Meeting: 1003, Atlanta, Georgia, SS 38A, AMS-SIAM Special Session on Orthogonal Polynomials—Random Matrices—Integrable Systems: Interdisciplinary Aspects, I

1003-42-331 **D S Lubinsky*** (lubinsky@math.gatech.edu), School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332-0160. *Condition Numbers of Hankel Matrices Associated with Exponential Weights.*

We discuss the rate of growth, in n, of the Euclidean condition number for n by n Hankel matrices associated with even exponential weights. The underlying interval may be finite or infinite. This condition number is defined as the ratio of largest to smallest eigenvalues. Since the entries of the Hankel matrix are the power moments of an exponential weight, there is a close connection to orthogonal polynomials for exponential weights. (Received September 10, 2004)