



**DEPARTMENT OF MECHANICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL**

Ref. No. 681/NITK/SERB/MECH/S.B./2023-24/A9

16/05/2025

Advertisement for Summer Internship

Applications are invited for the position of Summer Intern in a research and development project (**SERB-CRG**) with following details:

Title of the project: “Laser Directed Energy Deposition of Functionally Graded Cu-SS316L Structures”

Principal Investigator:

Dr. Srikanth Bontha,
Professor, Department of Mechanical Engineering,
National Institute of Technology Karnataka, Surathkal, Mangalore-575025
Email: srikanth.bontha@nitk.edu.in

Co-Principal Investigator:

Dr. A.S.S. Balan,
Assistant Professor, Department of Mechanical Engineering,
National Institute of Technology Karnataka, Surathkal, Mangalore-575025
E-mail: balan@nitk.edu.in

Name of the position: Summer Intern

No. of Positions/Vacancies: One

Qualifications:

Essential Qualifications: -

- a. Candidates must be in their pre-final of a B.E./B.Tech program in Mechanical Engineering
- b. A minimum aggregate score of 60% or a CGPA of 6.5 on a 10-point scale is required.

Desired Skills: -

- a. Basic working knowledge of simulation tools such as ANSYS.
- b. Understanding of the finite element method (FEM).
- c. Ability to work in a team environment, with good communication skills.

Age Limit: - 25 years (Preferable)

Salary: - ₹ 5,000/month

Duration: 02 Months

How to apply: Interested candidates must apply by sending the following documents as a single PDF file via email to the P.I., Dr. Srikanth Bontha (srikanth.bontha@nitk.edu.in), on or before **26th May 2025**, 11:59 PM IST.

Email Subject Line: **SERB-CRG-Intern-2025: Application from [Your Full Name]**

The application must include the following documents in order:

1. Cover Letter
2. Duly filled Application Form (as per the attached format) with a recent passport-sized photograph
3. Scanned copies of all academic certificates and mark sheets, starting from Class X onwards

Only shortlisted candidates will be intimated by email and called for an **in-person interview**. The appointment will be made immediately upon final selection. The appointment will be on a purely temporary basis co-terminus with the project.

About the project:

Project summary:

The development of bimetallic structures integrating copper and stainless-steel addresses critical needs in power generation, where components require both exceptional thermal conductivity and mechanical strength. The dissimilar thermo-physical properties of Cu and SS316L, combined with their low mutual solubility, pose significant challenges, including residual stresses, interfacial cracking, and defect formation. This research leverages Laser Directed Energy Deposition (LDED) to fabricate Functionally Graded Materials (FGMs) with a controlled compositional gradient between Cu and SS316L, aiming to mitigate these issues. The objectives are to optimize LDED process parameters, fabricate test coupons, perform mechanical and materials characterization, and establish microstructure-property relationships for defect-free FGM structures.



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SURATHKAL P.O. SRINIVASNAGAR, MANGALORE – 575 025**

APPLICATION FOR THE POST OF SUMMER INTERNSHIP

For Office Use:	Paste your recent Passport size photo
Serial Number:	
Verified the Certificates:	

1. Name:			
2. Father's Name:			
3(a). Date of Birth: (DD/MM/YYYY)		3(b). Nationality:	

4. Contact information:

(i) Address for communication:	
(ii) Mobile No:	
(iii) Email ID:	

5. Educational Qualifications*

Class	Subject/ Stream	Board/ University	Name of Institute	Marks/ CGPA	Year of Passing
X					
XII					
B.E/B.Tech.					

Competitive Exam	Qualified	Marks / Rank	Year
JEE	Yes / No		
CET/ State Entrance	Yes / No		

Exam			
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***Attach self-attested copies of all certificates.**

6. Workshop/Training programs attended*:

Sl. No.	Details

***Attach separate sheet (if required)**

7. Other Achievements*:

Sl. No.	Details

***Attach separate sheet (if required)**

Declaration: All the above particulars provided by me are true to the best of my knowledge and I understand that, if found incorrect, I may be disallowed to appear in the interview/test.

Date:

Place:

Signature of the Candidate

Note: Attach the list of enclosures along with the application.