SHIV NADAR UNIVERSITY

Department of Mathematics
School of Natural Sciences
Shiv Nadar University

Applications invited for JRF in Mathematical and Computational Biology

DST-Funded Project

Applications are invited for one post of Junior Research Fellow in a DST funded project entitled "**Game-theoretic Approach of Modelling Antibiotic Drug Resistance as Self-Reinforcing Process by Social Factors and Economic Growth**" under the supervision of Dr. Samit Bhattacharyya, Department of Mathematics, School of Natural Sciences, Shiv Nadar University, UP 201 314.

Essential & Desirable Qualification

The applicant must have Post Graduate Degree in Applied Mathematics or Computer Science with NET qualification or B.Tech./M.Tech. (in any discipline with Mathematics minor) from a recognized University. Knowledge in Mathematical modelling / Dynamical systems theory / and Game theory should be excellent. Basic programming skills in C / MATLAB / R is required and experience in working on Unix / Linux OS is preferred.

Fellowship

As per DST norms, fellowship is ₹ 25,000/- p.m. plus HRA as permissible for first two years. There will be enhanced fellowship in the third year as ₹ 28,000/- p.m. plus HRA.

Duration

One year (extendable up to 3 years based on performance and availability of funds). Note that the post is purely temporary in nature.

Project Rationale

The project will focus on modelling Antibiotic Drug resistance. Antibiotic drug resistance is a global issue. The challenges associated with controlling drug resistance, particularly in Indian context, are many and multifaceted. Along with extensive use of antibiotics in hospitals and farming, several socio-economic factors also promote antibiotic use (misuse) in community. Here in this project, we take modelling approach to understand how socioeconomic factors promote emergence and persistence of drug resistance in community.

Nature of Study

We will use Mathematical and Stochastic modelling technique, and computer simulations to understand the dynamics at different level of the system.

Applications with complete bio-data (with details of qualification i.e. examination passed, year, division, percentage of marks 12th board onwards, and photocopies of mark sheets/ testimonials/ certificates)

should be sent by email to: lakshmi.arya@snu.edu.in. An informal query of details of the project may be asked to PI Dr. Samit Bhattacharyya (samit.b@snu.edu.in).

Last date for applying JRF in Mathematical and Computational Biology is 28th February 2017.

About Shiv Nadar University

Shiv Nadar University is a comprehensive, multidisciplinary, research-focused and student-centric institution that is bringing a paradigm shift in higher education in India through its innovative curriculum, interdisciplinary focus, and cross-disciplinary thinking across a wide range of disciplines. The University is building an eco-system of knowledge to promote recognition of the inter-connectedness of ideas, systems, and environments in the world inside the campus, and those outside it. The University has 5 Schools, 16 Departments and 6 Research Centers engaged in teaching, practice, and research in disciplines as diverse as Engineering, Humanities & Social Sciences, Management, Natural Sciences, Art, Design, Performing Arts, Communication, and Extended Education & Professional Development. The schools offer Bachelor, Masters, and Doctoral degrees along with multidisciplinary curriculum to enable students to explore subjects and disciplines that may be widely different from their chosen Majors.