



Faculty of Applied Science
Department of Aerospace and Mechanical engineering
CGEO – Computational Geometry
Prof. Eric Béchet



Université de Liège

DOCTORAL / POST-DOCTORAL POSITION
SIMULATION OF THE BEHAVIOUR OF MICRO/NANO-
STRUCTURED MATERIALS DESCRIBED BY 3D TOMOGRAPHY

The proposed research project is about the determination of the behaviour of micro / nano-structured materials (e.g. mechanical or electromagnetic shielding properties), starting from 3D images obtained with adequate scanners. As such, the images can't be used as an input for the computations involving finite elements or the extended version of those. Thus, a fair amount of treatment is needed. The tasks involved in this position include geometrical analysis of the 3D images, generation of datasets which are suitable for the computations (meshes, level-sets fields ...), computations using novel numerical techniques (X-FEM)

KEYWORDS :

MULTISCALE SIMULATIONS, MESH GENERATION, LEVEL-SETS METHOD, EXTENDED FINITE ELEMENTS METHOD,

Ideally, the candidate holds a Ph.D or an equivalent degree in mechanical engineering or a related field. Outstanding candidates holding a Master of Sciences (M.Sc.) or an equivalent degree will also be considered for a Ph.D. scholarship

The initial appointment is for one year and opportunities for subsequent terms will be given. The project as a whole runs for 4 years.

Interested candidates may communicate with me and/or send a resumé at the email address below.

Institut de Mécanique (B-52/3) – Campus Universitaire du Sart-Tilman
Chemin des Chevreuils, 1
B-4000 Liège 1 (Belgique)
Phone : +32-(0)4-366 9165
Email : eric.bechet@ulg.ac.be