM 4204 Musculoskeletal Biomechanics – Fall 2016
- ESM 4204 Musculoskeletal Biomechanics – Fall 2017

Graduate

- ESM 5224/BMES 5124 Advanced Musculoskeletal Biomechanics – Fall 2015
- ESM 5224/BMES 5124 Advanced Musculoskeletal Biomechanics – Fall 2016
- SBES 5984 Human Movement – Spring 2017
- ESM 5224/BMES 5124 Advanced Musculoskeletal Biomechanics – Fall 2017

Medical Students (VTCSOM)

- Student Journal Club Discussion Facilitator – August 31, 2016

Professional Presentations

1. Predicting Measures of Physical Performance from Gait Mechanics in Patients with Ankle Osteoarthritis. (Rapid Podium) American Society of Biomechanics Annual Meeting Rochester, MN, 2018.
2. Association of Walking Speed with Gait Mechanics Following Total Ankle Arthroplasty. (Podium) American Society of Biomechanics Annual Meeting, Rochester, MN, 2018.
3. *The loadsol is a Valid and Reliable Device for Evaluating Force During Landing Tasks.* (Podium Presentation) World Congress on Biomechanics, Dublin, Ireland, 2018.
4. *Using Sports to Engage Youth in Science, Technology, Engineering and Math (STEM) Outreach.* (Podium Presentation) World Congress on Biomechanics, Dublin, Ireland, 2018.
5. *Functional Knee Bracing Improves Loading Symmetry Following ACL Reconstruction.* (Thematic Poster) American College of Sports Medicine Annual Meeting, Minneapolis, MN, 2018.
6. *The effect of ankle arthritis and total ankle arthroplasty on COP position at toe-off.* (Podium Presentation) International Foot and Ankle Biomechanics Meeting, New York, NY, 2018.
7. *Low Cost Sports Biomechanics Lab for Accessible STEM Outreach.* (Podium Presentation) International Foot and Ankle Biomechanics Meeting, New York, NY, 2018.
8. *Biomechanics Can Revolutionize and Diversify STEM (Symposium).* American Society of Biomechanics Annual Meeting, Rochester, MN, 2018
9. *Ankle Arthritis Alters Joint Moment Contributions During Locomotion.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, New Orleans, LA, 2018.
10. *Simplified Center of Mass Tracking in Ankle Osteoarthritis Patients.* (Poster Presentation) American Society of Biomechanics Annual Meeting 2017.
11. *Effects of Functional Knee Brace on Symmetry During Landings in ACL-R Patients.* (Poster Presentation) American Society of Biomechanics Annual Meeting 2017.
12. *Assessing Movement Asymmetry Using the Normalized Symmetry Index in ACL Patients.* (Thematic Poster Presentation) American Society of Biomechanics Annual Meeting 2017.

13. *Effects of Achilles Tendon Taping on Joint Energetics in Jumping and Landing.* (Thematic Poster Presentation) American College of Sports Medicine Annual Meeting, Denver, CO, 2017.
14. *Limb Asymmetry During Anterior Cruciate Ligament Reconstruction Recovery.* (Podium Presentation) American College of Sports Medicine Annual Meeting, Denver, CO, 2017.
15. *Gait Symmetry Metrics Provide Different Outcomes in Patients with Ankle Osteoarthritis.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, San Diego, CA, 2017.
16. *Implant Selection for Total Ankle Arthroplasty Does Not Substantially Alter Post-operative Walking Mechanics.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, San Diego, CA, 2017.
17. *Side-to-Side Asymmetry During Recovery Following Anterior Cruciate Ligament Reconstruction.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, San Diego, CA, 2017.
18. *Power Variation at the Hip and Ankle Associated with Severe Hip Osteoarthritis.* (Oral Presentation) Biomedical Engineering Society Annual Meeting, St. Paul, MN, 2016.
19. *Differences in Joint Work and Power During jumping and Landing in ACL reconstructed patients and healthy controls.* (Poster Presentation) American Society of Biomechanics Annual Meeting, Raleigh, NC, 2016.
20. *Unique Center of Pressure Profiles in Unilateral Compared to Bilateral End-Stage Ankle Arthritis Patients.* (Poster Presentation) American College of Sports Medicine Annual Meeting, Boston, MA, 2016.
21. *Increased Ankle Power Compensates For Loss of Hip Power in Patients with Advanced Hip Osteoarthritis.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, Orlando, FL, 2016.
22. *Sex-Specific Difference in Dynamic Balance Following Total Hip Replacement.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, Orlando, FL, 2016.
23. *Revision Total Ankle Arthroplasty Results in Similar Outcomes to Primary Total Ankle Arthroplasty.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, Orlando, FL, 2016.
24. *Using Sample Entropy on Continuous and Discontinuous Data to Assess Jumping and Landing.* (Podium Presentation) American Society of Biomechanics, Columbus, OH, 2015
25. *Changing the Landscape of Injury Prevention* (Symposium). American Society of Biomechanics Annual Meeting, Columbus, OH, 2015
26. *Movement Repeatability During Landing Following Anterior Cruciate Ligament Reconstruction.* (Thematic Poster Presentation) American College of Sports Medicine Annual Meeting, San Diego, CA, 2015.
27. *Gait Asymmetries as a Predictors of Walking Speed Five Years Following Total Ankle Arthroplasty.* (Poster Presentation) American College of Sports Medicine Annual Meeting, San

Diego, CA, 2015.

28. *Gait and Functional Outcomes 5 years After Total Ankle Replacement.* (Podium Presentation) Orthopaedic Research Society Annual Meeting, Las Vegas, NV, 2015
29. *Differences Between Observed and Patient-Reported Functional Status Following Primary Total Joint Arthroplasty.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, Las Vegas, NV, 2015.
30. *Changes in Energy Recovery Following Total Ankle Replacement.* (Poster Presentation) Orthopaedic Research Society Annual Meeting, Las Vegas, NV, 2015.
31. *Plantar Loading Differences Between Genders During an Unanticipated Side-cut.* (Podium Presentation) ESM Annual Meeting, Boston, MA, 2014.
32. *Differences in Walking Mechanics Between Ankle Disarthrodesis and Primary Total Ankle Replacement.* (Poster Presentation) American Orthopaedic Foot and Ankle Society Annual Meeting, Chicago, IL, 2014.
33. *The Effect of Total Ankle Replacement on Energy Recovery During Walking.* (Podium Presentation) Southern Orthopaedic Association Annual Meeting, Beaver Creek, CO, 2014.
34. *Effect of Meniscal Injury on Functional Performance Testing following ACL Rehabilitation.* (Poster Presentation) American College of Sports Medicine Annual Meeting Orlando, FL, 2014.
35. *Energy Recovery is Decreased During Walking in Patients with End-stage Hip, Knee, and Ankle Arthritis.* (Poster Presentation) American College of Sports Medicine Annual Meeting Orlando, FL, 2014.
36. *The influence of static balance on walking mechanics in patients with end-stage ankle osteoarthritis.* (Poster Presentation) American College of Sports Medicine Annual Meeting, Orlando, FL, 2014
37. *Energy Recovery During Walking is Decreased in Patients with End-stage Arthritis* (Poster Presentation). Orthopaedic Research Society. New Orleans, LA, 2014.
38. *Changes in Landing Mechanics between 6 and 12 months following ACL Reconstruction When Using a Functional Knee Brace* (Poster Presentation). Orthopaedic Research Society. New Orleans, LA, 2014.
39. *Does Achilles Tendon Lengthening Improve the Results in Total Ankle Replacement?* Poster Presentation. Orthopaedic Research Society (AAOS Exchange) Annual Meeting, New Orleans, LA, 2014.
40. *Does Achilles Tendon Lengthening Improve the Results in Total Ankle Replacement?* Poster Presentation (Alternate Podium). American Academy of Orthopaedic Surgery Annual Meeting, New Orleans, LA, 2014.
41. *Early detection of movement related risk factors for second knee injuries in ACL reconstruction patients.* Podium Presentation. Southern Orthopaedic Association Annual Meeting, Palm Beach,

