Applied

Mathematics

McGill Applied Mathematics Seminar Series

Dec. 7 , 2001

Dr. Tark Bouhennache

Title: "Point spectrum of elliptic operators in fibered half-cylinders and the related completeness problem"

Friday Dec. 7

Time: 2:30 pm

Room: Burnside 1205

Abstract: We consider an elliptic system in a half-cylinder $\mathbb{R}_+ \times \omega$ with coefficients constant in the direction of the axis and not necessarily smooth. We take different boundary conditions on $\mathbb{R}_+ \times \partial\omega$ and Dirichlet condition on $\{0\} \times \omega$. This defines a self-adjoint operator A^D. The main result is that A^D does not have eigenvalues. When ω is bounded, we use this result to prove the completeness of a part of the family of eigenvectors, and associated vectors, of a corresponding operator pencils.

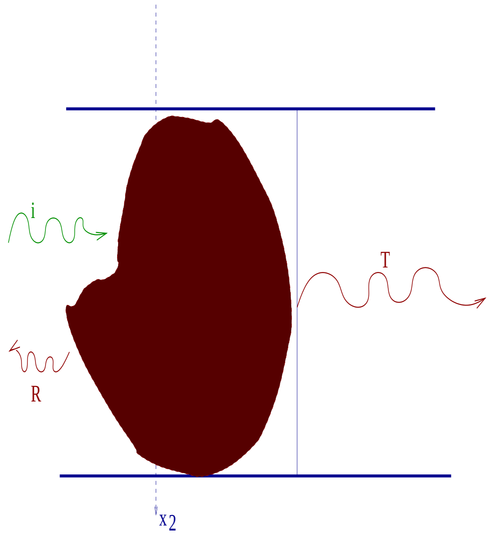

Figure 1: Scattering (reflection and transmission) of an incident wave