



## **Assistant professor in the group of research workers, Department of Machine Dynamics, 2 positions**

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 the largest national and international corporations. It conducts research of a European standard, develops new technologies and creates innovation in collaboration with the leading research centres all over the world. One of the pillars of 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*.

### **1. The requirements to be met by the candidate:**

- doctoral degree in a scientific discipline: mechanical engineering or physics or applied mathematics or related disciplines,)
- Experience in laboratory work: measurements of dynamic quantities,
- Programming experience: C language, Matlab, Mathematica,
- Publications: at least one publication,
- knowledge of English (fluent in speech and writing),
- the candidate must meet the requirements contained in:
  - "Regulations on the allocation of funds for the implementation of tasks financed by the National Science Center in the field of research projects" constituting an annex to the resolution of the Council of the National Science Center No. 95/2020 of September 14, 2020,
  - "Regulations for awarding research scholarships in research projects financed by the National Science Center" which is an Annex to the resolution of the NCN Council No. 25/2019 of March 14, 2019.

Rights:

- possibility of developing a scientific career,
- trips abroad related to conducting research in European research centers,
- participation in national and international conferences,
- publishing scientific articles in journals with a high citation index (Impact Factor).

### **2. Specification of the terms and conditions of employment and authority associated with the position.**

- full time,
- work start date: July 1, 2024,
- The selected candidate will be employed for a period of 6 months (until December 31, 2024)
- Hybrid work. NO



### 3. Description of the expected responsibilities and duties.

The post-doc selected in this competition will participate in scientific and research tasks carried out in the project titled: "TYTUL", headed by Prof. Tomasz Kapitaniak, Ph.D.

Tasks included in the scope of responsibilities include:

- Registration of experimental time courses, identification of extreme events
- Development of optimal predictors of extreme events from data characterizing the system of coupled oscillators
- Identification of coexisting dynamic states (chimeric, coherent, incoherent) based on machine learning methods
- Testing various machine learning algorithms based on the "echo state" network method
- Development of methods for predicting extreme events based on a combination of machine learning and partial model identification
- conducting and documenting research activities and participating in the dissemination of the results of these activities,
- conducting practical classes (laboratories),
- participation in organizational work for the University and the unit.

### 4. List of the required documents:

- 1) application for employment to the Rector of Lodz University of Technology;
- 2) CV with contact details, including previous scientific achievements, in particular:
  - scientific experience gained in Poland and/or abroad,
  - participation in research projects,
  - publications in scientific publishing houses/journals,
  - the most important (max. 5) awards resulting from conducting scientific research,
  - scientific workshops/training.
- 3) personal questionnaire for a person applying for employment at Lodz University of Technology, as provided in Annex no. 1.1 to the OTM-R POLICY - OPEN TRANSPARENT MERIT-BASED RECRUITMENT;
- 4) Data Privacy Statement as provided in Annex no. 1.2 to the OTM-R POLICY - OPEN TRANSPARENT MERIT-BASED RECRUITMENT;
- 5) Consent to the processing of personal data, as provided in Annex no. 1.3 to the OTM-R POLICY - OPEN TRANSPARENT MERIT-BASED RECRUITMENT;
- 5) true copies/copies of diplomas;
- 6) other documents proving the qualifications.



**5. The place, manner, and deadline for submitting the documents** (as well as information concerning their return);

The documents should be sent electronically to the e-mail address of the secretariat of the Department of Machine Dynamics of the Lodz University of Technology [w1k13@adm.p.lodz.pl](mailto:w1k13@adm.p.lodz.pl) or by traditional mail to the following address: Department of Machine Dynamics of the Lodz University of Technology 90-924 Łódź, ul. Stefanowskiego 1/15 **until June 20, 2024**. What matters is the date of receipt of the documents at the Department of Machine Dynamics of the Lodz University of Technology. Candidates will be able to collect the documents submitted by them related to the competition for a period of 30 days from the end of the competition.

Persons who meet the formal and project requirements may be invited for an interview. Information regarding a possible job interview will be sent to job applicants by e-mail.

**6. Contact person** and postal and e-mail addresses to which documents or scans thereof may be forwarded; Contact person details and postal and electronic address to which documents and their scans can be sent: Teodora Kopacka [w1k13@adm.p.lodz.pl](mailto:w1k13@adm.p.lodz.pl).

**7. The expected date of the announcement of the decision.** 27.06.2024.

## Description of the profile of the unit announcing the competition

The Department of Machine Dynamics, Lodz University of Technology is the leading unit of the Lodz University of Technology dealing with mechanical engineering problems, including nonlinear systems, new methods of their analysis, extreme and synchronization problems.