FL, 2013.

42. *Dynamic balance differences between isolated TKA patients and patients with multiple arthroplasties one year following TKA.* Podium Presentation. Southern Orthopaedic Association Annual Meeting, Palm Beach, FL, 2013.
43. *Early to Mid-Term Outcomes of Fixed-Bearing Total Ankle Arthroplasty Using a Modular Intramedullary Tibial Component.* Podium Presentation. Southern Orthopaedic Association Annual Meeting, Palm Beach, FL, 2013.
44. *Does a Concomitant Gastrocnemius Recession Improve Ankle Mechanics in Total Ankle Replacement Patients?* Podium Presentation. American Orthopaedic Foot and Ankle Society Annual Meeting, Hollywood, FL 2013.
45. *Total Ankle Replacement Does Not Alter Lower Extremity Kinematics During Sit-to-Stand Movement.* Poster Presentation. American Orthopaedic Foot and Ankle Society Annual Meeting, Hollywood, FL 2013.
46. *A Full-length Rigid Insert Does Not Reduce Loading Beneath the Metatarsals in Midfoot Arthritis Patients.* Poster Presentation. American Orthopaedic Foot and Ankle Society Annual Meeting, Hollywood, FL 2013.
47. *Is there a single set of biomechanical variables that predicts jump performance?* Poster Presentation. American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2013.
48. *Changes in lower extremity mechanics during a stop jump from 6 to 12 months following ACL reconstruction.* Podium Presentation. American College of Sports Medicine Annual Meeting 2013.
49. *Pre-operative gait speed as an indicator of subjective and functional recovery following total ankle replacement.* Poster Presentation. American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2013.
50. *The Influence of Gender on Walking Mechanics Following Total Ankle Replacement.* Poster Presentation. Orthopaedic Research Society Annual Meeting, San Antonio, TX, 2013.
51. *The Effect of Hindfoot Alignment on Frontal Plane Mechanics Following Total Ankle Replacement.* Poster Presentation. Orthopaedic Research Society Annual Meeting, San Antonio, TX, 2013.
52. *Understanding Changes in Hip and Knee Mechanics following Total Ankle Replacement.* Poster Presentation. Orthopaedic Research Society Annual Meeting, San Antonio, TX, 2013.
53. *Patient Reported Outcomes, Function, and Gait Mechanics After Fixed and Mobile-Bearing Total Ankle Replacement.* Podium Presentation. American Academy of Orthopaedic Surgeons Annual Meeting, Chicago, IL 2013.
54. *The Effect of Hindfoot Alignment on Frontal Plane Mechanics Following Total Ankle Replacement.* Poster Presentation. American Academy of Orthopaedic Surgeons Annual Meeting, Chicago, IL 2013.

55. *Bilateral differences in gait mechanics following Total Ankle Replacement: a two year longitudinal study.* Poster Presentation – Alternate Podium. American Academy of Orthopaedic Surgeons Annual Meeting Chicago, IL 2013.
56. *Assessing unilateral function following Total Joint Replacement: a novel testing protocol.* Poster Presentation. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012
57. *Does an extension constraint brace reduce knee motion?* Podium Presentation. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012.
58. *Changes in Patient Balance and Function 2 years Following Total Ankle Replacement.* Podium Presentation. Southern Orthopaedic Association Annual Meeting, Greenbrier, WV 2012
59. *Differences in Gait Mechanics and Clinical Outcomes between Fixed and Mobile-Bearing Total Ankle Replacements.* Podium Presentation. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012
60. *Changes in Patient Balance and Function 2 years Following Total Ankle Replacement.* Poster Presentation. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012.
61. *Gait Symmetry Changes following Total Ankle Replacement.* Poster Presentation. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012
62. *Unilateral balance in Total Joint Patients One year following Surgery.* Poster Presentation. American Orthopaedic Foot and Ankle Society Meeting. San Diego, CA 2012.
63. *Differences on the Upper Quarter Y Balance test between high school and college baseball players.* Poster Presentation. American College of Sports Medicine, San Francisco, CA 2012.
64. *Differences in Walking Mechanics between End-stage Ankle and Hip Osteoarthritis.* Podium Presentation. American College of Sports Medicine, San Francisco, CA 2012.
65. *Gender Differences in Plantar Loading during an Unanticipated Side-cut on FieldTurf.* Poster Presentation. American College of Sports Medicine, San Francisco, CA 2012.
66. *Changes in Plantar Loading During the Lower Quarter Y Balance Test.* Poster Presentation. American College of Sports Medicine, San Francisco, CA 2012.
67. *Changes in Pain, Function, and Gait Mechanics Two Years Following Total Ankle Replacement.* Podium Presentation. American Academy of Orthopaedic Surgeons, San Francisco, CA 2012.
68. *Does increased weight alter ankle mechanics and spatial temporal gait mechanics in healthy controls?* Podium Presentation. American Orthopaedic Foot and Ankle Society Annual Meeting. Keystone, CO 2011.
69. *Changes in Gait Mechanics Two Years Following Total Ankle Replacement.* Podium Presentation. American Orthopaedic Foot and Ankle Society Annual Meeting. Keystone, CO 2011.

