

At the **Faculty of Nuclear Science and Physical Engineering**, Department of Materials, group of Prof. Miroslav Karlík, we have a job opportunity for a

**Junior researcher (Postdoc),**

with the specialty of fatigue and fracture. The position is offered for 17 months, starting on February 1st, 2022, at the latest.

The Department of Materials recently purchased a new hydraulic biaxial loading system for fatigue testing. The fatigue crack path is monitored using Digital Image Correlation. Other equipment related to the task comprises scanning electron microscope, laser confocal microscope, micro and nanoindenters, Finite Element Method (FEM) software, MATLAB software.

Our research is within the European Regional Development Fund project “Centre of Advanced Applied Sciences – Multidisciplinary Research Programme for Materials”.

The concerned task aims to characterize the effect of the biaxial stress state on fatigue crack propagation in conventional and additive manufactured (3D printed) metallic materials.

The candidate will participate in running biaxial fatigue tests, fatigue crack measurement and crack path reconstruction, scanning electron microscopy, quantitative (computer-aided) fractography, and finite element modeling.

Candidates should hold an excellent University degree in natural sciences (e.g. material sciences, physics, or chemistry) as well as a Ph.D. Previous experience in the field of elastoplasticity, fracture mechanics, FEM, and MATLAB programming is necessary. Experiences in fatigue testing and scanning electron microscopy are welcome. Excellent language skills in English, flexibility, and teamwork ability are required.

The remuneration will be 63 500 CZK/month (approx. 2 450 EUR, a very good salary for the Czech Republic with relatively low living costs).

Eligibility criteria: A Ph.D. thesis defended in 2014 or later and at least two publications in Web of Science or Scopus in the last three years (2019-2021). Applicants are requested to send their motivation letter, CV, list of publications, and a name of a distinguished scientist for a reference to Prof. Miroslav Karlík, E-mail: [Miroslav.Karlik@fjfi.cvut.cz](mailto:Miroslav.Karlik@fjfi.cvut.cz).

The deadline for application is October 31, 2021.