## Abstract Submitted for the TSS21 Meeting of The American Physical Society

Using Image Processing for Automated Object Tracking in Videos LEVI TORRES, Texas Lutheran University — The goal of this research was to develop an efficient algorithm to track objects in videos using image processing methods. In order to run the algorithm, the desired video first had to be split into individual frames. In order to track the specific objects in the video, template images of the objects were defined. Then, using Python libraries including SciPy and scikit-image, each frame was processed to acquire a match to the templates which was used to track the objects throughout the duration of the video. In result, a proof-of-concept algorithm was developed that was able to efficiently track all the objects desired in the video.

Levi Torres Texas Lutheran University

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