70. *Hip Joint Mechanics during Stair Ascending and Descending following Total Hip Replacement and Hip Replacement Arthroplasty.* Poster Presentation. Southern Orthopaedic Association. Big Island, HI 2011
71. *Effect of Surgical Approach on Gait Mechanics following Total Hip Arthroplasty.* Poster Presentation. Southern Orthopaedic Association. Big Island, HI 2011
72. *Stair Climbing Symmetry Following Total Hip Arthroplasty Based on Surgical Approach.* Poster Presentation. Southern Orthopaedic Association. Big Island, HI 2011
73. *Changes in Gait Mechanics Two Years Following Total Ankle Replacement.* Podium Presentation. Southern Orthopaedic Association. Big Island, HI 2011.
74. *Functional Bracing and Limb Symmetry Following ACL Reconstruction in Adolescent Patients.* Poster Presentation. American College of Sports Medicine Annual Meeting. Denver, CO 2011.
75. *Total Ankle Replacement in Extreme Varus or Valgus Tibiotalar Alignment.* Podium Presentation. American Academy of Orthopaedic Surgeons, San Diego, CA, 2011.
76. *Should we train in racing flats or cushioning training shoes.* Poster Presentation at the American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
77. *Physical Performance Changes at Year One for Patients Who Receive a Total Ankle Replacement.* Poster Presentation at the American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD 2010.
78. *Validity of Four Measures for Severe Ankle Arthritis.* Podium presentation at the American Orthopaedic Foot and Ankle Society Annual Meeting, National Harbor, MD July 2010.
79. *The Effect of Total Hip Arthroplasty Surgical Approach on Post-operative Gait Mechanics.* Poster Presentation at the Southern Orthopaedic Association Annual Meeting, Fajardo, Puerto Rico June 2010.
80. *Gait Symmetry Following Total Hip Athroplasty Based on Surgical Approach.* Podium Presentation at the Southern Orthopaedic Association Annual Meeting, Fajardo, Puerto Rico, June 2010.
81. *Effect of Carbon Graphite Foot Plate on Loading During Different Cutting Tasks.* Poster Presentation at the American College of Sports Medicine, Baltimore, MD, June 2010
82. *Effect of Carbon Graphite Foot Plate on Loading During Jumping and Landing.* Poster Presentation at the American College of Sports Medicine, Baltimore, MD, June 2010
83. *Does Coronal Plane Hindfoot Alignment Adversely Affect Gait Mechanics and Functional Assessment in Patients with End Stage Ankle Arthritis.* Poster Presentation at the Orthopaedic Research Society Annual Meeting, New Orleans, LA, March 2010.
84. *Effect of Rigid Inserts on Plantar Loading During Level Walking.* Poster Presentation at the Orthopaedic Research Society Annual Meeting, New Orleans, LA, March 2010.

85. *Plantar Pressure Differences Between Genders When Comparing Racing Flats and Traditional Training Shoes.* Podium Presentation at the American College of Sports Medicine, Seattle, WA, May 2009
86. *Effect of Footwear on Lower Extremity Secondary Plane Movements During a Soccer Specific Jumping.* Poster Presentation at the American College of Sports Medicine, Seattle, WA, May 2009
87. *Plantar Loading differences between Racing Flats and Training Shoes at a Self-Selected Running Speed.* Poster Presentation at the North American Congress on Biomechanics, Ann Arbor, MI, August 2008.
88. *Hip Kinematics During Three Soccer Kicking Tasks.* Poster Presentation at the North American Congress on Biomechanics, Ann Arbor, MI, August 2008.
89. *Plantar Loading Comparison between Men and Women and Women with a Previous 2nd or 3rd Metatarsal Stress Fracture.* Poster Presentation at the American Orthopaedic Foot and Ankle Society, Denver, CO, June 2008
90. *A Comparison of Ankle Mechanics and Ground Reaction Forces in Women with a Metatarsal Stress Fracture and Matched Controls.* Poster Presentation at the American Orthopaedic Foot and Ankle Society, Denver, CO, June 2008
91. *Correlation between Static Foot Type Measurements and Clinical Assessment.* Poster Presentation at the American Orthopaedic Foot and Ankle Society, Denver, CO, June 2008
92. *Pre-operative versus Post-operative Comparison of Gait in STAR Patients.* Poster Presentation at the American Orthopaedic Foot and Ankle Society, Denver, CO, June 2008
93. *Differences in Wrist Kinematics between Low and High Handicap Golfers.* Poster Presentation at the American College of Sports Medicine Annual Meeting, Indianapolis, IN, May 2008.
94. *Adductor Longus Vulnerability in the Maximal Effort Soccer Kick.* Poster Presentation at the American College of Sports Medicine Annual Meeting, Indianapolis, IN, May 2008.
95. *The Effect of Foot Type on Plantar Pressure in Four Sport Specific Tasks.* Poster Presentation at American Orthopaedic Foot & Ankle Society Annual Meeting, Toronto, ON.
96. *Jones and Proximal Diaphyseal Fractures of the 5th Metatarsal.* Poster Presentation at American Orthopaedic Foot & Ankle Society Annual Meeting, Toronto, ON
97. *The Effect of Footwear on Pre-operative Gait Mechanics in a Clinical Population.* Poster Presentation at American Orthopaedic Foot & Ankle Society Annual Meeting, Toronto, ON
98. *The Effect of Foot Type on In-shoe Plantar Pressure During Walking and Running.* Podium Presentation at the American College of Sports Medicine Annual Meeting, New Orleans, LA, May 2007.

99. *Kinematic Analysis of the Lower Extremity During Sprinting at Maximum and Sub-maximum Speeds*. Poster Presentation at the American College of Sports Medicine Annual Meeting, New Orleans, LA, May 2007.
100. *Differences in Forefoot Loading During Three Athletic Tasks on FieldTurf*. Poster Presentation, American Society of Biomechanics Annual Meeting, Blacksburg, VA, September 7, 2006
101. *Gender Differences and Dominant/Non-Dominant Asymmetry in Measurements of the Foot and Medial Longitudinal Arch*. Poster Presentation, American Orthopaedic Foot & Ankle Society, La Jolla, CA, July 12-15, 2006
102. *Who's Right? The Differences in Clinical Assessment of Arch Height within and Across Health Care Provider Specialties*. Poster Presentation, American Orthopaedic Foot & Ankle Society, La Jolla, CA, July 12-15, 2006
103. *The Reliability of Measuring the Medial Longitudinal Arch: The Need for a Standardized Method*. Poster Presentation, American Orthopaedic Foot & Ankle Society, La Jolla, CA, July 12-15, 2006
104. *Plantar Pressure Differences between Cleat Plate Configurations During a Side-Cut Task on FieldTurf*. Podium Presentation at the American College of Sports Medicine National Meeting. Denver, CO, June 3, 2006.
105. *The Effect of Cleat Plate Configuration on Lower Extremity Kinematics and Performance on FieldTurf*. Medicine and Science in Sports and Exercise. Podium Presentation at the American College of Sports Medicine National Meeting. Denver, CO, May 31, 2006.
106. *The Reliability And Reproducibility Of Foot Measurements Using a Mirrored Foot Photo Box Compared To Caliper Measurements*. Poster Presentation at the American Society of Biomechanics National Meeting. Cleveland, OH.
107. *Reliability of Lower Extremity Kinetics and Kinematics for Constrained and Self-Selected Running Speeds*. Podium Presentation: American College of Sports Medicine National Meeting. Nashville, TN, June 3, 2005.
108. *Effect of Positive Posterior Heel Flare on Lower Extremity Kinematics During Running Gait*. Poster Presentation: American Society of Biomechanics National Meeting. Portland, OR, September 10, 2004.
109. *Effect of Positive Posterior Heel Flare on Kinetics and Tibialis Anterior Muscle Activation During Running Gait*. Poster Presentation: American Society of Biomechanics National Meeting. Portland, OR, September 9, 2004.
110. *Effect of Marker Sets on Between-day Reproducibility of Knee Kinematics and Kinetics in Stair Climbing and Level Walking*. Poster Presentation: American Society of Biomechanics National Meeting. Toledo, OH, September 25, 2003.
111. *Modeling the Impact of Heading: Influence of inflation pressure, contact mass, ball size and velocity*. Poster Presentation: American College of Sport Medicine 2002.

