Politechnika Łódzka

Assistant professor for research (PostDoc researcher in project funded by National Science Centre, Poland) Department of Automation, Biomechanics and Mechatronics

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

Formal requirements:
• PhD in one of the following branches of science: mechanics, applied physics, applied mathematics, computer physics obtained no earlier than 7 years;
• Do not have contract employment or will take an unpaid leave for the duration of employment in project;
• Do not receive any other form of renumeration from Polish National Science Centre,
• Fluent English language – allowing for communication and writing of research documents (obligatory);

Additional requirements:
• Confirmed publication of scientific papers related to modeling, dynamic analysis and/or synchronization of mechanical/dynamical systems in the scope indicated in the proposal.
• Knowledge in the field of:
- deriving the equations of state dynamics in various mathematical representations;
- programming numerical procedures in a script language and in a block form;
- solving ordinary and partial differential equations;
- modeling of vibrating systems with a small and large number of degrees of freedom;
- modeling and mathematical description of the phenomenon of resonance, synchronization, friction and time delays;
- recording results and performing experimental measurements;
- compiling research results and submitting publications to scientific journals. Confirmed publication of scientific papers related to modeling, dynamic analysis and/or synchronization of mechatronic systems in the scope indicated in the proposal.

2. Specification of the terms and conditions of employment

• Full-time position
• Expected employment duration up to 12 months
• Expected date of employment: March 1, 2024

Note: starting date can change in case of the need for additional employment permissions.

Authority associated with the position.
• the possibility of developing a scientific career;
• participation in national and international conferences;
• publishing scientific articles in journals with a high citation index.

3. Description of the expected responsibilities and duties

• conducting research related to the subject of the project;

• documenting the results in the form of publications in renowned scientific journals.

4. List of the required documents

1) application for employment to the Rector of Lodz University of Technology;
2) personal questionnaire for a person applying for employment at Lodz University of Technology, as provided in Annex no. 1;
3) Data Privacy Statement as provided in Annex no. 2;
4) Consent to the processing of personal data, as provided in Annex no. 3;
5) true copies/copies of diplomas;
6) other documents proving the qualifications.

5. The place, manner, and deadline for submitting the documents

Applications should be sent in form of PDF files by email to Secretariat of Department of Automation, Biomechanics and Mechatronics w1K11@adm.p.lodz.pl by January 3, 2024. For easier identification please use the following notation in the topic of email „OPUS18_PS_R23"

6. Contact person

Magdalena Jastrzębska w1K11@adm.p.lodz.pl

7. The expected date of the announcement of the decision 10.01.2024

8. Information materials for the candidate:

This job offer concerns employment for PostDoc researcher position in the project funded by National Science Centre - OPUS 18: „Nonlinear vibrations of coupled self-excited oscillators with parametric/auto-parametric excitation and non-ideal energy sources" (project description available in Annex no 4). The main research focus of will be:

- Deriving suitable mathematical models for exploring nonlinear phenomena in the selected mechanical/mechatronic systems;
- Uncovering parameter regions for unexpected behaviors like Hopf bifurcations, chaos and multistability. A focus should be paid on the coexistence of attractors (or multistability) since the multistable dynamics of the mechanical oscillators, in some cases, can be desired;
- In the case of undesired multistability in the considered dynamical problems, design of a controller that will enable the system to have a single stable state;
- Study of effects of the parameters of the mechanical oscillators on the energy released by the considered system during their vibrations
- Validate experimentally the results obtained from some of the considered mechanical oscillators.

Annex no. 1.1

Politechnika Łódzka

**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…………………………………………………………………………..
<center>(provided by the applicant)</center>
4.   Education (where required for specific duties or jobs) ………………………………….
<center>(name of school and graduation date)</center>
……………………………………………………………………………………………
……………………………………………………………………………………………
<center>(occupation, specialization, degree, professional title, academic title)</center>
5.   Professional qualifications (where required for specific duties or jobs………………….
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<center>(courses, postgraduate education, other forms of further development of knowledge and skills)</center>
6.   Employment history (where required for specific duties or jobs) ………………………
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<center>(employment periods and jobs held at previous employers')</center>
7.   Additional personal information, where the right or the duty to disclose it exists under specific regulations…………………………………………………………………………….
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     (place and date)   (signature of the applicant)

Annex no. 1.2

Politechnika Łódzka
90-924 Łódź, ul. Żeromskiego 116
tel. 42 636 55 22, fax: 42 636 56 15, www.p.lodz.pl

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; 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)

**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.