



UNIVERSITY OF CALIFORNIA RIVERSIDE

DEPARTMENT OF MATHEMATICS

COLLOQUIUM

Li-Sheng Tseng
(UC Irvine)

"Cohomology of Symplectic Manifolds"

Abstract:

Some of the most basic invariants on manifolds come from the study of their differential forms. In this talk, I will describe the special characteristics that differential forms have on symplectic manifolds. In the presence of a symplectic structure, I will show that the exterior derivative has a simple decomposition into two first-order differential operators analogous to that in complex geometry. Using this property, I will introduce new symplectic cohomologies of differential forms that encode interesting geometrical invariants especially for non-Kähler symplectic manifolds and also give an application in string theory physics.

Wednesday, October 5th, 2011

Surge 284

4:10-5:00pm

Tea Time at 3:40pm