

Probabilistic reasoning in compressed sensing

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Compressed sensing is an area of information theory where one seeks to recover an unknown signal from few measurements. A signal is often modeled as a vector in R^n , and linear measurements are given as $y = Ax$ where A is an m by n matrix. The best known results of compressed sensing are for random linear measurements, thus A is a random matrix. We will learn about some probabilistic successes and challenges in this area, with many connections to sampling theory, random matrix theory, and stochastic geometry.

The lecture will take place in Thackeray 704 at 4:00pm.
Refreshments will start at 3:30pm.