

# Deanna Needell

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Monday, December 2, 2019

Time: 4:00 p.m.

Location: Weber 223

Title: Simple approaches to complicated data analysis

Abstract: Recent advances in technology have led to a monumental increase in large-scale data across many platforms. One mathematical model that has gained a lot of recent attention is the use of sparsity. Sparsity captures the idea that high dimensional signals often contain a very small amount of intrinsic information. Using this notion, one may design efficient low-dimensional representations of large-scale data as well as robust reconstruction methods for those representations. Binary, or one-bit, representations of data for example, arise naturally in many applications, and are appealing in both hardware implementations and algorithm design. In this talk, we provide a brief background to sparsity and 1-bit measurements, and present new results on the problem of data classification with low computation and resource costs. We illustrate the utility of the proposed approach on recently acquired data about Lyme disease.

Host: Henry Adams

