

Erich J. Petushek, Ph.D.
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Education

Postdoctoral Fellow in Applied Cognition and Cognitive Engineering University of Huddersfield, Huddersfield, United Kingdom	2014-2015
Ph.D. in Applied Cognitive Science and Human Factors Michigan Technological University, Houghton, MI	2011-2014
M.S. in Exercise Science Northern Michigan University, Marquette, MI	2009-2011
B.S. in Exercise Science Marquette University, Milwaukee, WI	2005-2008

Current Positions

Assistant Professor—Tenure Track Department of Cognitive and Learning Sciences, Michigan Technological University Houghton, MI	2019-Present
Adjunct Professor Department of Family Medicine, Michigan State University Upper Peninsula Regional Campus, Marquette, MI	2019-Present
Assistant Professor—Non-tenure Track College of Human Medicine, Michigan State University Upper Peninsula Regional Campus, Marquette, MI	2015-2019
Research Associate School of Health and Human Performance, Northern Michigan University Marquette, MI	2015-2019

Academic Appointments

National Science Foundation Graduate Research Fellow Cognitive and Learning Sciences Department Michigan Technological University Houghton, MI	2011-2014
Visiting Researcher for NSF Graduate Research Opportunity Worldwide Oslo Sports Trauma Research Center Oslo, Norway	2013
Research Supervisor College of Health Sciences Marquette University Milwaukee, WI	2008-2009
Research Assistant College of Health Sciences Marquette University Milwaukee, WI	2008

Professional Memberships and Activities

Society for Judgment and Decision Making	2013-Present
Human Factors and Ergonomics Society	2013-Present

American College of Sports Medicine	2010-Present
International Society of Biomechanics in Sport	2010-Present
National Strength and Conditioning Association	2008-Present

University Committees

MTU CLS Chair Review Committee	2019-Present
Psychology Graduate Committee	2019-Present
University Research Advisory Council (Back-up)	2019-Present
UPHS-Marquette IRB Board Member	2019-Present

Honors and Awards

U.P. Service Award for Volunteer Program—Start the Cycle	2018
Best Presentation Award—Upper Peninsula Medical Conference	2015
Biotechnology Research Travel Grant/Award (\$500)	2012
Outstanding Graduating Graduate Student—Northern Michigan University	2011
Technology Innovation Award—Northern Michigan University (\$750)	2011
ACSM Biomechanics Interest Group Student Travel Grand/Award (\$200)	2011
Student Research Award—Marquette University	2009
Ignatius Scholarship Recipient—Marquette University	2006
College of Health Sciences Scholarship—Marquette University	2008

Education Activities

University Courses Taught

Marquette Family Medicine Residency Program	2019-Present
MSU CHM Upper Peninsula Campus, MI Research and Quality Improvement Processes	
Michigan State University—CHM Upper Peninsula Campus, MI HM652-Advanced Skills and Knowledge II	2017-Present
Northern Michigan University, Marquette, MI ES-417 Biomechanics	2009-2011
ES-317 Anatomical Kinesiology Laboratory	
ES-315 Physiology of Exercise Laboratory	
HP-200 Physical Well Being	
HP-245 Weight Training/Conditioning	
HL-495C Pediatric Health Research, Education, and Measurement	2019

Lectures and Workshops

Lecture—Hospital for Special Surgery Sport Safety Educator Certification Course	2019
Hospital for Special Surgery, New York, NY	
Workshop—Lower Extremity Injury Prevention: Tools and Tactics from the Experts	
Marquette Senior High School, Marquette, MI	2017
Negaunee Middle and High School, Negaunee, MI	2017
Gwinn High School, Gwinn, MI	2017
Lecture—Stats and Research Primer for Medical Residents	2016
UP Health Systems Marquette, Marquette, MI	
Lecture—On Validity and Reliability	2016
Health Education Class, Northern Michigan University, Marquette, MI	
Lecture—MSU Your Health Lecture Series	2016
Traumatic Knee Injury: Prevention, Screening, and Long-Term Consequences	
Calvin College, Grand Rapids, MI	
*Lecture led to connection with Grace Smith who worked as a research assistant in my laboratory	
Lecture—Kinesiology and Integrative Physiology Seminar Series	
Injury Risk Estimation Expertise: Assessment, Group Differences, and	

Mechanisms of ACL-IQ Michigan Technological University, Houghton, MI	2015
Lecture—Injury Risk Estimation Expertise Leeds Beckett University, Leeds, UK	2015
Lectures—Predicting ACL Injury Risk: A Biomechanical and Human Factors Approach Brunel University, Uxbridge, UK	2013
Max Plank Institute for Human Development, Berlin, Germany	2013
Oslo Sports Trauma Research Center, Oslo, Norway	2013
Lecture—Practical Application of Exercise Science Research to Training Midwest Strength and Conditioning Clinic, McHenry, IL	2009
Lecture—Stressing Your Bones: The Best Exercises to Stimulate Bone Growth National Strength and Conditioning Association: Wisconsin Annual Clinic, Oshkosh, WI	2009

Grants and Contract Awards

(\$838,130 Total, \$216.921 as PI)

