

B. Buffoni – B. Dacorogna – J. Krieger – M. Nguyễn – Section Mathématiques

SEMINAIRE D'ANALYSE

➤ **VENDREDI 11 MAI 2018 à 14h15 - salle MA A1 12**



Professeur **Lucas CHESNEL** (Ecole Polytechnique Paris, France) donnera une conférence sur le thème:

« Invisibility in acoustic waveguides »

Abstract: We will consider the propagation of waves in acoustic waveguides with defects (local perturbation of the wall, penetrable obstacle,...) in time harmonic regime. First, for a given frequency, we will present two approaches to construct waveguides such that the waves propagate as if there were no defect (perfect transmission). In other words, we will explain how to construct invisible obstacles. For this part, we shall mainly use techniques of asymptotic analysis. In a second step, for a given geometry, we will propose a method to compute frequencies for which perfect transmission occurs. To proceed, we shall explain how to adapt techniques of analytic dilation (or Perfectly Matched Layers). This will lead us to consider questions of spectral theory for non-selfadjoint operators.

Lausanne, le 30 avril 2018
BD/HMN/MM

Les séminaires qui ont lieu à la Section de Mathématiques sont annoncés sur Internet
<http://memento.epfl.ch/maths/>