

Jenevieve L Roper Ph.D, CSCS, FACSM

Department of Health and Human Sciences
Loyola Marymount University
FEA 187
Los Angeles CA, 90045
Phone: 310-258-2661
jenevieve.roper@lmu.edu

Education:

PhD, Physical Education, Sports and Exercise Science, University of New Mexico, Albuquerque, NM, 2015

Concentration: Exercise Science

Dissertation: The Effects of Gait Retraining in Runners With Patellofemoral Pain

M.S., Kinesiology, University of Nevada, Las Vegas, 2010

Concentration: Biomechanics

Professional Paper: Factors Influencing Knee Valgus in Female Athletes: A Review of Literature

B.S., Exercise Science, University of New Mexico, Albuquerque, NM, 2009

Experience:

Associate Professor of Health and Human Sciences, 2023 to present
Loyola Marymount University

Assistant Professor of Health and Human Sciences, 2017 to 2023
Loyola Marymount University

Courses:

HHSC 155 Human Anatomy and Physiology I

HHSC 156 Human Anatomy and Physiology I Lab

HHSC 255 Human Anatomy and Physiology II

HHSC 256 Human Anatomy and Physiology II Lab

HHSC 230/278 Nutrition

HHSC 375 Scientific Principles of Strength and Conditioning

HHSC 376 Scientific Principles of Strength and Conditioning Lab

HHSC 380 Kinesiology

HHSC 476 Exercise Physiology Lab

HHSC 477 EKG Interpretation and Lab

HHSC 480 Biomechanics

HHSC 481 Biomechanics Lab

Assistant Professor of Kinesiology, 2015 to 2017
California State University, San Bernardino

Courses:

KINE 360 Physical Activity & Aging

KINE 382 Nutrition for Health, Fitness and Sport
KINE 471 Exercise Science Program Management
KINE 480 Biomechanics Lecture and Laboratory
KINE 485 EKG

Teaching Assistant, 2015
University of New Mexico
Courses: PEP 476 Exercise Testing and Interpretation, PEP 478 Sports Physiology

Part-time Lecturer, 2014
University of Nevada, Las Vegas
Course: KIN 346 Biomechanics

Graduate Assistant, 2012-2015
University of New Mexico

Teaching Assistant, 2010
University of Nevada, Las Vegas
Course: KIN 176 Physical Activity and Health

Research Assistant, 2010
University of Nevada, Las Vegas

Guest Lectures:

Gait Analysis
Spring 2018, Loyola Marymount University
MECH 598/698 Intro to Biomedical Engineering

Bioelectrical Impedance Analysis
Fall 2014
PEP 532 Body Composition

Neuromuscular Physiology
Fall 2014
PEP 277 Kinesiology

Electromyography
Fall 2012
PEP 530 Lab Procedures

Neuromuscular Physiology
Fall 2012
PEP 277 Kinesiology

Peer Reviewed Journal Publications:

