

# STUDENT SEMINAR

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## Title

**Inverse Problem in  
Optical Tomography**

## Speaker

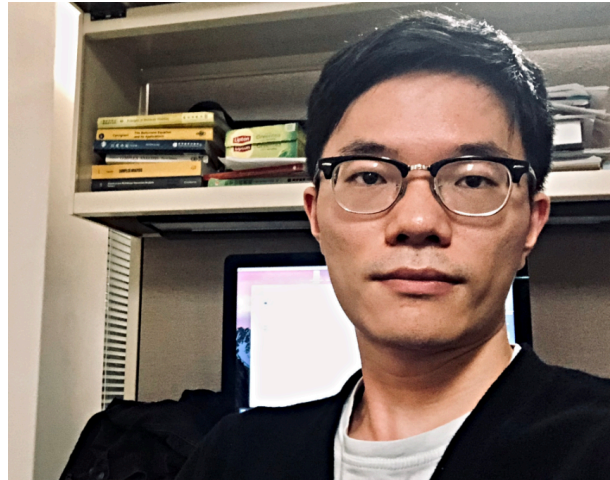
**Ke Chen**

(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.