

Project proposal template

Graduate School studentships

March 2015

<i>Project title</i>	<input style="width: 95%;" type="text" value="Spot the ball"/>
<i>First Supervisor</i>	<input style="width: 15%; border: none;" type="text" value="Dr"/> <input style="width: 15px; height: 15px; border: none;" type="button" value="▼"/> <input style="width: 60%; border: none;" type="text" value="James Orwell"/>
<i>Second Supervisor</i>	<input style="width: 95%;" type="text" value="Dimitris Makris"/>
<i>School</i>	<input style="width: 95%; border: none;" type="text" value="Computing and Information Systems"/> <input style="width: 15px; height: 15px; border: none;" type="button" value="▼"/>
<i>Other member of supervisory team</i> <i>(no more than three KU supervisors in total)</i>	<input style="width: 80%; height: 20px;" type="text"/>
<i>Specific requirements</i> <i>beyond 2:1 degree</i>	<input style="width: 95%;" type="text" value="Computer Science or related discipline"/>

Project summary
(max 4,000 characters)

Working in collaboration with a leading provider of sports data, this project investigates computer vision techniques for acquiring accurate real-time estimates of ball trajectories, using high resolution calibrated video feeds for Association Football, Wheelchair Rugby and Basketball.

Typical approaches to this problem include stages for detection and tracking, with fusion from multiple sources where applicable. This project will build on these existing approaches to improve the accuracy, robustness and generality.

Two possible areas in which it is expected that the successful candidate will focus, are the development of multi-modal dynamical models, to reflect the different phases of motion, and machine learning methods for estimation of likely paths for occluded trajectories.

The successful candidate will have an interest in mathematics, probability and machine learning; and an enthusiasm for programming in C++/Matlab.

