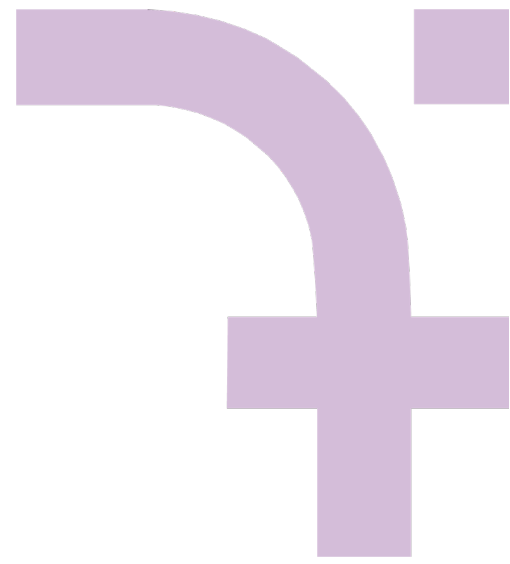




## AUFFRAY Nicolas

Friday, May 17, 2024 – 13h00  
DMA Meeting Rooms

2022- Professeur, Sorbonne Université  
2011-2022 MCF, Université Gustave  
Eiffel



## Harmonic Decomposition of Tensors: Application to the Mechanics of Architected Materials

An architected material is one in which the matter is organised on several scales between the microstructure and the microstructure. It is a system halfway between a structure and a material. We will adopt this second model and move towards generalised continuous media to describe its effective elastic behaviour. As we shall see, the associated formalism implies high-order tensors involving numerous material coefficients whose interpretation is not immediate. To give structure to all this, we will introduce a theoretical tool called "harmonic decomposition". This tool reveals and analyses the couplings at work in these high-order behaviour tensors.