Graduate Mathematics Seminar
Analyzing Hybrid Randomized and Greedy Projection Methods

Dr. Jamie Haddock
University of California, Los Angeles

Abstract: Stochastic iterative algorithms have gained recent interest for solving large-scale systems of equations, Ax=y. One such example is the Randomized Kaczmarz (RK) algorithm, which acts only on single rows of the matrix A at a time. While RK randomly selects a row, Motzkin's algorithm employs a greedy row selection; the Sampling Kaczmarz-Motzkin (SKM) algorithm combines these two strategies. In this talk, we present a convergence analysis for SKM which interpolates between RK and Motzkin's algorithm. Additionally, we discuss the application of RK methods to detecting corruptions in large-scale systems of equations.

When: Monday, September 16, 2019, 6:00 – 7:00 pm
Where: CSUCI, Sierra Hall 2411