

CALL FOR APPLICATIONS

POSTDOCTORAL RESEARCH FELLOW: DATA SCIENCE

The Sport, Exercise Medicine and Lifestyle Institute (SEMLI) at the University of Pretoria invites applications for a postdoctoral research fellowship with a focus on data science applied to sports performance and athlete health.

Sport, exercise medicine and lifestyle interventions have been identified as one of the University's four main strategic areas for research activity over the next decade. To realise this strategic goal SEMLI was established in June 2015, under the directorship of Professor Martin Schwellnus. The International Olympic Committee recently again recognised SEMLI as one of eleven research centres worldwide for the prevention of injury and protection of athlete health. The University of Pretoria is a leading sports university in Africa, regularly dominating South African intervarsity competitions and home to more than 100 national representatives annually and 3 000 student athlete club members.

SEMLI provides sport science and medical services to the University sport programmes, certain provincial and national sporting organisations, and the general public. The purpose of this postdoctoral fellowship is to increase the data analytics capability of SEMLI in order to enhance research and service delivery.

Responsibilities:

The postdoctoral fellow will contribute to interdisciplinary research and service programmes within the broad theme of athlete management to promote athlete health, reduce injuries and optimise sports performance. Tasks will include:

- project management of an existing electronic athlete management system, including:
 - o facilitate data collection, processing, analysis, and reporting/visualisation
 - o develop and compile resources/templates/policies for the effective use of the system
 - o coordinate integrations of various devices and software
 - o develop procedures for extracting data for use in scientific research and stakeholder reports
- contribute to research at SEMLI, including the supervision of postgraduate research students
- collaboration with academic staff, coaches, and sport science and medicine practitioners

Requirements:

Essential

- A PhD in one of the following areas, obtained within the past five years: data science, computer science, information technology, mathematics, biostatistics
- Proven capability in project management (formal qualifications and/or informal learning)
- Demonstrated high level data science skills, including a good understanding of machine learning and data mining
- Ability to work with various data sources, platforms and software and a proven ability to work with R, R Studio, Python, Matlab or similar programs.

- Demonstrated ability to deliver analysis and visualisations using web apps such as Shiny, plotly DASH or similar
- Publication record in peer-reviewed journals
- Ability to work in a multidisciplinary team environment
- Strong interpersonal and verbal/written communication skills, including the ability to effectively communicate complex ideas to both technical and non-technical audiences

Desirable

- Experience working with surveillance systems, longitudinal datasets, sensor data, data linkage and/or data wrangling particularly related to cloud-based data warehousing and reporting
- Experience in functional data analysis and statistical parametric mapping
- Experience supervising postgraduate students.
- Experience delivering end-user applications including visualisations (for non- technical audiences).
- Experience with typical athletic performance and sport wearable sensor data

Application process:

- Applications must be submitted be in writing to Dr Jill Borresen: jill.borresen@up.ac.za
- The following supporting documents as are required:
 - o Application letter
 - o CV including qualifications, work experience, and evidence of achievements such as publications and awards.
 - o Certified copies of degree certificates and academic transcripts
 - o Names and contact details of two professional referees.

Closing date for applications: 31 May 2019

This is a full-time, paid fellowship for up to three years (subject to annual reporting). The remuneration package will be determined according to UP policy.

<https://www.up.ac.za/sport-exercise-medicine-and-lifestyle-institute/>