Active Funding

PI: E. Petushek Research and Quality Improvement Facilitator MSU College of Human Medicine, UP Education Corporation Hourly contract work up to \$15,000 per year	2019-Present
PI: B. Carlson. Co-I: E. Petushek (3%) * C. Zenti Promising Futures Partnership Children's Trust Fund and the Michigan Department of Health and Human Services \$266,948 <i>*Responsible for needs assessment and program evaluation</i>	2016-2020

Past Funding

PI: E. Petushek Oslo Sports Trauma Research Center Data Analyses Projects The Norwegian School of Sport Sciences \$17,500	2019
PI: J. Carlson. Co-I: E. Petushek (10%) * B. Carlson, K. Pfeiffer, R. Ratan SPartners for Health: A School- and Web-Based Nutrition and Physical Activity Program for Obesity Prevention and Promoting Health in 5 th Grade Public School Students and their Parents Superior Health Foundation \$299,975 <i>*Responsible for data analytics</i>	2016-2019
PI: E. Petushek * Rural Community Opioid Response Planning Grant Health Resources and Services Administration \$30,000 <i>*Responsible for data analytics</i>	2018-2019
PI: T. Krosshaug. Co-I: E. Petushek (0%) * S. Clarke, S. Dorgo Development of a Test to Measure Knowledge of Strength Training Exercises with International Experts The Research Council of Norway \$24,086 (200,000 NOK) <i>*Responsible for test development and evaluation</i>	2017-2018

PI: P. Ward. Co-I: **E. Petushek**, D. Peebles 2015
Development of “The Applied Cognition and Cognitive Engineering Research Group”
(The AC₂E Group) within the Centre for Applied Psychological and Health Research
University of Huddersfield Research Fund
\$30,200 (£20,000 GB Pounds Sterling)

PI: **E. Petushek** 2013
Development and validation of screening methods for anterior cruciate ligament injury
in females
NSF Graduate Research Opportunity Worldwide—PN 230163
\$16,421

PI: **E. Petushek** (100%) 2011-2014
Effect of pediatric obesity on lower extremity biomechanics: Implications for injury risk
assessment and screening
NSF Graduate Research Fellowship
\$130,000

PI: **E. Petushek** 2011
Validation of electrogoniometry for the assessment of countermovement jump and
landing knee angle
Excellence in Education Research Grant—Northern Michigan University
\$1,500

PI: **E. Petushek** 2010
Validation of various instruments used to assess jumping performance and intensity
Excellence in Education Research Grant—Northern Michigan University
\$1,500

Not Funded

PI's: S Breen and B. Adeeko, Co-I: **E. Petushek** (20%) 2019-2022
Adaptive Exomuscular Clinical Gait Rehabilitation Device
National Institute of Health
\$184,275

PI's: B. Arnetz and E. Arble, Co-I: J. Arnetz, S. Counts, **E. Petushek** (10%) 2019-2022
Enhancing Decision-making Processes in Junior Law Enforcement Officers During
Potentially Critical Incidents
U.S. Department of Justice
\$992,001

PI: J. Cheruvelil, Co-I's: B. Carlson, K. Evans, I. Galdamez, R. Harrison, 2019-2024
S. Herbert, B. Neumann, **E. Petushek** (15%)
Michigan State University Extension's Racial Ethnic Approaches to Community
Health for Eastside Detroit
Centers for Disease Control and Prevention
\$899,879.91

PI: **E. Petushek** (32%) Co-I's: G. Myer, E. Cokely 2018-2020
Traumatic injury prevention: Validating a novel high-impact online intervention
National Institute of Health—R21: PAR 18-017
\$364,576

PI: J. Carlson. Co-I: **E. Petushek** (15%), B. Carlson, K. Pfeiffer, R. Ratan 2017-2020
SPartners for Health: A School- and Web-based Nutrition and Physical Activity
Program for Obesity Prevention and Promoting Health in 5th Grade Public School
Students and their Parents
US Department of Agriculture (AFRI)
\$2,500,000

<p>PI: J. Carlson. Co-I: E. Petushek (15%), B. Carlson, K. Pfeiffer, R. Ratan Partners for Health: A School- and Web-based Nutrition and Physical Activity Program for Obesity Prevention and Promoting Health in 5th Grade Public School Students and their Parents Michigan Health Endowment Fund \$499,366</p>	2018-2020
<p>PI: E. Petushek (32%). Co-I: G. Myer, E. Cokely, M. Stoolmiller, C. Kirk Optimizing uptake, adherence, and efficacy of injury prevention practices through vulnerability modeling and education National Institute of Health—R21: PAR 14-192 \$561,394</p>	2017-2020
<p>PI: E. Petushek (0%) *. Co-I: T. Krosshaug, G. Woodward Accelerating Strength Training Expertise: Understanding and Improving Exercise Technique Knowledge United Kingdom Strength and Conditioning Association £11,624 (GB Pound Sterling) <i>*Equipment and supplies</i></p>	2016
<p>PI: E. Petushek (0%) *. Co-I: T. Krosshaug Accelerating Strength Training Expertise: Understanding and Improving Exercise Technique Knowledge National Strength and Conditioning Association \$32,284 <i>*Equipment and supplies</i></p>	2016
Letters of Intent—Not Invited	
<p>PI: E. Petushek (15%) Validating a novel high-impact online intervention to prevent knee injuries Orthopaedic Research and Education Foundation \$150,000</p>	2019-2021
<p>PI: E. Petushek. Co-I: M. Stoolmiller, C. Kirk, C. Ohstad Improving uptake, adherence, and efficacy of sport injury prevention practices Blue Cross Blue Shield Michigan Foundation—Invest in the UP \$65,000</p>	2017-2019
<p>PI: S. Carlson. Co-I: E. Petushek, B. Carlson Start the Cycle—Supporting Resilience in at-risk Youth through Mountain Biking Blue Cross Blue Shield Michigan Foundation—Invest in the UP \$65,000</p>	2017-2019
<p>PI: Q. Sha. Co-I: E. Petushek Reducing Upper Peninsula Hospital Readmissions Blue Cross Blue Shield Michigan Foundation—Invest in the UP \$65,000</p>	2017-2019
<p>PI: C. Zenti. Co-I: E. Petushek, B. Carlson Promising Futures Partnership Blue Cross Blue Shield Michigan Foundation—Invest in the UP \$65,000</p>	2017-2019
Editorial Board/Reviewer Appointments	
Reviewer, Journal of Cognitive Engineering and Decision Making	2019-Present
Reviewer, Sport Health	2019-Present
Reviewer, Journal of Experimental Psychology: Applied	2016-Present
Reviewer, Journal of Sports Science and Medicine	2015-Present
Reviewer, Sports Medicine	2015-Present
Reviewer, International Journal of Sport Science and Coaching	2010-Present

