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# Research Institute in Trustworthy Inter-connected Cyber-physical Systems (RITICS)

# Fellowship Call

**Closing date: Friday 1st November 2024/ 5pm GMT**

The Research Institute in Trustworthy Inter-connected Cyber-physical Systems (RITICS) is inviting proposals from researchers for part-time fellowships.

**Topic Areas**

Applications for the fellowship should take into account applying for either the area of socio-technical security for cyber physical systems or one of the problems aligned to the NCSC’s Cyber-Physical problem Book.

Socio-technical cyber-physical security focusses on the human and cultural aspects of security in operational environments. This represents engagement on how not just individuals but the whole of organisations engage with security challenges. We are particularly interested in how these challenges and their potential solutions differ in the operational environment to that of a more traditional corporate environment. The key questions are:

* How do we create secure cyber-physical environments that have people at the heart of security?
* What limitations are there with cyber-physical environments for creating good security cultures and how can we go about addressing them?

Alternatively, applications respond to the challenges identified in the [NCSC’s Cyber-Physical Problem Book](https://www.ncsc.gov.uk/collection/problem-book/cyber-physical). currently includes:

* How do we build security for systems with long operational lives?
* How do we incentivise better security for cyber-physical systems?
* How can we understand the security of a wide variety of cyber-physical assets?
* How do we have confidence in the security of cyber-physical systems?
* How can we make use of emerging technologies in a secure way within cyber-physical systems?
* How do we build resilience across a ‘system of systems’?

Proposals should make clear how the proposal addresses Cyber-Physical and OT aspects of the problem.

**Responsibilities**

The RITICS Fellowship roles are leadership roles. Supported by RITICS and the NCSC, you will provide thought leadership in your topic across the RITICS Community and beyond. Specifically, you will:

* Explore the problem space to determine the research questions that need to be addressed and the benefits and means of growing the research topic beyond the initial period of a year.
* Engage with existing, established communities or establish a new community around the topic.
* Identify and engage with relevant research projects that fall under your scope and identify new opportunities to develop and grow the area.
* Consider the pipeline for and sustainability of the topic, providing development opportunities, establish pathways to develop a new research angle, or connect relevant communities that are currently disparate.

**Deliverables**

The period of the Fellowship (1st April 2025 – 31st March 2026) is intended to be exploratory and stimulate your own innovation and creativity. Therefore, the exact nature and format of the deliverables to satisfy the responsibilities outlined above will naturally vary. The specifics of the exact programme of work to achieve the following can be discussed with the NCSC Technical Lead and the RITICS Co-Directors. The initial set of desired outcomes are:

* Demonstrate how you have built the community.
* Present outcomes of your problem definition activities.
* Articulate existing and recurrent research questions.
* Articulate the strategy for the topic going forward.

**Assessment**

Assessment of proposals will be undertaken by a panel who will be looking at the relevant strengths of the candidates and the proposed method for delivering in the topic areas.

**Key Dates**

| **Activity** | **Date** |
| --- | --- |
| Call for Fellows Published by | Friday 13th September 2024 |
| Proposals due to be submitted | Friday 1st November 2024 |
| Announcement of Results  | Monday 2nd December 2024 |
| Fellowships Starts | Tuesday 1st April 2025 |
| Fellowship Completed | Tuesday 31st March 2026 |

**Funding**

Funding is available for part-time fellows with preferably at least 1 fellow working on the topic of socio-technical cyber physical security.  The total pool of funding available is £170K to support the engagement and activities of the fellows in these topic areas.  The funding can be used to cover the cost of the fellows’ time and appropriate travel and meeting costs.

**Application**

A **2 page CV** and a **2 page plan of work** **which clearly indicates the topic area being addressed** should be provided describing the plan to deliver the desired outputs of the chosen topic. Breakdowns of any known costs should be included – costings should be calculated using the FEC model.

Applications should be sent to Furrah Hussain, RITICS Programme Manager (ritics@imperial.ac.uk). We must receive your application by **1700 on 1st November 2024.**