



**INDIAN INSTITUTE OF TECHNOLOGY
(INDIAN SCHOOL OF MINES) DHANBAD**
(An autonomous institute under Ministry of HRD, Govt of India)



No: **DST-SERB/(188)/2017-2018/555/AP**

Dated: **April 20, 2018**

JRF position under SERB project

Applications are invited for the position of ONE Junior Research Fellow (JRF) under the SERB sponsored project. The details of the project are as under:

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|-------------------------|--|
| Position | Junior Research Fellow (01 post) [The position is temporary & co-terminus with the project.] |
| Title | <i>“Development of surface plasmon resonance ellipsometry as label-free optical biosensor for ultrasensitive detection of chemical and biological species”</i> |
| Sponsoring Agency | SERB, Department of Science and Technology, Government of India |
| Principal Investigator | Dr. Moirangthem Rakesh Singh Department of Applied Physics, IIT(ISM) Dhanbad – 826 004 E-mail: rakeshap@iitism.ac.in Phone no: 0326 223 5116 (Office), 0887 716 8602 (Mobile) |
| Tenure of project | Three years (3 years). |
| Tenure of Assignment | Initially 1 year, extended annually till the duration of project, subject to satisfactory performance. |
| Job Description | The project is designed to initiate research in developing an optical analytical tool based on surface plasmon resonance (SPR) ellipsometry for ultrasensitive detection of chemical and biological species. A comprehensive optical instrumentation will be done to integrate SPR platform with a commercial spectroscopic ellipsometer. The developed SPR ellipsometry will be used as optical sensing device for label-free detection of the biological molecules such as proteins, DNA, peptides etc. as well as trace amount of toxic heavy metal ions. Finally, stability, sensitivity and reliability of the SPR ellipsometry towards optical sensing will be investigated. |
| Enrolling for Ph.D. | The selected candidate may be allowed to enrol for Ph.D. programme as per institute rules. |
| Essential Qualification | M.Sc. in Physics with at least 65% marks or 7/10 CGPA with a valid a GATE/CSIR-UGC NET JRF/ CSIR-UGC NET LS/JEST. |
| Desirable Qualification | Computer programming skills and knowledge in electromagnetic optics. |
| Age | 30 years; relaxable up to 5 years in case of SC/ST/OBC/PH/Female candidates |
| Fellowship | Rs. 25000/- per month as per SERB/institute rules for the first 2 years. Rs. 28000/- per month as per SERB/institute rules for the 3rd year. |
| Last date & Time | 30 th June, 2018 5 PM IST. |

NB: Applications should be filled online ONLY through:

https://docs.google.com/forms/d/e/1FAIpQLScrunj44frg52B_gbNS1fcuSYohAx3zslcb7OSm0yDVG3uQ/viewform?c=0&w=1

Shortlisted candidates will be informed on the date of interview. Mere possession of minimum qualification does not guarantee an invitation to the interview. Candidates will be short listed based on their merit and as per the requirement of the project.

All candidates should make their own arrangements for their stay at Dhanbad, if required. No TA/DA will be paid to attend the interview.