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**Doron S Lubinsky\*** ([lubinsky@math.gatech.edu](mailto:lubinsky@math.gatech.edu)), School of Mathematics, Georgia Institute of Technology, 686 Cherry St. NW, Atlanta, GA 30332-0160, and **Edward B Saff** ([esaff@math.vanderbilt.edu](mailto:esaff@math.vanderbilt.edu)), Center for Constructive Approximation, Department of Mathematics, Vanderbilt University, Nashville, TN 37240. *Zero Distribution of Muntz Orthogonal and Extremal Polynomials.*

It is a classic result that zeros of orthogonal polynomials for weights on a fixed finite interval have arcsine distribution (except for pathological weights). We discuss what is the zero distribution when we consider Muntz orthogonal (or extremal) polynomials. These involve arbitrary powers of  $x$ , rather than integer powers. Surprisingly, a fairly complete answer is possible, and it has little relation to the conditions for density of Muntz polynomials in Muntz's famous theorem. (Received August 08, 2005)