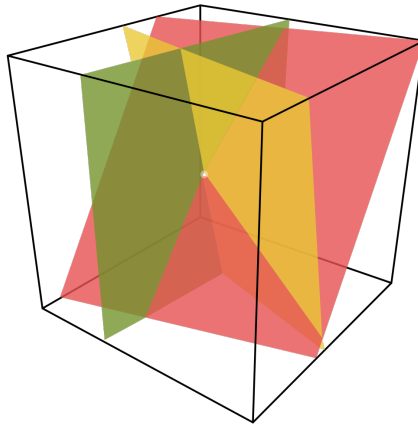


## *Graduate Mathematics Seminar*

Analyzing Hybrid Randomized and Greedy Projection Methods

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**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