

Iain Hunter

PERSONAL INFORMATION

Professor
120C Richards Building
Brigham Young University
Department of Exercise Sciences
Provo, UT 84602

Phone: 801-422-1434

E-mail: iain_hunter@byu.edu



EDUCATION

Doctor of Philosophy, Health and Human Performance, August 2001
Biomechanics Laboratory with Dr. Gerald A. Smith
Oregon State University, Corvallis, Oregon 97331

Master of Education, Physical Education, August 1997
Brigham Young University, Provo, Utah 84602

Bachelor of Arts, Math Education, April 1996
Physical Education Minor
Brigham Young University, Provo, Utah 84602

PROFESSIONAL EXPERIENCE

Current Employment

Professor, Brigham Young University, 2001-present
Graduate and Undergraduate Biomechanics

Previous Employment

Instructor, Graduate Teaching Assistant, Oregon State University, 1997-2001
Biomechanics

Math and Sign Language teacher and XC and Track coach, East HS, Salt Lake City, UT, 1997-1998

Graduate Research Assistant, Biomechanics Laboratory, Brigham Young University, 1996-1997

CITIZENSHIP

University Assignments

Rank and Status Committee Chair (department committee), 2020-present
College Rank and Status Committee (college committee), 2018-2021
Research and Professional Development Committee (department committee), 2018-present
Faculty Advisory Council (college committee), 2016-2020
University Academic Review Committee (university assignment), 2016-present
Student Ratings Task Force (university assignment), 2009-2015
Speakers Bureau (university assignment), 2009-present
Learning Outcome Supervisor (department committee), 2014-2017
Exercise Science Program Committee (department committee), 2001-2016
National Women in Sports Day Committee (college assignment), Jan-Feb 2004
Chair of search committee for biomechanics hire (department assignment), Dec 2003-Apr 2004
EXCS 139 (jogging) class coordinator (department assignment), Sep 2003-2009
Wellness Program Running Seminar, 2-day seminar to faculty and staff, June 2004
ORCA Grant Evaluation Committee (college assignment), Jan 2005-2008
BYU Running Club Advisor (department club), Jan 2006-present
Department Travel Committee (department committee), 2005-2007
Department Travel Committee Chair (department committee), 2007-2009
Program Chair for Exercise Science (department committee), 2009-2012
Undergraduate Curriculum Committee (department committee), 2001-2017

Professional Organization Membership

American Society of Biomechanics, 2004-present
American College of Sports Medicine (National and Regional), 2001-2008

Professional Organization Service

American Society of Biomechanics, Communications Committee Member, 2006-2013
NCAA Rules Committee Consultant, Determination of altitude adjustments for distance races in track and field, 2003-2008
USA Track and Field, Biomechanist for elite athletes in steeplechase, 1996 to present
USA Track and Field, Biomechanist for elite athletes in hammer throw, 2001 to 2010
USA Track and Field, Biomechanics for elite athletes in distance running (including steeplechase), 2005 to present
US Air Force, Determination of altitude adjustments for the 1 ½ mile fitness test, 2003
Dartfish Advisory Board, Test and provide input for using DartTrainer software for data analysis, April 2006 to 2012.

Community Service

Bishop (Church Calling), 2018-present
1st Counselor Bishopric (Church Calling), 2012-2018
Ward Mission Leader (Church Calling) 2010-2012
Elder's quorum president (Church Calling 2005-2010)
Varsity Coach, Boy Scouts of America, 2002-2005

1st Counselor Young Men's Presidency (Church Calling), 2005-2006
Volunteer indoor soccer coach-Provo Parks and Recreation, 2003-2006
Head Timer-Annual Boy Scout/Young Women Track Meet 2004-2012

Reviewer

Lippincott, Williams, & Wilkins. Reviewed three chapters from: Principles of Biomechanics & Motion Analysis by Iwan W. Griffiths. Published in 2005.

Journal of Athletic Training

Sports Biomechanics

Medicine and Science in Sports and Exercise

International Journal of Sports Science and Medicine

Journal of Applied Biomechanics

International Journal of Exercise Science

TEACHING

Courses Taught

Winter 2023	EXSC 362 (2 sections, blended), EXSC 497R	6 credits
Fall 2022	EXSC 362 (2 sections, blended)	6 credits
Spring 2022	EXSC 662	2 credits
Winter 2022	EXSC 362 (2 sections, blended), EXSC 497R	6 credits
Fall 2021	EXSC 362 (2 sections, blended), EXSC 497R	6 credits
Spring 2021	EXSC 662	2 credits
Winter 2021	EXSC 362 (2 sections, blended) EXSC 497R	6 credits
Fall 2020	EXSC 362 (2 sections, blended)	6 credits
Spring 2020	EXSC 362 (1 section, online)	3 credits
Winter 2020	EXSC 362 (4 sections, blended)	12 credits
Fall 2019	EXSC 362 (4 sections, blended)	12 credits
Spring 2019	EXSC 662	2 credits
Winter 2019	EXSC 362 (4 sections, blended)	12 credits
Fall 2018	EXSC 362 (2 sections)	6 credits
Winter 2018	EXSC 362 (2 sections)	6 credits
Fall 2017	EXSC 362 (2 sections)	6 credits
Spring 2017	EXSC 662	2 credits
Winter 2017	EXSC 362 (4 sections)	12 credits (these are smaller section as a blended course)
Fall 2016	EXSC 362 (4 sections)	12 credits (these are smaller section as a blended course)
Spring 2016	EXSC 662	2 credits
Winter 2016	EXSC 365 (1 section)	2 credits
Fall 2015	EXSC 362 (2 sections)	6 credits
Spring 2015	EXSC 662	2 credits
Winter 2015	EXSC 362 (2 sections)	6 credits
Fall 2014	EXSC 362 (2 sections)	6 credits
Spring 2014	EXSC 662	2 credits
Winter 2014	EXSC 362 (2 sections)	6 credits
Fall 2013	EXSC 362 (2 sections)	6 credits
Spring 2013	EXSC 662	2 credits
Winter 2013	EXSC 362 (2 sections)	6 credits
Fall 2012	EXSC 362 (2 sections) EXSC 365	8 credits
Spring 2012	EXSC 362	3 credits
Winter 2012	EXSC 362 (2 sections)	6 credits
Fall 2011	EXSC 362 (2 sections)	8 credits

	EXSC 365	
Spring 2011	EXSC 362	3 credits
Winter 2011	EXSC 362 (2 sections)	6 credits
Fall 2010	EXSC 362 (2 sections) EXSC 365	8 credits
Spring 2010	EXSC 662	2 credits
Winter 2010	EXSC 362 (2 sections)	6 credits
Fall 2009	EXSC 362 (2 sections) EXSC 365	8 credits
Spring 2009	EXSC 662	2 credits
Winter 2009	EXSC 362 (2 sections) EXSC 365	8 credits
Fall 2008	EXSC 362 (2 sections) EXSC 365	8 credits
Spring 2008	EXSC 362	3 credits
Winter 2008	EXSC 362 (2 sections)	6 credits
Fall 2007	EXSC 362 (2 sections)	6 credits
Spring 2007	EXSC 662	2 credits
Winter 2007	EXSC 362 EXSC 365	5 credits
Fall 2006	EXSC 362 (2 sections) EXSC 365	8 credits
Spring 2006	EXSC 663	2 credits
Winter 2006	EXSC 362 EXSC 365	5 credits
Fall 2005	EXSC 362 (2 sections) EXSC 365	8 credits
Summer 2005	EXSC 662	2 credits
Winter 2005	EXSC 362 EXSC 365	5 credits
Fall 2004	EXSC 362 (2 sections) EXSC 365	8 credits
Summer 2004	PE 663	2 credits
Winter 2004	PE 362 PE 365 (2 sections)	7 credits
Fall 2003	PE 139 PE 362 PE 365 (2 sections)	8 credits
Winter 2003	PE 362 PE 365 (2 sections)	7 credits
Summer 2003	PE 662	2 credits
Fall 2002	PE 362 PE 365 (2 sections) PE 139	8 credits

Winter 2002	PE 362 PE 365 (2 sections)	7 credits
Summer 2002	PE 362	2 credits
Fall 2001	PE 362 PE 365 (2 sections)	7 credits

Creative Works

Created a blended course through Online Education and Independent Study – This took many hours over the 2015-2016 school year. The course has been well-received by students, includes a great deal of multimedia learning and twice as many application assignments than the previous course. Test scores were slightly better than the traditional course.

