

Thesis subject

Nicolas Auquier

The thesis project in acoustics is concerned with the modelization of "unconventionnal" coupling within homogenized multilayer materials, for example : interface relative sliding ; openings and local heterogeneities between two layers ; non-linear coupling, are all coupling conditions that aren't modelized so far. The PhD work in collaboration LTDS/LVA and funded by the LabEx CeLyA, aims to provide the theory formalism necessary to describe these local phenomena, thus solving problematics commonly met with multilayer materials, in the industry for instance. The implementation of the vibro-acoustic behavior for such structures will eventually be optimized according to local dynamics. The generated results will yield more reliability to vibro-acoustic analysis in multilayer materials vibrations.