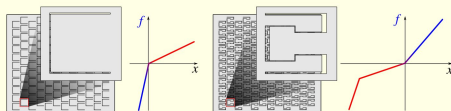
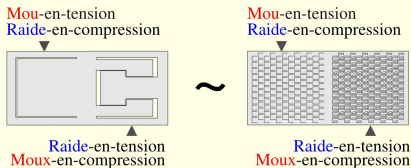


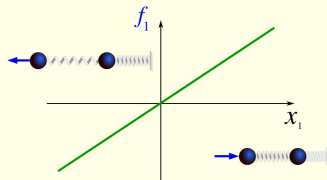
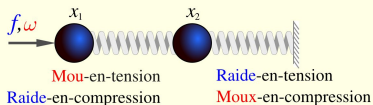
1 Motivation: nouvelle classe des matériaux architecturés



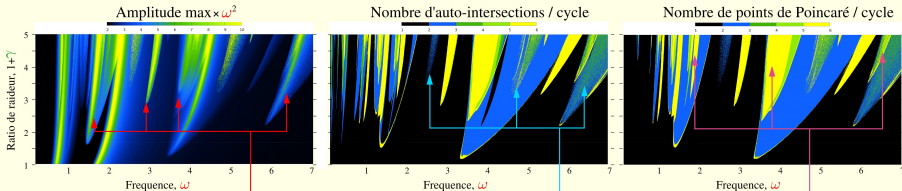
2 Ajuster les architectures et les combiner d'une manière symétrique



3 Modèle : oscillateur à 2 ddl



## 1 Amplitude, période et boucle maps dans l'espace $\{\omega, \gamma\}$



*résonances sous-harmoniques, multiples boucles stables, chaos*

## 2 Visualisation et analyse

