Department of Mathematics and Statistics Colloquium

Inverse Scattering, Imaging, and a Hybrid-Bremmer Series Approach

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Abstract: I will give a brief introduction to inverse scattering problems and their applications in imaging. Then I will consider a problem motivated by seismic imaging, where we are interested in reconstructing the earth subsurface from measurements of reflected sound waves at the boundary. I will first discuss series solutions for the forward problem (Born, Bremmer) and then I will make the case for an analogous Hybrid-Bremmer series approach to solve the inverse problem.

This is joint work with John Schotland and Alison Malcolm.

Monday, October 13 at 3:45 in Roop 103

refreshments at 3:30