

FORM FOR EMPLOYERS

INSTITUTION: AGH – University of Krakow

DEPARTMENT: Faculty of Mechanical Engineering and Robotics, Department of Robotics and Mechatronics

CITY: KRAKOW

POSITION: Assistant professor in the group of research workers at the Department of Robotics and Mechatronics

DISCIPLINE: mechanical engineering, civil engineering and transport

POSTED: 16.05.2024

EXPIRES: 20.06.2024

WEBSITE: www.agh.edu.pl/o-agh/praca-w-agh

KEY WORDS: lunar regolith, lunar simulant, habitat

DESCRIPTION (field, expectations, comments, requirements):

In recent times, many research centers have been planning for a permanent human presence on the Moon, which is likely to occur within a decade. Ensuring proper living and working conditions for the inhabitants of a lunar base will require significant engineering effort related to the extraction of regolith, its processing, the construction of mines, landing sites, habitats, warehouses, and facilities related to fuel production. Such undertakings will be conducted in very unfavorable conditions and with minimal availability of materials and components brought from Earth. The only possible solution is to use exclusively locally available resources on the Moon. Understanding the properties of regolith, the fragmented lunar rock, and their interaction with other bodies, as for instance excavators, is essential for creating basic living conditions for humans in future missions focused on long-term stays. For this purpose numerical models can be used to simulate the mechanical behaviour of the lunar soil. Nonetheless, numerical models need extensive validation programs that entail the comparison of numerical results with a large set of experimental results. Thus, the research fellow will specifically deal with the following main tasks:

- 1) researching the properties of lunar simulants,
- 2) conducting experiments with a triaxial compression apparatus,
- 3) conducting experiments with a direct shear apparatus,
- 4) reporting progress in the implementation of assigned project tasks,
- 5) writing and publishing articles in international journals indexed in the JCR database.

REQUIREMENTS:

- 1) doctoral degree in technical sciences in the fields of mechanical engineering, or civil engineering and transport, obtained no later than 10 years before assuming this position,
- 2) documented scientific achievements, particularly publications in renowned international journals, conference proceedings from leading conferences, and previous involvement in the implementation of national and international research projects,
- 3) Hirsch Candidate Index at a minimum level of 6,
- 4) experience in the research of lunar regolith or lunar simulant materials, with at least three publications indexed in the Scopus system on this topic,
- 5) good knowledge of materials research, including non-destructive testing,
- 6) knowledge of English at B2 level or higher,
- 7) list of scientific and organizational achievements.

REQUIRED DOCUMENTS:

1. Cover letter,
2. CV,
3. personal questionnaire,
4. Full list of scientific and organizational achievements,
5. Document confirming language knowledge at B2 level or higher.

DOCUMENTS SUBMISSION:

Candidates must send documents in electronic form to the e-mail addresses alberto.gallina@agh.edu.pl (Alberto Gallina - project manager from AGH)

The AGH University will be the candidate's main place of employment.

The AGH University of Krakow does not require you to provide any information or data other than those resulting from the applicable law (name/names, surname, date of birth, contact details, education, professional qualifications, and employment history). However, if you choose to include your photograph or any other information, please fill in and attach this statement of consent to the processing of personal data, which constitutes an attachment to this information.

The controller of your personal data processed in order to carry out the recruitment process for the above-mentioned position is the AGH University of Krakow, al. A. Mickiewicza 30, 30-059 Krakow. You can read all information concerning the processing of your personal data on the website of the AGH University of Krakow after going to the "Personal data protection" tab (<https://www.agh.edu.pl/en/personal-data-protection>).

The University reserves the right not to settle the competition without providing any reason or justification. Winning the competition is not tantamount to ensuring the candidate's employment. The result of the competition serves solely as a recommendation to the Rector in this regard. The final decision concerning the employment will be made by the Rector.

Cracow, on

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name and surname

CONSENT TO PERSONAL DATA PROCESSING
(recruitment - employee)

Pursuant to Article 6(1)(a) of the Regulation (EU) 2016/679 of the European Parliament and of the Council of April 27, 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), [OJ EU. L. 2016.119.1, May 4, 2016] hereinafter referred to as "GDPR", **I consent to the processing of my personal data other** than the data mentioned in Article 22¹ § 1 of the Labour Code and contained in my CV and other application documents, and to the reproduction of my physical likeness **for the purposes of recruitment and selection for the position of** (contest notice no.).

In addition, I declare that the request for consent has been presented in a clear and understandable manner and that I have been informed about a possibility of withdrawing my consent at any time as well as about consent accountability. The withdrawal of consent to have personal data processed shall not affect the legality of the processing, which is carried out on the basis of such consent prior to its withdrawal; The consent may be withdrawn by submitting a written representation on consent withdrawal at a place that was indicated in the contest notice as the place for submitting documents.

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Date and signature