## Description of the leading research undertaken in the unit

The development of methods for controlling chaos without feedback, the identification and description of new types of bifurcations, the identification of the synchronization mechanism in coupled mechanical oscillators and the explanation of the origin of randomness in a mechanical system are among his most important scientific discoveries. Synchronization of dynamic systems, chimeric states, stability and areas of attraction of solutions. The Department of Machine Dynamics is a multidisciplinary research group focusing on the applications of the theory of dynamic systems in science and engineering. The main activities beyond purely scientific ones are to build interactions between applied mathematicians, scientists and related researchers; building relationships between the Lodz University of Technology and other universities, industry and national laboratories; create international partnerships, collaborations and associations; increase the group's visibility as a major center of academic excellence.

**8. Other information: If documents are sent traditionally, the envelope should include the annotation "job candidate's offer".**



**PERSONAL INFORMATION FORM  
FOR APPLICANTS FOR EMPLOYMENT AT LODZ UNIVERSITY OF TECHNOLOGY**

1. First name(s) and family name.....
2. Date of birth.....
3. Contact details.....  
(provided by the applicant)
4. Education (where required for specific duties or jobs) .....  
(name of school and graduation date)  
.....  
.....  
(occupation, specialization, degree, professional title, academic title)
5. Professional qualifications (where required for specific duties or jobs).....  
.....  
.....  
(courses, postgraduate education, other forms of further development of knowledge and skills)
6. Employment history (where required for specific duties or jobs) .....  
.....  
.....  
(employment periods and jobs held at previous employers')
7. Additional personal information, where the right or the duty to disclose it exists under specific regulations.....  
.....  
.....

.....  
(place and date)

.....  
(signature of the applicant)



## Data Privacy Statement for job candidates

Pursuant to Article 13(1) and (2) of Regulation (EU) 2016/679 of the European Parliament and of the Council 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 Regulation, Official Journal of the EU L 119/1), hereinafter referred to as "GDPR", we inform you as follows:

Lodz University of Technology with the registered office in Lodz is the Controller of your personal data;

2) We have appointed a Data Protection Officer to supervise the compliance of personal data processing, who can be contacted in matters concerning the protection of your personal data at the following e-mail address: [iod@adm.p.lodz.pl](mailto:iod@adm.p.lodz.pl); telephone number: 42 631 2039; or in writing to the address of our registered office: Lodz University of Technology, Żeromskiego 116, 90-924 Łódź;

3) As the controller, we will process your data for the purpose of the recruitment process for the position indicated, based on your consent (Article 6(1)(a) GDPR);

4) You have the right to withdraw your consent to the processing of your personal data at any time, but such withdrawal shall not affect the lawfulness of the processing effected on the basis of your consent prior to its withdrawal;

5) You have the right to lodge an objection against the processing of the data as set out above at any time. We will cease to process your data for these purposes unless we can demonstrate that there are compelling legitimate grounds for us to do so which override your interests, rights, and freedoms, or that your data will be required for the possible establishment, assertion, or defense of claims;

6) Your personal data provided in the CV, personal information form for the applicant for employment, and copies of documents supporting your professional experience, education, additional credentials and qualifications will be processed for the period in which claims related to the recruitment process may arise, i.e. for 6 months following the conclusion of the recruitment process. For individuals who have given their consent to the processing of personal data for the purposes of future recruitment, for a period of 12 months following the conclusion of the recruitment process during which the consent has been given;

7) Only individuals authorized by the Controller to process your data in the performance of their duties will have access to your data;

8) Your personal data will not undergo automated processing and will not be subject to profiling;

9) Under GDPR, you shall further have:

a) the right to access your data and to receive copies thereof,

b) the right to rectification (amendment) of your data,

c) the right to erasure/to be forgotten, restriction of data processing,

d) the right to data portability,

e) right to file a complaint to the supervisory authority - President of the Personal Data Protection Office, Stawki 2, 00-193 Warsaw.

.....  
(date and signature of the candidate)



Politechnika Łódzka

Annex no. 1.3  
to The OTM-R POLICY – OPEN TRANSPARENT MERIT-BASED RECRUITMENT

**Consent of the candidate to the processing of personal data  
(pursuant to Article 7 GDPR)**

I consent to the processing of my personal data by Lodz University of Technology, the Controller of the data included in the following documents that I have submitted:

.....  
.....

for the purpose of recruitment/employment\*.

I hereby declare that I have been informed of the right to withdraw my consent at any time, effective as of the date of submission of the withdrawal of consent.

The Controller (or an authorized representative) has also informed me that the withdrawal of consent does not affect the lawfulness of the processing performed on the basis of the said consent prior to its withdrawal.

.....  
(date and signature of the candidate)

\* delete as appropriate.