Created website for EXSC 362 and EXSC 365 with class notes, homework assignments, sample problems, grade information, and reading assignments.
(<http://biomechanics.byu.edu>)

Created Android and iPhone apps for use in class with group discussions. This uses interactive demonstrations to show certain principles that we discuss in class ([Mechanics of Motion](#)).

Created an online book for use in EXSC 362. The book is customized to the interests of the user and includes professional quality videos explaining principles and challenging concepts.

Student Research Opportunities

2014-present I keep a consistent stream of student research assistants as either pay or credit help in the lab. About a quarter of them end up being coauthors and presenting.

2001-2014 Every term an optional term project for students is to be a research assistant for current research projects being conducted in biomechanics. This gives, on average, 15 students per term the opportunity to become involved in research.

2002-2003 Four students were involved in filming and analyzing steeplechase and hammer throw events in Pennsylvania, California, and Hungary at five different track and field meets (including US Nationals and the World Athletics Final). One publication is already in print and two are in review.

2004-2005 A mentoring environment grant was awarded providing 14 undergraduates research experience in analyzing the steeplechase. Four of them traveled to California with me to film events and all were involved in analysis.

2004-present Undergraduates and graduates have received pay for helping in analysis of various track and field events. This was funded by USA Track and Field. Over 15 students have worked with me on various research projects and been involved in presentation and writing for publication as undergraduates.

2007-present As a result of our new Vicon motion capture system, 12 undergraduates and one graduate student are now involved in measuring various characteristics of running technique among our men's and women's track teams. One master's thesis and multiple presentations and publications have been completed as a result of this work.

Graduate Student Committee Service (chair of committee)

Doctoral

Current: Jared Steele
Graduated: Susie Konz

Master's

Current: Luke Vankeersbilck
Graduated: McKenna Taylor, Paige Moore, Aubree McCleod, James Tracy, Sarah Klopp, Niklas Ahrrenius, Sarah Ingebretsen, Kyle Grossarth, Jill Camarena-Williams, Jesse Tukuafu, Aared Sampson, Ruthann Cunningham, Tyler Bushnell, Erin Robinson, Laurence Bollschweiler, Andrew Tegeder, Suzanna Logan

Graduate Student Committee Service (member of committee)

Doctoral

Current: Josh Sponbeck
Graduated: Hyunsoo Kim, Mark Coglianese, Jihong Park, Carlos Ugrinowitsch, Ulrike Mitchell, Eric Strong, Wayne Johnson, Neil Noakes, Matthew Gage, Matthew Denning,

Master's

Current:
Graduated: Nicole Denny, Katy Neves, Jarom Bridges, Daniel Moody, Lesley Lovese, Kelly Poppinga, Maggie Chan-Roper, Tracy Bertagna, Robert Adams, Josh Baker, Wesley Moss, Staci Reynolds, Deja Stevenson, Benjamin Rae, Anthony Clah, Nina Mortensen, William Nelson, Manu Peeni, Rachel Rife, Aaron Stites, David Pendegrass, Kira Pope, Micah Alba, Travis Epperson, Nicole Rasmussen

Undergraduate Research Assistants

2022-2023 Kaleigh Renninger, Makensie , Madison, Luke Johnston, Jared

2021-2022 Cal Bradshaw, Adam Wood, Kaleigh Renninger, Paige Moore, Hunter McWilliams, Zach Christensen

2020-2021 Cal Bradshaw, Spencer Coleman, Christina Blackmon, Kaleigh Renninger, Nathan Walker, Paige Moore, Isaac Walker, Madison Hutchings, Hunter McWilliams, Zach Christensen

2019-2020 Aubree McLeod, Dru Valentine, Cal Bradshaw, Spencer Coleman, Christina Blackmon

2018-2019 Steve Morrin, Dru Valentine, Luis Gonzalez, Tyler Low, Zan Ferrin

2017-2018 Steve Morrin, Dru Valentine, Luis Gonzalez, Neal Anderson, Skyler Basham, Tyler Low, Zan Ferrin, Zed Braden

2016-2017 Thomas Melanson, Andrew Terry, Andrew Nilsen, Megan Modersitzki, Parker Cressman, Spencer Baker, Steve Morrin, Jackson Walker

2015-2016 Andrew Terry, Andrew Nilsen, Tyrel Yardley, Megan Modersitzki, Parker Cressman, Spencer Baker, Steve Morrin, Sam Williams, Jackson Walker

2014-2015 Thomas Melanson, Andrew Terry, Andrew Nilsen, Tyrel Yardley, Megan Modersitzki, James Tracy, Parker Cressman, Spencer Baker, Steve Morrin, Sam Williams, Jackson Walker

2013-2014 Neal Ferrin, Jordan Eatough, Andrew Terry, Bailie Hicken, Brandon Martindale, James Tracy, Joe Castillo, Spencer Baker, Steven Bunker, Taylor Farnsworth, Daniel Bateman, Parker Cressman, Shaquille Walker

2012-2013 Neal Ferrin, Jordan Eatough, Bryson Renouard, Andrew Terry, Bailie Hicken, Brandon Martindale, Ezra Han, James Tracy, Joe Castillo, Johnathan Pierce, Spencer Baker, Steven Bunker, Taylor Farnsworth

2011-2012 Neal Ferrin, Clayton Davis, Bryce Kelly, Austin Grant, Ashley Nichols, Nathan Craig, Joshua Gurr, Jordan Eatough, Tanner Andre, Bryson Renouard

2010-2011 Neal Ferrin, Clayton Davis, Bryce Kelly, Austin Grant, Ashley Nichols, Nathan Craig, Joshua Gurr, Cameron Carr, Tanner Andre, Bryson Renouard

2009-2010 Doug Butler, Blake Steele, Bryce Warr, Johanna Swenson, Miles Batty, Tyler Hansen, Wes Jones, Blair Rhodehouse

2008-2009 Travis Clyde, Jocelyn Gardner, Carrie Robinson

2007-2008 Travis Clyde, Bobby Brigman, Jocelyn Gardner, Carrie Robinson

2006-2007 Lance Bergeson, Brad Roberts, Richard Leake, Garner Meads, Andrew Martin, Jocelyn Gardner, Jesse Tukuafu, Christian Hand, Jaron Miner, Carrie Robinson

2005-2006 Bryan Lindsay, Richard Leake, Sara Cropper, Garner Meads

2004-2005 Kathryn Andersen, Bryan Lindsay, Richard Leake, Jason Dorais, Garrett Welch, Tanner Bushnell, Blake Clifton, Tyler Bushnell, Ruthann Cunningham, Danielle Bousha, Sally Jo Koberlein, Joel Sumner, Suzanna Logan, Andrew Tegeder, Jason Bell

2003-2004 Kathryn Andersen, Bryan Lindsay

2002-2003 Kelly Lee, Megan Schorr, Erin Nasson, Blake Clifton, Richard Winder, Kristen Monson, Mike King

2001-2002 Kelly Lee, Matthew Palmer, Michael Lemme, Megan Schorr, Erin Nasson, Blake Clifton

Honors Thesis Advisor

2013-2014 Sarah Yingling

2011-2012 Michael Collins

2008-2010 Lee J Hinkle

2007-2008 Elise Livengood

2006-2007 Scott Blanchard

2004-2005 Jamie Jensen

2003-2004 Richard Winder

RESEARCH (Primary focus is on track and field performance)

Journal Choices

The Journal of Sports Science and Medicine is a common choice for me due to ease of access (it is online and free, but well-respected). Some journals (Journal of Athletic Training and Sports Biomechanics) were chosen as higher rated journals and to give some variety to where my publications were sent. Other journals were decided upon by other people or were chosen due to a specific niche that was appropriate for the topic.

