## Physics Colloquium

Friday, April 27, 2018 4:10 – 5:00 PM Barnard Hall (EPS) 103

## Finding and characterizing active massive black holes in dwarf galaxies

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## **Abstract:**

The population and properties of massive black holes in present-day dwarf galaxies provide some of the best constraints on the formation of black hole seeds at high redshift and are important for our understanding of co-evolution of galaxies and their black holes. However, until recently, there were very few dwarf galaxies known to contain central massive black holes. Large scale surveys have made it possible to search for signs of black hole accretion in large samples of dwarf galaxies, leading to more than an order of magnitude increase in the number of dwarf galaxies known to contain active galactic nuclei (AGN) in the last several years. I will discuss my multi-wavelength analysis of dwarf galaxies with AGN signatures, including their black hole masses and accretion properties, as well as discussing whether they follow well-known correlations between black hole mass and host galaxy properties. I will also discuss a new search for AGNs in dwarf galaxies using nuclear optical variability.

**Host: Amy Reines** 

<sup>\*</sup> Refreshments served in the Barnard (EPS) second floor atrium at 3:45 PM \*