112. *A Comparison Study of the Mechanical Properties of Different Surgical Fixation Materials.*
Poster Presentation: Biomedical Engineering National Meeting. Durham, NC, 2001

Invited Panel Participant

- 2018 “Women in STEM panel.” Women’s Month Event hosted by the College of Engineering and the College of Science, March 20, 2018
- 2018 “Interdisciplinary Teams, Tracing the Path.” ICAT's Creativity and Innovation Day, April 30, 2018
- 2018 "Academic Search Committees: Behind the Scenes." Virginia Tech Graduate School Professional Development Session. Graduate Office of Recruitment, Diversity, & Inclusion. March 14, 2018

Invited Presentations

- 2018 “Using Mechanics to Rehabilitate the World’s Most Complex Machine.” Student Transition Engineering Program (STEP), July 2018.
- 2018 “Using Mechanics to Improve Orthopaedic Clinical Care.” Invited Lecture. Center for Applied Biomechanics, University of Virginia, July 2018.
- 2018 “Using Gait Mechanics to Define Total Joint Arthroplasty Surgical Success.” Visiting Professor, Department of Orthopaedic Surgery, University of Virginia, July 2018.
- 2018 “Spring in your Step: Using Gait Mechanics to Define Total Ankle Arthroplasty Surgical Success” Diversity Exchange Lecture. North Carolina A&T University, Department of Biomedical Engineering, April 2018
- 2018 “ACL Injury Risk, Rehabilitation, Return to Sport, and Prevention of Re-injury” Clara Boothe Luce Research Fellows Lecture. University of Dayton, Department of Mechanical and Aerospace Engineering, April 2018
- 2017 “From Limping to Leaping: Using Gait Mechanics to Define Total Ankle Arthroplasty Surgical Success” Joint Seminar Series Invited Lecture. Rush University, Department of Orthopaedic Surgery, September 2017
- 2017 Galapatia Seminars: “Engineering Orthopaedics” – Guest Lecture (College of Engineering, Fall 2017)
- 2017 “Using Biomechanics to Understand the World's Most Complex Machine.” Student Transition Engineering Program (STEP), July 2017
- 2017 “Gait and Physical Performance Following TAA.” Virginia Podiatric Medical Association's Summer Scientific Seminar, May 2017
- 2017 “ACL Injury Risk, Rehabilitation, Return to Sport, and Prevention of Secondary Injuries”

Rutgers Human Performance Conference, April 2017

- 2017 “Engineering Orthopaedics to Improve Patient Outcome and Prevent Future Injuries”, Keynote Lecture for the Medical Student Research Symposium: Virginia Tech Carilion School of Medicine, March 2017.
- 2017 “Using Lower Extremity Biomechanics in Patients with Ankle Osteoarthritis and Ankle Arthroplasty to Direct Clinical Care”, Kappa Delta Award Presentation: Orthopaedic Research Society Annual Meeting, March 2017.
- 2016 Engineering Freshman Seminar: “From Engineering to Orthopaedics and Back Again” – Guest Lecture (College of Engineering, Fall 2016)
- 2016 Hypatia Seminars: “Biomechanics of Human Movement” – Guest Lecture (College of Engineering, Fall 2016)
- 2016 “Using Biomechanics to Understand the World's Most Complex Machine.” Student Transition Engineering Program (STEP), July 2016
- 2016 “Human Biomechanics: Understanding the World’s Most Complex Machine” Research Experience for Undergraduates Program, June 2016
- 2016 “Gait and Functional Outcomes Following Total Ankle Arthroplasty” Foot and Ankle Grand Rounds Carilion Orthopedics, February 2016
- 2015 “Assessing Movement and Improving Outcomes using Motion Capture (MoCap)” McMaster University Department of Orthopedic Surgery Resident Teaching, Toronto, Ontario, December 2015
- 2015 “Walking Mechanics Review” McMaster University Department of Orthopedic Surgery Resident Teaching, Toronto, Ontario, December 2015
- 2015 “Optimizing Life Long Function Following Surgical Intervention” McMaster University Department of Orthopedic Surgery Grand Rounds, Toronto, Ontario, December 2015
- 2015 Virginia Tech Interdisciplinary Research Honor Society's Speaker Spotlight Series: “Engineering Orthopaedics: Building Teams in the Most Unlikely Places” (Fall 2015)
- 2015 ESM 2014: “From Engineering to Orthopedics and Back Again” – Guest Lecture for Instructor: Pat Artis (Engineering Science and Mechanics, Fall 2015)
- 2015 Terrestrial Locomotion: “Impact of Pathology on Movement Symmetry and Movement Quality” – Guest Lecture for Instructor Dr. Socha (Engineering Science and Mechanics, Fall 2015)
- 2015 Engineering Freshman Seminar: “Biomechanics of Human Movement” – Guest Lecture (College of Engineering, Fall 2015)
- 2015 Hypatia Seminars: “Biomechanics of Human Movement” – Guest Lecture (College of Engineering, Fall 2015)