Publications

62. Tafuna'i N, Hunter I, Johnson AW, Fellingham G, Vehrs P. (2022). Differences in femoral artery occlusion pressure between sexes and dominant and non-dominant legs, Chapter in: Training Load, Well Being, and Readiness: Reducing Injury Risk and Improving Sports Performance, 17-28
61. Adams L, Pace N, Heo A, **Hunter I**, Johnson AW, Mitchell U. (2022). Internal and external oblique muscle asymmetry in sprinters and sprint hurdlers: a cross-sectional study, Journal of Sports Science and Medicine, 21, 120-126. Primary research area
60. **Hunter I**, Bradshaw C, McLeod A, Ward J, Standifird T. (2022). Energetics and Biomechanics of Uphill, Downhill and Level Running in Highly-Cushioned Carbon Fiber Midsole Plated Shoes, Journal of Sports Science and Medicine, 21, 127-131. Primary research area
59. Tafuna'I ND, **Hunter I**, Johnson AW, Fellingham GW, Vehrs PR. (2021). Differences in femoral artery occlusion pressure between sexes and dominant and non-dominant legs, Medicina, 57(9), 863. Collaborative research area
58. Feland JB, Stevenson DL, **Hunter I**, Hopkins JT, Cochrane DJ. (2021). Acute effect of whole-body vibration on electromechanical delay and vertical jump performance, Journal of Musculoskeletal and Neuronal Interactions, 21(3), 373-378. Collaborative research area
57. SK Christensen, AW Johnson, N Van Wagoner, TE Corey, MS McClung, **I Hunter**. (2021). Characteristics of eight irish dance landings considerations for training and overuse injury prevention, Journal of Dance Medicine & Science, 25(1), 30-37. Collaborative research area
56. JK Sponbeck, **I Hunter**, KA Neves, DC Swanson, DA Swanson, Johnson AW. (2021). Achilles tendon single bout and season long adaptations during early and late collegiate cross-country season, Physical Therapy in

Sport, 47, 114-119.

55. Neves CD, Sponbeck JK, Mitchell UH, **Hunter I**, Johnson AW. (2020). The Achilles tendon response to a bout of running is not affected by triceps surae stretching training in runners, Journal of Sports Science and Medicine, 19(2): 358–363. Primary research area
54. Feland JB, Lovese L, Hunter I, Cochrane DJ, Hopkins JT. (2020). The effect of whole body vibration on dorsiflexion in subjects with chronic ankle instability, Physical Therapy in Sport, 44:1-7. Collaborative research area
53. McLeod A, Bruening D, Johnson AW, **Hunter I**. (2020). Improved running economy through altered shoe bending stiffness across speeds, Footwear Science, 12(2):79-89. Primary research area
52. Neves CD, Sponbeck JK, Neves KA, Mitchell UH, **Hunter I**, Johnson AW. (2020). The Achilles tendon response to a bout of running is not affected by triceps surae stretching training in runners, Journal of Sports Science and Medicine, 19(2):358-363. Primary research area
51. **Hunter I**, McLeod A, Valentine D, Low T, Ward J & Hager R. (2019). Running economy, mechanics, and marathon racing shoes, Journal of Sports Sciences, 37(20):2367-2373. Primary research area
50. **Hunter I** (2018). Physics of Human Movement (2nd edition), Brigham Young University, Provo, UT. First year ready for purchase
49. Moody DC, **Hunter I**, Myrer JW. (2018). Comparison of varying heel to toe differences and cushion to barefoot running in novice minimalist runners, International Journal of Exercise Science, 11(1), 13-19. Primary research area
48. Kwon S, Pfister R, Hager RL, **Hunter I**, Seeley MK. (2017). Influence of tennis racquet kinematics on ball topspin rate and accuracy during the forehand groundstroke, Journal of Sports Science and Medicine, October. Collaborative research area
47. **Hunter I**, Lee K, Ward JE, Tracy JT. (2017). Self-optimization of Stride Length Among Experienced and Inexperienced Runners, International Journal of Exercise Science, 10(3), 446-453. Primary research area
46. Denning M, Becker Pardo M, Winward JG, **Hunter I**, Ridge SET, Hopkins JT, Reese C, Parcell AC, Seeley MK. (2016). Ambulation speed and corresponding mechanics affect articular cartilage catabolism, Gait and Posture, 44, 131-136. Collaborative research area

45. Johnson AW, Myrer JW, Mitchell UH, **Hunter I**, Ridge SET. (2016). The Effects of a Transition to Minimalist Shoe Running on Intrinsic Foot Muscle Size, International Journal of Sports Medicine, 37, 154-158. Primary research area
44. Ridge SET, Standifird T, Rivera J, Johnson AW, Mitchell UH, **Hunter I**. (2015). The effect of training in minimalist running shoes on running economy, Journal of Sports Science and Medicine, 14(3), 643-647. Primary research area
-This article was from a master's thesis on minimalist running.
43. Earl S, **Hunter I**, Mack GW, Seeley MK. (2015). The relationship between steeplechase hurdle economy, mechanics, and performance, Journal of Sport and Health Science, 4(4), 353-356. Primary research area
-This article was from a master's thesis on steeplechase hurdling.
-Lead author with student
41. Prusak KM, Prusak K, **Hunter I**, Seeley MK, Hopkins JT. (2014). A comparison of two tape techniques on navicular drop and center of pressure measurements during stance, Athletic Training and Sports Healthcare, 13(4), 823-828. Collaborative research area
-I served on Krista Prusak's committee. This is the outcome of her work.
40. Neves KA, Johnson AW, **Hunter I**, Myrer JW. Does Achilles tendon cross sectional area differ after downhill, level and uphill running in trained runners?, Journal of Sports Science and Medicine, 13(4), 823-828. Primary research area
-This article focused on my interests in running mechanics and injury. I was on the committee of Katy Neves.
39. **Hunter I**, Seeley MK, Hopkins JT, Carr C, Franson JJ. (2014). EMG activity during positive-pressure treadmill running, Journal of Electromyography and Kinesiology, 24, 348-352. Primary research area
-The interest for this article came from various injuries in running that did not seem to improve with Alter-g treadmill running. The results explained very well why some injuries benefit from Alter-g running while others did not.
-Lead author
38. Fellingham GW, Hinckle LJ, **Hunter I**. (2013). Importance of Attack Speed in Volleyball, Journal of Quantitative Analysis in Sports, 9, 87-96. Collaborative research area
-I was the honors thesis advisor for Lee J Hinckle.
37. Draper DO, Maloy L, Johnson AW, Egget DL, Rigby JH, Hopkins JT, **Hunter I**. (2013). Single use electrodes are as effective as multiple use electrodes for producing sensory, motor threshold amplitudes and force production, Athletic Training and Sports Health Care, 5, 123-128. Collaborative research area

-I served on the graduate committee with Lucy Maloy's. This was the result of her work.

36. Falk E, Seeley MK, **Hunter I**, Park J, Hopkins JT. (2013). Experimental Anterior Knee Pain Does Not Affect Certain Measures of Static and Dynamic Postural Control, *Athletic Training and Sports Healthcare*, 6(1), 7-14. Collaborative research area
-I served on the graduate committee with Elizabeth Falk. This was the result of her work.
35. Standifird T, **Hunter I**, Johnson AW, Trager SE. (2013). Minimalist and shod lower extremity running mechanics at heel strike, *Sports Biomechanics*, (IN PRESS). Primary research area
-I served on Tyler Standifird's committee and played a major role in helping with the collection and analysis of this project.
-Multiple articles were worked on with this data collection. I was the lead author on this part of Tyler's master's thesis.
34. Trager SE, Johnson AW, Mitchell UH, **Hunter I**, Robinson E, Rich B, Brown SD. (2013). Foot Bone Marrow Edema after 10-week Transition to Minimalist Running Shoes, *Medicine and Science in Sports and Exercise*, 45, 1363-1368. Primary research area
-This was a large collaborative project where we have multiple research questions. This one was answered clearly and helps runners determine how and whether to make the transition into minimalist shoes.
33. Prusak KM, Prusak KA, **Hunter I**, Seeley MK, Hopkins JT. (2013). Effectiveness of Anti-Pronation Taping Technique in Controlling Navicular Drop and Assisting the Tibialis Posterior During Foot Pronation, *Journal of Athletic Training*, (IN PRESS). Collaborative research area
-This is a master's student committee that I was a part of. I spent a lot of time helping with the methods and revisions.
32. Cunningham R, **Hunter I**, Seeley MK, Feland JB. (2012). Running mechanics of female sprinters, middle-distance, and distance runners, *International Journal of Exercise Science*, 6, 43-51. Primary research area
-This is my graduate student's work that I was heavily involved in. It fits very well with my primary research area and has been used in working with US Olympians and many presentations. I am expecting it will be referenced many times in the future.
31. Chan-Roper M, **Hunter I**, Myrer JW, Eggett DL, Seeley MK. (2012). Kinematic changes during a marathon for fast and slow runners, *Journal of Sports Science and Medicine*, 11, 77-82. Primary research area

– I was a member of Chan-Roper’s committee heavily involved in methodology and interpretation of results. This thesis was closely related to my research focus.

