



2007 - 2008



**MATHEMATICS COLLOQUIUM SERIES
UNIVERSITY OF CENTRAL FLORIDA**

**Dr. Jacob Christiansen
Department of Mathematics
California Institute of Technology**

will speak on

Finite gap Jacobi matrices: Szego's theorem and Szego asymptotics

ABSTRACT: In the spectral theory of orthogonal polynomials (or Jacobi matrices) the goal is to relate information about the recurrence coefficients (=Jacobi parameters) to information about the measure of orthogonality (=spectral measure). In the talk I'll discuss results of this type for Jacobi matrices whose essential spectrum is a finite union of closed intervals. In particular, I'll show how to obtain Szego's theorem from a non-local step-by-step sum rule. Moreover, I'll explain how one can use recent results of Remling to prove that the Jacobi parameters approaches a single point on the isospectral torus in the setting of Szego's theorem.

DATE: Tuesday, February 26, 2008
TIME: 10:30am – 11:30am
PLACE: MAP 318

Refreshments will be served