Kovtunets, V. V.
An algorithm for the construction of the polynomial of best approximation for complex-valued functions. (Russian) [Zbl 0702.41007]

Summary: [For the entire collection see Zbl 0631.00007.]
An iterative algorithm is presented to construct the polynomial of best uniform approximation for complex-valued functions on their characteristic set with arbitrary exactness. The discussion uses the possibility to differentiate the operator of best uniform polynomial approximation. The numerical behaviour shows high effectivity compared to the Lawson algorithm. Compared to methods like semi-infinite control, the suggested method only needs linear algebraic schemes.

MSC:
41A10 Approximation by polynomials
41A50 Best approximation, Chebyshev systems

Keywords:
iterative algorithm; polynomial of best uniform approximation; Lawson algorithm; semi-infinite control