

CALIFORNIA STATE UNIVERSITY, LONG BEACH

# THE MATHEMATICS COLLOQUIUM

presents

Dr. Michael Orrison

Harvey Mudd College

speaking on

*The Linear Complexity of a Graph*

Friday, December 3, 2004

12:00PM-1:00PM

LA5-250

**Abstract:** Complexity, like beauty, is in the eye of the beholder. In this talk, I will describe the motivation behind the recent study of the *linear complexity* of a graph. This measure of complexity, which is essentially the minimum number of additions, subtractions, and scalar multiplications needed to apply an adjacency matrix of a graph to an arbitrary vector, turns out to have interesting and useful applications. For example, I will say something about the role it plays in an analysis of voting on the Supreme Court. This is joint work with David Neel (Seattle University).