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

Ted Chinburg

University of Pennsylvania

will speak on

Group representations, deformations and class numbers

ABSTRACT: This talk will be about a question of M. Flach which arose from the proof of Fermat's Last Theorem by A. Wiles and R. Taylor. I will start by describing what a universal deformation of a group representation is and how these pertain to number theory. Flach's question was whether all deformation rings are nice in the sense that they are local complete intersection rings. I'll then describe an answer to this question which is joint work with F. Bleher.

> Monday, November 7, 2005 Lecture at 4:00 PM (\$) Coffee, tea, and refreshments from 3-5 PM. Room 617, Wachman Building Department of Mathematics