



INDIAN INSTITUTE OF TECHNOLOGY ROPAR

Department of Physics · Photonics & Meta-Optics Laboratory

Junior Research Fellow (JRF) — PhD Position

Funded by the Anusandhan National Research Foundation (ANRF) · PMECRG Scheme

Applications are invited from motivated candidates for **one (01) Junior Research Fellow (JRF)** position in the Photonics & Meta-Optics Laboratory, Department of Physics, IIT Ropar. The selected candidate will design, simulate, fabricate, and characterize **broadband metasurfaces for thermal (infrared) imaging**. The position offers a pathway to **register for the PhD programme at IIT Ropar** (subject to admission norms), with training in high-impact research and publications.

Project Details

Project Title	Design and development of broadband metasurfaces for thermal imaging
Funding Agency	Anusandhan National Research Foundation (ANRF) — PMECRG Scheme
Principal Investigator	Dr. Danveer Singh, Department of Physics, IIT Ropar
No. of Positions	01 (One)
Expected Start	September 2026

Eligibility Criteria

Essential

- BS-MS/M.Sc. / M.Tech. in Physics, Applied Physics, Photonics, Optics, or a closely related discipline, with a consistently good academic record as per IIT Ropar norms.
- Valid CSIR-UGC NET/ GATE or an equivalent national-level qualification.
- Sound understanding of electromagnetic theory and optics, with a keen interest in metamaterials and metasurfaces.

Desirable

- Hands-on experience with electromagnetic simulation tools (CST Studio Suite, COMSOL Multiphysics, Ansys Lumerical/FDTD, MEEP).
- Familiarity with nanofabrication and/or optical and infrared characterization techniques.
- Programming skills (MATLAB, Python) for modelling and data analysis.
- Prior research experience or publications in photonics/optics will be an added advantage.

Fellowship & Benefits

- Fellowship:** ₹37,000/- per month + HRA (10%) as applicable, strictly as per ANRF norms.
- Opportunities:** PhD registration at IIT Ropar (subject to norms), training in metasurface design, nanofabrication and advanced characterization, access to state-of-the-art facilities, and support for conference presentations and publications.

How to Apply

Interested candidates should apply through the google form (link below):

Link: https://docs.google.com/forms/d/1n9zFIfQpoBzv5tq8iaN03jQ2s8Gkflnw6_FL03wIYJc/edit

Or, email with the following documents:

1. Detailed CV / résumé (including academic record and publications, if any).
2. A brief cover letter describing research experience, skills, and motivation.
3. Mark sheets and degree certificates (Bachelor's and Master's).
4. NET / GATE scorecard or equivalent qualification certificate.
5. Names and contact details of two academic referees.

Email	danveer.singh@iitrpr.ac.in
Subject Line	Application for JRF – Metasurface Project (ANRF)
Application Deadline	31st August 2026

General Information

- Only shortlisted candidates will be contacted for an interview (online).
- The position is purely temporary, co-terminus with the project. Reservation and age relaxation follow Government of India / ANRF norms, and the Institute reserves the right to fill or not fill the position.