

## Physics Colloquium

**Professor Shamit Kachru**

**Stanford University**

**Black holes, string theory, and number theory**

**Friday, March 24, 2017**

**2:30 pm—3:30 pm**

**210 Robeson Hall**

Black holes are some of the most enigmatic objects in Einstein's theory of general relativity. In the 1970s, striking analogies between black holes and thermal systems were uncovered. In recent years, in simple and soluble toy models, string theory has started to provide an explanation of some of these properties, including a microscopic accounting of the black hole entropy. Attempts to make this precise involve fruitful and evolving interactions between theoretical physics and number theory. This colloquium will explain the basic objects and ideas of this subject in elementary terms.