### **CCSU** DEPARTMENT OF MATHEMATICAL SCIENCES

## COLLOQUIUM

Friday, November 22 2:00 – 3:00 PM Maria Sanford, Room 101

# FROM GRADIENT ESTIMATES TO LIOUVILLE PROPERTIES FOR PERTURBED LAPLACIANS ON MANIFOLDS

## **NELSON CASTANEDA**

#### CENTRAL CONNECTICUT STATE UNIVERSITY

<u>Abstract</u>: We start the talk with a discussion of the Cheng-Yau gradient estimate and some of its generalizations. Then we discuss some maximum principles. Finally, we combine gradient estimates and maximum principles to obtain Liouville properties for certain perturbations of the Laplacian on Manifolds.

Aftermath to follow at Castaneda's (across from Davidson's Hall)

For further information: gotchevi@ccsu.edu 860-832-2839 http://www.math.ccsu.edu/gotchev/colloquium/