30. Hopkins JT, Moss W, Feland JB, **Hunter I.** (2011). Static Stretching Does Not Alter Pre and Post-landing Muscle Activation, Sports Medicine, Arthroscopy Rehabilitation, Therapy & Technology, 3, 1-6. Collaborative research area
– My knowledge and experience were needed for certain methodology for data collection, calculations, and interpretation in this study.
29. Seeley MK, **Hunter I,** Bateman T, Roggia A, Larson BJ, Draper DO. (2011). A kinematic comparison of spring-loaded and traditional crutches, Journal of Sport Rehabilitation, 20, 198-206. Collaborative research area
– Complex calculations and methodology were involved with interpreting results in this study. Dr. Seeley and I were able to think through many difficult ideas and interpretation together to satisfy the reviewers.
28. Miller K, Mack GW, Knight KL, Hopkins JT, Draper DO, Fields PJ, **Hunter I.** (2010). Three percent hypohydration does not affect the threshold frequency of electrically-induced cramps, Medicine and Science in Sports and Exercise, 42, 2056-2063. Collaborative research area
– I was mainly a help for methodology in this study. I helped with programming the data collection and analysis, but also worked on the writing and revisions.
27. Rife R, Myrer JW, Vehrs PR, **Hunter I,** Feland JB, Fellingham GW. (2010). Water Treadmill Parameters Needed to Obtain Land Treadmill Intensities in Runners, Medicine and Science in Sports and Exercise, 42, 733-738. Primary research area
– This article helped understand cross-training interventions for runners. I’ve used the information in working with US Olympic athletes.
26. Feland JB, Hawks MM, Hopkins JT, **Hunter I,** Johnson AW, Egget DL. (2010). Whole-body-vibration as an adjunct to static stretching, International Journal of Sports Medicine, 31, 584-589. Collaborative research area
– Part of a master’s thesis committee I was on. It fit well with some secondary interests and used my knowledge in performing some of the calculations involved.
25. Logan S, **Hunter I,** Hopkins JT, Feland JB, Parcell AC. (2010). Ground reaction force differences between running shoes, racing flats, and distance spikes in runners, Journal of Sports Science and Medicine, 9, Primary research area

147-153.

– *Specialized equipment and calculations were used in this study by my graduate student. She completed a large data collection using customized software which I had programmed.*

24. Miller KC, Mack GW, Knight KL, Hopkins JT, Draper DO, Fields PJ, **Hunter I.** (2010). Reflex inhibition of electrically-induced muscle cramps in hypohydrated humans, Medicine and Science in Sports and Exercise, 42(5), 953-961. Collaborative research area
- *My primary help in this study was in building a program to analyze the data collected by Kevin. The software located events, calculated amplitudes of muscle activity, and plotted the results. I also helped with revisions of the article.*
23. Johnson AW, Myrer JW, **Hunter I**, Feland JB, Hopkins JT, Draper DO, Egget D. (2010). Whole-body vibration strengthening compared to traditional strengthening during physical therapy in individuals with total knee arthroplasty, Physiotherapy Theory and Practice, 26(1), 1-11. Collaborative research area
- *A group of professors collaborated on an area of interest (whole-body vibration platforms). We helped each other by sharing our abilities and knowledge to create multiple articles.*
22. Mitchell UH, Myrer JW, Hopkins JT, **Hunter I**, Feland JB. (2009). Neurophysiological reflex mechanisms lack of contribution to the success of PNF stretches, Journal of Sport Rehabilitation, 18(3), 343-357. Collaborative research area
- *There were certain measurements in this study that I was asked to help provide accuracy and methodology to. It was part of a dissertation that I was on the committee for.*
21. Roberts B, **Hunter I**, Hopkins JT, Feland JB. (2009). The short-term effect of whole body vibration training on the sprint start, International Journal of Exercise Science, 2(4), 264-268. Primary research area
- *A group of professors collaborated on an area of interest (whole-body vibration platforms). This specific study related to my primary interest of performance in track and field. Brad Roberts, the primary author, was one of my undergraduate students that was heavily involved in the study.*
20. Hopkins JT, Fredericks D, Guyon PW, Parker S, Gage M, Feland JB, & **Hunter I.** (2009). Whole body vibration does not potentiate the stretch reflex, International Journal of Sports Medicine, 30, 124-129. Collaborative research area
- *A group of professors collaborated on an area of interest (whole-body vibration platforms). We helped each other by sharing our abilities and knowledge to create multiple articles.*

19. Judge L, **Hunter I**, & Gilreath E. (2008). Using Sport Science to Improve Coaching: A Case Study of the American Record Holder in the Women's Hammer Throw, International Journal of Sports Science and Coaching, 3(4), 373-348. Primary research area
– I've worked with Larry Judge (Ball State University) for many years. We completed a case study on the American record hammer throw.
18. Tegeder A, **Hunter I**, Mack G, & Hilton S. (2008). Long-Distance Interval Training Following Pre-Cooling with an Ice Vest. International Journal of Sports Science and Coaching, 3(2), 269-275. Primary research area
– Andy was a master's student with me. He was interested in the distance running research I was involved in. Due to excitement about the cooling methods used by the US marathoners in the Olympic Games in Athens, we looked at performance issues with distance runners and cooling methods.
17. **Hunter I**, Lindsay BK, & Anderson KR. (2008). Gender differences and biomechanics in the 3000m steeplechase water-jump, Journal of Sports Science and Medicine, 7(2), 218-222. Primary research area
– Within performance of track and field, I have been very interested in the steeplechase event. Two of my students Bryan and Kassi helped a lot with this study. Kassi was actually a National champion in the event.
16. Feland JB, Hopkins JT, **Hunter I**, & Johnson W. (2008). Hamstring stretching using a whole body vibration platform, British Journal of Sports Medicine, 42, 523. Collaborative research area
– A group of professors collaborated on an area of interest (whole-body vibration platforms). We helped each other by sharing our abilities and knowledge to create multiple articles.
15. **Hunter I** & Hensen P. (2008). Reading Fully Automatic Timing Images. Track Coach, 182, 5823-5826. Primary research area
– There are times when timing of track races is done inaccurately. Phillip Hensen (University of Indiana) and I wrote this article to help people with using timing equipment reliably and accurately.
○ This journal was chose to reach the right audience (track and field officials and coaches)
14. Mitchell UH, Myrer JW, Hopkins JT, **Hunter I**, Feland JB, & Hilton SC. (2007). Acute Stretch Perception Alteration Contributes to the Success of the PNF "Contract Relax" Stretch. The Journal of Sport Rehabilitation, Collaborative research area

16(2), 85-92.

– *There were certain measurements in this study that I was asked to help provide accuracy and methodology to. It was part of a dissertation that I was on the committee for.*

13. Hopkins, J.T., Pak, J., Robertshaw, A., Feland, J.B., Gage, M., & **Hunter, I.** (2008). Whole body vibration does not alter dynamic restraint characteristics of the peroneus longus. International Journal of Sports Medicine, 29, 424-428. Collaborative research area
– *A group of professors collaborated on an area of interest (whole-body vibration platforms). We helped each other by sharing our abilities and knowledge to create multiple articles.*
12. Midgley W, Hopkins JT, Feland JB, Merrill G, & **Hunter I.** (2007). The effects of ankle bracing on dynamic restraint characteristics of the ankle in volleyball players. Clinical Journal of Sports Medicine, 17(5), 343-348. Collaborative research area
– *I have interests in injury related to performance and enjoy doing some collaborative work with our other professors on ankle injury topics.*
11. Bushnell TD & **Hunter I.** (2007). Technique differences between sprinters and distance runners at equal and maximal velocities. Sports Biomechanics, 6(3), 261-268. Primary research area
– *This is one of the best articles for my interest. I am very excited about learning the differences in how people should run as they transition through different race distances.*
10. **Hunter I** & Smith GA. (2007). Preferred and Optimal Stride Frequency, Stiffness and Economy, European Journal of Applied Physiology, 100(6), 653-662. Primary research area
– *This was an article completed with my PhD advisor. We determined that people naturally select the optimal stride pattern in running even when fatigued.*
9. **Hunter I**, Hopkins JT, & Casa D. (2006). Core Body Temperature Before and After Cross-Country Racing after Warming Up with an Ice Vest. Journal of Athletic Training, 41(4), 371-374. Primary research area
– *Due to excitement about the cooling methods used by the US marathoners in the Olympic Games in Athens, we looked at performance issues with distance runners and cooling methods. We collaborated with Doug Casa from Connecticut since he is an expert on cooling methods for runners.*
8. Hopkins JT, **Hunter I** & Feland JB. (2006). A comparison of voluntary Collaborative

