



The laboratory of **Living Matter and Biophysics (LIMBI), Institute of Materials Science and Nanotechnology (UNAM), Bilkent University, Ankara, Turkey** invites applications for a full-time fully funded PhD student to perform simulations on cellular and biological processes.

UNAM, National Nanotechnology Research Center and Institute of Materials Science and Nanotechnology is the first ranked national lab in Turkey in the field of nanotechnology and material sciences located in Bilkent University, Ankara. The laboratory of Living matter and biophysics, established since January 2021, has recently received the **European Molecular Biology organisation (EMBO) installation grant**. The successful applicant will enjoy a package including full PhD fund for up to 5 years, subsidized furnished housing in university campus as well as prominent opportunities such as travelling, conference participation provided by **EMBO**. Our group is also closely collaborating with Max Planck society in Germany and has started the first Max Planck Partner group in Bilkent university. We have access to domestic international HPC resources to perform our simulations.

Project description:

Living cells and cellular organelles are protected by lipid membranes that separates the cell interior from the surrounding cytoplasm and lets the cell communicate with its environment. Many cellular organelles regulate their functions and perform their tasks by remodelling their shape, a process which is mainly induced by biomolecules such as protein. It is thus central to understand how these organelles have attained their structure in the course of evolution and how they reorganize their shape to functions properly. Among these organelles mitochondria and Endoplasmic Reticulum (ER) have prominent roles in our cells as the cell fuel and lipid factories. The successful candidate will simulate a previously developed membrane model to understand how protein-induced membrane remodelling shapes mitochondrial and ER and how these shapes modulate organelles' functions. Applicants with different scientific backgrounds in engineering, physics, chemistry, in particular with a theoretical and computational attitude, having following skills are encouraged to apply.

Qualifications:

- Reasonable knowledge of a programming language such as C, Fortran, Julia, Python, Matlab, and etc. Being familiar with C is a plus.
- Interest and passion for computer programming and code development
- Preliminary knowledge of Molecular Dynamics and Monte Carlo simulations is an asset
- Good communication skills of spoken and written English

Salary: The salary is competitive to European standard and is negotiable depending on the applicant's qualification.

Planned start date: September 2022

Application deadline: The position is open till filled, The university application deadline for Fall semester 2022 is 31.5.222

Duration: Maximum 5 years

Full applications should include a curriculum vitae including publication list, a 1-page letter of motivation, list of references and should be emailed as a single PDF file to bahrami@unam.bilkent.edu.tr. For further info please visit:

<http://amir.unam.bilkent.edu.tr/positions/>