

## *Department of Physics and Astronomy*



### Summer 2019— Kaustubh Anand

#### Dr. Lee's Group

The universe will always have its mysteries whether it is life on Earth, the existence of Dark Matter or black holes. Astrophysicists can only focus on certain aspects of the world beyond which includes so much more than just stars and galaxies. Dr. Lee, along with multiple collaborators, is working on studying massive galaxy clusters (specifically from the SPT-SZ survey) to understand certain characteristics of them such as mass and star formation. We use data available to us from NASA and ESA archives of certain telescopes to find (infrared) images of known clusters and attempt to stack them together. We make the underlying assumption that the clusters being stacked develop in a similar manner over time and want to track these commonalities over the stacking series.

Since this is a relatively new topic, I am currently focused on organizing the data and filtering through them to find the relevant clusters while also starting to stack their images together.