

SPEAKER:

Francis Chung, University of Kentucky

TITLE:

A hybrid inverse source problem for radiative transport

ABSTRACT:

The radiative transport equation (RTE) is a model for light propagation inside a scattering medium. A classic inverse problem for the RTE is as follows. Suppose we have an object where light propagation is modeled by the RTE, which contains a source of light. Given the ability to measure light intensity on the boundary, can we recover the light source exactly? In this talk I will give a brief introduction to the RTE and its inverse source problem, and discuss recent work on improving the stability of the problem using so-called hybrid methods. This is joint work with John Schotland and Guillaume Bal.