Birla Institute of Technology & Science, Pilani
K K Birla Goa Campus

BITS Pilani- IIT Madras Collaborative Ph.D. Position

Date: 07/11/2026

Applications are invited from interested and motivated candidates for a fully funded PhD position under the BITS Pilani-IIT Madras collaborative Ph.D. program to work in the following project entitled "**Resource-efficient generation of GKP states for photonic quantum Technologies**" under the supervision of **Prof. Sanjib Dey (Supervisor from BITS Pilani)** [URL: https://www.bits-pilani.ac.in/goa/sanjib-dey/] and **Prof. Anil Prabhakar (Co-supervisor from IIT Madras)** [URL: https://www.ee.iitm.ac.in/people/anil-prabhakar/]. The project aims to develop and optimize practical methods for generating high-quality Gottesman-Kitaev-Preskill (GKP) states in photonic quantum computing by accounting for realistic experimental imperfections, resource constraints, and their impact on fault-tolerant quantum information processing.

Number of Vacancy	01
Essential Qualification	M.Sc. in Physics or an equivalent degree in Physics / Engineering Physics / M.Tech. / M.E. / B.E. / B.Tech. in Electrical Engineering or other allied disciplines from a recognized university / Institute, with minimum 60% aggregate marks or equivalent CGPA.
Desired Skills	Knowledge of quantum mechanics, quantum optics or quantum information theory, along with basic programming skills (preferably Python) and an interest in theoretical and numerical research.
Fellowship	₹ 37,000 + 30% HRA = ₹ 48100 per month Annual Contingency: ₹ 20,000/-
Age Limit	28 Yrs.

How to apply: Candidates meeting above-mentioned qualification should send their CV to **Prof. Sanjib Dey** [Email: sanjibd@goa.bits-pilani.ac.in] **by 21st Nov, 2026.** Please note that only shortlisted candidates will be called for online interviews. The interview schedule will be sent to candidates via email. Selected candidates will be registered for the Ph.D. program subject to the fulfilment of the requirements of the Ph.D. qualification process as per academic guidelines of BITS Pilani.

Notes:

1. The student will be registered at BITS Pilani and, upon successful completion of all programme requirements, the PhD degree will be awarded by BITS Pilani.

2. The duration of the Ph.D. student's stay at **IIT Madras** will be mutually decided by the supervisor and co-supervisor based on the requirements of the research work. However, student is expected to spend at least 6 months, which could be extended up to 24 months at **IIT Madras** during the course of the PhD program.

3. For any queries regarding the position, please feel free to email the supervisor (sanjibd@goa.bits-pilani.ac.in).

4. No TA/DA will be paid for attending the interview.