

RYAN ALCANTARA

Email: ryan.alcantara@colorado.edu

EDUCATION

- 2019 – Pres Ph.D. Integrative Physiology – University of Colorado Boulder**
Advisor: Dr. Alena Grabowski – Applied Biomechanics Lab
Anticipated Graduation: Spring 2021
- 2017 – 2019 M.Sc. Integrative Physiology – University of Colorado Boulder**
Advisor: Dr. Alena Grabowski – Applied Biomechanics Lab
- 2011 – 2015 B.Sc. Applied Human Biology, Kinesiology Minor – Seattle Pacific University**
Advisor: Dr. Cara Wall-Scheffler

RESEARCH EXPERIENCE

- 2018 – Pres Graduate Research Assistant – University of Colorado Boulder**
Advisor: Dr. Alena Grabowski. Funding by the PAC-12 Student-Athlete Health & Well-Being Grant Program
- 2016 – 2017 Biomechanics Research Technician – Brooks Running Company**
Lab Director: Eric Rohr. Performed 3D motion capture data collections, developed custom MATLAB scripts for data analysis, reported findings to Footwear R&D.
- 2015 – 2016 Biomechanics Lab Intern – Brooks Running Company**
Lab Director: Eric Rohr. Assisted with mechanical footwear testing, subject recruitment, and data processing in Cortex and Visual 3D.
- 2014 – 2015 Undergraduate Research Assistant – Seattle Pacific University**
Advisor: Dr. Cara Wall-Scheffler. Lead a research study investigating the biomechanical and physiological effects of running with a stroller.

TEACHING EXPERIENCE

- 2018 Guest Lecturer – Colorado School of Mines**
Introductory Biomechanics, taught by Dr. Jana Montgomery
- 2017 – 2018 Graduate Teaching Assistant – University of Colorado Boulder**
Human Anatomy Laboratory, Department of Integrative Physiology
- 2016 Guest Lecturer – Seattle Pacific University**
Disciplinary Research and Writing, taught by Dr. Cara Wall-Scheffler
- 2014 – 2015 Teaching Assistant – Seattle Pacific University**
Introductory Physics I & II

HONORS & AWARDS

- 2019** IPHY Fellowship Travel Award, University of Colorado Boulder
- 2018** Diversity Travel Award, American Society of Biomechanics (ASB)
- 2018** Best Masters Student Poster Presentation, Rocky Mountain ASB Regional Meeting

- 2018** Graduate Student Travel Grant, University of Colorado Boulder
2017 Graduate Dean's Fellowship, University of Colorado Boulder
2012 Oregon Latino Scholarship, Hispanic Metropolitan Chamber of Commerce
2011 – 2015 President's Scholar Award, Seattle Pacific University

PEER-REVIEWED PUBLICATIONS

- Alcantara R.,** Trudeau M., Rohr E. (2018). Calcaneus range of motion underestimated by markers on running shoe heel. *Gait & Posture* 63: 68-72
Alcantara R. & Wall-Scheffler C. (2017). Stroller Running: Energetic and kinematic changes across pushing methods. *PLoS One* 12(7): e0180575.

CONFERENCE PRESENTATIONS

- Alcantara R.,** Day E., Hahn M., Grabowski A. (2019). Sacral Accelerations Predict Whole Body Kinetics and Stride Kinematics During Running. International Society of Biomechanics. (podium)
Alcantara R., Day E., Hahn M., Grabowski A. (2019). Sacral Accelerations Predict Whole Body Kinetics and Stride Kinematics During Running. Rocky Mountain ASB Meeting. (podium)
Alcantara R., Beck O., Grabowski A. (2018). Mass added to a running-specific prosthesis increases metabolic power during running. American Society of Biomechanics. (thematic)
Alcantara R., Beck O., Grabowski A. (2018). Mass added to a running-specific prosthesis increases metabolic power during running*. Rocky Mountain ASB Meeting. (poster)
***Awarded Best Poster Presentation by Masters Student**
Alcantara R., Trudeau M., Brüggemann G., Hamill J., Rohr E. (2016) Running Shoe Forefoot Bending Stiffness Affects Calf Muscle EMG. Northwest ASB Meeting. (poster)
Alcantara R. & Wall-Scheffler C. (2016). Running With A Stroller: Kinematic and Energetic Changes Across Different Stroller Pushing Techniques. American College of Sports Medicine. (poster)
Alcantara R. & Wall-Scheffler C. (2015). Push it, Push it Real Good: The energetic cost of running with a stroller. Murdock College Science Research Program. (poster)
Alcantara R. & Wall-Scheffler C. (2015). Push it, Push it Real Good: The energetic cost of running with a stroller. Seattle Pacific University Summer Research Symposium. (podium)

INVITED PRESENTATIONS

- 2019** Using inertial measurement units to predict running kinetics and kinematics. LEOMO Inc.
2019 Wearable devices estimate biomechanical risk factors for stress fractures. Integrative Physiology Department Colloquium, University of Colorado Boulder
2018 Panel Member. Capstone Seminar, George Fox University
2016 Panel Member. Biology Cornerstone Seminar, Seattle Pacific University

MENTORSHIP & OUTREACH

- 2019 – Pres** Volunteer. Colorado Advantage Program, University of Colorado Boulder
- 2019 – Pres** Mentor. “L2k” Legacy High School STEM Internship Program, Boulder, CO
- 2019 – Pres** Mentor. University of Colorado Boulder Graduate Student Peer Mentoring Program
- 2017 – Pres** Supervisor. Applied Biomechanics Lab Undergraduate Researchers
- 2018 – 2019** University of Colorado Boulder National Biomechanics Day

ACADEMIC SERVICE

- 2019 – Pres** Ad Hoc Reviewer, Journal of Open Source Software
- 2019** Co-Chair, Running Performance Session – *Footwear Biomechanics Symposium*
- 2018** Co-Chair, PhD Competition Session – *American Society of Biomechanics Meeting*
- 2018** Co-Chair, Sports Session – *Rocky Mountain ASB Regional Meeting*
- 2017 – 2018** ASB Student Advisory Committee for Biomechanics Advocacy
- 2017** Ad Hoc Reviewer, Journal of Applied Physiology

SPECIALIZED SKILLS

- Data Analysis:** MATLAB, R, Python, Git/Github, Tableau, LaTeX
- Laboratory Equipment:** Motion Analysis Cortex, Vicon Nexus 2.x, Visual 3D, Novel Pedar, Instron Material Testing, Delsys & Noraxon EMG, IMeasureU, Treadmetrix, Bertec, Parvo Medics, Oxycon Mobile

MEDIA & PRESS

Selected Press for *Energetic Cost of Stroller Running*:

[New York Times](#)

[Inside Science](#)

Society Magazine (Paris, France), by Emmanuelle Andreani

Personal Interview - SPU etc. Magazine:

<https://voices.spu.edu/articles/dream-career-reality-college-etc>