Lodz University of Technology
Department of Automation, Biomechanics and Mechatronics

POST-DOC RESEARCHER

Requirements:

1. **Formal (according to the rules of the NCN OPUS14 project):**
   - Obtained a doctoral degree no earlier than 7 years before the year of employment in the project;
   - 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 remuneration from Polish National Science Centre.

2. **Following from project requirements:**
   - have a degree of doctor of sciences in the field of mechanics, electrical engineering, applied physics or applied mathematics;
   - proven scientific achievements and experience in the field of nonlinear dynamics (especially of mechanical, electromechanical or mechatronic systems);
   - good knowledge and experience in the use of both modern analytical and numerical methods applied in nonlinear dynamics;
   - good knowledge of the English language (also in technical terminology);
   - knowledge of program SCILAB/XCos, MATLAB/Simulink, Mathematica or similar software;
   - other advantage will be experience in the area of modelling and/or identification of mechanical, electromechanical or mechatronic systems

Job Description

The duties of the person employed for this position will consist of conducting works of the entrusted by the Head of the Project and specified in the schedule of the project National Science Centre - OPUS 14: „Modeling and nonlinear dynamics of magneto-electromechanical systems" followed by documentation of their results in the form of publications in reputable scientific journals. They include:

- the use of analytical and/or numerical methods devoted to nonlinear dynamics of discrete mechanical and electromechanical systems;
- using SCILAB/XCos, MATLAB / Simulink and/or Mathematica environment for development of software for analytical and/or numerical analysis of nonlinear dynamics of lumped mechanical and electromechanical systems;
- development of mathematical models and identification of mechanical and electromechanical systems;
- analysis of bifurcation, resonance, synchronization and energy flow in mechanical systems with magnetic interactions, electric/magnetic springs/actuators and systems of parametric/spring pendulums embedded in electric and magnetic fields.
- the primary criterion for evaluation of the tasks implementation will be the papers published in journals from the JCR list.
- expected is also close cooperation with other investigators, including the exchange of information, participation in the analysis, development and preparation of the presentation of research results.

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Employment conditions:

- Full-time position
- Expected gross: about 7000 PLN (with taxes and statutory premium) - allowing for comfortable life in Poland,
- Expected employment duration up to 12 months
- Expected date of employment: January 2020

Please note that starting date and duration of employment can change in case of the need for additional employment permissions.

Required documents:

- application for employment addressed to the Rector of the Technical University of Lodz;
- CV (no longer than 1 page A4);
- list of achievements and scientific achievements (containing, among other: publications in reputable journals, awards resulting from academic research, scholarships, awards and research experience gained outside the home scientific unit in the country or abroad, workshops and scientific training, participation in research projects);
- diploma certifying possession of a doctoral degree;
- references from at least one independent researcher, along with his contact information.

Applications can be send as an e-mail titled "OPUS-14" with attached PDF to address K-16@adm.p.lodz.pl or in form of a hardcopy posted to the following address:

Prof. Jan Awrejcewicz
Head of Department of Automation, Biomechanics and Mechatronics,
Lodz University of Technology
1/15 Stefanowskiego Str., 90-924 Lodz
POLAND

Deadline: September 30th, 2019, 23:59*

Short description of the project available on the website:
in Polish:
https://ncn.gov.pl/sites/default/files/listy-rankingowe/2017-09-15/streszczenia/391574-pl.pdf
or in English:
https://ncn.gov.pl/sites/default/files/listy-rankingowe/2017-09-15/streszczenia/391574-en.pdf

WARNING!
* The date of receipt is decisive. Applications received after the deadline will not be considered. Department reserves the right to contact only candidates selected for the second stage of qualification, without notice to the other participants.

Lodz University of Technology, registered office Poland, 90-924 Łódź, ul. Żeromskiego 116, as the personal data administrator, informs that personal data of candidates for work will be processed only for the purpose of recruitment for the Post-Doc Researcher position. The candidate has the right to access the data contents and correct them, providing the data is voluntary. In the case of providing data in a wider scope than that resulting from art. 22^1 § 1 of the Act of June 26, 1974. The Labor Code (Journal of Laws of 1998 No. 21, item 94, as amended), please insert the consent clause in the documents sent for the processing of personal data