$\mathbf{T}_{\text{EMPLE}} \; \mathbf{U}_{\text{NIVERSITY}} \; \mathbf{M}_{\text{ATHEMATICS}} \; \mathbf{C}_{\text{OLLOQUIUM}}$ 

## Sinai Robins

Temple University

will speak on

## Polyhedral theta functions, polyhedral Gauss sums, and extensions of the Gram relations for solid angles of polytopes

ABSTRACT: We extend the famous Gram relations for solid angles of a polytope P, which say that:  $\omega_P = \sum_{F \in P} (-1)^{\dim F} \omega_F = 0$ . We will first cover a little of the history of solid angles, especially as they

We will first cover a little of the history of solid angles, especially as they relate to polytopes, and then show how to extend their Gram relations, using the polyhedral theta functions.

> Monday, February 5, 2007 Lecture at 4:00 pm (\$) Coffee, tea, and refreshments from 3-5 pm Room 617, Wachman Building Department of Mathematics