General Instructions

Application for Chanakya Under Graduate Fellowship

Research proposals are invited from motivated under-graduate students studying in education/research institutions of India for the CHANAKYA fellowships, year 2024:

a) Chanakya Under-Graduate Fellowship (UGF)

General conditions

- 1) The under-graduate fellowship (Rs. 10,000/- per month) is tenable for a maximum of 6 months.
- 2) The mentoring faculty member must be working or intend to work in an area relevant to quantum technologies and must be closely aligned with the goals and deliverables of I-HUB QTF (see annexure).
- 3) Research proposals with mentoring faculty members in institutes having requisite infrastructure, laboratories for research in the areas of quantum technologies will be preferred.
- 4) The supervisor/mentor must agree to provide facilities required for the research to be conducted by the candidate in line with the research proposal.
- 5) Host Institute will take care of the funds disbursal as per the terms and conditions stated by I-HUB QTF. These fellowships will be valid at the host institute with the approved mentor for working on the problem submitted as part of the research proposal. Any change in any of these conditions will lead to a withdrawal of Chanakya fellowship.
- 6) Start date of under-graduate must be within 1 month after declaration of result.
- 7) At the end of the fellowship, the fellowship holder and the faculty mentor will have to file a comprehensive report (Progress Report) on the execution of the research project with clearly stated outcomes in terms of any research articles, patents, white papers etc. to the monitoring committees as part of the review process.
- 8) The statement of expenditure (SE) and Utilization Certificate (UC) along with the Progress Report is to be submitted within one month from the closure of the project.
- 9) Host Institute can monitor the academic progress of the Chanakya fellowship holders (after they are appointed) as per the norms and rules of the host institute.
- 10) The interest accrued on any un-used funds should be submitted to 'Bharatkosh' account and the receipt to be submitted to I-HUB QTF.

Annexure

Themes and goals of I-HUB Quantum Technology Foundation

Research and Technology proposals with a focus on product, prototype or solution deliverables should fit in one of the specific areas/themes given below:

1. Quantum Information and Metrology

- a) Development of physics package for quantum processors (fully programmable gate-based quantum computers as well as quantum simulators)
- b) Development of sensors for magnetic fields and electric fields
- c) Development of portable atomic clocks
- d) Development of quantum accelerometers and gravimeters

2. Quantum Communication

- a) Development of portable entangled photon sources
- b) Development of Quantum repeaters
- c) Development of Quantum Key distribution systems
- d) Development of device independent Quantum Random Number generators
- e) Development of quantum cryptography algorithms and post quantum cryptography algorithms

3. Quantum Materials and Devices

- a) Single photon sensors for visible and infrared regions
- b) Spintronic devices
- c) Sensors for electric and magnetic fields
- d) Sensors/devices based on low dimensional materials
- e) Sensors/devices based on hybrid nanostructures
- f) Multifunctional quantum materials for improved thermoelectric, electro/magnetocaloric, optoelectronic and biomedical applications

4. Enabling Technologies

- a) Instrumentation for enabling quantum systems design, integration and deployment
- b) Low noise measurement systems
- c) Development of data acquisitions and control systems targeted towards enabling the abovementioned applications
- d) Development of arbitrary waveform and signal generators for the above applications
- e) Development of cryogenic electronics systems
- f) Development of optical systems, devices and components
- g) Development of tunable laser systems
- h) Development of state-of-the-art cryogenic and vacuum technologies

5. Any other proposal that has high relevance to Quantum Technologies

To Apply: Click on the link

Chanakya Fellowship (google.com)

Last date of application submission:

21st June 2024

For any queries, please call 020-25908592 Email: fellowships@quantech.org.in

or Scan the QR Code