Research Committee and Consortium member, National Strength and Conditioning Association	2010-Present
Guest Associate Editor, <i>Frontiers in Psychology</i> —Research Topic: Macro-cognition: The Science and Engineering of Sociotechnical Work Systems	2016-2017
Reviewer, Human Factors and Ergonomic Society 2014 Annual Meeting	2014
Co-Editor, XXVII th Symposium of the International Society of Biomechanics in Sports. Marquette, MI. 2010	2010
Reviewer, <i>International Journal of Exercise Science</i>	2008-2009

Publications

Peer Reviewed Articles

*Denotes students I have mentored

1. Mørtyedt, A.*, Krosshaug, T., Bar, R. and **Petushek, E.J.** (2019). Can I spy with my little eye...a knee about to go 'pop'? Can coaches and sports medicine professionals accurately screen female athletes' landings for ACL injury risk? *British Journal of Sports Medicine*.
2. **Petushek, E.J.**, Sugimoto, D., Stoolmiller, M., Smith, G.*, and Myer, G. (2018). Evidence based best-practice guidelines for preventing ACL injuries: A systematic review and Meta-analysis. Ahead of print E-pub available. *American Journal of Sports Medicine*. <http://doi.org/10.1177/0363546518782460>
3. Faude, O., Rössler, R., **Petushek, E.J.**, Roth, R., Zahner, L. and Donath, L. (2017) Neuromuscular Adaptations to Multimodal Injury Prevention Programs in Youth Sports: A Systematic Review with Meta-Analysis of Randomized Controlled Trials. *Frontiers in Physiology*, 8.
4. Ward, P., Hoffman, R., Conway, G., Schraagen, J.M., Peebles, D., Hutton, R. and **Petushek, E.J.** (2017) Editorial—Macro-cognition: The science and engineering of sociotechnical work systems. *Frontiers in Psychology*, 8 (515).
5. Mok, K.M.*, Krosshaug, T.K., and **Petushek, E.J.** (2016) Reliability of knee biomechanics during a vertical drop jump in elite female athletes. *Gate and Posture*. 46, 173-178.
6. **Petushek, E.J.**, Ward, P., Cokely, E.T., and Myer, G.D. (2015) Injury risk estimation expertise: Interdisciplinary differences in ACL-IQ performance. *Orthopaedic Journal of Sports Medicine*. 3(11), 1-7.
7. Raisbeck, L., Suss, J., Diekfuss, J., **Petushek, E.J.**, and Ward, P. (2015) Skill-based changes in motor performance from attentional focus manipulations: A kinematic analysis. *Ergonomics*, 1-9.
8. **Petushek, E.J.**, Cokely, E.T., Ward, P., and Myer, G.D. (2015) Injury risk estimation expertise: Cognitive-perceptual mechanisms of ACL-IQ. *Journal of Sport and Exercise Psychology*, 37(3), 291-304.
9. **Petushek, E.J.**, Cokely, E.T., Ward, P., Wallace, S., Durocher, J.J., and Myer, G.D. (2015) Injury risk estimation expertise: Assessing the ACL injury risk estimation quiz. *American Journal of Sports Medicine*, 43(7), 1640-1647.
10. Garceau, L.R., **Petushek, E.**, Fauth, M.L., and Ebben, W.P. (2012). Effect of remote voluntary contractions on isometric prime mover torque and electromyography. *Journal of Exercise Physiology Online*, 15(4), 40-46.
11. **Petushek, E.**, Richter, C., Donovan, D., Ebben, W.P., Watts, P.B. and Jensen, R.L. (2012). Comparison of 2D video and electrogoniometry measurements of knee flexion angle during a countermovement jump and landing task. *Sports Engineering*, 1-8.
12. Ebben, W.P., Garceau, L.R., Wurm, B.J., Suchomel, T.J.*, Duran, K.*, and **Petushek, E.J.** (2012). The optimal back squat load for potential osteogenesis. *The Journal of Strength and Conditioning Research*, 26(5), 1232-1237.
13. Ebben, W.P., Fauth, M.L., Garceau, L.R. and **Petushek, E.J.** (2011). Kinetic quantification of plyometric exercise intensity. *The Journal of Strength and Conditioning Research*, 25(12), 3288-3298.
14. Ebben, W.P., Wurm, B.*, VanderZanden, T.L.*, Spadavecchia, M.L.*, Durocher, J.J., Bickham, C.T., and **Petushek, E.J.** (2011). Kinetic analysis of several variations of push-ups. *The Journal of Strength and Conditioning Research*, 25(10), 2891-2894.
15. Ebben, W.P. and **Petushek, E.J.** (2010). Using the reactive strength index modified to evaluate plyometric performance. *The Journal of Strength and Conditioning Research*, 24(8), 1983-1987.
16. Ebben, W.P., Kaufmann, C.E.*, Fauth, M.L., and **Petushek, E.J.**, (2010). Kinetic analysis of concurrent activation potentiation during back squats and jump squats. *The Journal of Strength and Conditioning Research*, 24(6), 1515-1519.
17. Fauth, M.L., **Petushek, E.J.**, Feldmann, C.R., Hsu, B.E.*, Garceau, L.R., Lutsch, B.N.*, and Ebben, W.P. (2010). Reliability of surface electromyography during maximal voluntary isometric contractions, jump landings, and cutting. *The Journal of Strength and Conditioning Research*. 24(4), 1131-1137.

