

Stanford



Olivia Bruce

Postdoctoral Scholar, Radiology

Bio

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Calgary (2023)
- Bachelor of Science, Queen's University (2015)
- Master of Science, University of Calgary (2018)
- PhD, University of Calgary , Biomedical Engineering (2023)
- MSc, University of Calgary , Kinesiology (Biomechanics) (2018)
- BSc, Queen's University , Kinesiology (2015)

STANFORD ADVISORS

- Feliks Kogan, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Dirt Track Surface Preparation and Associated Differences in Speed, Stride Length, and Stride Frequency in Galloping Horses.** *Sensors (Basel, Switzerland)*
Pfau, T., Bruce, O. L., Sawatsky, A., Leguillette, R., Edwards, W. B.
2024; 24 (8)
- **Predicting Tibia-Fibula Geometry and Density From Anatomical Landmarks Via Statistical Appearance Model: Influence of Errors on Finite Element-Calculated Bone Strain.** *Journal of biomechanical engineering*
Bruce, O., Tu, J., Edwards, W. B.
2024: 1-32
- **Fixed and Relative Positioning of Scans for High Resolution Peripheral Quantitative Computed Tomography.** *Journal of clinical densitometry : the official journal of the International Society for Clinical Densitometry*
Bugbird, A. R., Klassen, R. E., Bruce, O. L., Burt, L. A., Edwards, W. B., Boyd, S. K.
2023; 27 (1): 101462
- **Sex disparities in tibia-fibula geometry and density are associated with elevated bone strain in females: A cross-validation study** *BONE*
Bruce, O. L., Edwards, W.
2023; 173: 116803
- **Statistical Shape Modelling Discriminates Patients with Complete Subtrochanteric and Midshaft Atypical Femoral Fractures**
Bruce, O., Haider, I., Cheung, A., Edwards, W.
WILEY.2023: 110
- **Stride frequency derived from GPS speed fluctuations in galloping horses.** *Journal of biomechanics*

Pfau, T., Bruce, O., Brent Edwards, W., Leguillette, R.

2022; 145: 111364

● **Tibial-fibular geometry and density variations associated with elevated bone strain and sex disparities in young active adults** *BONE*

Bruce, O. L., Baggaley, M., Khassetarash, A., Haider, I. T., Edwards, W.

2022; 161: 116443

● **A statistical shape model of the tibia-fibula complex: sexual dimorphism and effects of age on reconstruction accuracy from anatomical landmarks** *COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING*

Bruce, O. L., Baggaley, M., Welte, L., Rainbow, M. J., Edwards, W.

2022; 25 (8): 875-886

● **Are subject-specific models necessary to predict patellar tendon fatigue life? A finite element modelling study** *COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING*

Firminger, C. R., Haider, I. T., Bruce, O. L., Wannop, J. W., Stefanyshyn, D. J., Edwards, W.

2022; 25 (7): 729-739

● **Lower-limb joint kinetics in jump rope skills performed by competitive athletes** *SPORTS BIOMECHANICS*

Bruce, O. L., Ramsay, M., Kennedy, G., Edwards, W.

2020: 1-14

● **Effect of Shoe and Surface Stiffness on Lower Limb Tendon Strain in Jumping** *MEDICINE AND SCIENCE IN SPORTS AND EXERCISE*

Firminger, C. R., Bruce, O. L., Wannop, J. W., Stefanyshyn, D. J., Edwards, W.

2019; 51 (9): 1895-1903

● **Effects of basketball court construction and shoe stiffness on countermovement jump landings** *FOOTWEAR SCIENCE*

Bruce, O. L., Firminger, C. R., Wannop, J. W., Stefanyshyn, D. J., Edwards, W.

2019; 11 (3): 171-179

● **Principal components analysis to characterise fatigue-related changes in technique: Application to double under jump rope** *JOURNAL OF SPORTS SCIENCES*

Bruce, O., Moull, K., Fischer, S.

2017; 35 (13): 1300-1309