- and involuntary measures of electromechanical delay. International Journal of Neuroscience, 107(5), 597-604. research area
- *This was the third in a collaboration that used my programming skills to analyze the data. I also gained further knowledge on muscle activity that has helped in future studies.*
7. Hopkins JT, **Hunter I** & McLoda T. (2006). Effects of ankle joint cooling on peroneal short latency response. Journal of Sports Science and Medicine, 5(2), 333-339. Collaborative research area
- *This was the second in a collaboration that used my programming skills to analyze the data. I also gained further knowledge on muscle activity that has helped in future studies.*
6. Linford CW, Hopkins JT, Schulthies SS, Feland JB, Draper DO, & **Hunter I**. (2006). Effects of neuromuscular training on the reaction time and electromechanical delay of the peroneus longus muscle, Archives of Physical Medicine and Rehabilitation 5(2), 333-339. Collaborative research area
- *This was the first in a collaboration that used my programming skills to analyze the data. I also gained further knowledge on muscle activity that has helped in future studies.*
5. **Hunter I** & Bushnell TD. (2006). Steeplechase barriers affect women less than men. Journal of Sports Science and Medicine, 5(2), 318-322. Primary research area
- *This article helped me understand the differences between men and women in how they clear the barriers in a 3000m steeplechase race. This helped coaches and athletes understand how they should move differently than others.*
4. **Hunter I**. (2005). The effect of venue on the distance of a hammer throw. Research Quarterly in Exercise and Sport, 76(3), 347-351. Primary research area
- *This article continued my study on the hammer throw by looking at the fluid mechanics involved during its flight.*
3. **Hunter I**, (2003). A new approach to modeling vertical stiffness in heel-toe distance runners, Journal of Sports Science and Medicine, 2, 139-143. Primary research area
- *This article focused on different methods for characterizing distance running mechanics. I used the methods described in this study in future distance running articles.*
2. **Hunter I** & Killgore G. (2002). Release velocity and angle in men's and women's hammer throw, Track Coach, 162, 5180-5182. Primary research area
- *My initial interests in track and field performance were in hammer throwing due to the technical nature of the event and how well it fits with angular physics.*

1. **Hunter I.** (2000). Determining the appropriate specifications for the women's steeplechase water jump pit. *Track Coach*, **150**, 4799-4801. Primary research area
- *When I started at BYU, our women's track coach approached me about a need in determining the rules for a new women's track and field event. This article was used by the IAAF and USATF to help in determining the final specifications for the water jump of the women's 3000m steeplechase event.*

Research in Progress

Optimal technique for performance in the steeplechase water jump

Running economy

Running technique of collegiate and elite distance runners

Invited Publications

Rocky Mountain Running & Triathlon (This is a regional magazine that I've been asked to contribute to 2-3 times per year)

- Should Distance Runners Learn to Sprint, April 2012, **3**(2), 15.
- Forces and Injury, December 2011, **2**(4), 13.
- Which Running Surface is Best?, September 2011, **2**(3), 16.
- Shoes or No Shoes, that is the Question, September 2010, **1**(5), 16-17.
- What did Isaac Newton know about Running, March 2010, **1**(2), 18-19.

Utah Valley Health and Wellness

- Brrrrrace Yourself for Winter Running, December 2015, 10-11.
<https://issuu.com/ibuildmagazines/docs/utvalleyhw1215>
- Fast and Steady Wins the Race, July 2016, 10-11.
<https://issuu.com/ibuildmagazines/docs/utvalleyhw0616>

Invited Presentations

32. **Hunter I.** Put one foot in front of the other and don't fall down, February 2020, Northwest American College of Sports Medicine, Boise, ID.
31. **Hunter I.** Distance running mechanics, January 2018, Runner's Corner, Orem, UT.

30. **Hunter I.** Distance running mechanics, USATF Annual Meeting, December 2017, Columbus, OH.
29. **Hunter I.** Steeplechase technique and performance, USATF Distance Running Summit, March 2017, US Olympic Training Center, Chula Vista, CA.
28. **Hunter I.** Steeplechase technique and performance, USATF Distance Running Summit, March 2016, US Olympic Training Center, Chula Vista, CA.
27. **Hunter I.** Steeplechase technique and performance, USATF Distance Running Summit, March 2015, US Olympic Training Center, Chula Vista, CA.
26. **Hunter I.** Balance Training for the Elderly, Grandview Farm Women's Group, January 2015, Provo, UT.
25. **Hunter I.** Steeplechase technique and performance, USATF Distance Running Summit, March 2014, US Olympic Training Center, Chula Vista, CA.
24. **Hunter I.** Steeplechase technique and performance, IAAF/USATF Coaching Academy, December 2013, US Olympic Training Center, Chula Vista, CA.
23. **Hunter I.** Distance running mechanics, IAAF/USATF Coaching Academy, December 2013, US Olympic Training Center, Chula Vista, CA.
22. **Hunter I.** Healthy competition, Annual Office Professional's Conference, March 2012, Provo, UT.
21. **Hunter I.** Running Mechanics, Research Revolution at the Orem Public Library, February 2012.
20. **Hunter I.** Winter Marathon Training, 26.2 Running Company Education Series, Provo, UT. January 2012.
19. **Hunter I.** Distance running mechanics, 26.2 Running Company Education Series, Provo, UT. November 2011.
18. **Hunter I.** Distance running mechanics, USA Track and Field Distance Running Summit, Colorado Springs, CO, October 2011.
17. **Hunter I.** Steeplechase running mechanics, USA Track and Field Distance Running Summit, Colorado Springs, CO, October 2011.
16. **Hunter I,** Konz S. Axis of rotation in the hammer throw, USA Track and Field Throws Summit, Las Vegas, NV, November 2010.

15. **Hunter I.** Steeplechase running mechanics, USA Track and Field Distance Running Summit, Colorado Springs, CO, October 2010.
14. **Hunter I, Konz S, Tukuafu J & Ingebretsen S.** Foot placement in elite hammer throwing, USA Track and Field Podium, Orlando, FL, December 2009.
13. **Hunter I.** Running economy in the distance races of the 2008 Olympic Trials. USATF Coaches Education Summit, Las Vegas, NV, December 2008.
12. **Hunter I.** Release parameters in the hammer throw. USATF Coaches Education Summit, Las Vegas, NV, December 2008.
11. **Hunter I & Bollschweiler L.** Optimal performance in the 3000m steeplechase. USATF Steeplechase Summit, Chula Vista, CA, December 2007.
10. **Hunter I.** Hip to hammer separation in the hammer throw. USATF Annual Meeting. Las Vegas, NV, December 2007. Hunter, I.
9. **Hunter I & Konz S.** Optimal release parameters in the hammer throw. USATF Annual Meeting. Las Vegas, NV December 2006.
8. **Hunter I & Konz S.** Optimizing release angle and velocity for performance in the hammer throw. National Throws Summit, Columbus, OH, November 2005
7. **Hunter I.** Determinants of success in the 3000 m steeplechase water jump. USATF Steeplechase Summit, Olympic Training Center, Chula Vista, CA, December 2004.
6. **Hunter I & Konz S.** Acceleration of the hammer head and path of the orbit in hammer throwing. USATF Hammer Throw Summit, Olympic Training Center, Chula Vista, CA, October 2004.
5. **Hunter I & Shane P.** Analysis of men's and women's steeplechase at the 2003 USATF Nationals. USATF Hammer Throw Summit, Olympic Training Center, Chula Vista, CA, December 2003.
4. **Hunter I** The effect of venue on the distance of a hammer throw, USATF Hammer Throw Summit, Olympic Training Center, Chula Vista, CA, November 2002. (Duplicated presentation as it was invited here and presented at a the American Society of Biomechanics, September 2003)
3. **Hunter I** and Konz S. Kinematical changes in technique with increases in running speed, USATF Elite Distance Camp, Olympic Training Center, Chula Vista, CA, December 2002.

2. **Hunter I.** Analysis of release velocity and angle in the women's hammer throw from the 2002 USATF Championships, USATF Hammer Throw Summit, Olympic Training Center, Chula Vista, CA, November 2002.
1. **Hunter I.** and Shane P. Biomechanical analysis of male steeplechasers in the 1998 USA Track and Field Championships, USATF Steeplechase Convention, Ogden, Utah, August 1998.

