

1. Record Nr.	UNISA996466375003316
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Titolo	Weighted approximation with varying weight // Vilmos Totik
Pubbl/distr/stampa	Berlin ; ; Heidelberg : , : Springer-Verlag, , [1994] ©1994
ISBN	3-540-48323-3
Edizione	[1st ed. 1994.]
Descrizione fisica	1 online resource (VI, 118 p.)
Collana	Lecture Notes in Mathematics ; ; Volume 1569
Disciplina	511.4
Soggetti	Approximation theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Freud weights -- Approximation with general weights -- Varying weights -- Applications.
Sommario/riassunto	A new construction is given for approximating a logarithmic potential by a discrete one. This yields a new approach to approximation with weighted polynomials of the form $w_n(x)P_n(x)$ ("=" uppercase). The new technique settles several open problems, and it leads to a simple proof for the strong asymptotics on some L_p (uppercase) extremal problems on the real line with exponential weights, which, for the case $p=2$, are equivalent to power- type asymptotics for the leading coefficients of the corresponding orthogonal polynomials. The method is also modified to yield (in a sense) uniformly good approximation on the whole support. This allows one to deduce strong asymptotics in some L_p (uppercase) extremal problems with varying weights. Applications are given, relating to fast decreasing polynomials, asymptotic behavior of orthogonal polynomials and multipoint Pade approximation. The approach is potential-theoretic, but the text is self-contained.