



Institute of Physics of the Polish Academy of Sciences

Scholarship for a PhD Student



Job ID: #JOB17/2021

Job Description

Job Title: PhD student – scholarship holder

Job Summary:

Molecular dynamics of systems of the intrinsically disordered proteins

Job Description:

In recent years, there has been a tremendous interest in the properties of the intrinsically disordered proteins, primarily in the context of the neurodegenerative diseases. Oftentimes the aqueous solutions of these proteins undergo liquid-liquid phase transitions that result in the formations of the proteinaceous droplets. The droplets act as membraneless organelles that provide a more concentrated environment to perform various biological functions. The idea of the project is to use simulations to derive phase diagrams of such solutions and to understand how such droplets form and what are their properties. This project is done in parallel to the European PathoGelTrap H2020 grant that is focused on involving such droplets of chimeric proteins in the fish aquaculture to capture toxins that plague breeding of salmon and other species. The modelling will be based both on all-atom and coarse-grained simulations. The latter will be based on the available in-house programs.

Requirements:

- A willingness to learn and advance numerical skills.
- Research experience in theoretical physics, chemistry or computer science.
- Experience with biological issues
- Master's degree in physics, chemistry, biophysics (or an equivalent degrees).
- Sufficient proficiency in the English language that scientific interaction is not hindered.
- To be employed, the candidate must be accepted into the PhD school in which the Institute of Physics participates. Applications for the position are through recruitment to the School, online at <http://warsaw4phd.eu> .

Main research field: Physics

Sub Research Field: Biophysics

Career Stage: Early stage researcher or 0-4 yrs (Post-graduate)

Research Profile ([details](#)): First Stage Researcher (R1)

Type of Contract: Fixed term (48 months; the first 18 months will be paid by the NCN grant)

Status: Full-time

Salary: 4500 PLN per month (grant funding, before obligatory employer and employee social security contributions).

Contact

More information can be obtained from

Marek Cieplak (e-mail: mc@ifpan.edu.pl)

<http://www.ifpan.edu.pl/~cieplak/>

Please make contact.

Application details

Application deadline: 6.6.2021

Required materials:

- Scientific CV
- Cover letter
- Scan of MsC diploma or equivalent (or an explanation of when one is expected)
- Academic record (for finalized semesters)
- Recommended: A recommendation letter by an academic, or their contact email.

All materials should be submitted in electronic form by application to the PhD school <http://warsaw4phd.eu>, choosing the project: “Aggregation and gellation of the intrinsically disordered proteins”. (The application system will be active from 24 May 2021).

Results regarding the position will be made available by 9 July 2021.