The USATF meetings are with elite athletes and coaches from around the country with the purpose of qualifying for the Olympic Games and earning Olympic medals. It is an honor to be involved in this work. There are only four other biomechanics professors involved in this work among various events.

Professional Presentations (Numbers highlighted in yellow represent abstracts that were published)

90. Johnston L, Steele J, Vankeersbillek L, **Hunter I.** Effect of Air Resistance on Braking and Propulsive Impulses During Treadmill Running, Southwest American College of Sports Medicine, Costa Mesa, CA, October 2022.
89. Weeks C, Steele J, Standifird T, McLeod AR, **Hunter I.** The Impact of Running Experience on Segment Coordination Variability, North American Congress on Biomechanics, Ottawa, Canada, August 2022.
88. Steele J, Weeks C, **Hunter I.** Uphill, level, and downhill running in a new style of road-racing shoe, North American Congress on Biomechanics, Ottawa, Canada, August 2022.
87. Steele J, Weeks C, Renninger K **Hunter I.** The Impact of Running Experience on Segment Coordination Variability, Rocky Mountain American Society of Biomechanics, Estes Park, CO, April 2022.
86. Weeks C, Steele J, Renninger K, **Hunter I.** Stride by Stride Variability Impacts on Running Economy, Rocky Mountain American Society of Biomechanics, Estes Park, CO, April 2022.
85. Bradshaw C, McLeod AR, Ward JB, Standifird T, **Hunter I.** Grade running in a novel road racing shoe, Rocky Mountain American Society of Biomechanics, Estes Park, CO, April 2021.
84. **Hunter I,** Bradshaw C, Standifird T, McLeod AR, Ward JB, McWilliams H. Uphill, Level, And Downhill Running In A New Style Of Road-racing Shoe, Southwest American College of Sports Medicine, Costa Mesa, CA, October 2021.

83. Renninger K, Standifird T, **Hunter I**. Mechanics of Running Grade Ability, Southwest American College of Sports Medicine, Costa Mesa, CA, October 2021.
82. **Hunter I**, McLeod AR, Low T, Valentine D, Ward JB, Hager RL. Running economy and marathon racing shoes, American Society of Biomechanics Annual Meeting, Rochester, MN, August 2018.
81. McLeod AR, Gonzalez L, Valentine D, Ward JB, Hager RL, **Hunter I**. A comparison of running mechanics in marathon racing shoes, American Society of Biomechanics Annual Meeting, Rochester, MN, August 2018.
80. Valentine D, McLeod AR, Anderson N, Ward JB, Hager RL, **Hunter I**. The benefit of different marathon shoes through various running mechanics, American Society of Biomechanics Annual Meeting, Rochester, MN, August 2018.
82. **Hunter I**, McLeod AR, Low T, Valentine D, Ward JB, Hager RL. Running economy and marathon racing shoes, Rocky Mountain American Society of Biomechanics Annual Meeting, Rochester, MN, April 2018.
81. McLeod AR, Gonzalez L, Valentine D, Ward JB, Hager RL, **Hunter I**. A comparison of running mechanics in marathon racing shoes, Rocky Mountain American Society of Biomechanics Annual Meeting, Rochester, MN, April 2018.
80. Valentine D, McLeod AR, Anderson N, Ward JB, Hager RL, **Hunter I**. The benefit of different marathon shoes through various running mechanics, Rocky Mountain American Society of Biomechanics Annual Meeting, Rochester, MN, April 2018.
79. **Hunter I**. Optimal steeplechase mechanics, 2018 USATF Distance Summit, Chula Vista, CA, January 2018.
78. Tracy J, Baker S, **Hunter I**. Kinetics of steeplechase hurdling performance, American Society of Biomechanics Annual Meeting, Boulder, CO, August 2017.
77. **Hunter I**, Ward JE, Fellingham G, Tracy J, Terry A. Changes in running mechanics during the 2016 US Olympic Trials Marathon, American Society of Biomechanics Annual Meeting, Boulder, CO, August 2017.
76. Tracy J, Baker S, **Hunter I**. Kinetics of steeplechase hurdling performance, Regional American Society of Biomechanics Annual Meeting, Estes Park, CO, August 2017.
75. **Hunter I**, Ward JE, Fellingham G, Tracy J, Terry A. Changes in running mechanics during the 2016 US Olympic Trials Marathon, Regional American Society of Biomechanics Annual Meeting, Estes Park, CO, August 2017.

74. **Hunter I**, Nilsen A, Tracy J. Running mechanics and fatigue in elite 10 km track racing, American Society of Biomechanics Annual Meeting, Raleigh, NC, August 2016.
73. Tracy JT, **Hunter I**, Modersitzki M, Nilsen A. Running mechanics and fatigue in elite 10 km track racing, American Society of Biomechanics Annual Meeting, Raleigh, NC, August 2016.
72. Nilsen A, **Hunter I**, Tracy J. Running mechanics and fatigue in elite 10 km track racing, Regional American Society of Biomechanics Meeting, Estes Park, CO, April 2016.
71. Tracy JT, **Hunter I**, Modersitzki M, Nilsen A. Running mechanics and fatigue in elite 10 km track racing, Regional American Society of Biomechanics Meeting, Estes Park, CO, April 2016.
70. Bunker S, **Hunter I**, Eatough J, Tracy J, Farnsworth T. Accuracy of running data from the Garmin Forerunner, American Society of Biomechanics Annual Meeting, Columbus, OH, August 2015.
69. Bunker S, **Hunter I**, Eatough J, Tracy J, Farnsworth T. Accuracy of running data from the Garmin Forerunner, Regional American Society of Biomechanics Annual Meeting, Estes Park, CO, April 2015.
68. Denning W, Pardo MB, Winward JG, **Hunter I**, Ridge SET, Hopkins JT, Parcell AC, Seeley MK. Gender differences in the association between acute articular cartilage metabolism and ambulatory kinetics, American Society of Biomechanics Annual Meeting, Columbus, OH, April 2015.
67. Konz S, **Hunter I**. Technique comparison of male and female hammer throwers, International Sports Biomechanics Conference, Glasgow, Scotland, July 2015.
66. Bunker S, **Hunter I**, Eatough J, Tracy J, Farnsworth T. Running mechanics and step variability, Regional American Society of Biomechanics Annual Meeting, Estes Park, CO, April 2014.
65. **Hunter I**, Bunker S, Tracy J, Eatough J, Reese S. Tibial shock across footwear and running surfaces, Regional American Society of Biomechanics Annual Meeting, Estes Park, CO, April 2014.
64. Eatough J, **Hunter I**, Bunker S, Tracy J, Farnsworth T. Running mechanics and performance, Regional American Society of Biomechanics Annual Meeting, Estes Park, CO, April 2014.
63. Ridge S, Nelson J, Dahle L, Mitchell U, Johnson A, **Hunter I**, Standifird T, Bruening D. Lower extremity kinematics after 10-week transition to minimalist running shoes, World Congress on Biomechanics, Boston, MA, August 2014.

62. **Hunter I**, Bunker SD, Tracy JB, Eatough J, Reese S. Tibial shock while running on various surfaces in different footwear, World Congress on Biomechanics, Boston, MA, August 2014.
61. Bridges J, Johnson AW, Myrer JW, **Hunter I**. Preliminary study on changes in multifidus cross-sectional area in female collegiate volleyball players from preseason to post season and comparing multifidus CSA changes to back, 32nd Annual Meeting Southwest Chapter of ACSM, Newport Beach, CA, October 2013.
60. Neves C, Johnson AW, Myrer JW, **Hunter I**. Changes in Achilles' tendon cross-sectional area in collegiate cross country runners across a competitive season, 32nd Annual Meeting Southwest Chapter of ACSM, Newport Beach, CA, October 2013.
59. Dahle L, Ridge SE, Mitchell UH, **Hunter I**, Johnson AW, Brown SD. Bone marrow edema in the foot after a 10-week transition from traditional running shoes to minimalist running shoes, Annual Meeting of the Utah Physical Therapy Association, Layton, UT, October 2013.
58. Rigby J, Nelson J, **Hunter I**, Mitchell UH, Johnson AW, Ridge SE. The Effect of Footwear on Foot Strike Pattern in Running, Annual Meeting of the Utah Physical Therapy Association, Layton, UT, October 2013.
57. **Hunter I**, Mitchell UH, Ridge SE, Johnson AW. Light, Lighter, Barefoot Symposium, Southwest American College of Sports Medicine Annual Meeting, Newport Beach CA, October 2013.
56. **Hunter I**, Robinson E. Economization Of Stride Length In Level And Uphill Running, Annual Meeting of the American Society of Biomechanics, Omaha, NE, September 2013.
55. Denning WM, Woodland S, **Hunter I**, Hopkins JT, Seeley MK. The effects of experimental knee pain on co-contraction and spatiotemporal characteristics during a 30-minute run, Annual Meeting of the American Society of Biomechanics, Omaha, NE, September 2013.
54. Myrer JW, Neves KA, Johnson AW, **Hunter I**, Neves C, Bridges J. A 4-mile run decreases Achilles tendon thickness and cross-sectional area in collegiate female cross-country runners, National Athletic Trainers' Association Annual Meeting and Clinical Symposium, Las Vegas NV, June 2013.
53. Ridge SE, Johnson AW, **Hunter I**, Mitchell UH. Arch height changes after 10-week transition to minimalist running shoes, Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, May 2013.

