

UCLA Division of Astronomy & Astrophysics

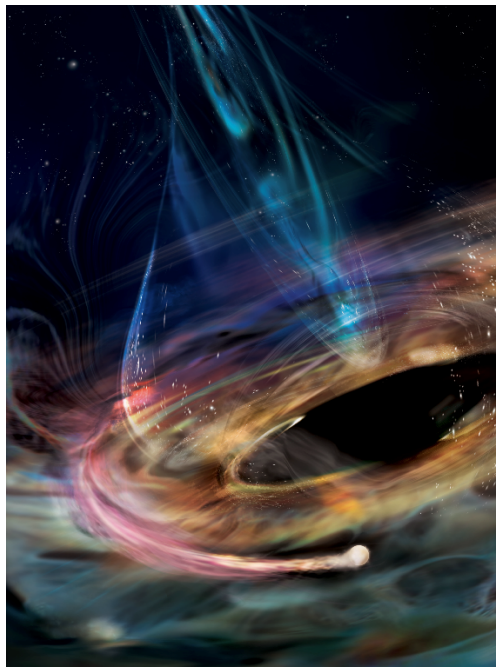
Astronomy Colloquium

Wednesday, June 3 at 3:30 PM

Room 1-434 PAB

Dr. Erin Kara

MIT Kavli Institute for Astrophysics and Space Research



Supermassive Black Holes in the TDAMM Era

The field of black hole accretion is seeing a renaissance in the last 5–10 years, thanks to the advent of wide-field, time domain surveys across the electromagnetic spectrum. These surveys monitor hundreds of thousands of AGN at unprecedented cadence, revealing the secrets AGN were keeping while we weren't watching. Time domain surveys are changing what we thought we understood about standard AGN activity, and thus, evolving our picture of how supermassive black holes grow and affect their environments. In this talk, I will present some recent highlights on supermassive black hole transients, like Tidal Disruption Events, and a new phenomenon called Quasi-Periodic Eruptions, which are a totally unexpected X-ray phenomenon, where $\sim$ million solar mass black holes show extremely high-amplitude regular flares, which have been posited as due to the presence of an orbiting stellar mass object (also known as Extreme Mass Ratio Inspirals). We will discuss the current state of the field, and implications for joint detections with the LISA Gravitational Wave Observatory.

Hosted by professors: Smadar Naoz, Alice Shapley, Erik Petigura