



**12 months post-doctoral position opened from January 2015 at
Unité de Mécanique – Matériaux et Structures, ENSTA-ParisTech, Palaiseau, France**

Supervised by Dr Anne-Lise GLOANEC

anne-lise.gloanec@ensta-paristech.fr

Fatigue Crack Growth Behaviour in TiNi Shape Memory alloy

Today, Fatigue Crack Growth (FCG) behaviour of the TiNi Shape Memory alloy is one of the behaviours which are not well studied.

The scientific objective of this work is to find out the control parameters of FCG modelling. To realize this objective, it will be necessary first to understand and to master the influence of the phase transformation on this behaviour. By adopting an experimental approach with coupling FCG tests and microstructural observations, the influence of the phase transformation on the speeds of propagation of cracks, on the tenacity of the material and/or on the fatigue crack threshold will be determined. Beyond the microstructural conditions favoring the damage and so impacting on the FCG behavior, it is also necessary to take into account the local mechanical fields around the crack. So this deformation field will be measured by using image (Digital Image Corelation).

A PhD in the field of fatigue would be appreciated, as well as a significant experience in experimental mechanics.

To apply, please send a CV, including names of referees and a publication list as well as a motivation letter.