- 2015 “The Impact of Injury on Movement Symmetry and Movement Quality” Washington University, School of Physical Therapy invited lecture, Spring 2015
- 2015 “The Impact of Injury on Movement Symmetry and Movement Quality” BEAM invited lecture Virginia Tech, Spring 2015
- 2014 “Engineering: The Coolest Job Ever!” Perry Initiative Duke University, Fall 2014
- 2014 “Life-Long Function Following Surgical Intervention” School of Kinesiology University of Michigan Fall 2014
- 2014 “Bridging the Gap: Engineering Research the Undergraduate Experience” School of Engineering. Virginia Commonwealth University Fall 2014
- 2014 “Life-Long Function Following Surgical Intervention” SBES invited lecture Virginia Tech Spring 2014
- 2014 “Life-Long Function Following Surgical Intervention” Department of Kinesiology University of Tennessee Knoxville Spring 2014
- 2013 “Walking Mechanics and Functional Assessment: Applications in Orthopaedics” (Resident Education Talk – University of Arkansas Medical Sciences – November 2013)
- 2013 “Research Design and Statistics” (Resident Education Talk – University of Arkansas Medical Sciences – November 2013)
- 2013 “Total Ankle Replacement: Changes in Gait, Function, and Patient Reported Measures Over Two Years” (Duke Foot and Ankle Society Annual Meeting – May 2013)
- 2012 “Gait and Functional Assessment in Foot and Ankle Research” (Foot and Ankle Grand Rounds Duke University- March 2013)
- 2012 “Total Ankle Replacement: What Have We Learned and Where Are We Going” (Grand Rounds Duke University- December 2012)
- 2012 “The Jump Height Recipe: Using Biomechanics and Clinical Measures to Predict Performance” (Nike Global Research Symposium 2012)
- 2012 “Gait and Functional Assessments in Adult Reconstruction: What Can We Learn” (Total Joint Replacement Grand Rounds Duke University- September 2012)
- 2011 “Gait and Functional Assessments: What Can We Learn” (Total Joint Replacement Grand Rounds Duke University- September 2011)
- 2010 “Gait and Functional Outcomes in Foot and Ankle Patients” (Foot and Ankle Grand Rounds Duke University- January 2012)
- 2010 “Gait and Functional Assessments: What Can We Learn” (Foot and Ankle Grand Rounds Duke University- July 2011)

- 2010 “Lower Extremity Gait Assessment: What Can We Learn” (Total Joint Replacement Grand Rounds Duke University- September 2010)
- 2007 “Metatarsal Stress Fractures: Plantar Pressure Distribution Patterns and the Implications for Injury Reduction” (Foot and Ankle Grand Rounds Duke University- Feb 2007)
- 2006 “Food for Thought” Department of Biological Anatomy and Anthropology, Duke University, Durham, NC
- 2006 “Stress Fractures: Current Issues in Research and Treatment” (Primary Care Sports Medicine – Journal Club)
- 2006 “Anatomy of the Lower Extremity” Department of Biological Anatomy and Anthropology, Duke University, Durham, NC
- 2005 “Effects of Ankle Taping on Fifth Metatarsal Loading in Selected Athletic Tasks” (Nike Global Research Symposium 2005)
- 2005 “The Effect of Soccer Shoe Type on Cutting Kinematics and Plantar Pressure Distributions” (Nike Global Research Symposium 2005)
- 2005 “Biomechanics: What Happens in the K-Lab” (Sports Medicine Research Conference Duke University- April 2005)
- 2004 “Effect of a Positive Posterior Heel Flare on Muscle Activation, Kinetics, and Kinematics during Running Gait” (Nike Global Research Symposium 2004)

Areas of research interests (basic and applied):

Foot and ankle biomechanics

Loading symmetry and the implications for joint damage and injury prevention

Energy Recovery: limb and functional decline

Post-operative return of function

University Service:

2018 Search Committee Member: IRB Administrative Specialist

2017 - Present Gender@VT Committee Member

2017 - Present Gender@VT Steering Committee Member

2017 - Present VTCSOM Medical Student Project Reviewer (~5 reviews per year)

2016 - 2018 Commission on Equal Opportunity and Diversity – At-large Member

2016-2018 BEAM Diversity Committee (Committee Chair)

2016-2018 Co-Vice Chair; VT Women’s Alliance

- 2016 Diversity Planning Summit - Aug 18th, Inn at Virginia Tech (Invite Only)
- 2016 - 2017 Biomaterials-Body Device Interfaces Focus Area (Committee Member) Virginia Tech, Blacksburg, VA
- 2016-2017 InclusiveVT Advisory Board (Member)
- 2011 - 2016 Member of the Duke University Medical Center Institutional Review Board (Board #3)

Outreach/Diversity:

- Perry Initiative Participant 2014-2015
- Organizing Committee and Participant for the ORS/Perry Initiative 2016
- College of Engineering Open House Lab Tours – April 2016
- NSF REU program Undergraduate Mentor – Summer 2016
- NSF Teach Engagement Faculty Mentor – Summer 2016
- C-Tech^2 – Faculty Mentor Lunch – June 2016
- C-Tech^2 – 2 Lab Tours – June 2016
- STEP program Faculty Mentor Lunch – July 2016
- CEED Imagination Camp – 2 Lab Tours – July 2016
- Roanoke Middle School outreach – Lab Demo – October 2016
- National Society of Black Engineers (NSBE) – Lab Demo – October 2016
- ESM2014 Professional Development – Lab Demo – October 2016
- NSF Teach Engagement Faculty Mentor – Summer 2017
- C-Tech^2 – Faculty Mentor Lunch – June 2017
- C-Tech^2 – 2 Lab Tours – June 2017
- STEP program Faculty Mentor Lunch – July 2017
- CEED Imagination Camp – 2 Lab Tours – July 2017
- Science of the Slam, Minneapolis, MN – January 2018
- Science of the Slam for iFAB meeting, New York, NY – April 2018
- Girls Tech Talk and Tour – July 2018
- STEP program Faculty Mentor Lunch – July 2018
- Science of the Slam for ASB meeting, Rochester, MN – August 2018

Trainees

Current Graduate Students

- 2016-2019 Kristen Renner, SBES, (PhD Student), SBES, Virginia Tech
- 2016-2020 Cherice Hughes-Oliver (PhD Student), SBES, Virginia Tech
- 2017-2021 Alex Peebles (PhD Student), SBES, Virginia Tech

Current Undergraduate Students

- 2017- Leila Kamareddin, Biologic Systems Engineering, Virginia Tech
- 2017- Caitlyn Overbay, Engineering Science and Mechanics, Virginia Tech
- 2017- Alison Mihailovich, Animal and Poultry Science, Virginia Tech
- 2018- Christopher White, Mechanical Engineering, Virginia Tech
- 2018- Karthik Dikshithar, Engineering Science and Mechanics, Virginia Tech
- 2018 Sindy Hou, Engineering Science and Mechanics, Virginia Tech

Current Medical Students/Residents

2015-2019	Adam Heilmann (MD Student), VT Carilion School of Medicine
2015-2019	Lindsay Maguire (MD Student), VT Carilion School of Medicine
2016-2020	Everest, Soleille (MD Student), VT Carilion School of Medicine
2017-	Alex Paulini (DO Student), VCOM
2017-2018	Travis Nelson, MD (Family Medicine Resident), Carilion Clinic-VTC

