



# Birla Institute of Technology & Science, Pilani

## K K Birla Goa Campus

### Research staff position under AR&DB-DRDO funded project

Applications are invited for the position of Junior Research Fellow (JRF) in the Department of Mechanical Engineering at BITS Pilani, K. K. Birla Goa Campus, Goa. This is Aeronautics Research and Development Board (AR&DB), DRDO sponsored research project titled “**Investigating The Influence of Steady and Pulsating Mini-Jets on Jets Impingement Heat Transfer Enhancement**” (ARDB/1032160/M/I).

**Principal Investigator:** Prof. Shibu Clement ([Profile Link](#))

**Co-Principal Investigator:** Prof. Pritanshu Ranjan ([Profile Link](#))

**Broad area of research:** Fluid Mechanics, Heat Transfer, Flow Visualization, Machine Learning for Control Systems

**Duration of the project:** 3 years

**Project Description:** The project aims to investigate methods of modifying the main jet in jet-impingement heat transfer to improve heat transfer rates. Detailed flow visualization, velocity measurements, and thermal imaging will be conducted to understand how various flow patterns influence heat transfer. Additionally, the study will focus on developing real-time control systems using machine learning to optimize heat transfer efficiency in diverse thermal management applications.

**Qualification:** First class Post Graduate/ Graduate Degree (M.E./M.Tech./M.S.) in Mechanical Engineering/Aerospace Engineering.

**Desirable Skills:** We seek a candidate with a strong passion for experimental fluid mechanics and heat transfer research. The ideal candidate should be enthusiastic about hands-on work with advanced techniques such as flow visualization, velocity measurements, and thermal imaging. Additionally, the candidate should possess programming skills (MATLAB and Python) and have a problem-solving mindset. While prior experience in these areas is desirable, we are also open to candidates eager to learn and develop these skills during the project. Aspiring to obtain a Ph.D. in the project topic will be highly encouraged.

**Fellowship Amount (Rs.): 37,000 pm plus 18% HRA**

#### Benefits:

- Hands-on experience with state-of-the-art equipment such as infrared thermal imaging cameras and data acquisition systems. Opportunity to work on cutting-edge research with potential real-world applications in thermal management systems.
- The selected candidate will be encouraged to apply for a full-time Ph.D. program at BITS Pilani, K. K. Birla Goa Campus, as per the institute norms.

**How to Apply:** Interested candidates can send a cover letter mentioning their motivation for this project and a detailed curriculum vitae with details of research experience to the principal investigator (email: [shibu@goa.bits-pilani.ac.in](mailto:shibu@goa.bits-pilani.ac.in)) by **22<sup>nd</sup> March 2025, 23.59 PM (IST)**. Shortlisted candidates will be contacted via e-mail within a few days of the application deadline for an online interview.