** denotes undergraduate student*

1. **Roper JL**, Brasher JA, Musci RV, Lin J, and Rovetti RJ. (2023). Sled Pull Training Improves Maximal Horizontal Velocity in Collegiate Men and Women Soccer Players. *International Journal of Sports Science*. 13(3): 43-48.
2. Davis IS, Tenforde AS, Neal BS, **Roper JL**, Willy R. (2020). Gait retraining as an intervention for patellofemoral pain. *Current Reviews in Musculoskeletal Medicine*. 13(1):103-114.
3. O'Donnell SR*, Eitan D*, **Roper JL**. (2020). A comparison of quadriceps-to-hamstrings ratios during isokinetic testing, cutting, and drop landings in male soccer players. *International Journal of Exercise Science*. 13(4):157-166.
4. Aquino J.A.* & **Roper J.L.** (2018). Intraindividual variability and validity in smart apparel muscle activity measurements during exercise in men. *International Journal of Exercise Science*. 11(7):516-525.
5. **Roper J.L.**, Doerfler D., Kravitz, L., Dufek J.S., and Mermier C.M. (2017) Gait retraining from rearfoot strike to forefoot strike does not change running economy. *International Journal of Sports Medicine*. 38(14):1076-1082.
6. **Roper, J. L.**, Doerfler, D, Mermier, C. M. & Dufek, J. S. (2016). Foot strike while running and patellofemoral pain. *Lower Extremity Review*. 8(8):37-40.
7. **Roper, J. L.**, Harding, E. M., Doerfler, D., Dexter, J. G., Kravitz, L., Dufek, J. S., & Mermier, C. M. (2016). The effects of gait retraining in runners with patellofemoral pain: a randomized trial. *Clinical Biomechanics*. 35:14-22.
8. Gibson, A. L., **Roper, J. L.** & Mermier C. M. (2016). Intra-individual variability in test-retest air displacement plethysmography measurements of men and women. *International Journal of Sport Nutrition and Exercise Metabolism*. 26(5):404-412.
9. **Roper, J.**, Dufek, J., & Mermier, C. (2014). Gait Retraining with Foot Strike Patterns as Management for Patellofemoral Pain Syndrome: A Brief Review. *International Journal of Sports Science*. 4(5), 181-187
10. **Roper, J. L.** & Kravitz, L. (2013). Helping the Chronically Short of Breath. *IDEA Fitness Journal*. 10(6), 20-22.
11. **Roper, J. L.** & Dufek, J. S. (2013). Exploring the Gender Disparity in Knee Valgus: Implications for ACL injuries and prevention strategies. *Wulfenia Journal*. 20(5).
12. Santo, A. S., **J. L. Roper**, J. S. Dufek, and J. A. Mercer. (2012). Rocker-bottom, profile-type shoes do not increase lower extremity muscle activity or energy cost of walking. *Journal of Strength and Conditioning*. 26(9), 2426-2431.

Peer Reviewed Published Conference Papers:

1. Matias A., Bennett C.*, Estelle S.*, **Roper J.L.**, and Smith B.W. (2020). Biomechanical

Comparison of the Validity of Two Configurations of Simulators for Body-Powered Hand Prostheses. 2020 8th IEEE RAS/EMBS International Conference for Biomedical Robotics and Biomechatronics (BioRob), New York City, NY, USA, pp. 422-427, doi: 10.1109/BioRob49111.2020.9224379.

Peer Reviewed Published Abstracts:

1. **Roper J.L.** (2023). An examination of predicted running performance after gait retraining in runners with patellofemoral pain. *J Orthop Sports Phys Ther.* 1(1): 1-23.
2. Parske K.K.*, Brasher J.A., Musci R.V., **Roper J.L.** (2023). Sled pull training improves maximal horizontal velocity in collegiate male and female soccer players: 2533. *Med Sci. Sports Exerc.* 55(9S), 836.
3. Faltas C.*, Musci R.V., **Roper J.L.** (2022). Assessing the validity of a performance prediction model for use with gait retraining. *Int J Exerc. Sci.* 14(2), 114.
4. Hartz A.J.*, Brasher J.A., **Roper J.L.**, Musci R.V. (2022). Sled-pull training protocol increases critical speed in female collegiate soccer players. *Int J Exerc Sci.* 14(2), 37.
5. Ibe O.*, Musci R.V., **Roper J.L.** (2022). Novel application of a performance prediction model during altered running gait strategies. *Int J Exerc. Sci.* 14(2), 134.
6. Multani A.K*, Brasher J.A., Rovetti R.J., Lin J., Musci R.V., **Roper J.L.** (2022). Sled-pull training improves maximal horizontal velocity in collegiate male and female soccer players. *Int J Exerc Sci.* 14(2), 60.
7. Parske K.K.*, Brasher J.A., Musci R.V., **Roper J.L.** (2022). Sled pull training protocol does not improve peak force and increases asymmetry in collegiate soccer players. *Int J Exerc Sci.* 14(2), 66.
8. **Roper J.L.**, Harding E.M., Doerfler D., Dexter J.G., Kravitz L., Dufek J.S. & Mermier C.M. (2016). The effects of gait retraining on oxygen consumption and carbohydrate metabolism. *Med Sci Sports Exerc*, 48(5) Supplement.
9. **Roper, J.L.**, Dexter, J., & Kravitz, L. (2014, May). Comparison of Foot Strike Patterns in Habitually Shod Runners: Analysis of Preliminary Data. *Med Sci Sports Exerc*, 46(5), 415.
10. **Roper, J.L.**, DeMattei, M., Santo, A., Dufek, J., & Mercer, J. (2011). Lower Extremity Muscle Activity While Walking in Shape-Up Shoes: 1465: Board# 201 June 1 11: 00 AM-12: 30 PM. *Medicine & Science in Sports & Exercise*, 43(5), 314.

