

MATHEMATICS COLLOQUIUM  
SEMINAR

*Direct Sampling Algorithms in Inverse Scattering*

Isaac Harris  
Purdue University

**Abstract:** In this talk, we will discuss the Transmission Eigenvalue problem that is obtained by the inverse acoustic scattering for a material with a coating on the boundary. In general, the transmission eigenvalue problem is a non-selfadjoint and non-linear eigenvalue problem for a system of PDEs. This makes their investigation difficult and interesting Mathematically. Some of the questions we will discuss are the existence and discreteness of the eigenvalues as well as how they depend on the material parameters. Numerical examples will be given to show how the refractive index may be estimated using these eigenvalues.

Monday, February 15, 2021, 12:30 pm

<https://emory.zoom.us/j/93146817322?pwd=WTVrOEdnTzg3UVpYYlNOYWcrMHJGZ0pRbDZkdz09>

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