18. Ebben, W.P., **Petushek, E.J.**, Fauth, M.L., and Garceau, L.R. (2010). EMG analysis of concurrent activation potentiation. *Medicine and Science in Sports and Exercise*, 42(3), 556-562.
19. Ebben, W.P., VanderZanden, T.*, Wurm, B.J.*, and **Petushek, E.J.** (2010). Evaluating plyometric exercised using time to stabilization. *The Journal of Strength and Conditioning Research*, 24(2), 300-306.
20. Ebben, W.P., Fauth, M.L., **Petushek, E.J.** Garceau, L.R., Hsu, B.E.*, Lutsch, B.N.*, and Feldmann, C.R. (2010). Gender-based analysis of hamstring and quadriceps muscle activation during jump landings and cutting. *The Journal of Strength and Conditioning Research*, 24(2), 408-415.
21. Ebben, W.P., Feldmann, C.R., VanderZanden, T.L.*, Fauth, M.L. and **Petushek, E.J.** (2010). Periodized plyometric training is effective for women, and performance is not influenced by the length of post-training recovery. *The Journal of Strength and Conditioning Research*, 24(1), 1-7.
22. Ebben, W.P., Fauth, M.L., Kaufmann, C.E.*, and **Petushek, E.J.** (2010). Magnitude and rate of mechanical loading of variety of exercise modes. *The Journal of Strength and Conditioning Research*. 24(1), 213-217.
23. Ebben, W.P., **Petushek, E.J.**, AND Clewien, R. (2009). A comparison of manual and electronic timing during 20 and 40 yd sprints. *Journal of Exercise Physiology Online*, 12(5), 34-38.

Books/Book Chapters

24. **Petushek, E.J.**, & Donaldson, A. Injury Prevention in Sport- Design with Implementation in Mind. *Human Factors and Ergonomics in Sport: Applications and Future Directions*. Submitted for Review
25. **Petushek, E.J.**, Aarsal, G. Hoffman, R., Whyte, J., & Ward, P Learning at the edge: The role of mentors, coaches, and their surrogates in developing expertise. *The Oxford Handbook of Expertise: Research & Application*. Oxford University Press.
26. Ward, P., Belling, P., **Petushek, E.J.**, & Ehrlinger, J. (2017) Does talent exist? A re-evaluation of the nature-nurture debate. Chapter1.3: *Routledge Handbook of Talent Identification and Development in Sport*. Routledge. ISBN: 9781138951778
27. Jensen, R.L., Ebben, W.P., **Petushek, E.J.**, Richter, C., & Roemer, K, editors. (2010). *Proceedings of the 28th Conference of the International Society of Biomechanics in Sports*. Marquette, MI: Northern Michigan University. ISSN 1999-4168. <http://w4.ub.uni-konstanz.de/cpa>

