TOPIC 3 - Observations of debris disks: scattered-light to mid-infrared

Our Invited Speaker

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Debris disks serve as important signposts for both stellar and planetary system evolution. Over the past decade, observations of debris disks from optical to Infrared wavelengths have demonstrated a large diversity in debris disk morphologies. Ground based high contrast imaging systems and the Hubble Space Telescope have imaged dozens of new debris disks in scattered light, probing the spatial and size distributions of the sub-micron dust. At longer wavelengths, thermal emission from the dust peaks in the infrared where solid state spectral features can further elucidate the dust properties. JWST now allows for unprecedented spatial and spectral resolution in the near to mid-IR and has already changed our view of several debris disk systems. In this talk, I will review notable debris disk discoveries in this wavelength regime and discuss future capabilities provided by e.g. the Nancy Grace Roman Space Telescope Coronagraph Instrument and the upcoming ground based 30-meter class telescopes.