**2021—2022 ASTROPHYSICS SEMINAR SERIES**

# Revealing Obscured Dusty Star-Forming Galaxies in the Early Universe

Since the late 1990s, infrared (IR) and submillimeter (submm) extragalactic surveys have revealed a significant population of extreme star-forming galaxies (forming upwards of 1000 solar masses per year) shining intensely at long wavelengths as dust-reprocessed ultraviolet and optical light from newly formed stars is emitted in this regime. These early works drastically altered our understanding of the prevalence of dusty star-forming galaxies (DSFGs) beyond our local Universe and guided a new era of astronomical discovery. In this talk, I will provide a brief history of far-IR/submm observations of DSFGs before discussing the advancements made at even longer (millimeter) wavelengths, in particular with the Atacama Large Millimeter Array (ALMA). I will then introduce the Mapping Obscuration to Reionization with ALMA (MORA) survey, which aims to efficiently detect redshift > 4 DSFGs at 2 millimeters and my work to characterize a sub-sample of the DSFG population, called OIR-dark, which have eluded detection until the last few years due to a combination of their extreme dust obscuration and lower star-formation rates. Finally, I will look ahead to future surveys with ALMA, LMT, and JWST as we work to take census and determine the physical properties of the earliest known dust-obscured galaxies residing in the first billion years of the Universe.

**Monday, March 28th**

3:30 - 4:30 p.m.

725 Commonwealth Ave | Room 502

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