# The University of Mississippi Department of Mathematics 

## Departmental Colloquium

Dr. Florian Enescu<br>Georgia State University

## Multiplicity in algebra and geometry

## Friday, November 13, 2009 2:00 P.M. Hume 331

Abstract: The multiplicity of a root of a polynomial equals its order of vanishing. A point on an algebraic variety is a solution to a system of polynomial equations. For such a point, how is its multiplicity defined? We will discuss some of the historical approaches to this question. In relation to this, we will present a new multiplicity, called Hilbert-Kunz multiplicity, and discuss some open problems related to it that have algebro-geometric as well as number theoretical flavor.

Faculty, Staff and Students are welcome to attend

