

## The University of Mississippi Department of Mathematics

## **Departmental Colloquium**

Dr. Susan Cooper University of Nebraska

## Powerful Invariants of Points

Friday, November 5, 2010 2:00 P.M. Hume 331

Abstract: Many algebraic and numerical ideas have been introduced in order to obtain information about sets of points in projective space. In particular, the Hilbert function and graded Betti numbers have played central roles in many exciting problems. These tools were introduced by David Hilbert in his work in invariant theory and have been shown to encode important geometric and algebraic data. Many people have tried to characterize the Hilbert functions and graded Betti numbers for a variety of families of sets of points. In this talk we'll investigate some of the developments of these characterizations awhile focusing mainly on the Hilbert.

Faculty, Staff and Students are welcome to attend