

Materials Center Leoben (MCL) - with a staff of 180 highly specialized employees - 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. MCL's 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.

To strengthen our team, we are looking for someone with the following qualifications and responsibilities:

## PhD Position

### Finite element based Digital Twin of the manufacturing process of Ti-6Al-4V components

Reference-n°.: MCL\_198

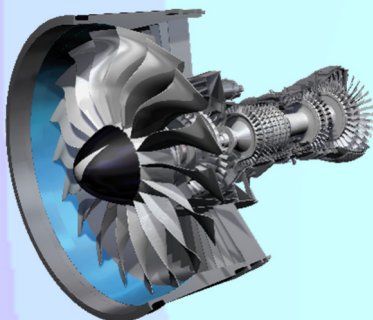
## Aerospace parts – residual stresses – distortion optimization

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

#### What do we need?

- Academic degree (master equivalent) in engineering or science such as materials science, mechanical engineering, physics, etc.
- Knowledge in plasticity and modeling of the formation of residual stresses.
- Experience with numerical simulation desirable, especially with Finite Element simulation.
- Good oral and written communication skills in English.
- Scientific curiosity, team skills, self-initiative.
- Mobility for business trips to company partners and international conferences.

**We are working worldwide in strong cooperation with well-known scientific- and company partners**



#### Your tasks?

- Development of numerical models for the plastic deformation and residual stress formation during forging of components.
- Planing, 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.
- Close coordination with second PhD student regarding machining and related distortion phenomena after forging.

#### Our offer:

A permanent employment, with start in October and a gross monthly salary of € 2.971,39 (14 times per year). Please send your complete application documents. We would be pleased to get to know you!

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