Peer Reviewed Conference Proceedings

28. Breen, S., Osterwald, K., Richter, C., & **Petushek, E.J.** (2019). A comparison between the modern and the lower body golf swing techniques – Pilot study with implications for lower back injury risk. *37th International Symposium on Biomechanics in Sports*, Miami, USA.
29. **Petushek, E.J.**, Ward, P., Cokely, E., & Myer, G. (2015). Cross professional differences in real-time assessment of ACL injury risk. *33rd International Symposium on Biomechanics in Sports*, Poitiers, France.
30. Krosshaug, T.K., **Petushek, E.J.**, Richter, C., Paulsen, G., & Faul, O. (2015). Effect of load and various equipment modalities on back squat biomechanics in elite powerlifters. *33rd International Symposium on Biomechanics in Sports*, Poitiers, France.
31. Carlson, B.R., **Petushek, E.J.**, Moore, M., & Dermeyer, H. (2015). Effect of sauna therapy on overhead squat depth in elite weightlifters. *33rd International Symposium on Biomechanics in Sports*, Poitiers, France.
32. Jensen, R.L., Ebben, W.P., **Petushek, E.J.**, Moran, K., O'Connor, N.E., & Richter, C. (2013). Continuous waveform analysis of force, velocity, and power adaptations to a periodized plyometric training program. *31st International Symposium on Biomechanics in Sports*, Taipei, Taiwan.
33. Stephenson, M.L., Leissring, S.K., Wolfe, A.R., Bellovary, B., Glendenning, C., Purdy, E., Hagner, B.M., **Petushek, E.J.**, & Jensen, R.L. (2012). Reliability of knee joint measures in a cutting movement. *30th International Symposium on Biomechanics in Sports*, Melbourne, Australia.
34. Jensen, R.L., Leissring, S.K., Stephenson, M.L., Wolfe, A.R., Bellovary, B., Glendenning, C., Purdy, E., Hagner, B.M., & **Petushek, E.J.** (2012). Effect of acute feedback on knee angle and moments during a horizontal land and cut maneuver. *30th International Symposium on Biomechanics in Sports*, Melbourne, Australia.
35. **Petushek, E.P.**, Richter, C., Donovan, D., Ebben, W.P., & Jensen, R.L. (2011). Comparison of tibial impact accelerations: Video vs. Accelerometer. *29th International Symposium on Biomechanics in Sports*, Porto, Portugal.
36. **Petushek, E.J.**, Ebben, W.P., VanderZanden, T., & Wurm, B. (2010). Comparison of jump height values derived from a force platform and vertec. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
37. **Petushek, E.J.**, Garceau, L.R., VanderZanden, T., Wurm, B., Feldmann, C., & Ebben, W.P. (2010). Dynamic stabilization during the landing phase of plyometric exercises. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
38. **Petushek, E.J.**, Garceau, L., & Ebben, W.P. (2010). The effect of remote voluntary contractions during fast stretch shortening cycle activity. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.

39. **Petushek, E.J.**, Garceau, L., & Ebben, W.P. (2010). Force, velocity, and power adaptations in response to a periodized plyometric training program. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
40. VanderZanden, T., Wurm, B., Durocher, J., Bickman, C., **Petushek, E.J.**, & Ebben, W.P. (2010). The effect of reaching to an overhead goal while performing the countermovement jump. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
*Third place: International Society of Biomechanics in Sports New Investigator Award
41. Ebben, W.P., Fauth, M., VanderZanden, T., Feldmann, C., Hsu, B., Vogal, C., Lutsch, B., & **Petushek, E.J.** (2010). The time course of recovery from periodized plyometric training. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
42. Garceau, L., **Petushek, E.J.**, Fauth, M., & Ebben, W.P. (2010). The effect of concurrent activation potentiation on the knee extensor and flexor performance of men and women. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
43. Ebben, W.P., & **Petushek, E.J.** (2010). Reactive strength index modified: A new method of assessing explosive power. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
44. Wurm, B., VanderZanden, T., Spadavecchia, M., Durocher, J., Bickham, C., **Petushek, E.J.**, & Ebben, W.P. (2010). Kinetic analysis of several variations of push-ups. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
45. Fauth, M., **Petushek, E.J.**, Kaufman, C., & Ebben, W.P. (2010). The effect of remote voluntary contractions on strength and power tasks of women. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
46. Ebben, W.P., VanderZanden, T., Wurm, B., Garceau, L., & **Petushek, E.J.** (2010). Kinetic quantification of plyometric take off, flight, and landing characteristics. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
47. Ebben, W.P., **Petushek, E.J.**, & Nelp, A. (2010). The effect of whole body vibration on the dynamic stability of women basketball players. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
48. Garceau, L., **Petushek, E.J.**, Fauth, M., & Ebben, W.P. (2010). The acute time course of concurrent activation potentiation. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
49. Garceau, L., **Petushek, E.J.**, Fauth, M., & Ebben, W.P. (2010). Gender differences in knee extensor and flexor performance. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
50. Leissring, S., **Petushek, E.J.**, Stephenson, M., & Jensen, R. (2010). Relationship of Ground Reaction and Knee Joint Reaction Forces in Plyometric Exercises. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
51. McGowan, B., Jensen, R., & **Petushek, E.J.** (2010). Differences in RSI and peak ground reaction force for drop rebound jumps from a hang and box for female subjects. *28th International Symposium on Biomechanics in Sports*, Marquette, USA.
52. Leissring, S.K., Ebben, W.P., Garceau, L., **Petushek, E.J.**, & Jensen, R.L. (2009). Reliability of forces during variations of plyometric exercises. *27th International Symposium on Biomechanics in Sports*, Limerick, Ireland.
53. Jensen, R.L., Leissring, S.K., Garceau, L.R., **Petushek, E.J.**, & Ebben, W.P. (2009). Quantifying the onset of the concentric phase of the force-time record during jumping. *27th International Symposium on Biomechanics in Sports*, Limerick, Ireland.

