

PGTA Project Proposal

Discipline:	Biomechanics & Motor Control
Project Title:	Speed Accuracy Trade Off in complex coordinated sequences.
Supervisory Team:	Dr Michael Hiley Dr Matthew Pain
Summary of proposed project:	<p>Aims: To investigate if and where in complex co-ordinated sporting sequences speed accuracy trade-offs may exist</p> <p>Summary: The speed accuracy trade off (SATO) has been investigated in a number of sporting situations (e.g., badminton, baseball, cricket, handball, tennis etc). In the majority of these cases a particular skill has been studied in isolation from the typical context and sequence of events that it would normally occur in. Recently, a more applied approach to investigating fielding in cricket has yielded interesting results, particularly when looking at the whole sequence of the task. This included which aspects of the sequence the SATO occurred in, the effect of task constraints (distance, approach, target size, timing) on the choice of technique employed, and the effect of timing on the acquisition and hence accuracy of the subsequent throw.</p> <p>The overall project would be focussed on addressing some of the above questions with a predominantly experimental approach (motion analysis, gaze tracking, potentially performance analysis) and delving deeper into how this information can be exploited to optimise training and performance of such tasks. It would be logical to extend the work on cricket/fielding and make connections with partners already on campus, but it does not have to be limited to cricket, as long as a suitable alternative/s can be agreed upon.</p>
Required skills, experience, and/or education:	Applicants should have at least a 2:1 Honours degree (or equivalent) in sport science (with a large component of biomechanics). A relevant Master's degree and/or experience in one or more of the following will be an advantage: motion analysis, applied sport science support, motor control, skill acquisition.
Link to School research theme:	Sport Performance