

Indian Institute of Technology Indore

Khandwa Road, Simrol, Indore 453 552

Ref.: IITI/MATHS/CSIR/EMR-II/2018/25(0280)

Dated: 26.06.2018

Advertisement for RA/SRF/JRF position under CSIR sponsored project

IIT Indore invites applications from highly motivated, sincere, hardworking and research-oriented candidates for the position of **RA/SRF/JRF** in a CSIR funded research project entitled “An study of Shearlet frames and Shearlet transform”. Candidates are strongly advised to visit the profile of **Dr. Niraj Kumar Shukla** (<http://iiti.ac.in/people/~nirajshukla>), before applying against this advertisement. The research staff will be working under **Dr. Niraj Kumar Shukla** at IIT Indore.

Project Details: Wavelets have wide scope of applications in mathematics, engineering, sciences, and industries in view of the major tool for multiscale data analysis, etc. Being a multidisciplinary research area, wavelets and framelets are useful for representing various functions and data. The great success of wavelets and framelets largely lies in their many desired properties such as multiscale structure, sparse representation, efficient approximation schemes, good time-frequency localization, and fast computational algorithms. Although wavelets are optimal for describing point-wise smoothness properties of univariate functions, they fail to efficiently characterize the subtle geometric phenomena of multidimensional singularities in higher dimensional functions. This limitation has led to several new constructions, in order to handle efficiently geometrical features of multidimensional signals. Among various directional representation systems such as ridglets, contourlets, curvelets, and shearlets, the shearlet system is more popular not only in view of applications but also extensive theoretical framework. The main objective of this project is to investigate more properties of Shearlet frames and Shearlet transform, not only theoretical but also their applications in different scenarios.

Stipend and duration: The amount of fellowship will be as per CSIR norm (www.csirhrdg.res.in). Initial appointment is for one year and co-terminus with the project.

Educational qualifications:

	JRF	SRF	RA
Essential Qualification	M.Sc. degree in Mathematics/or in equivalent degree, with 55% marks and passing of NET/GATE test*	M.Sc. degree in Mathematics/or in equivalent degree, and at least two years of post-M.Sc. research experience, as evidenced from published papers in standard refereed journals*	Ph.D. degree in Mathematics/or in equivalent streams with standard refereed publications *
	*Please visit here www.csirhrdg.res.in for terms & conditions.		
Desirable Qualification		Exposure to frame and wavelet analysis, wavelet transform, signal processing,	

How to Apply: Interested candidates are requested to send a detailed CV to **Dr. Niraj Kumar Shukla** (nirajshukla@iiti.ac.in) with subject line “Application for RA/SRF/JRF position” latest by **July 15, 2018**. Complete information with respect to such as year of passing, experience, marks etc. should be mentioned in the CV. Incomplete applications will be rejected.

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

Note: The Institute reserves the right to fill or not to fill the post advertised.