

## COLLOQUIUM

3:30 P.M.

WEDNESDAY, NOVEMBER 19, 2008

BOEHM HALL 262

*The Physics of Astromathematics**(Is there anybody out there?)*

DR. PATRICK GORMAN

ASSISTANT PROFESSOR OF MATHEMATICS

KUTZTOWN UNIVERSITY OF PENNSYLVANIA

## ABSTRACT

With the discovery of over one hundred extrasolar planetary systems recently, it appears that the existence of a Hot Jupiter in a planetary system is a fairly common event. Jupiter size planets and larger have been found at orbits where terrestrial planets in our own solar system are. This raises the question, "in what conditions could an Earth type planet have a stable orbit in the habitable zone of a planetary system if a Hot Jupiter is also a part of the system?"

This talk will first look at methods of detecting these extrasolar planets. The conditions under which a planet like earth could exist with a environment where life could flourish will be discussed. This will use mathematical methods such as differential equations, Fourier transforms, and statistics.

**3:00 p.m.****refreshments served****3:30 p.m.****talk begins**