



PHYSICS AND ASTRONOMY SEMINAR

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“AGN and Star Formation in Dwarf Galaxies”

Abstract

Contrary to conventional wisdom, low-mass, physically small dwarf galaxies can indeed host supermassive black holes. Moreover, the population and properties of black holes in nearby dwarf galaxies hold clues to the formation of the first seed black holes in the earlier Universe. However, identifying black holes in dwarf galaxies is observationally complex. First, active galactic nuclei (AGN) powered by smaller black holes are less luminous and more difficult to detect than typical AGNs in more massive systems. Furthermore, low-mass galaxies generally have ongoing star formation, gas and dust that can mimic or mask signatures of black hole accretion. With these challenges in mind, I will present ongoing multi-wavelength searches for AGNs in dwarf galaxies, as well as follow-up studies of existing samples. I will also discuss my future plans to probe the origin of supermassive black holes with dwarf galaxies, and provide the much needed observational constraints on the otherwise theory-dominated work on the formation of the first black hole seeds.

Tuesday, January 24, 2017
3:00 p.m.
Engineering Computer Science
Room 108