Current Doctoral Committees

2016-2019	Kristen Renner, SBES, Virginia Tech (Chair)
2016-2020	Cherice Hughes-Oliver, SBES, Virginia Tech (Chair)
2016-2019	Mingyi Liu, Dept. Mechanical Engineering, Virginia Tech (Member)
2016-2020	Mehdi Alemi, Dept. Mechanical Engineering, Virginia Tech (Member)
2016-2020	Athulya Simon, Dept. Mechanical Engineering, Virginia Tech (Member)
2016-2020	Sophia Ulman, Dept. Industrial and Systems Engineering, Virginia Tech (Member)
2017-2021	Alex Peebles, SBES, Virginia Tech (Chair)
2015-2019	Michelle Graham, Engineering Mechanics, Virginia Tech (Member)
2017-2019	Leigh Allin, SBES, Virginia Tech (Member)

Current Master's Committees

2018-2020	Evan Wood, Mechanical Engineering, Virginia Tech (Member)
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Previous Doctoral Committees

2015-2018	Bhushan Thakkar, Dept Physical Therapy, VCU (Member)
2015-2016	Peter Fino, PhD, Mechanical Engineering, Virginia Tech (Member)
2009-2012	Boyi Dai, PhD, Dept. Human Movement Science, UNC-Chapel Hill (Co-Chair)

Previous Master's Committees

2016-2017	Sarah Beauchamp, Mechanical Engineering, Virginia Tech (Member)
2015-2017	Evan McConnell (MS Student), SBES, Virginia Tech (Chair)
2016-2017	Jonathan Gladish (MS Student), SBES, Virginia Tech (Chair)
2015-2017	Yue Yuan (MS Student), Mechanical Engineering, Virginia Tech (Member)
2013-2015	Eric Merritt, MS, Dept. Exercise Science, Univ. Georgia (Member)

Previous Ph.D. Students

2017-2018	Katherine Biddle, Counselor Education, Virginia Tech (Committee Member)
2009-2012	Boyi Dai, PhD, Dept. Human Movement Science, Univ. North Carolina – CH
2007-2009	Mike Malinzak, MD, PhD, Biological Anthropology and Anatomy
2005-2006	Yukiko Makihara, PhD, Dept. Human Movement Science, Univ North Carolina-CH

Previous Master's Students

2016-2017	Sarah Beauchamp, Mechanical Engineering, Virginia Tech
2015-2017	Evan McConnell, SBES, Virginia Tech
2016-2017	Jonathan Gladish, SBES, Virginia Tech
2010	Laura Paulsen, Dept. Biomedical Engineering, Duke Univ.
2010	Molly Glauber, Dept. Biomedical Engineering, Duke Univ.
2008	Mathew Tenan, Dept. Human Movement Science, Univ North Carolina-CH

Previous Post-doc

2014-2016	Roxanne Larsen, Evolutionary Anthropology, Duke Univ.
2007-2010	Ershela Sims, Orthopaedic Surgery, Duke Univ.

Previous Medical Students

2016-2018	Dan Park ((MD Student), VT Carilion School of Medicine
2012-2015	Cameron Ledford, Orthopaedic Resident, Duke Univ.
2012-2015	Alex Vap, Orthopaedic Resident, Duke Univ.
2013-2015	A. Jordan Grier, Medical Student, Duke Univ.
2013-2014	Manuel Pellegrini Pucci, Foot and Ankle Fellow, Dept. of Ortho Surgery, Duke Univ.
2013-2014	Lior Laver, Sports Medicine Fellow, Dept. of Orthopaedic Surgery, Duke Univ.
2013-2014	Jonathan Roth, Sports Medicine Fellow, Dept. of Orthopaedic Surgery, Duke Univ.
2013-2014	Matthew Boyle, Sports Medicine Fellow, Dept. of Orthopaedic Surgery, Duke Univ.
2012-2013	Cher Wei Liang (Eric), Medical Student, National Univ of Singapore (Singapore)
2012-2013	Paul Maloof, Foot and Ankle Fellow, Dept. of Orthopaedic Surgery, Duke Univ.
2012-2013	Constantine Demetracopoulos, Foot & Ankle Fellow, Dept. Ortho Surg, Duke Univ.
2011-2013	Jordan Schaeffer, Orthopaedic Resident, Duke Univ.
2011-2012	Chad Hembree, Orthopaedic Resident, Duke Univ.
2011-2013	Eric Newman, Medical Student, Duke Univ.
2011-2013	Karl Schweitzer, Orthopaedic Resident, Duke Univ.
2011-2013	Nicholas Viens, Orthopaedic Resident, Duke Univ.
2011-2012	Tobin Eckel, Foot and Ankle Fellow, Dept. of Orthopaedic Surgery, Duke Univ.
2011-2012	Stephen Appleton, Adult Recon Fellow, Dept. of Orthopaedic Surgery, Duke Univ.
2011-2013	Phillip Horne, Orthopaedic Resident, Duke Univ.
2011	Kevin Hug, Medical Student, Duke Univ.
2010-2013	Ravi Verma, Medical Student, University of Medicine and Dentistry of New Jersey
2010-2014	Donald Fowler, Orthopaedic Resident, Duke Univ.
2010-2012	Jessica “Jace” Carter, Medical Student, Duke Univ.
2010-2014	Stephanie Mayer, Orthopaedic Resident, Duke Univ.
2010	Sami Mardam-Bey, Medical Student, Duke Univ.
2009	Kristina Siorpaes, Medical Student, University of Salzburg, Austria
2008-2010	Johanna Bischof, Medical Student, Duke Univ.
2007-2009	Jocelyn Wittstein, Orthopaedic Resident, Duke Univ.
2007-2009	Mike Malinzak, Medical Student, Duke Univ.
2008	Bill Kaufman, Medical Student, Medical College of Virginia
2007	Johanes Wiegerinck, Medical Student, University of Amsterdam
2006-2009	Vani Sebesan, Orthopaedic Resident, Duke Univ.
2006-2008	Jason Hurst, MD, Orthopaedic Resident, Duke Univ.
2005	Donald Fowler, III, Medical Student, University of Virginia
2004-2005	Nathan A. Mall, MSIII, Medical Student, Duke University Medical Center

Visiting Professors (hosted Sabbaticals)

2012-2013	Chayanin Anghong, MD, Siriraj Hospital, Mahidol University (Bangkok, Thailand)
2006-2007	Bavornrit Chuckpaiwong, MD, Siriraj Hospital (Bangkok, Thailand)

Undergraduate Independent Study Students

2017-2018	Leila Kamareddin, Mechanical Engineering, Virginia Tech
2016-2017	Melanie Kangelaris, Mechanical Engineering, Virginia Tech
2014	Caitlin Gallagher, Exercise Science, Appalachian State University
2014	Morgan Pillsbury, Exercise and Sports Science, Elon Univ.
2014-2015	Eddie Merenda, Biomedical Engineering, Duke University
2014-2015	Erinn Menninger, Biomedical Engineering, Duke University
2012-2013	Lucas Johnston, Mechanical and Biomedical Engineering, Duke Univ
2009	Romin Ghassemi-nia, Exercise Physiology, East Carolina Univ.

