

**Information on Postgraduate Research Scholarship - Ref: Eng-PhD-22-25**

<b>Faculty:</b>	Engineering and Science	<b>Department:</b>	School of Engineering
<b>Lead Supervisor:</b>	Kang Tong		
<b>Project Title:</b>	Artificial Intelligence-Enabled Decision Regimes in Complex Construction Project Delivery		
<b>Project Description:</b> <b>(maximum 500 words)</b>	<p>The construction and infrastructure sector is undergoing rapid digital transformation, with artificial intelligence (AI) emerging as a powerful enabler of data-driven decision-making. In complex projects, AI is increasingly used to support planning, design coordination, risk management, and operational performance. However, despite rapid technological progress, there remains limited understanding of how AI-enabled decision-making is perceived, trusted, and operationalised by diverse stakeholders across the project lifecycle.</p> <p>This PhD project investigates how AI shapes decision-making regimes in complex construction and infrastructure projects, focusing on the interactions between technology, organisational practices, governance arrangements, ethical accountability, and stakeholder perceptions. The research takes a lifecycle perspective, examining decision-making across strategic intent, design and construction implementation, and operational impact. Rather than viewing AI as a purely technical tool, the project explores how human judgment, collaboration, responsibility, and accountability evolve alongside AI-enabled systems.</p> <p>The primary aim is to explore AI-enabled decision-making regimes in complex project environments through stakeholders' perceptions across the project lifecycle, with particular attention to the temporal dimensions of before (intent), during (implementation), and after (impact) delivery.</p> <p>The main objectives include:</p> <ul style="list-style-type: none"> <li>• To examine how AI deployment influences decision-making processes, collaboration, and ethical accountability in complex construction projects.</li> <li>• To investigate the challenges and contributions of AI-enabled decision-making in relation to strategic intent, design and construction implementation, and long-term operational impact.</li> <li>• To develop a novel theoretical framework and conceptual model explaining the mechanisms and implications of AI-driven decision-making in complex project environments.</li> </ul>		

	<p>The successful candidate will undertake an abductive research design and develop iterative links between theory and empirical evidence through a multi-stage, mixed-methods approach. This will incorporate the Delphi method, expert interviews, focus groups, industry surveys, and multiple case studies of complex projects that have adopted integrated digital technologies. The project will develop strong capabilities in mixed-methods research, stakeholder engagement, and digital technologies in construction, alongside opportunities to strengthen professional and academic skills.</p> <p>The project has strong industry relevance and will be supported through collaboration with leading construction and engineering organisations. Findings will contribute to research in project management and digital engineering while producing practical recommendations for policymakers and practitioners seeking to deploy AI responsibly to improve decision effectiveness and accuracy. The research aligns with the University of Greenwich's strategic priorities in digital futures and sustainable infrastructure and offers strong opportunities for high-quality publications, industry engagement, networking, future research funding, and career development in this rapidly emerging area.</p> <p>This scholarship is awarded competitively, and all applications are carefully reviewed. While we cannot guarantee an offer, we encourage strong candidates to apply.</p>
<b>Duration:</b>	3 years, Full-Time Study or 6 years, Part-Time Study
<b>Support available (subject to satisfactory performance):</b>	
<p>A successful Home candidate will receive:</p> <ul style="list-style-type: none"> <li>• A Full tuition fee waiver at the university Home-student rate for the specified duration of the scholarship</li> </ul> <p>A successful International candidate will receive:</p> <ul style="list-style-type: none"> <li>• A tuition fee waiver for 50% of the International-student rate for the specified duration of the scholarship.</li> </ul>	
<p>Tuition fees are subject to annual increases.</p> <p>This scholarship does not include funding for living expenses.</p>	
<b>Person Specification of Essential (E) or Desirable (D) requirements:</b>	
<b>Criteria:</b>	<b>E or D</b>
<b>Education and Training:</b>	
<ul style="list-style-type: none"> <li>• 1<sup>st</sup> Class or 2<sup>nd</sup> class, First Division (Upper Second Class) honours degree or a taught master's degree with a minimum average of 60% in all areas of assessment (UK or UK equivalent) in a relevant area to the proposed research project</li> </ul>	E
<ul style="list-style-type: none"> <li>• For those whose first language is not English and/or if from a country where English is not the majority spoken language (as recognised by the UKBA), a</li> </ul>	E

