

## Project proposal template – Faculty studentships Summer 2014

<i>Project title</i>	BIM-enabled Lean Scheduling: Overcoming Implementation Barriers in Complex Construction	<i>Director of Study</i>	Dr. Tina Papadopoulou
<i>Second Supervisor</i>	Professor Mukesh Limbac	<i>School</i>	Civil Engineering and
<i>Other members of supervisory team</i>		<i>Any requirements from applicant (eg degree in specific subject area)</i>	Normally a postgraduate qualification (with distinction or
<b>Project summary (max 1,000 characters)</b>			
<p>Lean construction is at the forefront of the industry’s agenda. Founded on the principles of waste elimination and Just-in-Time (JIT), lean construction is the extension of the lean production paradigm.</p> <p>A key lean enabler is Building Information Modelling (BIM). BIM is a platform for value creation underpinned by cost/schedule enriched 3D models. BIM’s synergy with pull scheduling which is at the core of lean/JIT thinking is well documented. In pull scheduling, project resources are drawn from immediately preceding stage(s) just when they are needed.</p> <p>The limited validations of BIM scheduling suggest that its practical applications are fraught with challenges due to a fragmented construction industry and bespoke nature of projects.</p> <p>This is an exciting opportunity to undertake doctoral research on how such challenges can be countered. Empirical research involving project case data analysis will be carried out to assess the scheduling performance of BIM in relation to lean performance indicators. The project is interdisciplinary, integrating strands from: manufacturing (lean thinking), construction (project management) and computing (simulation).</p>			