Abstracts and Presentations

Oral Presentations

Invited/Keynote Lectures

1. Strength training technique expertise: Development of efficient assessment and training systems. *National Strength and Conditioning Association 41st Annual Meeting*, Indianapolis, IN. 2018.
2. Can you visually identify athletes at risk for ACL injury? Asian Federation of Sports Medicine Scientific Symposium—Sports Medicine in the Community. *Hong Kong Sports Institute*, Sha Tin, Hong Kong. 2016.
3. ACL injury prevention—From science to sustainable behavior change. Hong Kong Association of Sports Medicine and Sport Science 5th Student Conference on Sports Medicine, Rehabilitation and Exercise Science. *Hong Kong Sports Institute*, Sha Tin, Hong Kong. 2016.
4. Northern Michigan University Athletic Training Summer Conference. Title: ACL injury prevention—From science to sustainable behavior change. *Northern Michigan University*, Marquette, MI. 2016.

National/International Meetings

1. **Petushek, E.J.**, Stoolmiller, M., Smith, G., Sugimoto, D., & Myer, G. (2017) Meta-analytic drive best-practice checklist for preventing ACL injuries. *National Strength and Conditioning Association 40th Annual Meeting*, Las Vegas, NV.

2. **Petushek, E.J.**, Fauth, M.L. & Ebben, W.P. (2009). Evaluation of concurrent activation potentiation during squats and jump squats. *National Strength and Conditioning Association 32nd Annual Meeting*. Las Vegas, NV.
3. **Petushek, E.J.**, Fauth, M.L., Hsu, B., Vogel, C., Lutsch, B., Feldmann, C.R., & Ebben, W.P. (2010). The effect resistance and plyometric training on hamstring and quadriceps activation and timing during simulated sports movement. *National Strength and Conditioning Association 33rd Annual Meeting*. Orlando, FL.
4. Garceau, L.R., Feldmann, C.R., **Petushek, E.J.**, Fauth, M.L., & Ebben, W.P. (2009). The effect of remote voluntary contractions on upper body force and muscle activation. *National Strength and Conditioning Association 32nd Annual Meeting*. Las Vegas, NV.
5. Feldmann, C.R., Fauth, M.L., **Petushek, E.J.**, Hsu, B., Lutsch, B., & Ebben, W.P. (2009). The effect resistance training on hamstring and quadriceps activation and timing during movements that are similar to those that cause ACL injuries. 11th American Society of Exercise Physiologist Annual Meeting. Wichita Falls, TX.
*American Society of Exercise Physiologist Research Award
6. **Petushek, E.J.**, Garceau, L.R. & Ebben, W.P. (2009). Relationship between training status and concurrent activation potentiation. *11th American Society of Exercise Physiologist Annual Meeting*. Wichita Falls, TX.
7. Fauth, M.L., Feldmann, C., **Petushek, E.**, Hsu, B., Lutsch, B., Vogel, C., Garceau, L., & Ebben, W.P. (2008). Reliability of surface electromyography during isometric and dynamic movements. In: *Proceedings of the IVth International Conference on Strength Training*. Colorado Springs, CO.
8. Fauth, M., Feldmann, C.R, Hsu, B., Lutsch, B., **Petushek, E.**, Garceau, L., & Ebben, W.P. (2008). Gender differences in muscle activation during jump landings and cutting movements. *10th American Society of Exercise Physiologists Annual Meeting*. Duluth, MN.
9. Garceau, L.R., Fauth, M.L., Feldmann, C., **Petushek, E.**, Hsu, B. & Ebben, W.P. (2008). Gender differences in concurrent activation potentiation. In: *Proceedings of the IVth International Conference on Strength*. Colorado Springs, CO.
10. **Petushek, E.J.**, Fauth, M.L., Feldmann, C.R., Hsu, B. & Ebben, W.P. (2008). Magnitude and rate of mechanical loading during walking, running, plyometrics, maximum power training and resistance training exercises. In: *Proceedings of the IVth International Conference on Strength Training*. Colorado Springs, CO.

Local/Regional Meetings

1. **Petushek, E.J.**, Smith, G., and Stoolmiller, M. (2017) What are the most effective exercises to prevent ACL injuries? Meta-analytic evidence. *Midwest Chapter of the American Society of Biomechanics*, Grand Rapids, MI.
2. **Petushek, E.J.**, Cokely, E.T., Ward, P., Durocher, J., Wallace, S., and Myer, G.D. (2015) Visual estimation of ACL injury risk: Efficient assessment method, group differences, and expertise mechanisms. *Upper Peninsula Medical Conference*, Copper Harbor, MI.
*Pecha Kucha presentation and Best Poster Award

