Information on Postgraduate Research Scholarship - Ref: CS2-FES-01-23

Faculty:	Engineering and Science	**School:**	Computing & Mathematical Sciences
Lead Supervisor:	Dr Sadiq Sani		
Project Title:	**Sustainable Cybersecurity Framework for Operational Technology Protocols**		
Project Description:	Many Operational Technology (OT) protocols suffer from security weaknesses. Existing security solutions such as the cybersecurity maturity model and key management for the OT protocols have at least one of the following limitations: (I) Security focuses on limited security specifications. (II) Security does not explicitly capture adversarial actions. (III) Security focuses on prior security procedures and does not use systematic methodologies for attack discovery. This project aims to design and deploy a Sustainable Cybersecurity Framework for checking whether an OT protocol suffers from security under-specification and further optimising the security of the protocol. In this project, we will utilise string and frequency analyses to identify the security specifications required for the OT protocols and apply our new sustainable split-lightweight cryptographic algorithm approach to optimise the security specifications of the protocols. The approach takes as input the attributes of lightweight cryptographic algorithms required for security specifications optimisation of an OT protocol and produces a sustainable version of the OT protocol with security, performance, and usability guarantees.		
Duration:	3 years, Full-Time Study or 6 years, Part-Time Study		

Bursary available (subject to satisfactory performance):

Year 1: £20,780 (FT) or pro-rata (PT) Year 2: In line with UKRI rate Year 3: In line with UKRI rate

In addition, the successful candidate will receive a contribution to tuition fees equivalent to the university's Home rate, currently £5,006 (FT) or pro-rata (PT), for the duration of their scholarship. International applicants will need to pay the remainder tuition fee for the duration of their scholarship.

This fee is subject to an annual increase.

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

Criteria:	**E or D**
Education and Training:	
• 1st Class or 2nd 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	**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	**E**

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.	
Experience & Skills:	
• Previous experience of undertaking research (e.g. undergraduate or taught master's dissertation).	**E**
• Proficiency in applied cybersecurity, cryptography, blockchains, and Artificial Intelligence (AI).	**E**
• Previous experience of model checking, utilisation of lightweight cryptographic algorithms, and evaluating Operational Technology protocols and their source codes.	**E**
• Previous experience in software engineering, security engineering, and utilising simulation tools and cloud technologies.	**E**
• Familiar with application of Blockchain and Artificial Intelligence in Operational Technology environments.	**E**
• Coding/scripting experience in general-purpose languages with strong analytical abilities and knowledge of data structures.	**E**
Personal Attributes:	
• Understands the fundamental differences between a taught degree and a research degree in terms of approach and personal discipline/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 ***30 November 2025***	**E**
Closing date for applications:	***midnight UTC on 30 October 2025***
For further information contact:	**Dr Sadiq Sani (s.sani@greenwich.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 (CS2-FES-01-23)**– 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.