Works in Progress

1. **Roper, J.L.**, Ibe, O.*, & Musci, R. (in development). Predicting running performance changes resulting from gait alterations.

Invited Speaker Presentations:

1. **Roper J.L.** (2023). Exercise is Medicine: The role of exercise in patients with heart disease. Invited speaker presentation for Kaiser Permanente Cardiac Rehabilitation of Southern California. Virtual format.
2. **Roper J.L.** (2020). Gait Retraining and Performance: Friend or Foe? Invited speaker presentation at the Northwest Regional Conference of the National Strength and Conditioning Association. Virtual format.
3. Davis I, Neal B, **Roper J.L.**, Willy R. (2019). Consensus on Movement Retraining for Patellofemoral Pain. Invited speaker presentation at the International Patellofemoral Pain Research Retreat. Milwaukee, WI.
4. **Roper J.L.** (2018). Diet Decryption: How to recommend diets based on your client's body and not their friend. Invited speaker presentation at Fitness MBA Summit. Oklahoma City, Oklahoma.
5. **Roper J.L.** (2018). Talking to Yourself: How to teach best nutrition practices to athletes who don't listen. Invited speaker symposium presentation at Practical Applications in Sports Medicine. Palm Springs, California.
6. **Roper J.L.** (2018). The Fundamentals to Fueling Athletes: Basic nutrition strategies to support and improve athletic performance. Invited speaker presentation to the YMCA of Santa Monica. Santa Monica, California.
7. **Roper J.L.** (2017). The Fundamentals to Fueling Athletes: Basic nutrition strategies to support and improve athletic performance. Invited speaker symposium presentation at Practical Applications in Sports Medicine. Palm Springs, California.

Speaker Presentations:

1. **Roper J.L.** (2023). An examination of predicted running performance after gait retraining in runners with patellofemoral pain. Oral presentation at the 7th International Patellofemoral Research Retreat. Bologna, Italy
2. **Roper J.L.** (2020). Gait Retraining and Performance: Friend or Foe? Oral presentation at the Southwest Regional Conference of the American College of Sports Medicine. Virtual format.
3. **Roper J.L.**, Seeley M, and Freedman-Silvernail J. (2016). Altered running mechanics: common causes, consequences, and fixes. Symposium presentation at the Southwest American College of Sports Medicine regional conference. Costa Mesa, California.

Poster Presentations:

