

1011-19-211      **Mona Mocanasu\*** ([stanciulescu\\_mona@yahoo.com](mailto:stanciulescu_mona@yahoo.com)), 2033 Sheridan Road, Department of Mathematics, Evanston, IL 60208. *A Bivariant Theory for Quasi-Projective Schemes.*

The goal of this talk is to present a bivariant theory, following the approach of W. Fulton and R. MacPherson in "Categorical Framework for the Study of Singular Spaces"; this theory connects singular homology of quasi-projective schemes to cohomology with support for smooth pairs of schemes.

We describe the most general type of "pull-back" and "push-forward" maps, and give the conditions required for the existence of both these structures on a given theory. Moreover, such a bivariant theory comes with higher Chern classes, fact that allows us to study the problem of a general Riemann-Roch theorem for singular homologies. (Received August 27, 2005)