52. Van Wagenen K, Benson B, Johnson AW, **Hunter I**, Mitchell UH. Effect of training in minimalist running shoes on running economy, Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, May 2013.
51. Standifird T, **Hunter I**, Johnson AW, Ridge SE. Minimalist and shod lower extremity running mechanics at heel strike, Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, May 2013.
50. Nelson J, **Hunter I**, Mitchell UH, Johnson AW. The Effect of Footwear on Foot Strike Pattern, Annual Meeting of the American College of Sports Medicine, Indianapolis, IN, May 2013.
49. Trager SE, Mitchell UH, **Hunter I**, Johnson AW. Bone marrow edema in the foot after a 10-week transition from traditional running shoes to minimalist running shoes, Combined Sections Meeting of the APTA, San Diego, CA, January 2013.
48. Mitchell UH, Johnson AW, Trager SE, **Hunter I**. Intra- and Inter-tester Reliability of the Varifit Foot Assessment Device, Combined Sections Meeting of the APTA, San Diego, CA, January 2013.
47. Neves KA, Johnson AW, Myrer JW, **Hunter I**, Neves C, Bridges J. A 4 mile run decreases Achilles' tendon thickness and cross-sectional area in collegiate female cross country runners, Southwest American College of Sports Medicine, Newport Beach, CA, October 2012.
46. Johnson AW, Neves C, Myrer JW, **Hunter I**. An 8.3 mile run decreases Achilles' tendon thickness in collegiate male cross country runners, Southwest American College of Sports Medicine, Newport Beach, CA, October 2012.
45. Ridge SE, Johnson AW, **Hunter I**, Mitchell UH. Arch height changes after 10 week transition to minimalist running shoes, Southwest American College of Sports Medicine, Newport Beach, CA, October 2012.
44. Nelson J, **Hunter I**, Mitchell UH, Johnson AW, Ridge SE. The Effect of Footwear on Foot Strike Pattern, Southwest American College of Sports Medicine, Newport Beach, CA, October 2012.
43. Seeley M, Park J, **Hunter I**, Francom D, Black B, Hopkins J. The Effect of Knee Pain and Effusion on Vertical Ground Reaction Force During Walking, American Society of Biomechanics Annual Meeting, Gainesville, FL, August 2012.
42. Standifird T, Johnson W, **Hunter I**, Ridge S. Lower Extremity Joint Moments During the Active Peak Vertical Ground Reaction Force in Three Different Running Conditions, American Society of Biomechanics Annual Meeting, Gainesville, FL, August 2012.

41. **Hunter I**, Seeley M, Hopkins T, Franson J, Collins M. EMG Activity while Alter-G Treadmill Running, American Society of Biomechanics Annual Meeting, Gainesville, FL, August 2012.
40. Denning W, **Hunter I**, Seeley M. A Comparison of Position Measurement Accuracy Using Two Different Camera Arrangements, American Society of Biomechanics Annual Meeting, Gainesville, FL, August 2012.
39. Gage M, Seeley MK, Draper DO, **Hunter I**, Feland JB, Myrer JW. The effect of an eight-week abdominal training program on muscle activation in healthy and chronic ankle instability subjects, St Louis, MO, June 2012.
38. **Hunter I**, Mitchell UH, Benson B. Effect of Training in Vibram FiveFingers on Running Economy: Preliminary Results, Southwest American College of Sports Medicine Regional Meeting, Reno, NV, October 2011.
37. May M, Ridge SE, Johnson AW, **Hunter I**, Mitchell UH, Benson B. Effect of Training in Vibram FiveFingers on Running Economy: Preliminary Results, Southwest American College of Sports Medicine Regional Meeting, Reno, NV, October 2011.
36. Johnson AW, Mitchell UH, Ridge SE, **Hunter I**, Assay J, Petersen J, Olson T. Inter-tester reliability of the Varifit foot assessment device, Southwest American College of Sports Medicine Regional Meeting, Reno, NV, October 2011.
35. Johnson AW, Olson T, Ridge SE, Mitchell UH, **Hunter I**, Assay J, Petersen J. Intra-rater reliability of foot intrinsic muscle size measured by ultrasound, Southwest American College of Sports Medicine Regional Meeting, Reno, NV, October 2011.
34. Hager RL, Parcell AC, **Hunter I**, Allsen PE, George JD. Comparison Of The Effects of High-resistance Cycle Training and Leg Press on Wingate Anaerobic Test, Strength, and Time-trial Performance, American College of Sports Medicine National Meeting, Denver, CO, June 2011.
33. **Hunter I**, Cunningham R, Ingebretsen S, Butler D. Ground Contact Time and Running Speed in Elite Championship Distance Races, American Society of Biomechanics, Providence, RI, August 2010.
32. Tukuafu JT, **Hunter I**. The Effects of Indoor Track Curve Radius on Sprint Speed and Ground Reaction Forces, American Society of Biomechanics, Providence, RI, August 2010.
31. Cunningham R, **Hunter I**, Seeley MK, Feland JB. Variations in Running Form Among Female Sprinters, Middle, and Distance Runners, American Society of Biomechanics, Providence, RI, August 2010.

30. Miller K, Mack G, Knight KL, Draper DO, Fields PJ, **Hunter I**. Hypohydration does not affect the threshold frequency, duration, or intensity of electrically-induced muscle cramps, National Athletic Trainers' Association Annual Meeting, Philadelphia, PA, June 2010.
29. Gage M, Seeley MK, Draper DO, **Hunter I**, Feland JB, Myrer JW, Sudweeks R. The effect of an eight-week training program on abdominal muscle thickness, National Athletic Trainers' Association Annual Meeting, Philadelphia, PA, June 2010.
28. Willis J & **Hunter I**. Ground contact time in steeplechase hurdling, American Society of Biomechanics Annual Meeting, State College, PA, August 2009.
27. Tukuafu J, **Hunter I**, Cunningham R & Willis J. Biomechanical parameters and mile performance, American Society of Biomechanics Annual Meeting, State College, PA, August 2009.
26. Ingebretsen S, **Hunter I**, Cunningham R & Willis J. Barrier clearance in the 3000m steeplechase, American Society of Biomechanics Annual Meeting, State College, PA, August 2009.
25. **Hunter I**, Robinson C & Clyde T. Maximizing velocity in the hammer throw, American Society of Biomechanics Annual Meeting, State College, PA, August 2009.
24. Laurence Bollschweiler, **Iain Hunter**, J. Brent Feland & J. Ty Hopkins. Technique differences among male and female intermediate hurdlers and steeplechasers, American Society of Biomechanics Annual Meeting, Ann-Arbor, MI, August 2008.
23. Roberts B, **Hunter I**, Thiebaud R & Bishop M. The short-term effect of whole body vibration training on collegiate sprint athletes, American Society of Biomechanics Annual Meeting, Palo Alto, CA, August 2007.
22. Logan S, **Hunter I**, Feland JB, Hopkins JT & Parcell AC. Ground reaction forces between running shoes, racing flats, and distance spikes in runners, American Society of Biomechanics Annual Meeting, Palo Alto, CA, August 2007.
21. **Hunter I** & Dallon J. Applications of the peronnet-thibault model of running performance, American Society of Biomechanics, Blacksburg, VA, September 2006.
20. Mitchell UH, Myrer JW, Hopkins JT, **Hunter I**, Feland JB & Hilton SC. Reciprocal Inhibition, Successive Inhibition, Autogenic Inhibition, or Stretch Perception Alteration: Why do PNF Stretches Work?, American College of Sports Medicine, Denver, CO, June 2006.