* denotes undergraduate student

1. Parske K.K., Brasher J.A., Rovetti R.J., Lin J., Musci R.V., **Roper J.L.** (2023). Sled-pull training improves maximal horizontal velocity in collegiate male and female soccer players. Poster presentation at the annual American College of Sports Medicine national conference. Denver, Colorado.
2. Quiroz K.H.*, Andani M.S.*, **Roper J.L.** (2020). Frontal plane knee mechanics during a loaded and unloaded squat in individuals with and without patellofemoral pain. Poster presentation at Southwest Regional Conference of the American College of Sports Medicine. Virtual format.
3. Andani M.S.*, Quiroz K.H.*, **Roper J.L.** (2020). Frontal plane knee mechanics during loaded and unloaded drop landings in individuals with and without patellofemoral pain. Poster presentation at Southwest Regional Conference of the American College of Sports Medicine. Virtual format.
4. Eitan D*, Roper J.L., McCormack W. (2019). Comparison of quadriceps-to-hamstrings ratios and isokinetic torque during cutting. Poster presentation at the Undergraduate Research Symposium at Loyola Marymount University. Los Angeles, CA
5. Sarbaum A*, **Roper J.L.**, McCormack W. (2019). Comparison of quadriceps-to-hamstrings ratios in male soccer athletes during drop landings. Poster presentation at the Undergraduate Research Symposium at Loyola Marymount University. Los Angeles, CA.
6. Shieh J*, DePalma R*, Smith M*, **Roper J.L.** (2019). An examination of knee abduction and patellofemoral stress during walking and running: Preliminary analysis. Poster presentation at the Undergraduate Research Symposium at Loyola Marymount University. Los Angeles, CA.
7. Travis T.* & **Roper J.L.** (2018). A comparison of Patellofemoral Stress Among Healthy Weight and Overweight Individuals. Poster presentation at the LMU McNair Research Symposium at Loyola Marymount University. Los Angeles, California.
8. Aguilera M.* & **Roper J.L.** (2018). A Comparison of Injury Rates in Marathon and Half-Marathon Participants: Preliminary analysis. Poster presentation at the Undergraduate Research Symposium at Loyola Marymount University. Los Angeles, California.
9. Aquino J.A*, Isidoro N*, Gallindo P*, & **Roper J.L.** (2017). Comparison of smart apparel muscle activity measurements to surface electromyography during exercise. Poster presentation at the National Strength and Conditioning Association national conference. Las Vegas, Nevada. ***Journal of Strength and Conditioning. *Student awarded the Undergraduate Student Outstanding Presentation Award****
10. Wimbish, J.*, Cooper, C.N.*, Hughes, P.*, Reid, M.*, Vazquez, A.*, Aquino, J.*, **Roper, J.**, Dabbs NC. (2017). The Effects of Motorized vs. Non-motorized Treadmill on Voluntary Oxygen Consumption, Heart Rate, and RPE in Collegiate Cross-Country

Females: A Preliminary Analysis. Poster presentation at the National Strength and Conditioning Association national conference. Las Vegas, Nevada. Journal of Strength and Conditioning.

11. Aquino J.A.*, Isidoro N*, Gallindo P*, & **Roper J.L.** (2017). Comparison of smart apparel muscle activity measurements to surface electromyography during exercise. Student oral presentation at the California State University Statewide Student Research Competition. San Luis Obispo, California.
12. Aquino J.A.*, Isidoro N*, Gallindo P*, & **Roper J.L.** (2016). Comparison of smart apparel muscle activity measurements to surface electromyography during exercise. Poster presentation at the American College of Sports Medicine southwest regional conference. Costa Mesa, California.
13. **Roper J.L.** et al. (2016). The effects of gait retraining on oxygen consumption and carbohydrate metabolism. Thematic poster presentation at the annual American College of Sports Medicine national conference. Boston, Massachusetts.
14. **Roper J.L.** et al. (2015). The effects of changing footstrike pattern on running economy. Poster Presentation at the Southwest American College of Sports Medicine regional conference in Costa Mesa, California.
15. Harding E.M., **Roper J.L.** et al. (2015). The effects of gait retraining in runners with patellofemoral pain. Poster presentation at the Southwest American College of Sports Medicine regional conference in Costa Mesa, California.
16. **Roper J.L.** et al. (2013). Comparison of foot strike patterns in habitually shod runners: Analysis of preliminary data. Poster presentation at the Southwest American College of Sports Medicine regional conference in Newport Beach, California.
17. **Roper, J. L.** et al. (2013). Social Factors Affecting Obesity Rates in African American Women. Poster presentation at the University of New Mexico, College of Education Graduate Student Colloquium in Albuquerque, New Mexico.
18. **Roper, J. L.** et al. (2012). Reliability of BodPod measures using Bland and Altman analysis. Poster presentation at the Southwest American College of Sports Medicine regional conference in Newport Beach, California.
19. **Roper, J. L.** et al. (2010). Lower Extremity Muscle Activity while Walking in Shape-Up Shoes. Poster presentation at the American College of Sports Medicine national conference in Denver, Colorado.

Funded Grants, Fellowships, and Awards:

External:

1. TOPO Athletic, Inc. External Funding of Athletic Running Shoes (2021), Awarded an in-kind donation of 10 pairs of running shoes to examine and compare foot strike

patterns, altered cadence, and muscle activity in runners with and without patellofemoral pain, \$1,500, Role: PI.

