

1077-47-642

Carl Sundberg and **Dechao Zheng*** (dechao.zheng@vanderbilt.edu). *The spectrum and essential spectrum of Toeplitz operators.*

On the Hardy space, by means of an elegant and ingenious argument, Widom showed that the spectrum of a bounded Toeplitz operator is always connected and Douglas showed that the essential spectrum of a bounded Toeplitz operator is also connected. On the Bergman space, in 1979, G. McDonald and the C. Sundberg showed that the essential spectrum of T_φ is connected for φ a harmonic function on the unit disk which is either real or piecewise continuous on the boundary. They asked whether the essential spectrum of a Toeplitz operator on the Bergman space with bounded harmonic symbol is connected. In this talk, we will show an example that the spectrum and the essential spectrum of a Toeplitz operator with bounded harmonic symbol is disconnected. (Received September 09, 2011)