Applications are invited for a position of SRF in a SERB funded research project (EMR/2016/001454) at IOP Bhubaneswar

Title: *Entropic and active forces on confined polymers: Organization and dynamics of bacterial chromosomes*

The candidate will work at IOP Bhubaneswar under the guidance of Dr. Debasish Chaudhuri.

Goal : *In this project we will explore a physical model of bacterial chromosomes using numerical simulations, and analytical calculations to understand chromosomal positioning, morphology, dynamics and segregation associated with the cell division. At short length scales the DNA can be modeled as a semi-flexible and self-avoiding polymer, dynamics of associated proteins involve diffusion, and stochastic attachment-detachment. The impact of molecular crowding and confinement will be analyzed.*

Duration: Initial appointment of the candidate will be for 6 months, extendable depending on satisfactory performance, availability of fund, and co-terminates with this project.

No. of Positions: 1

Fellowship: SRF emoluments, Rs. 35000/ per month, according to IOP, Bhubaneswar rules.
Accommodation : Campus accommodation will be provided subject to availability, else HRA will be provided as per the rule.

Essential Qualifications: M.Sc. in Physics

Desirable: Experience in molecular dynamics simulations, and a keen interest in Statistical Physics. The candidate is expected to be proficient in programming languages Fortran/c/c++ and familiar with unix/Linux based operating systems. Experience in handling molecular dynamics packages ESPResSo or LAMMPS would be of added advantage.

Candidates are requested to send a CV with a short write up about why they would be interested in the project to serb16_1454@iopb.res.in with a copy to the Director, IOP director@iopb.res.in.

Last Date of receipt of application : 20th February, 2020.

Institute of Physics, Bhubaneswar, India
group website: https://www.iopb.res.in/~debc/index.html