Information on Postgraduate Research Scholarship
Ref: FS-ES-04-2027-9

Faculty:	Engineering & Science	**School:**	Engineering
Lead Supervisor:	Dr Kang Tong		
Project Title:	**Human-AI Decision Regimes in Healthcare Infrastructure Project Delivery**		
Project Description:	The design of healthcare infrastructure and hospital buildings brings together engineering, clinical, operational and investment priorities, while responding to patient backlogs, evolving service demands and uncertain future needs. AI can help project teams organise evidence and compare design options, but professionals still need to decide how to verify, challenge and use its advice. This PhD will investigate how human-AI collaboration shapes design decisions in healthcare and hospital projects. It will examine who participates, how evidence and assumptions are checked, how disagreements are addressed and who takes responsibility. The research will focus on design reviews, using scenarios such as changes in building function, capacity expansion, equipment replacement and spatial reconfiguration. The study will combine comparative case studies with practitioner evaluation. Interviews and selected design review records from two to three healthcare projects will be used to examine how decisions are made and justified. Analysis will distinguish actual AI use from conventional digital practice and expectations about AI. The findings will inform workshops using existing AI tools, where practitioners compare different arrangements for checking and discussing AI advice using the same case information and recommendations within each scenario. Decision logs, follow-up interviews and independent expert reviews will assess overlooked requirements, the use of supporting evidence and clarity of responsibility. The research will connect human-AI collaboration with construction and design management. Findings could strengthen design appraisal, help teams consider uncertainty and future requirements and reduce unsupported design commitments. Outputs will include a theoretical framework and conceptual decision model evaluated through practitioner workshops and independent expert reviews, alongside evidence-based recommendations for professional learning. The research will extend knowledge of decision-making, digital engineering and innovation in the smart built environment. The successful candidate should have strong research and analytical skills, familiarity with relevant data analysis and digital tools, and ideally some experience of mixed-methods research. They should also be keen to contribute to journal publications and knowledge exchange, and to support external funding applications where appropriate. **This scholarship is awarded competitively, and all applications are carefully reviewed. While we cannot guarantee an offer, we encourage strong candidates to apply.**		

Duration:	3 years, full-time study 6 years, part-time study

Support available (subject to satisfactory performance):

For Home students

- A full tuition fee waiver at the Home student rate for the duration of the scholarship.

For International students

- 50% tuition fee waiver against the International student rate for the duration of the scholarship.

Important information

- Tuition fees are subject to annual review and may increase during the course of study.
- This scholarship covers tuition fees only and does not include funding for living, accommodation, or maintenance costs.

Person Specification of Essential (E) or Desirable (D) requirements:

Criteria:	**E or D**
Education and Training:	
• First Class or Upper Second Class (2:1) 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. • Relevant academic background in digital engineering, architecture, construction and project management, commercial management, quantity surveying, civil engineering, computer science, data science or a related discipline.	**E**
• 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 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 **and** obtained in a majority English speaking country, e.g. UK, USA, Australia, New Zealand, etc, as recognised by the UKBA.	**E**
Experience & Skills:	
• Previous experience of undertaking research (e.g. undergraduate or taught master's dissertation).	**E**
• Understanding of, or a strong interest in, digital transformation, artificial intelligence, data analytics and decision-making in healthcare infrastructure and hospital projects.	**E**
• Experience of mixed-methods research, combining qualitative and quantitative approaches.	**D**
• Strong analytical and academic writing skills and familiarity with qualitative or quantitative data analysis tools and software.	**E**

• Strong communication and presentation skills, including the ability and willingness to communicate with experts from different disciplines.	**E**
• Good organisational and time management skills and ability to plan and meet research deadlines.	**E**
• Motivation to engage with industry and contribute to publications and knowledge exchange.	**E**
Personal Attributes:	
• Understands the fundamental differences between a taught degree and a research degree in terms of approach, self-discipline and motivation.	**E**
• Able to, under guidance, complete independent work successfully.	**E**
Other Requirements:	
• This scholarship may require Academic Technology Approval Scheme approval for the successful candidate if from outside of the EU/EEA	**E**
• The scholarship must commence before 5th April 2027	**E**
Closing date for applications:	**Midnight UTC on 30th November 2026**
For further information contact:	**Dr Kang Tong** **Email: k.tong@gre.ac.uk**

Making an application:

Please read this information before making an application. Information on the application process is available at: https://www.gre.ac.uk/research/study/apply/application-process. Applications need to be made online via this link. **No other form of application will be considered**.

All applications **must include** the following information. **Applications not containing these documents will not be considered.**

- **Scholarship Reference Number (FS-ES-04-2027-9)**– 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, 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.