2. MAD Apparel, Inc. External Funding of Athos Apparel (2018), Secured a research and development contract to test apparel and its applications in sports performance research, \$3,500, Role: PI

Internal:

1. Course Development Grant (Frank R. Seaver College of Science and Engineering, Loyola Marymount University, 2023), Forensic Kinesiology, \$5,000, Role: PI
2. Continuing Faculty Grant (Frank R. Seaver College of Science and Engineering, Loyola Marymount University, 2022), An investigation into seasonal running economy changes in collegiate cross-country runners, \$5,000, Role: PI
3. Continuing Faculty Grant (Frank R. Seaver College of Science and Engineering, Loyola Marymount University, 2020), A comparison of running economy and carbohydrate utilization among 3 running gait conditions, \$5,000, Role: PI
4. Continuing Faculty Grant (Frank R. Seaver College of Science and Engineering, Loyola Marymount University, 2018), The effects of gait retraining on the risk and progression of knee osteoarthritis, \$5,000, Role: PI
5. Summer Course Redesign Grant (Teaching Resource Center, California State University, San Bernardino, 2016), \$4,000
6. Mini-Grant (Office of Academic Research, California State University, San Bernardino, 2016), The Validity and Reliability of Smart Apparel During Exercise, \$4,500, Role: PI
7. Professional Development Grant (Graduate Professional and Student Association, University of New Mexico, 2015), \$500
8. Student Conference Award Program (Career Services, University of New Mexico, 2015), \$600
9. RAC Grant (Research Allocations Committee, University of New Mexico, 2014), \$4,000, Role: Co-investigator
10. New Mexico Research Grant (Graduate Professional and Student Association, University of New Mexico, 2014), \$3,000, Role: PI
11. Graduate Student Excellence Award, College of Education, University of New Mexico, 2014-2015, \$7,000
12. HESS PB Grant (University of New Mexico, Department of Health, Exercise and Sports Science, 2014), \$277

13. RPT Grant (University of New Mexico Research Project and Travel Grant, 2013), \$1,000

14. RPT Grant (University of New Mexico Research Project and Travel Grant, 2012), \$500

Other Grants, Fellowships, and Awards:

1. Military Medical Research and Development (Department of the Army, 2022), Examining Gait Retraining: Neuromechanisms and Long-Term Retention, \$2,256,870 (*not awarded*), Role: PI
2. NIHR21 (National Institute of Health, 2022), Examining Gait Retraining: Neuromechanisms and Retention, \$579,313 (*not awarded*), Role: PI
3. Visiting Scholar Award (American College of Sports Medicine, 2020), A comparison of early stance mechanics among 3 running conditions, \$5,000 (*not awarded*), Role: PI
4. Research Endowment (American College of Sports Medicine, 2020), A comparison of running economy and carbohydrate utilization among 3 running conditions, \$9,616 (*not awarded*), Role: PI
5. Research Grant (Ultra-Sports Science Foundation, 2019), The effects of gait retraining on running performance, \$9,616 (*not awarded*), Role: PI
6. Young Investigator Grant (National Strength and Conditioning Association Foundation, 2019), The effects of gait retraining on running performance, \$12,600 (*not awarded*), Role: PI
7. Arthritis National Research Foundation Grant (Arthritis National Research Foundation, 2019), The effects of gait retraining on the risk and progression of knee osteoarthritis, \$68,207 (*not awarded*), Role: PI
8. Arthritis National Research Foundation Grant (Arthritis National Research Foundation, 2018), The effects of gait retraining on the risk and progression of knee osteoarthritis, \$76,109 (*not awarded*), Role: PI
9. Young Investigator Grant (National Strength and Conditioning Association Foundation, 2017), The effects of gait retraining in runners with MTSS and stress fractures, \$7,440 (*not awarded*), Role: PI
10. Research Endowment (American College of Sports Medicine, 2017), The effects of gait retraining in runners with a history of stress fractures and shin splints, \$6,200 (*not awarded*), Role: PI
11. NIHR21 (National Institute of Health, 2016), The Use of Smart Fitness Apparel as a Weight Loss Intervention, \$275,000 (*not awarded*), Role: PI

Services to the University/School/Department:

Curricular Changes and Implementation Committee (*ad hoc*), Department of Health and Human Sciences, Loyola Marymount University, 2022-2023

