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

# COLLOQUIUM

Friday, February 6 2:00 – 3:00 PM Maria Sanford, Room 101

## **REAL DIVISION ALGEBRAS**

## **NELSON CASTANEDA**

#### CENTRAL CONNECTICUT STATE UNIVERSITY

**Abstract:** The reals, the complex numbers, the quaternions, and the octonions are examples of division algebras of dimensions 1, 2, 4, and 8 respectively. The purpose of the talk is to outline the ideas related to the proof that finite dimensional real algebras exist only in dimensions 1, 2, 4, and 8. I will try to provide the necessary background to a reasonable extent. Graduate students may benefit from seeing interactions of familiar concepts from algebra, topology and analysis.

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

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