

Materials Center Leoben Forschung GmbH (MCL) is an internationally active research institution specializing in materials research along the whole product value chain starting from the materials synthesis, proceeding with the processing of products and concluding with their in-service behavior until the end of the product life time. MCL is carrying out long-term research and development projects in cooperation with a total of some 150 industrial and scientific partners as well as laboratory, computational and advisory services.

3D characterization in material science displays an emerging field. The announced PhD thesis is embedded in this hot topic where the development of advanced 3D imaging methods shall pursue novel insights regarding material properties, functionality and technological applications.

To strengthen our team, we are looking for someone with the following area of responsibility or requirement profile:

PhD Thesis

Development of an Advanced Toolbox for 3D Image Analysis in Material Science

Reference-n°.: MCL_109

Tasks:

- *Work within an interdisciplinary research environment directly connected to the industry and renowned research centres in Europe.*
- *Develop and apply an image segmentation toolbox for 3D characterization.*
- *Work on data obtained from methods like high resolution X-ray computed tomography, synchrotron tomography, FIB-tomography, scanning acoustic microscopy.*
- *Link experimentally performed work with analysis.*
- *Deal with e.g. graph- or morphological-based segmentation algorithm.*
- *Evaluate possibilities and limitations of the methods.*

Requirements:

- *Education: master´s degree in mathematics, informatics, physics, or similar*
- *Hard skills: background in image processing, programming skills e.g. Python or similar, Matlab; interest in applied science; curiosity for both experimental and theoretical work.*
- *Soft skills: Initiative, scientific curiosity, team-minded, highly structured working*

Additional Information:

- *Supervisor: priv. Doz. Dr. Roland Brunner*
- *Expense allowance: 2.731,00€*
- *period: 36 months*
- *Start of work: as soon as possible*
- *Leoben*
- *employment*

Please send your complete application documents by post or email to:

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