

Advertisement for Research Positions

Three-Year Project Funded by the National Quantum Mission (NQM)

Indian Institute of Technology Ropar

Last Date to Apply:
18th Sept 2026

Applications are invited from motivated and suitably qualified candidates for the following research positions under a **three-year research project funded by the National Quantum Mission (NQM)** at the **Indian Institute of Technology Ropar (IIT Ropar)**.

Position	No. of Positions
Junior Research Fellow (JRF)	04
Senior Research Fellow (SRF)	03

Research Area

The project focuses on the **intersection of smart-grid power systems and quantum computing**, with emphasis on quantum and hybrid quantum-classical approaches for optimization and real-time power-system applications.

Job Description

Selected candidates will contribute to research activities including, but not limited to:

1. Developing and testing **hybrid quantum-classical optimization algorithms** for dynamic power grids.
2. Modelling **real-time Optimal Power Flow (OPF)** problems and simulating them on hybrid quantum-classical systems.
3. Developing computational models, conducting experiments and analysing results.
4. Preparing high-quality **research papers, project reports and technical documentation**.
5. Collaborating with researchers and cross-functional teams working on power systems, quantum computing and related technologies.

Essential Qualification

For Senior Research Fellow (SRF):

M.E./M.Tech./M.S. or equivalent degree in Electrical Engineering, Electrical & Electronics Engineering, Computer Science Engineering, or a related discipline, preferably with specialization in Power Systems, Power Electronics, Control Systems, or related areas, with First Division as defined by the awarding Institute/University, along with preferably two (02) years of relevant research/professional experience.

For Junior Research Fellow (JRF):

M.E./M.Tech./M.S. or equivalent degree in Electrical Engineering, Electrical & Electronics Engineering, Computer Science Engineering, or a related discipline, preferably with specialization in Power Systems, Power Electronics, Control Systems, or related areas, with First Division as defined by the awarding Institute/University.

Desirable Qualifications / Skills

A valid GATE/NET or equivalent national-level qualification will be preferred. Candidates who do not satisfy the prescribed national-level examination (GATE/NET etc.) requirements for JRF/SRF may, subject to Institute/project rules and availability of funds, be considered for appointment under an appropriate project staff category at the applicable remuneration.

Candidates with experience or knowledge in one or more of the following areas will be preferred:

- Power-system optimization and **Optimal Power Flow (OPF)** analysis.
- **Python programming** and quantum-computing frameworks such as Qiskit, PennyLane or Cirq.
- Basic **machine learning** or hybrid classical-quantum modelling.
- Familiarity with power-system simulation tools such as **PSCAD, RTDS, MATPOWER or DIgSILENT**.
- **IoT-based data acquisition** and/or real-time power-system data processing.
- Strong programming, mathematical modelling and research skills.

How to Apply

Interested and eligible candidates are invited to submit their applications online at the following page on or before **18th Sept 2026**:

<https://bit.ly/NQM-IITRPR>

Candidates should provide complete and accurate information and upload all required supporting documents through the application form.



Project Duration: 3 Years

Funding Agency: National Quantum Mission (NQM)

Institute: Indian Institute of Technology Ropar

Reservations and relaxations: Reservations and age/qualification relaxations, wherever applicable, shall be as per **Government of India norms**.

Only shortlisted candidates will be contacted for the selection process. IIT Ropar reserves the right to fill or not fill any/all positions depending upon project requirements and the availability of suitable candidates.