

## Project proposal template

### Graduate School studentships

### March 2015

<i>Project title</i>	<input type="text" value="Computers watching cricket"/>
<i>First Supervisor</i>	<input type="text" value="Dr"/> <input type="text" value="James Orwell"/>
<i>Second Supervisor</i>	<input type="text" value="Dimitris Makris"/>
<i>School</i>	<input type="text" value="Computing and Information Systems"/>
<i>Other member of supervisory team</i> <i>(no more than three KU supervisors in total)</i>	<input type="text"/>
<i>Specific requirements</i> <i>beyond 2:1 degree</i>	<input type="text" value="Computer Science or related discipline"/>

#### Project summary

(max 4,000 characters)

Automated annotation of human activity is a challenging problem for the computer vision community. However, constrained domains, such as sports, offer a graded set of problems to solve. Cricket is an interesting case: a succession of set pieces, each with potential for variation in outcome, commonly annotated with an extensive and refined ontology.

The project will investigate possible methods for processing high resolution calibrated video to produce a formal description (e.g. in xml) of the activity. Additional input sources may also be within scope, e.g. audio and scoreboard. A key component of these methods will be the recognition of key activities such as bowling, batting, fielding, throwing and catching. This will use techniques from human body modelling and action recognition to detect and classify such actions.

This project will work in collaboration with an internationally recognized provider of sports data. The successful candidate will have an interest in mathematics, statistics and pattern recognition, and an enthusiasm for programming in C++/Matlab.

