12-month Postdoc

The *Laboratoire d'Étude des Microstructures et de Mécanique des Matériaux*, LEM3, was founded in 2011 by merging two CNRS laboratories located in Metz (France). From this fusion has emerged a center for transdisciplinary experimental and theoretical research combining mechanics of solids and metallurgy, materials science, chemistry, and physics, to ensure a better visibility of research in France and an effective knowledge transfer to industrial partners, while maintaining the balance between basic and applied approaches. The *Ingénierie des Microstructures, Procédés, Anisotropie, ComportemenT*, IMPACT department studies microstructures (with their 3D topology) and crystallographic textures (at micro- and macro-scales) of polycrystalline materials, with focus on changes induced by phase transitions during thermal, mechanical and/or physical processing, to better understand how the changes alter macroscopic behavior of materials, especially their anisotropy.

The *Centre Interdisciplinaire de Microscopie Électronique*, CIME is a central facility in electron microscopy dedicated to studies in solid state physics, material science and life sciences gathering most of the *École Polytechnique Fédérale de Lausanne*, EPFL (Switzerland) equipment for electron microscopy together with an experienced staff. This situation leads to the availability of the widest set of observation techniques at a minimum cost of investments. It guarantees to all persons interested in electron microscopy – researcher or students of EPFL, co-workers of other universities or private laboratories – to get access to the best-suited technique for their purpose. To stay competent and open-minded to the user questions, CIME leads its own research and development activity.

To support our research, we are looking for a

12 month Postdoc

Characterization and 3D reconstruction of deformation defects in TiAl based alloys observed by Scanning Electron Microscopy (SEM)

Your tasks

- You will perform detailed analyses of deformation microstructures.
- You will mainly work with SEM. You will develop and explore cutting-edge techniques for characterizing defects.
- You will interact with computer scientists, engineers and researchers from several countries.
- You will share your time between Metz (France) and Lausanne (Switzerland).
- Your results will be discussed in the framework of materials plasticity particularly on TiAl based alloys.

Your profile

- You should be a PhD in materials science. (PhD defense in 2014, 2015, 2016 or 2017)
- You should have good knowledge of deformation physics and plasticity of materials.
- Experience with electron microscopes is expected.
- As you will be part of international teams, good communication skills in English and teamwork practices are expected.

We offer

This is a 12-month postdoc position. Extension to 24 months may be possible.

For further information and application, please contact:

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LEM3 · cnrs · Grand Est ALSACE CHAMPAGNE-ARDENNE LORRAINE · EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE · CiMe Centre Interdisciplinaire de Microscopie Électronique