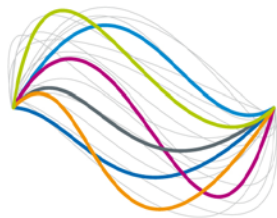


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Job title	PhD in Design, Fabrication Characterization and Numerical of metamaterials for mechanical and optical applications
Job type	PhD
Contract duration	36 months
Estimated net salary per month (€)	1400 €
Qualifications	Master
Desired skills and Experience	mechanics, optics or physics
Areas of research	mechanics, elasticity, metamaterials, FEM, COMSOL
Job hours (full time/ part time)	Full time
Employer	UBFC
Host Laboratory	FEMTO-ST
URL Host Laboratory	http://www.femto-st.fr/
Job description	<p>In the last few years, many companies emerged with 3D printing and have become the real threat to advanced precision mechanics. The printed structures could be easily personalized and thus be very competitive for small series of fabrication. What is the current use and potential output of such materials? Controlling deformations (under external or internal stress) and wave propagation in mechanics is the “holy grail”. An elegant way to design functionalities is transformational elastodynamics. It requires that one can design a metamaterial (new materials) with an extreme, anisotropic and non-symmetric elasticity tensor. In this thesis, we will focus on Design, Fabrication (Direct Laser Writing), Characterization (MEMS Analyser) and Numerical modelling (FM COMSOL, Ansys, Matlab) of metamaterials for mechanical and optical applications. This thesis will give a solid base on how to build required materials out of a single component. Additionally, it will show how, friction, buckling, rotations and anisotropy can help in building new devices to control wave propagation or its absorption.</p> <p>Supervisors: -Muamer Kadic -Vincent Laude -Khelif Abdelkrim</p>
Application	PhD Position Please send the following documents (all in one PDF file) by e-mail to sophie.aupet@ubfc.fr :



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	<ol style="list-style-type: none">1) For EU candidates: Copy of your national ID card or of your passport page where your photo is printed. For non-EU candidates: Copy of your passport page where your photo is printed.2) Curriculum Vitae (1 page).3) Letter of motivation relatively to the position (1 page).4) Copy of your Master degree if already available.5) Copy of your final marks and ranks.6) Coordinates of reference persons (maximum 3, at least your master thesis supervisor): Title, Name, organization, e-mail.
Application deadline	Nov. 17 th 2017
Anticipated start date	Before Fev. 2017