2009-2010 Marian Dickinson, Dept. of Biomedical Engineering, Duke Univ
2011-2012 Tawnee Sparling, Evolutionary Anthropology, Duke Univ.
2011-2014 Shikha Sachdeva, Evolutionary Anthropology, Duke Univ.
2007 Mya Shackelford, Exercise Physiology/Psychology, Univ North Carolina-CH
2007-2008 Jordan Yoder, Dept. of Biomedical Engineering, Duke Univ.
2007-2010 Tradelle Ward, Biological Anthropology and Anatomy, Duke Univ.
2008-2009 Winston Lynk, Dept. of Biomedical Engineering, Duke Univ.
2008-2011 Justin De Biasio, Dept Chemistry, Duke Univ.

Undergraduates Supervised

2018 - Christopher White, Mechanical Engineering, Virginia Tech
2018 - Karthik Dikshithar, ESM, Virginia Tech
2018 Sindy Hou, ESM, Virginia Tech
2017-2018 Leila Kamareddin, Mechanical Engineering, Virginia Tech
2017- Caitlyn Overbay, ESM, Virginia Tech
2017- Alison Mihailovich, Animal and Poultry Sciences, Virginia Tech
2017 Vincent Caittei, Mechanical Engineering, Virginia Tech
2016-2017 Melanie Kangelaris, Mechanical Engineering, Virginia Tech
2015-2017 Nicole Orndorff, Mechanical Engineering, Virginia Tech
2016-2017 Catherine Lyle, Engineering Science and Mechanics, Virginia Tech
2016 Rick Cantania, Mechanical Engineering, Virginia Tech
2016 Stephen Heinichen, Mechanical Engineering, Virginia Tech
2016 Sean Wilkins, Mechanical Engineering, Virginia Tech
Summer 2016 Mackenzie Wenrick, Summer REU through the NSF
2014-2015 Steven Heer, Biology, Duke Univ.
2014-2015 Eddie Merenda, Biomedical Engineering, Duke University
2014-2015 Erinn Menninger, Biomedical Engineering, Duke University
2014 Morgan Pillsbury, Exercise and Sports Science, Elon Univ.
2014 Caitlin Gallagher, Exercise Science, Appalachian State University
2014 Rajan Khanna, Neuroscience, Duke University
2013-2014 David Huang, Dept. Biomedical Engineering, Duke Univ.
2013-2014 Michelle Roberts, Undecided, Duke Univ.
2012-2013 Lucas Johnston, Mechanical and Biomedical Engineering, Duke Univ
2012-2013 Teron Nezwek, Evolutionary Anthropology, Duke Univ
2012-2013 Jordyn Silverstein, Dept. Biology, Duke Univ.
2012-2013 Thomas Hennessy, Undecided, Duke Univ.
2012-2013 Shaun Thompson, Dept. Biophysics, Duke Univ.
2012-2013 Camden Spade, Dept. Biology, Emory Univ.
2011-2014 Shikha Sachdeva, Evolutionary Anthropology, Duke Univ.
2011-2012 Tawnee Sparling, Evolutionary Anthropology, Duke Univ.
2011-2012 Emily Bhutiani, Dept. Biology, Duke Univ
2011-2012 Eric Merritt, Dept. Kinesiology, Penn State Univ.
2011 Neha Bakhai, Global Health, Duke Univ.
2011 Maxwell Horowitz, Dept. Psychology, Duke University
2011 Conor Irwin, Dept. Evolutionary Anthropology & Anatomy, Duke Univ.
2011 Thomas Thorne, Dept. Biomedical/Medical Engineering, North Carolina State Univ.
2011 Debbie Chi, Dept. Mechanical Engineering, Duke Univ.
2011 Amos Dai, Dept. Global Health, Duke Univ.
2010-2011 Joe Hoerner, Dept. Biomedical Engineering, Duke Univ.
2010 Lauren DeRuyter, Dept. Biology, Duke Univ.

2010 Alison Damon, Dept. Biology, Duke Univ.
 2010 Brad Peters, Exercise Science, Univ. Nebraska at Kearney
 2009-2010 Marian Dickinson, Dept. of Biomedical Engineering, Duke Univ
 2009-2010 Elyse Glover, Mechanical Engineering, Duke Univ.
 2009-2010 Jenna McNeill, Evolutionary Anthropology, Duke Univ.
 2009 Romin Ghassemi-nia, Exercise Physiology, East Carolina Univ.
 2009 Tesa Gross, Depts. Biology and Evolutionary Anthropology, Duke Univ.
 2009 Michelle Jablons, Dept. Biology, Duke Univ.
 2009 Nissar Ahmed, Dept. Biomedical Engineering & Chemistry, Duke Univ.
 2009 John Yanik, Biomedical Engineering, North Carolina State Univ.
 2009 Irfan Husain, Dept. Biology, Duke Univ.
 2008-2011 Justin De Biasio, Dept Chemistry, Duke Univ.
 2008-2009 Winston Lynk, Dept. of Biomedical Engineering, Duke Univ.
 2008 Slater Hurst, Dept. History, Duke Univ.
 2008 Taylor Tappe, Dept Physics, Univ North Carolina-CH
 2008 Wesley Ogelsby, Biological Anthropology & Anatomy, Duke Univ.
 2007-2010 Tradelle Ward, Biological Anthropology and Anatomy, Duke Univ.
 2007-2008 Jordan Yoder, Dept. of Biomedical Engineering, Duke Univ.
 2007-2008 Alicia Eubank, Global Health, Duke Univ
 2007 Mya Shackelford, Exercise Physiology/Psychology, Univ North Carolina-CH
 2007 Jennifer Boyd, Dept. Biomedical Engineering, North Carolina State Univ.
 2006-2007 Emily Boecking, Dept. of Biomedical Engineering, Duke Univ.
 2006 Alicia Abbey, Athletic Training, Mercyhurst College
 2006 Brian Yeh, Dept. of Biomedical Engineering, Duke Univ
 2006 Travis Nelson, Dept. Biology, Duke Univ.
 2006 Andrew Juer, Viterbi School of Engineering at the Univ. of Southern California
 2005-2008 Benjamin Haynes, Dept. of Biomedical Engineering, Duke Univ.
 2004-2005 W. Mack Hardaker, Evolutionary Anthropology, Duke Univ.
 2005 Daniel Southam, BSE, Dept. of Biomedical Engineering, Duke Univ.

