

Project proposal template – Faculty studentships Summer 2014

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<i>Project title</i>	<input style="width: 90%;" type="text" value="Development of a computational system for image analysis in experimental biology"/>	<i>Director of Study</i>	<input style="width: 90%;" type="text" value="Dr Andreas Hoppe"/>
<i>Second Supervisor</i>	<input style="width: 90%;" type="text" value="Dr Souheil Khaddaj"/>	<i>School</i>	<input style="width: 90%;" type="text" value="Computing and Infor"/> ▼
<i>Other members of supervisory team</i>	<input style="width: 90%;" type="text"/>	<i>Any requirements from applicant (eg degree in specific subject area)</i>	<input style="width: 90%;" type="text" value="Computing, Engineering, Physics"/>
Project summary (max 1,000 characters)			
<p>Light microscopy and image processing have led to the development of quantitative analysis techniques in experimental biology. This produces huge multi-dimensional image datasets which cannot be analysed in a traditional way whereby an operator highlights features manually. However, in some instances user interaction would be desirable to eliminate false segmentation results and to guide through the analysis process. The aim of this project is to develop a high throughput computational system which guides the user through the image analysis process interactively. The system would use parallel computing for fast computation and immediate feedback to make the analysis process more robust and very efficient. Existing image analysis techniques would be adapted to provide a better user experience. Such a system would be an important tool for quantitative experimental biology. Suitable candidates should have a degree in computing, engineering or physics. A training programme is provided.</p>			