Institute of Physics of the Polish Academy of Sciences

OPEN POSITION

Job ID: #JOB 47/2019

Job Description

Job Title: Postdoc to perform numerical simulations pertaining to intrinsically disordered proteins

Job Summary:

The research project is about the multiscale and multiphase molecular dynamics of intrinsically disordered proteins and proteinaceous liquid droplets

Job Description:

The goal of the project is to perform systematic studies of single- and many-chain IDPs through a combination of coarse-grained and all-atom simulations to understand the mechanisms of aggregation and structural biases. The focus of the research will be on proteins related either to neurodegeneration (alpha-synuclein, tau) or with the memory consolidations (hCPEB3, Orb2). The ultimate goal of the research involving the coarse-grained model is to study systems of many IDPs, including the proteinaceous droplets. The droplets arise under the conditions of large molecular densities through the liquid-liquid separation. This results in compartmentalization into droplets that are necessary for the organization of vital processes. Examples include stress bodies, P-granules, nucleoli signaling complexes, and centrosomes. These so called membraneless organelles typically consist of many proteins and nucleic acids that are combined at a higher density than in the surrounding fluid, but they may also consist of just one kind of IDPs, especially in *in vitro* studies. The surface tension involved in the phase separation is generally small. The droplets undergo shape fluctuations and may combine through fusion. The purpose of the research is to understand the properties of the droplets consisting of one kind of proteins, in collaboration with biologists in Madrid. In particular, the main goal is to calculate the coexistence curves and the fluid parameters (surface tension, viscosity) for droplets made of different IDPs. Most of the studies will involve the in-house coarse-grained molecular dynamics package. Another possible goal will be to generalize the package to enable studies of protein-RNA systems. Required: good knowledge of numerical programing, background in biophysics or biochemistry.

Main research field: Physics

Sub Research Field: Biophysics

Career Stage: Experienced researcher or 4-10 yrs (Post-Doc)

Research Profile (details)**: Recognised Researcher (R2)**

Type of Contract: Temporary 24 months.

Status: Full-time

Salary: Depends on qualifications
From 7500 to 8400PLN/ gross per month (before taxes).

Contact

More information can be obtained from prof. Marek Cieplak (e-mail: mc

@ifpan.edu.pl).

Application details

Application deadline: November 15, 2019 **Later applications may also be considered.**

Required materials:

- Curriculum Vitae
- List of publications
- Consent to process your personal data
- Scan of M.Sc. Diploma

Scan of the Ph.D. Diploma (or of a document that states the date of the Ph.D. defence

All materials should be submitted in electronic form to the address: jobs@ifpan.edu.pl with Job ID in the subject.

DATA PROCESSING UNDER CONSENT FOR THE PURPOSES OF RECRUITMENT

Under Art. 13 sections 1 and 2 of the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Resolution), EU OJ L 119 of 04.05.2016, page 1, as amended, hereinafter referred to as "GDPR", we hereby inform as follows:

1. The Data Controller of the provided personal data is the Institute of Physics of the Polish Academy of Sciences, Al. Lotników 32/46, 02-668 Warsaw, phone (22) 116-2111, e-mail director@ifpan.edu.pl.
2. Contact details to the Data Protection Officer are as follows: e-mail iodo@ifpan.edu.pl
3. Your personal data shall be processed for the purpose of carrying out the recruitment process for the position of postdoc.
4. Processing of your personal data in scope of: full name, date of birth, correspondence address, information about education and course of past employment shall take place under Art. 22^1 § 1 of the Act of 26 June 1974 - Labour Code. In the scope in which you sent to us more personal data than indicated above, we process your data under the consent granted by you.
5. Your personal data shall be stored for 1 month from completion of the recruitment process. If you grant consent for processing of personal data for future recruitments, we shall process your data until withdrawal of the consent by you, however, no longer than for the period of 6 months from the day of submittal of the application by you.
6. Provision of the abovementioned data in the scope indicated above is a statutory requirement resulting from Art. 22^1 § 1 of the Act of 26 June 1974 - Labour Code, in the remaining scope it is voluntary. Failure to provide the data referred to in Art. 22^1 § 1 of the Act of 26 June 1974 - Labour Code precludes consideration of your candidacy for the offered position.
7. You have the right to access your personal data, to rectify them, erase them, restrict their processing.
8. You may submit a complaint to the Inspector General for the Protection of Personal Data.
9. You have the right to withdraw the consent to process your personal data in the scope in which they were provided at any time. Withdrawing the consent does not affect the lawfulness of processing carried out on the basis of consent before its withdrawal.

Consent content:

☐ *I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents for the purpose of carrying out the recruitment process for the position of postdoc .*

If you want us to consider your candidacy also in the future recruitment processes, please grant the additional consent:

☐ *I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents in future recruitment processes taking place during 6 months from the day of appearance of this job advertisement.*