

ANALYSIS AND DIFFERENTIAL GEOMETRY  
COLLOQUIUM

*Nonlocal PDEs and Quantum Optics*

John Schotland  
Yale University

**Abstract:** Quantum optics is the quantum theory of the interaction of light and matter. In this talk, I will describe a real-space formulation of quantum electrodynamics with applications to many body problems. The goal is to understand the transport of nonclassical states of light in random media. In this setting, there is a close relation to kinetic equations for nonlocal PDEs with random coefficients.

Friday, October 20, 2023, 2:00 pm  
Mathematics and Science Center: MSC W301

MATHEMATICS  
EMORY UNIVERSITY