

WA High Performance Sport Research Centre

Swimming Analysis PhD Scholarship

Are you thinking of a research career in high performance sport? The University of Western Australia (UWA) and the Western Australian Institute of Sport (WAIS) are seeking a PhD candidate to undertake movement analysis research in elite swimmers

Project Title: Understanding and optimising the use of the dynamic wave in elite swimmers

Project Overview: An exciting opportunity exists for an enthusiastic and motivated student to complete a doctoral degree at UWA whilst embedded in the high-performance swimming program at WAIS. This research program aims to advance the understanding and effects of the dynamic wave generated while swimming and how swimmers can better optimise the use of this wave. Previous research using computational fluid dynamics (CFD) models and initial testing has shown a good correlation for this effect, but the methods to measure this more accurately and assess across multiple swimmers and techniques is required. The approach will be to develop a means of using live testing methods, for example using active tow devices, velocity measurement devices and Inertial Measurement Units (IMUs) in combination with video recording to enable measurement and live feedback of the inter-cyclical accelerations.

Project Team: The successful applicant will receive team-based academic and industry support from Dr Matt Keys (Atkins Engineering), Dr Nat Benjanuvatra (UWA), Mr Koji Honda (Swimming Australia), Dr Matt Doyle (WAIS) and Dr Aaron Balloch (WAIS).

Candidate Requirements: Potential candidates should have a bachelor's degree (science or engineering), with research-based honours or masters-level training. Preference will be given to students specialising in sports science, movement analysis, and/or biomechanics (if a science major) or students who have a basic understanding of modelling and exposure to course work in computational fluid dynamics (if an engineering major).

This opportunity is open to **Domestic and International applicants.**

This position includes a fully funded industry-based PhD scholarship provided by UWA and WAIS. The living stipend of this scholarship is \$30,000 per annum. More details relating to these scholarships can be found here: http://www.scholarships.uwa.edu.au/search?sc_view=1&id=9401

The Research Environment: The WA High Performance Sport Research Centre (HPSRC) is a joint initiative between UWA and WAIS. The HPSRC aims to provide WAIS with evidence-based, innovative solutions to performance-driven questions via uncompromised high quality research. The key intent of the Centre is to produce practical and applied research outcomes, which can be translated into the WAIS daily training environment in order to optimise current practice and athlete success. For further information, please visit: <http://waiss.org.au/other/id.php?id=63>. The University of Western Australia is a world top-100 University. More information on the School can be found here: <http://www.science.uwa.edu.au/schools/human-sciences>.

Contact Information: For more information please contact the HPSRC director, Associate Professor Peter Peeling, at peter.peeling@uwa.edu.au

How to Apply: Please email a cover letter outlining your suitability for the position, a copy of your academic transcript and a brief CV containing your contact details to Associate Professor Peter Peeling.

Scholarship applications close **28th February 2020**