TEMPLE UNIVERSITY GEOMETRY SEMINAR

Clay Shonkweiler

University of Pennsylvania

will speak on

Poincaré duality angles for Riemannian manifolds with boundary

ABSTRACT: The Hodge decomposition theorem for Riemannian manifolds with boundary says that the absolute and relative cohomology groups of such manifolds can be realized as certain subspaces of harmonic forms. Although the cohomology groups are independent of the metric, I will present some examples demonstrating that the relative positions of these subspaces depend on the metric. These relative positions are measured by the so-called Poincaré duality angles, which are the principal angles between the subspaces corresponding to the absolute and relative cohomology groups and are invariants of the Riemannian manifold with boundary.

TUESDAY, 2 DECEMBER 2008
LECTURE AT 1:10 PM
COFFEE, TEA, AND REFRESHMENTS FROM 3-5 PM
ROOM 617, WACHMAN BUILDING
DEPARTMENT OF MATHEMATICS