Athletic Advisory Board, Loyola Marymount University, 2022- Present

Department of Health and Human Sciences Faculty Search Committee, Loyola Marymount University, 2020-2021

Undergraduate Research Symposium, Moderator- Oral Presentations, 2021

Equipment Committee, Frank R. Seaver College of Science and Engineering, Loyola Marymount University, 2020- present

Department of Health and Human Sciences Faculty Search Committee, Loyola Marymount University, 2019

Equipment Committee (temporary replacement), Frank R. Seaver College of Science and Engineering, Loyola Marymount University, 2019

Department of Health and Human Sciences Faculty Search Committee, Loyola Marymount University, 2018

Faculty Handbook and Academic Life Committee, Loyola Marymount University, 2018-present

Office of Student Research Awards Committee, California State University, San Bernardino, 2016- 2017

Women's Soccer Sports Nutrition Workshop, California State University, San Bernardino, 2016

Part-time/Adjunct faculty classroom visitation/evaluation, Department of Kinesiology, California State University, San Bernardino, 2016

Center of Aging Executive Board, California State University, San Bernardino, 2016- 2017

CNS Equipment Systems Specialist Search Committee, California State University, San Bernardino, 2016

Department of Kinesiology Chair Search Committee, California State University, San Bernardino, 2016

Curricular and Career advisement, Department of Kinesiology, California State University, San Bernardino, 2015-2017

Graduate Student Representative, Department of Health, Exercise and Sports Sciences

Faculty Search Committee, University of New Mexico, 2014-2015

Other Professional or Community Service:

Mentor, Leadership and Diversity Training Program, National Strength and Conditioning Association, 2023 - present

Consultant and Expert Contributor, Pillar4 Media, 2023 - present

Diversity Action Committee, American College of Sports Medicine, 2023 - present

Grant Panel, National Strength and Conditioning Association Foundation, 2023 - present

Ad Hoc Proposal Reviewer, Expert Committee, Fonds de recherche du Québec- Santé and Canada Foundation for Innovation, CFI Innovation Fund competition, 2022

President-Elect of the Board of Directors, Southwest Chapter of the American College of Sports Medicine, 2022 - present

Diversity Equity & Inclusion Committee, National Strength and Conditioning Association, 2021 - present

Ad Hoc Grant Reviewer, Biobehavioral Medical and Health Outcomes study section, National Institute of Health, 2020 - present

Early Career Reviewer Program, National Institute of Health, 2020 - 2021

Reviewer, Physical Therapy in Sport, 2019 – present

Reviewer, PLOS One, 2019- present

Reviewer, Sports Biomechanics, 2018- present

External Examiner, PhD Thesis Revision, University of the Punjab, 2018
“Biomechanical Analysis for Evaluating Performance of Competitive Swimmers in Pakistan”

Nominations Committee, National Strength and Conditioning Association, 2018- 2021

Member-at-Large, Board of Directors, Southwest Chapter of the American College of Sports Medicine, 2018- 2021

Reviewer, Medicine and Science in Sports and Exercise, 2017- present

Reviewer, International Journal of Sports Medicine, 2017- present

External Examiner, PhD Thesis, University of the Punjab, 2017
“Biomechanical Analysis for Evaluating Performance of Competitive Swimmers in Pakistan”

Reviewer, Journal of Sport and Health Science, 2017

Reviewer, International Journal of Sports and Exercise Medicine, 2017

Reviewer, Clinical Biomechanics, 2017- present

Contributing Writer, International Sports Science Association Blog, Online 2016

Editorial Board, Gavin Journal of Orthopedic Research and Therapy, 2016- 2017

Reviewer, Gavin Journal of Orthopedic Research and Therapy, 2016

Reviewer, Journal of Sports Medicine and Physical Fitness, 2014

Contributing Writer, Inside Fitness Magazine, Print and Online, 2014- 2019

Contributing Writer, Iron Man Magazine, 2015- 2017

Professional Affiliations:

Fellow of the American College of Sports Medicine (2023)

American College of Sports Medicine, Southwest Chapter

National Strength and Conditioning Association

Licenses/Certifications:

Certified Strength and Conditioning Specialist, NSCA

American Heart Association Basic Life Support (CPR and AED)