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**Brian Simanek\*** ([brian.z.simanek@vanderbilt.edu](mailto:brian.z.simanek@vanderbilt.edu)), 1326 Stevenson Center, Vanderbilt Math Department, Nashville, TN 37240. *Orthogonal Polynomials and the Bergman Shift Operator.*

Given a finite measure  $\mu$  with compact and infinite support in the complex plane, the Bergman Shift operator is multiplication by the variable  $z$  in the space  $L^2(\mu)$ . When restricted to the closure of the space of polynomials, the matrix form of this operator is a Hessenberg matrix with respect to the basis given by the orthonormal polynomials for the measure  $\mu$ . We will discuss the use of orthogonal polynomials to study the relationship between  $\mu$  and the matrix form of the Bergman Shift. In particular, we will determine when the Bergman Shift is asymptotically Toeplitz; i.e., asymptotically constant along its diagonals, and when “most” of the measures  $\mu$  is concentrated near a level set of a polynomial. (Received February 06, 2014)