<p>language proficiency score of at least IELTS 6.5 (in all elements of the test) or an equivalent UK VISA and Immigration secure English Language Test is required, if your programme falls within the faculty of Engineering and Science a language proficiency score of at least IELTS 6.5 overall with a minimum of 6.0 in all elements of the test or an equivalent UK VISA and Immigration secure English Language Test is required. Unless the degree above was taught in English <u>and</u> obtained in a majority English speaking country, e.g. UK, USA, Australia, New Zealand, etc, as recognised by the UKBA.</p>		
<p><b>Experience &amp; Skills:</b></p>		
<ul style="list-style-type: none"> <li>Previous experience of undertaking research (e.g. undergraduate or taught master's dissertation)</li> </ul>		E
<ul style="list-style-type: none"> <li>Academic background in construction management, project management, facilities and real estate management, commercial management, digital engineering, computer science, data science, or a closely related discipline.</li> </ul>		E
<ul style="list-style-type: none"> <li>Understanding of, or strong interest in, digital transformation, artificial intelligence, data analytics, decision-making, or sustainability in complex project environments.</li> </ul>		E
<ul style="list-style-type: none"> <li>Experience with mixed research methodologies, including qualitative and quantitative approaches, or clear potential to develop these skills.</li> </ul>		E
<ul style="list-style-type: none"> <li>Familiarity with data analysis tools and software (for example NVivo, SPSS, Python, or similar), or willingness to acquire these skills.</li> </ul>		D
<ul style="list-style-type: none"> <li>Strong communication skills, including academic writing and verbal presentation.</li> </ul>		E
<ul style="list-style-type: none"> <li>Good organisational and time management skills, with the ability to work independently.</li> </ul>		E
<ul style="list-style-type: none"> <li>Motivation to engage with industry and contribute to publications and conferences.</li> </ul>		D
<p><b>Personal Attributes:</b></p>		
<ul style="list-style-type: none"> <li>Understands the fundamental differences between a taught degree and a research degree in terms of approach and personal discipline/motivation</li> </ul>		E
<ul style="list-style-type: none"> <li>Able to, under guidance, complete independent work successfully</li> </ul>		E
<p><b>Other Requirements:</b></p>		
<ul style="list-style-type: none"> <li>This scholarship may require Academic Technology Approval Scheme approval for the successful candidate if from outside of the EU/EEA</li> </ul>		E
<ul style="list-style-type: none"> <li>The scholarship must commence before 15<sup>th</sup> July 2026 (offers will be withdrawn if this condition is not met)</li> </ul>		E
<b>Closing date for applications:</b>	<i>midnight UTC on 20<sup>th</sup> February 2026</i>	
<b>For further information contact:</b>	<i>k.tong@greenwich.ac.uk</i>	
<p><b>Making an application:</b> Please read this information before making an application. Information on the application process is available at: <a href="https://www.gre.ac.uk/research/study/apply/application-process">https://www.gre.ac.uk/research/study/apply/application-process</a>. Applications need to be made online via this link. <b>No other form of application will be considered.</b></p> <p>All applications <b>must include</b> the following information. <b>Applications not containing these documents will not be considered.</b></p>		

- **Scholarship Reference Number (\*insert reference\*)**– included in the personal statement section together with your personal statement as to why you are applying
- **a CV including 2 referees \***
- **academic qualification certificates/transcripts and IELTs/English Language certificate if you are an international applicant or if English is not your first language or you are from a country where English is not the majority spoken language as defined by the UK Border Agency \***

*\*upload to the qualification section of the application form. Attachments must be a PDF format.*

Before submitting your application, you are encouraged to liaise with the Lead Supervisor on the details above.