Department of Mathematics and Statistics

CAL POLY POMONA

Fall Colloquium Series

Can you “hear” the shape of a radial Schroedinger Operator?

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Abstract:

Inverse problems are a large class of both theoretical and applied problems that have captivated the mathematical community for over half a century. During this time numerous applications have arisen in in a variety of fields, such as medical imaging and cloaking. In the first half of this talk, I will discuss, by example, general inverse problems and how they arise in the real world. In the second half I will focus specifically on spectral inverse problems, starting with the classic "Can you hear the shape of a drum?" problem in the case of the sphere. Finally I will present an analogous result for semi-classical Schroedinger operators.

Wednesday, November 18, 1:05 - 1:50pm in 3-2643