ACOUSTICS2008/2458
Ultrasonic wave propagation in heterogeneous solid media

Mathieu Rossat, Jean-François Chaix and Vincent Garnier
LCND - Université de la Méditerranée, IUT Aix Provence, Avenue Gaston Berger, 13625 Aix en Provence Cedex, France

To check up concrete structures 'in situ' engineers often employ ultrasonic waves. The implementation of tests and analysis of results even inversion of the problem need good knowledge about propagation phenomena. These phenomena require understanding interaction between ultrasonic waves and scatters, like granular, porosity and cracks. This defect can come from fabrication or mechanical damage.
The size and the shape of obstacle have an influence on the spatial scattering of ultrasonic waves. We propose to show you the possible using multiple scattering in homogeneous models of propagation and the last work on a sphere in a hard media. Our objective is to bring obstacle geometries closer to the reality. Consequently, we study spheroidal scatters with various aspect ratios.