1. Record Nr. UNISA996466539203316

Titolo	Strong asymptotics for extremal polynomials associated with weights on R / / edited by Doron S. Lubinsky, Edward B. Saff
Pubbl/distr/stampa	Berlin, Germany : , : Springer, , [1988] ©1988
ISBN	3-540-38857-5
Edizione	[1st ed. 1988.]
Descrizione fisica	1 online resource (VIII, 156 p.)
Collana	Lecture Notes in Mathematics, , 0075-8434 ; ; 1305
Disciplina	511.66
Soggetti	Orthogonal polynomials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Notation and index of notation -- Statement of main results -- Weighted polynomials and zeros of extremal polynomials -- Integral equations -- Polynomial approximation of potentials -- Infinite-finite range inequalities and their sharpness -- The largest zeros of extremal polynomials -- Further properties of Un, R(x) -- Nth root asymptotics for extremal polynomials -- Approximation by certain weighted polynomials, I -- Approximation by certain weighted polynomials, II -- Bernstein's formula and bernstein extremal polynomials -- Proof of the asymptotics for Enp(W) -- Proof of the asymptotics for the Lp extremal polynomials -- The case p=2 : Orthonormal polynomials.
Sommario/riassunto	0. The results are consequences of a strengthened form of the following assertion: Given 0 <p<, f Lp ( ) and a certain sequence of positive numbers associated with Q(x), there exist polynomials Pn of degree at most n, n = 1,2,3..., such that if and only if f(x) = 0 for a.e. 1. Auxiliary results include inequalities for weighted polynomials, and zeros of extremal polynomials. The monograph is fairly self-contained, with proofs involving elementary complex analysis, and the theory of orthogonal and extremal polynomials. It should be of interest to research workers in approximation theory and orthogonal polynomials.