

## **Abstract**

This poster aims to provide an overview of compressive sensing and its developments in radar applications. Conventional radar imaging techniques require acquiring many measurements to reconstruct the scene [1]. The advantages of compressed sensing, or compressed sampling, are low energy consumption, high-speed measurements, and revolutionary data acquisition [3]. There are many techniques for solving the compressed sensing problem. Chaotic frequency signals present advantages by having a wider bandwidth, contriving noise, and easy generation using a Bernoulli map [4], and they can be used in compressive radar. Using MATLAB, a radar scene was simulated, and compressive sensing techniques were implemented. The disciplined convex programming algorithm CVX was used to reconstruct the radar scene [6] from the simulated radar measurements. Convex programming provides the most accurate results when reconstructing data at the cost of high computational complexity. In addition to CVX, other greedy algorithms can be used to solve a radar signal's compressed sensing problem that requires further understanding [5].