

PhD Position Simulation

Reference No.: MCL_226

Materials Center Leoben (MCL) supports numerous companies in the production sector developing high-performance materials, manufacturing processes and products. MCL designs specific computer-aided technologies in order to accelerate innovation processes in manufacturing companies as well as to support the digitalization of the value chain and products. Our portfolio includes cooperative research and development projects with international and national partners from the production and research sectors as well as several consulting, laboratory and simulation services in materials science.

Digital Twin for the microstructure and property optimized manufacturing of Ni-base superalloy components for aerospace industry

*These topics inspire you or you are already familiar with them?
Then you are the right person for this position!*

What are we looking for....

- Academic degree (master equivalent) in engineering or science such as materials science, mechanical engineering, physics, etc.
- Experience with numerical simulation, especially with Finite-Element simulation.
- Programming skills in Python, Fortran, C/C++, or equivalent desirable.
- Knowledge of microstructure modeling desirable.
- Interest in close cooperation with experimental and numerical partner groups required.
- Good communication skills in English.
- Scientific curiosity, team skills, self-initiative.
- Mobility for business trips to company partners and international conferences.

Your challenge...

- Development of numerical models for the microstructure and property evolution during forging and heat treatment of components.
- Planning, coordination and evaluation of accompanying experimental investigations.
- Implementation of the models and creation of a Digital Twin by combining the real and the digital world.
- Preparation of the Digital Twin for identification of optimized manufacturing parameters in view of a) final microstructure & properties and b) carbon footprint.

Our offer

An employment contract with start in October and a (min.) gross monthly salary of € 3.058,45.

*Please send your complete application documents by email.
We are looking forward to knowing you!*

bewerbung@mcl.at