

## Public Abstract

First Name:Lindsey

Middle Name:Michelle

Last Name:Woodland

Adviser's First Name:Peter

Adviser's Last Name:Casazza

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:SP 2015

Department:Mathematics

Degree:PhD

Title:Frames and applications: Distribution of frame coefficients, integer frames and phase retrieval

The present dissertation is divided into two main areas: frame theoretic results and applications of frames. In particular, the beginning half develops the first detailed theory of the distribution of frame coefficients. Next, the first systematic study of integer frames is included. The latter half of the dissertation is concerned with the application of frames to the area of signal reconstruction. In particular, phase retrieval by subspaces components and norm retrieval are discussed.