

## 2013 YCCSA SUMMER SCHOLARSHIP PROJECT SUBMISSION

This form is for prospective project supervisors to submit their projects to be included in the YCCSA Summer Scholarships Programme for 2013.

It is the purpose of the Summer School that any projects submitted are interdisciplinary in nature.

<b>Date</b>	<i>11/03/2013</i>
<b>Main Supervisor's Name</b>	<i>Daniel Franks</i>
<b>Main Supervisor's Department</b>	<i>Biology</i>
<b>Co-supervisors' name(s) and Departments</b>	<i>Simon Poulding (Computer Science)</i>
<b>Project Title</b>	<i>Software for developing and assessing evolutionary algorithms</i>
<b>Project Description</b>	<p><i>This project involves the development of software that can be used to give hands-on experience of evolutionary computation to students. The proposed software would have four major features:</i></p> <p><i>(1) Permit users to configure and interact with evolutionary algorithms through an intuitive graphical interface. This would avoid the need to learn a specific toolkit and the particular programming language in which the toolkit was implemented.</i></p> <p><i>(2) Visualise runtime behaviours of the algorithm that are normally hidden in real-world applications.</i></p> <p><i>(3) Enable the exploration of the more advanced algorithm concepts (e.g. co-evolution) using the same software.</i></p> <p><i>(4) Facilitate users in creating solutions to problems that do not rely on their knowledge of, and skills in using, a particular programming language.</i></p> <p><i>One key example of such a task is to test users in evolving characters that participate in a strategy-based game, such as an adaptation of: <a href="http://nerogame.org/">http://nerogame.org/</a>.</i></p>
<b>Required skills</b>	<i>Good programming ability essential</i>
<b>Project dates</b>	<i>9 weeks, starting on Monday, 15 July 2013 and finishing on Friday, 13 September.</i>
<b>Other information</b>	
<b>References</b>	<i>Eiben &amp; Smith. (1998) Introduction to Evolutionary Computing. Springer</i>

When complete, please email the form to [sarah.christmas@york.ac.uk](mailto:sarah.christmas@york.ac.uk)