February 1, 2019

# STUDENT SEMINAR

UW-Madison | Department of Statistics | www.stat.wisc.edu

## Title

**Inverse Problem in Optical Tomography**

## Speaker

***Ke Chen***

(Ph.D. student in Mathematics, UW-Madison)

## Time & Place

Friday, Feb 1, 2:30pm, SMI **133**

**Snack will be provided.**

## Abstract

Optical tomography is an inverse problem that aims to reconstruct images via light transmitted and scattered through an object. In this talk, I will introduce the mathematical setup of this inverse problem, survey a few related topics, and show our stability results of the reconstruction. In particular, we provide a stability estimate of the identification of images and show that the discrepancy between two measurements is amplified by a large magnitude if the light is scattered too many times through the object. Our result apply to both continuous and discrete settings.