

Department of Mathematics

University of Houston

Analysis Seminar

FRIDAY April 26, 2019

13:00-14:00 – Room 646 PGH

Speaker: Ahmed Abouserie (University of Houston)

Title: Signal Reconstruction from Intensity Data in Finite Dimensions

Abstract: The problem of reconstructing a signal from the magnitudes of linear measurements is known as ‘Phase Retrieval’. In this talk, we discuss existing results regarding the existence and uniqueness of solutions to the phase retrieval problem in finite dimensions. After considering classical algorithms, such as the error reduction algorithm, we present a more recent approach used in phase retrieval, known as ‘Phase Lift’ which allows us to transform the problem into a semidefinite program under certain conditions. If time permits, we will discuss open questions related to stability conditions.