Title:
Bloch's formula

Abstract:
In this talk, we discuss Bloch's formula for smooth and singular schemes. The formula relates Chow group of cycles on a scheme with the cohomology of K-sheaves or $K^M$-sheaves, where $K$ and $K^M$ stand for K-theory and Milnor K-theory, respectively. In smooth case, the formula is a corollary to the Gersten resolution. As Gersten resolution for these sheaves is not available for singular schemes, in a joint work with Prof. Amalendu Krishna, we use Cousin complex to study the Bloch's map.

We begin the talk with a brief discussion of the formula for smooth schemes. In the case of singular schemes, we use Cousin complex to define Bloch's map. We then prove the formula for affine schemes over algebraically closed fields and for regular in codimension one projective schemes over algebraically closed fields. At last, Bloch's formula with modulus will be discussed.