19. Feland JB, Hopkins JT, & **Hunter I**. Effect of Acute Exposure to Whole-Body-Vibration on Vertical Jump in Senior Athlete Volleyball Players, American College of Sports Medicine, Denver, CO, June 2006.
18. Hopkins JT, Feland JB & **Hunter I**. A Comparison of Voluntary and Involuntary Measures of Electromechanical Delay, American College of Sports Medicine, Denver, CO, June 2006.
17. Ricard MD, Ugrinowitsch C, Hilton S, Parcell AC, **Hunter I**, Knight K & Tricoli V. Effects of the Rate of Force Development on Fatigue Onset and Location, American College of Sports Medicine, Denver, CO, June 2006.
16. Tegeder AR, **Hunter I** & Martini E. Utilizing the Nike Ice Vest in Distance Running Training, American College of Sports Medicine, Denver, CO, June 2006.
15. Lindsay BK & **Hunter I**. Predictors of Success in the 3000m Steeplechase Water Jump, International Society of Biomechanics, Cleveland, OH, August 2005.
14. **Hunter I** & Hopkins JT. A Comparison of Vertical Stiffness Calculation Methods, American College of Sports Medicine, Nashville, TN, June 2005.
13. Feland JB, Hopkins JT & **Hunter I**. Acute Changes in Hamstring Flexibility Using a Wholebody- Vibration Platform with Static Stretch. American College of Sports Medicine, Nashville, TN, June 2005.
12. Andersen KR & **Hunter I**. Gender Differences in the 3000m Steeplechase Water-Jump, American College of Sports Medicine, Nashville, TN, June 2005.
11. Bushnell TD & **Hunter I**. Technique Differences Between Sprinters and Distance Runners at Equal and Maximal Speeds, American College of Sports Medicine, Nashville, TN, June 2005.
10. **Hunter I**, Tegeder AR, & Martini E. Core Body Temperature During Cross Country Racing with the Nike Ice-Vest, American College of Sports Medicine, Denver, CO, June 2006.
9. Hagar R, Bertagna T, Prusak K & **Hunter I**. The Effects of Multi-View Video Modeling and Skill Acquisition on Learning the Tennis Serve, American College of Sports Medicine, Indianapolis, IN, June 2004.
8. Trowbridge CA, Winder RP, **Hunter I** and Ricard M. Gender Differences in Knee Torques and Angles During Different Cutting Tasks, National Athletic Trainers Association Annual Meeting and Clinical Symposium, Baltimore, MD, June 2004.

7. **Hunter I** & Bushnell TD. Analysis of Steeplechase Hurdling Strides, American College of Sports Medicine, Indianapolis, IN, June 2004.
6. Russell KL, Strong E and **Hunter I**. Bone mineral density among sprinters and distance runners, Southwest American College of Sports Medicine, Las Vegas, NV, November 2003.
5. Nasson E and **Hunter I**. Economization of Stride Length in Level and Uphill Distance Running, Southwest American College of Sports Medicine, Las Vegas, NV, November 2003.
4. **Hunter I** & Feland B. Effect of wind resistance on the distance of a drive in golf, Southwest American College of Sports Medicine, Las Vegas, NV, November 2003.
3. **Hunter I**. The Effect of venue on the distance of a hammer throw. American Society of Biomechanics, Toledo, OH, September 2003.
2. Lee K and **Hunter I**. (2003). Self-optimization of stride length among experienced and inexperienced distance runners. *Medicine and Science in Sports and Exercise*, 35(5), S88.
1. **Hunter I**. and Smith GA. The effect of a near-maximal effort one-hour run on preferred and optimal stride rate. Sixth IOC World Congress on Sport Sciences, St. Louis, MO, May 2002.

Creative Works

2016 – Extensively updated an online book for use in EXSC 362 and 365. Concept questions were added for applicable chapters. 42 videos were created professionally for use in the book and for assignments related to the book. Text was added for areas where insufficient detail had been provided in the past.

2010-2011 – Created an online book for use in EXSC 362 and 365. This was very well received and includes many interactive examples and practice problems. This required many hours of work in creation and revision. I am constantly updating and adding more examples for students.

2009 – Created a PDA application for timing and predicting finish times for track races.
<http://techtransfer.byu.edu/AvailableTechnologies/ItemDetail.aspx?itemId=108>

2008 – Created online tutorials for software used in my class.
[http://biomech.byu.edu/exsc362\(hunter\)/termproject.html](http://biomech.byu.edu/exsc362(hunter)/termproject.html)

- 2007 – Created booklets for seven female hammer throwers that have opportunities to make the 2008 US Olympic Team. These 36 page booklets included individualized reports on how their body positioning compares with other international elite athletes and provides suggestions for improvement.
- 2007 – Created a webpage for elite steeplechase athletes focusing on optimal technique and training for the event. <http://biomech.byu.edu/steeplechase>
- 2006 – Recreated course webpages for EXSC 365 and 362. <http://biomech.byu.edu>
- 2003 – Created Dartfish training videos for steeplechase athletes and coaches (distributed by USATF).
- 2003 – Compiled video for hammer throw athletes and coaches (distributed by USATF).
- 2002 – Created DVD for hammer throw athletes and coaches (distributed by USATF). This DVD has all throws from USA Nationals indexed with a menu to navigate which athlete and which throw wants to be viewed with the distance of each throw displayed on screen.
- 2001 – Created course webpages for EXSC 365 and 362.

External Funding

- 2019-\$7200-USA Track and Field
 2018-\$7200-USA Track and Field
 2017-\$7200-USA Track and Field
 2016-\$3000-USA Track and Field*
 2016-\$7000-USA Track and Field
 2016-\$3000-USA Track and Field*
 2015-\$7000 USA Track and Field
 2015-\$2000 USA Track and Field*
 2014-\$7000 USA Track and Field
 2014-\$2000 USA Track and Field*
 2013-\$7000 USA Track and Field
 2013-\$2000 USA Track and Field*
 2012-\$7000 USA Track and Field
 2012-\$2000 USA Track and Field*
 2011-\$4000 USA Track and Field
 2011-\$5800 USA Track and Field* (this included national track and field events and an international trip helping the USA Track & Field Team in preparation for and during the World Championships in Daegu, Korea)
 2010-\$4000 USA Track and Field
 2010-\$1800 USA Track and Field*
 2009-\$4100 USA Track and Field* (this included an international trip helping the USA

Track & Field Team in preparation for and during the World Championships in Berlin, Germany)

2009-\$4000 USA Track and Field

2008-\$5500 USA Track and Field* (this included an international trip helping the USA Olympic Team in preparation for Beijing)

2008-\$4000 USA Track and Field

2007-\$3150 MindPix Corp

2007-\$900 USA Track and Field*

2007-\$4000 USA Track and Field

2006-\$850 USA Track and Field*

2006-\$3000 USA Track and Field

2006-\$2250 USA Track and Field*

2005-\$3000 USA Track and Field

2005-\$500 USA Track and Field*

2004-\$3500 USA Track and Field

2004-\$1550 USA Track and Field*

2003-\$500 USA Track and Field*

2003-\$4470 USA Track and Field*

2002-\$1290 USA Track and Field*

* Proprietary funding came in the form of travel expenses for me and students to collect and present data.

Internal Funding

2019-CURA Grant \$3000 with Blake Ellis

2005-Faculty Fellowship \$1820

2004-Mentoring Environment Grant \$14,150

2003-Faculty Fellowship \$7500

2002-Faculty Fellowship \$2182

Consulting

Sports Scientist for USA Track & Field, 1996-present

Responsibilities: Film, analyze, and present data from professional track and field meets annually

HONORS AND AWARDS

Finalist for Prince Alexandre de Merode Award. International Olympic Committee Scientific Congress, St. Louis, MO, 2002

- This award is for new researchers. I was in the top three who completed oral presentations.

College of Health and Human Performance Annual Faculty Teaching Excellence Award 2007

2009 5k Lab Challenge team champions at the American Society of Biomechanics Annual Conference

- With me as the advisor and two students (Ruthann Cunningham and Sarah Ingebretsen), we won the team title for this annual race which brings some good attention to BYU as a graduate program in exercise science.

2009 St George Marathon Champion

- Being the biggest marathon in Utah, this brought some positive attention to BYU and our program. The television and newspaper interviews made a point of me being a professor of exercise science at BYU.

2013 USA Track and Field Sports Medicine and Science, Scientist of the Year.