**Postdoctoral Position\_Otago Rugby Community Head Impact Detection (ORCHID) study**

**SCHOOL OF PHYSICAL EDUCATION SPORT AND EXERCISE SCIENCES**  
**University of Otago  
Dunedin, New Zealand**

***The role***  
  
A full-time, fixed-term (12-month) position is available for a driven and high-performing Postdoctoral Fellow in the Human Movement Lab, School of Physical Education Sport and Exercise Sciences.  
  
This groundbreaking research project is a world-first in cumulative head impact burden, through an exciting collaboration between World Rugby, New Zealand Rugby, Prevent Biometrics and the University of Otago. The World Rugby funded project, intends to gather head acceleration data from 700 community rugby players, males, and females, from age 11 to adult, over the course of a single season. All players included in the study have been fit with instrumented mouthguards (IMM) from Prevent Biometrics, which will capture head kinematics across a range of playing and training scenarios. The data gathered under control conditions at the University of Otago, combined with time-coded video analysis, will provide the largest bank of head kinematic data ever undertaken in any sport worldwide. The primary aim of the study is to understand how age and sex may influence head impact exposure and associated risk factors for concussion within the cohort.  
  
Medial release for the study can be seen here <https://www.otago.ac.nz/news/news/otago826215.html>  
  
***Your skills and experience***

* Applicants must have a PhD in computer science, engineering or biomechanics.
* Knowledge of and experience with programming languages (such as MATLAB, Python, C, R, or Java) is essential.
* Prior experience with inertial sensors or accelerometers.
* The ability to be an effective member of an interdisciplinary team.

Prior experience with computational statistics is desirable, as is experience in artificial intelligence, machine learning, or deep learning methods.  
  
This project will harness a variety of signal processing skills, therefore experience in a wide range of signal processing and Big Data techniques are highly desirable.  
  
***Our department***  
  
The School of Physical Education Sport and Exercise Sciences is a research and teaching department currently ranked 14th in the world for Sports-related subjects (QS rankings 2021). It is part of the University of Otago and is located in Dunedin, a culturally vibrant and diverse university city.  
  
  
***Further details***  
  
This is a full-time, fixed-term position for 12 months.  
  
You must have the right to live and work in New Zealand to apply for this position.  
  
Informal confidential inquiries can be directed to Associate Professor Melanie Bussey, via [melanie.bussey@otago.ac.nz](mailto:melanie.bussey@otago.ac.nz).  
  
***Application***  
  
To submit your application (including CV and cover letter) please click this link [Postdoctoral Fellow – Head Impact Detection Study](https://otago.taleo.net/careersection/2/jobdetail.ftl?lang=en&job=2101396). Applications quoting reference number 2101396 will close on Sunday, 15 August 2021.

**Tags:** [head kinematics](https://biomch-l.isbweb.org/search?searchJSON=%7B%22tag%22%3A%5B%22head+kinematics%22%5D%7D), [postdoctoral position](https://biomch-l.isbweb.org/search?searchJSON=%7B%22tag%22%3A%5B%22postdoctoral+position%22%5D%7D), [rugby](https://biomch-l.isbweb.org/search?searchJSON=%7B%22tag%22%3A%5B%22rugby%22%5D%7D)