Abstract

In this paper we consider the design of FIR filters that satisfy magnitude specifications. We refer to such design problems as magnitude filter design problems. In this paper it is shown that by a change of variables, a wide variety of magnitude filter design problems can be posed as convex optimization problems, i.e., problems in which the objective and constraint functions are convex.

References


Index Terms

Computer Science  Applied Mathematics

Keywords

finite-duration impulse response (FIR), convex optimization, filter design, spectral factorization.