CFD specialist in the group of engineering and technical employees,

Institute of Turbomachinery

Lodz University of Technology is one of the finest universities of technology in Poland. Its tradition and experience in training professionals and conducting research date back more than 75 years. It is an attractive partner for business. It cooperates with largest national and international corporations. It conducts research of a European standard, develops new technologies and creates innovation in collaboration with the leading research centers all over the world. One of the pillars of the Lodz University of Technology management is equal treatment of staff regardless of their gender, age, race or other demographic and social characteristics. In 2016, TUL was the first technical university in Poland to receive the HR EXCELLENCE IN RESEARCH award certifying that the University adheres to the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

The Institute of Turbomachinery is a unit of the Faculty of Mechanical Engineering of the Lodz University of Technology, recognizable both in Poland and abroad. The organizational structure of the Institute includes 6 Scientific Divisions (with specialized laboratories) and a mechanical workshop. Both research projects and cooperation with domestic and foreign industry concern:

- computational and design works of turbomachines and their components,
- analysis and evaluation of possibilities to improve the currently achieved operating parameters of turbomachines and their operation systems,
- technical expertise to determine the causes of failures and methods of removing their effects
- operational tests of turbomachines in industrial installations,
- advice and consultation in planning energy generation investments, in supervising their implementation and during the operation of turbomachines,
- specialized courses and trainings for technical personnel.

The Institute of Turbomachinery can boast the implementation of innovative technologies, including the implementation of the design and optimization of aircraft propellers for the X3 multitask hybrid helicopter developed by AIRBUS HELICOPTERS and the gold medal for the invention "Wind turbine with vertical axis of rotation and variable geometry of blades" awarded at the 2nd World Exhibition Technology Expo. The employees of the Institute are the authors of numerous patented solutions. The Institute of Turbomachinery is also the organizer of the cyclical International SYMPOSIUM ON COMPRESSOR & TURBINE FLOW SYSTEMS - THEORY & APPLICATION AREAS - SYMKOM, attended by representatives of the world of science and industry.

1. *Requirements for the candidate (description of detailed knowledge, qualifications, competences and professional experience)*

    - possession of a master's degree or other degree enabling application to the Interdisciplinary Doctoral School (ISD),
    - meeting all the requirements for ISD candidates,
    - having documented scientific achievements in the discipline of mechanical engineering, with particular emphasis on achievements in the field of designing machines and devices or numerical simulations using the tools of numerical fluid mechanics or stress analysis,
    - experience in the implementation of industrial or research projects,

- having at least 1 publication in the journal from the list from the annex to the Communication of the Minister of Education and Science of 1 December 2021 on the list of scientific journals and peer-reviewed materials from international conferences,
- knowledge of English confirmed by a certificate at the level B2 or higher,
- documented foreign scientific or industrial internships, scholarships (including foreign ones), awards and distinctions will be welcome.

2. *Determination of working conditions and rights related to the position.*

The job offer concerns **the position of a CFD specialist** at the Institute of Turbomachinery at the Faculty of Mechanical Engineering, Lodz University of Technology, employed for the implementation of the project ***A FRONTrunner approacTransition to a circular & resilient future: deployment of systemic solutions with the support of local clusters and the development of regional community-based innovation schemes —*** an acronym **FRONTSH1P** under the H2020 Programme. We are planning full-time employment for a fixed period of 6 months, with a possibility of extension provided that the candidate is admitted to the ISD. The employment is planned to start in June 2022.

It is expected that the Lodz University of Technology at the time of employment of the Candidate will be his/her only place of work.

We offer:

- an opportunity to improve qualifications and training as well as develop a scientific career,
- favorable social conditions,
- a location in the city center with easy access and available parking site,
- work in a relaxed atmosphere.

3. *Description of the anticipated scope of tasks and responsibilities.*

A person employed as **a CFD specialist in the group of engineering and technical employees** will be obliged to:

- review scientific literature and prepare a description of the state of knowledge in a specific area falling within the discipline of mechanical engineering,
- develop 3D models and design flow channels,
- develop numerical models and simulate the flow of a high-viscosity medium in the channels, also using fluid-model wall interaction techniques,
- process the results, propose modifications of the research methodology depending on the development of the model, cooperate in reporting research results,
- participate in the teamwork.

To perform the above-mentioned scope of duties, it is necessary to show:

- motivation and very good organization of work,
- independence in action with simultaneous readiness for teamwork,
- an ability to develop and transmit information,
- an ability to present the results and conduct ongoing reporting on the work carried out,
- openness to new challenges and changes,
- high personal culture and interpersonal skills,
- accuracy in the performance of assigned tasks and an ability to adapt to procedures.

4. *List of required documents:*

1) a letter of application addressed to the Rector of the Lodz University of Technology;

2) a personal questionnaire for a person applying for employment at the Lodz University of Technology, constituting Annex 1.1 to the "OTM-R POLICY – OPEN TRANSPARENT MERIT-BASED RECRUITMENT";

3) a clause on the protection of personal data, constituting Annex No. 1.2 to the "OTM-R POLICY – OPEN TRANSPARENT MERIT-BASED RECRUITMENT";

4) a consent to the processing of personal data, constituting Annex No. 1.3 to the "OTM-R POLICY – OPEN TRANSPARENT MERIT-BASED RECRUITMENT";

5) copies/copies of diplomas;

6) other documents confirming the qualifications held.

5. *Place, form and date of submission of documents (with an indication of the possibility of their receipt).*

Application documents will be accepted until May 17, 2022 at the Secretary Office of the Institute of Turbomachinery, 217/221 Wólczańska Street, 93-005 Łódź, Poland (building B-13, second floor, room no. 208) and to the e-mail address: w1i12@adm.p.lodz.pl

In the case of sending documents by traditional mail, the envelope should be annotated "candidate's offer for job" and sent to the correspondence address: Lodz University of Technology, Institute of Turbomachinery, 116 Żeromskiego Street, 90-924 Łódź, Poland

6. *Details of the contact person and the postal and electronic address to which documents and their scans can be sent.*

In matters related to the competition, please contact the Secretary Office of the Institute of Turbomachinery, tel. 48 42 631-23-64, e-mail: w1i12@adm.p.lodz.pl

7. *Expected date of the competition adjudication.*

May 2022