External support - gifts, grants, and contracts:

	<u>% Effort</u>	<u>Title</u>	<u>Amount</u>	<u>Funding Period</u>
<u>Pending:</u>				
Rikakis (PI) Queen (Co-PI)	13%	SCH: INT: Smart Rehabilitation in the Home: Connecting the Pieces	\$1,198,255	12/18-11/22
Queen (PI)	90%	NIH – R01 Determination of Clinically Assessed Loading Asymmetry Following ACL Reconstruction	\$664,446	07/19 - 06/24
Allen (PI)	50%	NIH – R21 Improving Physical Activity and Gait Symmetry after Total Knee Arthroplasty	\$629,789	04/19-03/22
Queen (PI)	57%	NIH – R01	\$2,416,068	Resubmission

Predicting Total Ankle Replacement
Outcomes

Present:

Queen (PI)	100%	Howard Hughes Medical Institute Graduate Student Diversity Fellowship	\$150,000	09/18 – 08/21
Lei (PI) Queen (Co-I)	20%	DOD - US Office of Naval Research Energy harvesting backpack with high specific power and broadband using a dual mass-inerter and mechanical motion rectification	\$528,314	03/18 – 02/21
Queen (PI)	100%	ICTAS Diversity Grant Noninvasive Health Assessment and Tracking	\$10,000	10/17-09/18
Ogle (PI)	15%	ICAT Catalyst Grant Program Embodied Virtual Reality for Training and Performance	\$25,000	08/17-06/18
Queen (PI)	100%	NIH – R21 Pilot Clinical Trial Reduction of Risk Factors for ACL Re-injuries using an Innovative Biofeedback Approach	\$600,333	12/16-11/19
Queen (PI) (Asbeck: Co-PI)	50%	NSF – MRI MRI: Acquisition of a Force-measuring treadmill for fundamental research to advance injury prevention, rehabilitation and exoskeleton development.	\$231,149	08/16-08/18
Queen (PI)	100%	Don Joy, Ortho The Effects of brace wear on sports performance following Anterior Cruciate ligament reconstruction	\$141,747	07/15-6/18
Queen (PI)	100%	DonJoy, Ortho Gender Differences in the Performance Response to Brace Wear Following ACL Reconstruction	\$101,662	03/16-09/19

Past:

Queen (PI)	100%	REAP VCOM The Ability of Osteopathic Structural Evaluation to Assess Gait Asymmetry	\$50,450	10/16-12/17
Collins	30%	NIH F32	\$167,346	09/14-8/17

(Co-Mentor)		Biomechanical Markers of Knee Osteoarthritis and In Vivo Cartilage Loading		
Queen (PI)	100%	OREF: Assessment of Physical Performance, Walking Mechanics, and the Cost-effectiveness of Revision Total Ankle Replacement, and Outcomes Following Total Ankle Replacement	\$100,000	07/14-10/16
Defrate (PI) (Queen: Co-I)	40%	1RO1-AR065527-01 In Vivo Knee Motion and ACL Biomechanics During Dynamic Activities	\$1,787,513	05/14-04/19
Queen (PI)	100%	Stryker Clinical and Functional Outcomes following Total Knee Replacement using Two Different Implants	\$300,856	09/12-01/16
Allen (PI) (Queen: Co –I)	50%	VA Grant - O1033-P Functional movement retraining after hip arthroplasty in veterans: pilot study	\$200,000	10/13-09/15
Ledford (Queen: PI)	100%	Piedmont Research Foundation The Effect of Body Composition on Functional Outcomes after Total Joint Replacement	\$7,000	9/14-8/15
Roth-Fellow (Queen: PI)	100%	Piedmont Research Foundation The Functional Recovery After Arthroscopic Partial Meniscectomy	\$7,000	9/14-8/15
Queen (PI)	100%	Don Joy, Ortho Knee Extension Constraint Brace Compliance following ACL Reconstruction	\$523,706	09/12-10/14
Queen (PI)	100%	Piedmont Foundation Equipment Grant Examining Plantar Loading in various clinical populations	\$20,000	03/11-02/13
Fowler Ortho Resident (Queen – PI)	100%	Piedmont Foundation Loading symmetry in patients following ACL reconstruction	\$5,000	05/11-04/13
Horne Ortho Resident (Queen: PI)	100%	Piedmont Foundation Differences in Clinical and Functional Outcomes following THA and TKA.	\$10,000	05/11-04/13

Updated 7/26/2018

Queen (PI)	100%	Nike, Inc The Implications of flexibility, strength and morphology on single and 2 leg jumping performance in elite basketball players.	\$33,000	4/12 – 11/12
Bolognesi (PI) (Queen: Co-PI)	90%	OREF Effect of Surgical Approach on Gait Mechanics and Physical Function Following Total Hip Replacement.	\$85,000	07/10-06/12
Queen (PI)	100%	Don Joy, Ortho Effects of Knee Extension Constraint Bracing on Lower Extremity Motion Patterns in Post-ACL Reconstruction Patients	\$233,529	08/09-01/12
Mayer Ortho Resident (Queen: PI)	100%	Piedmont Foundation Short Term Results Following Anterior Cruciate Ligament Reconstruction: Improving Post-Operative Evaluations and Safety for Return to Sport	\$3,000	03/11-02/12
Defrate (PI) (Queen: Co-I)	40%	PAR06-383 (NIH-R03): The In Vivo Biomechanics of Lateral Ankle Ligament Injury and Reconstruction	\$234,000	12/08-11/11
Allen (PI) (Queen: Co-I)	50%	Pepper Center Pilot Study of Strength and Gait Training for Older Adults with Knee Osteoarthritis and Varus Malalignment	\$53,100	07/08-06/10
Sabesan Ortho Resident (Queen: PI)	100%	OREF Resident Award A Prospective Clinical Gait Comparison of Total Hip Replacements versus Hip Resurfacing	\$20,000	07/08-06/09
Queen (PI)	100%	Piedmont Research Foundation Examine the differences in lower extremity kinetics and kinematics during 3 tasks between patients with Total Hip Replacement, Hip Resurfacing and Normal Controls.	\$5,000	10/06-09/07
Queen (PI)	100%	AOFAS Grant: To determine the kinetic, kinematic, and pressure differences between women with a previous history of 2 nd and 3 rd metatarsal stress fractures and	\$10,000	04/06-02/07

women without a history of stress fractures and men without a previous history of stress fractures.

Boling (PI: Queen)	100%	Robertson Scholars Program Foster research Collaboration between UNC - Chapel Hill and Duke University	\$ 950	06/06-05/07
Queen (PI)	100%	Piedmont Research Foundation To determine the differences between a Nordic hamstring curl and traditional hamstring curls in terms of eccentric and concentric strength	\$5,000	01/06-06/06
Herman (PI: Queen)	100%	Robertson Scholars Program Foster research Collaboration between UNC - Chapel Hill and Duke University	\$ 1,000	09/05-09/06
Queen (PI)	100%	Nike, Inc The Effect of Four Different Cleat Plate Configurations on Lower Extremity Kinematics and In-Shoe Pressure on FieldTurf	\$51,529	01/05-09/05
Queen (PI)	100%	Injury Prevention Research Center The Effect of a Positive Posterior Heel Flare on Lower Extremity Kinetics, Kinematics, and Muscle Activation During Running	\$5,000	05/03-05/04