



ID de Contribution: 89

Type: Non spécifié

## Numerical study of composite materials using FFT-Based homogenization

*vendredi 3 juillet 2026 14:20 (20 minutes)*

Composite materials are widely used in engineering because of their interesting mechanical properties. The objective of this internship is to study the mechanical behavior of composite materials using a numerical homogenization approach based on Fast Fourier Transforms (FFT). The work focuses on understanding the theoretical framework of the method and implementing numerical tools to compute local stress and strain fields and estimate the effective mechanical properties of heterogeneous materials. This study aims to provide a better understanding of FFT-based methods and their application to the prediction of effective material properties.

**Master**

**Laboratoire d'accueil**

**Composante ou Département Composante**

**Auteurs principaux:** DI CESARE, NOELIE (Polytech - LMC2); ABDELLAOUI, ZOUHEIR

**Orateurs:** DI CESARE, NOELIE (Polytech - LMC2); ABDELLAOUI, ZOUHEIR

**Classification de Session:** Vendredi après midi