FFT solvers for transport problems in heterogeneous media

François Willot^{*1}

¹Centre de Morphologie Mathématique (CMM) – MINES ParisTech - École nationale supérieure des mines de Paris – 35 rue Saint-Honoré 77305 Fontainebleau cedex, France

Abstract

In this course, we address various FFT methods developed for treating other physics and multi-physical couplings, including conductivity, diffusion, optics in the electrostatic regime, viscoelasticity, phase-field for damag mechanics and Stokes flow. We also give a brief review of comparison between FFT and finite element methods in terms of accuracy and overall performances.

*Speaker