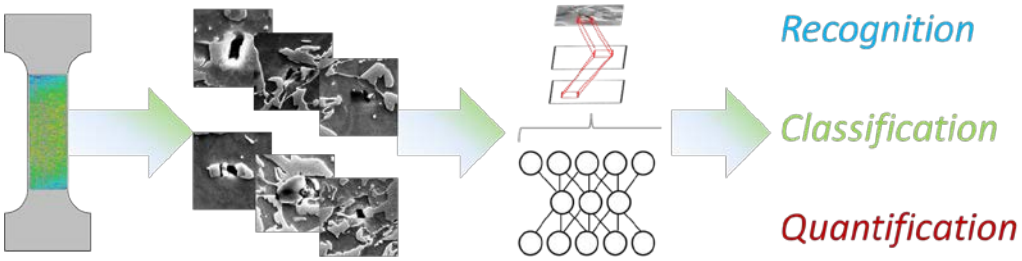
Post-Doctoral researcher

Institute of Physical Metallurgy and Metal Physics (IMM)

Machine Learning in Materials Physics



About us:

Research at the Institute of Metallurgy and Metal Physics at RWTH Aachen University focuses on fundamental and applied materials physics. Materials are characterized, modelled and optimized in interdisciplinary collaborations at national and international level and using state-of-the-art equipment for experiments and simulations.

We are looking for:

An enthusiastic candidate with excellent background in machine learning and an interest in materials science who

- holds a doctoral degree in Physics, Materials Science, Mathematics or Engineering
- has established expertise in modern machine learning libraries such as TensorFlow and Keras or PyTorch, ideally with a track record in developing and applying neural networks, image processing and convolutional neural networks
- possesses good programming skills in python
- is familiar with Linux and modern principles of software development, code and data management and
- has a very good command of English and German and enjoys working in a team

Your responsibilities:

The knowledge-driven development of new materials, improvement of processing strategies and component design is increasingly based on detailed descriptions of the underlying damage mechanisms inside the material's microstructure. At the IMM, initial machine learning environments have been developed and tested which show that much larger datasets could be acquired and analyzed to improve the ways in which we study and understand materials' deformation. In this context, we would like to advance existing microscopy and analysis methods towards the interrogation of larger and therefore much more relevant areas. As a Post-Doc in this area, you would drive this research further to expand its reach and versatility in close collaboration with the materials scientists at IMM and within the scope of research topics including safety conscious lightweight design and high performance materials.

We offer:

The position is offered on a temporary contract for a fixed term of initially 12 months (full-time) and is to be filled as soon as possible. The salary is based on the German public service salary scale (TV-L EG13). The RWTH Aachen University is certified as a "Family-Friendly University". We particularly welcome and encourage applications from women, disabled persons and ethnic minority groups, recognizing that they are underrepresented across RWTH Aachen University. The principles of fair and open competition apply and appointments will be made on merit.

Your contact person:

For further information or application, please contact Prof. Dr. Sandra Korte-Kerzel (korte-kerzel@imm.rwth-aachen.de) or Dr. Talal Al-Samman (al-samman@imm.rwth-aachen.de)

Applications accompanied by supporting documentation in English (Cover letter, CV, certificates, credentials, names and addresses of 2 references) should be submitted **as soon as possible.**

Institute of Physical Metallurgy and Metal Physics

Rheinisch-Westfälische Technische Hochschule Aachen

8 January 2019

Institut für Metallkunde und Metallphysik

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