Posters

National/International Meetings

1. **Petushek, E.J.**, Clarke, S., Dorgo, S., Ebben, W., Myer, G.D., & Krosshaug, T. (2018) Development and validation of efficient assessment tool to quantify strength training technical expertise. *American College of Sports Medicine 65th Annual Meeting*. Minneapolis, MN.
2. Carlson, J., Paulsen, N.A., Carlson, B., **Petushek, E.J.**, & Pfeiffer, K. (2018) The relationship between screen time and sleep duration in children. *American College of Sports Medicine 65th Annual Meeting*. Minneapolis, MN.
3. Carlson, B., Carlson, J., **Petushek, E.J.**, Pfeiffer, K. (2018) Changes in perceived importance of physical activity and nutrition for health following (S)Partners intervention. *American College of Sports Medicine 65th Annual Meeting*. Minneapolis, MN.
4. Weedon, R., **Petushek, E.J.**, Osterwald, K., Clarke, S., Dixon, J.B., and Richter, C. (2018) Reducing lower back injury in Golf: Cross-sectional assessment of novel swing technique. *American College of Sports Medicine 65th Annual Meeting*. Minneapolis, MN.
5. Ricci, J., Carlson, J., **Petushek, E.J.**, & Pfeiffer, K. (2018) Differences in CVD risk factor status and micronutrient intakes by physical activity level in youth. *American College of Sports Medicine 65th Annual Meeting*. Minneapolis, MN.
6. **Petushek, E.J.**, Mørtnvedt, A. Cokely, E.T., & Krosshaug, T. (2017) Predicting Injury Risk in Elite Sport: A ROC Analysis of Observational Judgments. *Society for Judgment and Decision Making*, Vancouver, Canada.
7. Faude O., Rössler R., **Petushek E.J.**, Roth R., Zahner L., and Donath L. (2017) Neuromuscular adaptations to exercise-based injury prevention programs in youth sports: A systematic review with meta-analysis of randomised controlled trials. *European College of Sport Science Congress*.

8. Saswat, S., Dixon, B., & **Petushek, E.J.**, (2017) Short-term pain reduction using percutaneous tenotomy with TENEX., *American Medical Society for Sports Medicine Annual Meeting*, San Diego, CA.
9. **Petushek, E.J.**, Cokely, E.T., Ward, P., Myer, G.D. & Wallace, S. (2014) Expert Injury Risk Assessment: Investigating the ACL-IQ. *Society for Judgment and Decision Making*, Long Beach, CA.
10. **Petushek, E.J.**, Cokely, E.T., Ward, P., Krosshaug, T., & Myer, G.D. (2014) Visual assessment of ACL injury risk: Can expertise be achieved? *British Journal of Sports Medicine*, 48(7), 652-652.
11. **Petushek, E.J.**, Cokely, E.T., Ward, P., & Myer, G.D. (2013) A simple approach to predicting risk of ACL injury. *Society for Judgment and Decision Making*, Toronto, Canada.
12. Ebben, W.P., **Petushek, E.P.** & Garceau, L.R. (2013). Head acceleration while driving a late model stock car. *National Strength and Conditioning Association 36th Annual Meeting*, Las Vegas, NV.
13. **Petushek, E.J.**, Suss, J., Ward, P., & Roemer, K. (2012). The effects of attention resource allocation and skill level on performance and movement variability during a handgun shooting task. *North American Society for the Psychology of Sport and Physical Activity*. Honolulu, HI.
14. **Petushek, E.J.**, Roemer, K., Hamlin, B., Ebben, B., Carlson, B., Mallo, C., Tysz, A., & Jensen, R.L. (2012). The effect of a dynamic and static start on snatch pull technique and performance. *American College of Sports Medicine 59th Annual Meeting*. San Francisco, CA.
15. Regal, A. Roemer, K., Raisbeck, L., & **Petushek, E.J.** (2012). Influence of visual conditions and leg dominance on balance performance on unstable surfaces. *American College of Sports Medicine 59th Annual Meeting*. San Francisco, CA.
16. Jensen, R.L., Leissring, S.K., **Petushek, E.J.**, Ebben, W.P., & Richter, C. Analysis of jumping technique via functional principal components data analysis versus peak ground reaction force. (2012). *American College of Sports Medicine 59th Annual Meeting*. San Francisco, CA.
17. Bellovary, B., Glendenning, C., Wolfe, A., **Petushek, E.J.**, Leissring, S., Stephenson, M., Purdy, E., Hagner, B., & Jensen, R.L. (2012). Comparison of isotonic and isokinetic measurements of extension/flexion strength and quadriceps-hamstring ratio. *American College of Sports Medicine 59th Annual Meeting*. San Francisco, CA.
18. Leissring, S., Stephenson, M., **Petushek, E.J.**, Bellovary, B., Wolfe, A., Glendenning, C., Purdy, E., Hagner, B., & Jensen, R.L. (2012). Effect of acute feedback on landing patterns in a horizontal land and cut maneuver. *American College of Sports Medicine 59th Annual Meeting*. San Francisco, CA.
19. Ebben, W.P., **Petushek, E.J.**, & Garceau, L.R. (2011) Muscular demands of driving a late model stock car. (2011). *National Strength and Conditioning Association 34th Annual Meeting*, Las Vegas, NV.
20. Garceau, L.R., **Petushek, E.J.**, Franche, C., & Ebben, W.P. (2011). Metabolic demands of a late model stock car driver. *American College of Sports Medicine 58th Annual Meeting*. Denver, CO.
21. **Petushek, E.J.**, Richter, C., Donovan, C., Ebben, W.P., & Jensen, R.L. (2011). Validation of electrogoniometry for the assessment of countermovement jump and landing knee angle. *American College of Sports Medicine 58th Annual Meeting*. Denver, CO.
22. Garceau, L.R., VanderZanden, T., Wurm, B.J., **Petushek, E.J.**, Spadavecchia, M., & Ebben, W.P. (2010). The effect of remote voluntary contractions on non-active muscles. *National Strength and Conditioning Association 33rd Annual Meeting*. Orlando, FL.
23. Ebben, W.P., VanderZanden, T., Wurm, B.J., & **Petushek, E.J.** (2010). Quantification of the dynamic balance of women during plyometric landings. *National Strength and Conditioning Association 33rd Annual Meeting*. Orlando, FL.
24. Ebben, W.P., Geiser, C., Fauth, M.L., **Petushek, E.J.**, Leigh, D.H. & Garceau, L.R. (2009). Electromyographic analysis of concurrent activation potentiation. *National Strength and Conditioning Association 32nd Annual Meeting*. Las Vegas, NV.
25. **Petushek, E.J.**, Hilgendorf, J., Feldmann, C.R., Fauth, M.L. & Ebben, W.P. (2009). Hamstring to quadriceps timing and activation ratios of high school athletes during cutting and jumping. *National Strength and Conditioning Association 32nd Annual Meeting*. Las Vegas, NV.
26. Ebben, W.P., **Petushek, E.J.**, Fauth, M.L., Garceau, L.R., Millin, K., Spadavecchia, M., Petrauskas, K., & Feldmann, C.R. (2009). Do high hamstring to quadriceps activation ratios impair jumping performance? *National Strength and Conditioning Association 32nd Annual Meeting*. Las Vegas, NV.
27. Garceau, L.R., **Petushek, E.J.**, Feldmann, C.R., VanderZanden, T., Millin, K., Spadavecchia, M., Petrauskas, K., & Ebben, W.P. (2009). Resisted speed development methods: The effect of wind speed. *National Strength and Conditioning Association 32nd Annual Meeting*. Las Vegas, NV.
28. Lutsch, B., Feldmann, C.R., **Petushek, E.J.**, Fauth, M.L., & Ebben, W.P. (2009). The role of resistance training in ACL injury prevention. *11th American Society of Exercise Physiologist Annual Meeting*. Wichita Falls, TX.
29. VandenZanden, T., **Petushek, E.J.**, & Ebben, W.P. (2009). Program design for the optimal adaptation of bone. *11th American Society of Exercise Physiologist Annual Meeting*. Wichita Falls, TX.
30. Hsu, B., Fauth, M.L., **Petushek, E.**, & Ebben, W.P. (2008). The effect of resistance training on hamstring and quadriceps activation and timing during jump landings: a case study. In: *Proceedings of the 14th International Conference on Strength Training*. Colorado Springs, CO.

