



भारतीय प्रौद्योगिकी संस्थान इंदौर

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**IIT Indore**

Dated: 26<sup>th</sup> Jan 2022

## Advertisement for a Junior Research Fellow (JRF)

Applications are invited from motivated and eligible candidates for JRF in the research project “*Failure Analysis of the Rotating Band under rammed condition for 155mm×52 cal Gun System through Numerical methodology*”. The brief description of the project is given below:

*Rotating band of ammunition intends to provide obturation or gas seal against high pressure developed by rapid burning of propellant inside the gun chamber. It is also utilized to spin the projectile through the rifled barrel which is required to stabilize the projectile in flight. Deformation of driving band starts during ramming operation and gets completed as the projectile travels few centimeters down the bore. Ramming force developed due to interaction of band and barrel ensures that the projectiles do not fall back, irrespective of the angle of elevation of barrel. Determining the ramming force and understanding the deformation of driving band is essential step in designing the rotating band and Ammunitions. This project will focus in understanding the deformation behaviour of band through finite element methods.*

**Eligibility:** M. Tech. in Mechanical Engineering. The candidates with specialization in design and applied mechanics will be given preference. Please note that candidate should have a valid M. Tech. degree.

### **Stipend:**

JRF will be paid Rs. 31,000/- & 16% HRA (if accommodation inside the institute is not provided)

### **Service conditions:**

(i) DA: JRF will not be entitled to DA.

(ii) House Rent Allowance (HRA): All JRF may be provided accommodation based on availability and those residing in accommodation provided by the institute will not be eligible for drawing HRA. Wherever provision of hostel

accommodation is not possible, HRA will be provided as mentioned above. The fellowship amount may be taken as basic for calculating the HRA.

(iii) Medical Benefits: The JRF *may be* entitled for medical allowance as per institute policy.

**Duration:** The appointment is for one year.

Interested candidates are requested to submit a detailed CV to *Dr. Indrasen Singh* via e-mail: *indrasen@iiti.ac.in* by *2<sup>nd</sup> Feb 2022*.

Only shortlisted candidates will be intimated by email for an interview. No TA/DA will be paid for appearing in the interview.