CeNT-10-2026

Director of the Centre of New Technologies of the University of Warsaw, with the Project Leader, announce the opening of the competition for the position of Student in the Interdisciplinary Laboratory of Biological Systems Modelling – Centre of New Technologies of the University of Warsaw.

JOB OFFER

Position in the project:	PhD student
Laboratory:	Interdisciplinary Laboratory of Biological Systems Modelling
Scientific discipline:	Machine learning, engineering or chemical sciences, biology
Keywords:	coiled coil, engineering, structural biology, prediction, databases, AI
Job type (employment contract/stipend):	stipend
Number of job offers:	1
Maximum stipend amount/month:	A basic doctoral scholarship of: 6742 (4242 - doctoral scholarship paid by the Doctoral School + 2500 - by OPUS 28 NCN) PLN/month gross for the first 24 months and 8340,90 (5340,90 + 3000 respectively as above) PLN/month gross for the remaining 24 months This scholarship is offered to students who are accepted into doctoral school at UW, with examinations in July and applications due in early June.
Position starts on:	1 August 2026 or as soon as possible after that date
Maximum period of contract/stipend agreement:	48 months with possibility of extension
Institution:	Centre of New Technologies, University of Warsaw
Project leader:	Professor Joanna Sułkowska
Project title:	Design of coiled-coil and alpha/beta non-trivial protein folds that self-assemble in silico and in vitro.
Competition type:	OPUS 28
Financing institution:	NCN
Project description:	The aim of the project is to develop a new way of using proteins in non-native environments. The idea is to remodel or create completely new proteins, as material that can bolster protein stability in non-native environments, thereby enhancing their utility in diverse medicinal, commercial, and industrial applications. ● Typical approaches are to construct polymer–protein hybrids, where stabilization strategy involves designing synthetic random copolymers with compositions attuned to the protein surface. ● Another approach assumes programmable protein gelation in compositionally designed natural deep eutectic solvents (DES), which allows to stabilize non-native conformations by varying the solvent's inherent properties.

	The project is interdisciplinary and integrates aspects of artificial intelligence (AI), theoretical crystallography, engineering, structural biology, as well as both in vivo and in silico studies. Information on research conducted at the INTERDISCIPLINARY LABORATORY of BIOLOGICAL SYSTEMS MODELLING be found at: https://jsulkowska.cent.uw.edu.pl/ Please direct any questions to: jsulkowska@cent.uw.edu.pl
Key responsibilities include:	The role of the applicant will be to conduct ● designing new functional motifs coiled-coil in proteins and RNA ● or experimental investigation to develop a method/protocol to obtain a sample of new proteins and then determine the structure using either X-ray or cryo-EM methods. The results obtained will then be used as training data for the AI model so as to create state-of-the-art methods to design biomolecules. ● Submitting research reports ● Preparing manuscripts ● Presenting research at conferences
Profile of candidates/requirements:	The competition is open for persons who meet the conditions specified in the regulations on the allocation of resources for the implementation of tasks financed by the National Science Centre for OPUS 28 grant. The MSc degree should be obtained before the date of employment in the project. Requirements: - Confirmed status of a PhD student (on the date of starting work in the project at the latest). - Master's degree in chemistry (crystallography), biophysics, structural biology, machine learning, or related fields - Knowledge and experience in chemistry (crystallography), particularly in designing or obtaining compounds - or knowledge and experience in structural biology, particularly in a protein expression,, chromatographic methods of their purification, kinetics study. - alternatively, knowledge and experience in machine learning applied to biomolecules, database analysis - knowledge of knot theory and graph theory is an advantage - good command of English - high motivation and willingness to engage in scientific work
Required documents:	1. Cover letter; 2. Current curriculum vitae; 3. Lectures completed during the course of study with marks; 4. Copy of document confirming the student status; 5. Signed information on the personal data processing Before entering the competition, candidates are obliged to familiarise themselves with **Internal Reporting Procedure.**
We offer:	An opportunity to participate in a multidisciplinary project in one of the best scientific institutions in Poland. Stimulating, young and friendly work environment. Access to high quality structural biology laboratory, as well as, high-end computing equipment (CPU clusters). Opportunity to participate in various practical EMBO workshops.

Please submit the following documents to:	j.sulkowska@cent.uw.edu.pl
Application deadline:	1.04.2026
Date of announcing the results:	10.04.2026
Method of notification about the results:	e-mail, CeNT website