Local/Regional Meetings

1. **Petushek, E.J.**, Clarke, S., Carlson, B., Osterwald, K. and Richter, C. (2016) Reducing back injury in fold: Assessment of novel swing technique. *Upper Peninsula Medical Conference*, Copper Harbor, MI.
2. Fauth, M.L., **Petushek, E.J.**, Garceau, L.R., Millin, K., Spadavecchia, M. Petrauskas, K., Feldmann, C.R., and Ebben, W.P. (2009). Is female athlete age or size related to quadriceps dominance during movements that are similar to those that cause ACL injuries? *Midwest Chapter of the American College of Sports Medicine Annual Meeting*. St. Charles, IL.
3. VanderZanden, T., Garceau, L.R., **Petushek, E.J.**, Feldmann, C.R., Kaufman, C., Kaufman, S., and Ebben, W.P. (2009). Effect of wind assistance on 10 and 40 yard running speed. *Midwest Chapter of the American College of Spots Medicine Annual Meeting*. St. Charles, IL.
4. Garceau, L.R., Fauth, M.L., **Petushek, E.J.**, and Ebben, W.P. (2009). Electromyographic analysis of concurrent activation potentiation during isometric exercise. *Midwest Chapter of the American College of Sports Medicine Annual Meeting*. St. Charles, IL.

Computer Programming/Statistics Software Proficiency

1. R—R Foundation for Statistical Computing
2. IBM SPSS Statistics
3. MathWorks MATLAB

Other Creative Products

1. Founder and creator of www.ACL-IQ.org
2. Author of ACL injury prevention animated videos
Basketball: <https://vimeo.com/281734465>
Soccer: <https://vimeo.com/281721823>
3. Michigan Opioid Data Surveillance:
Michigan: https://erichpetushek.shinyapps.io/Shiny_App/
Northern Michigan Opioid Response Consortium: <https://erichpetushek.shinyapps.io/NMORC/>

Community Research Partnerships

Advanced Center for Orthopedics and Plastic Surgery	2015-Present
*Conference presentations and grant letters of support	
UP Rehab Services	2016-Present
*Community injury prevention workshops and grant letters of support	
Marquette County Health Department	2017-Present
*Grant support	
Northern Michigan University	2008-Present
*Grant co-investigators, conference presentations, publications and grant site	
UP Health Systems Marquette	2015-Present
*Conference presentations	
Upper Peninsula Health Plan	2017-Present
*Grant application	
Michigan Technological University	2011-Present
*Grant co-investigators publications, senior design team and HCI class project, grant site	
Lake Superior State University	2016-Present
*Grant site	
Marquette Alger Regional Education Service Agency	2016-Present
*Research support and grant site	
Marquette Area Public Schools	2016-Present
*Grant site	
Munising Public Schools	2017-Present
*Grant site	
Grow and Lead Community and Youth Development	2016-Present
*Grant support and fiduciary	