

Abstracts

A Unified Review of Optimization

C. Charalambous. "A Unified Review of Optimization." 1974 Transactions on Microwave Theory and Techniques 22.3 (Mar. 1974 [T-MTT] (Special Issue on Computer-Oriented Microwave Practices)): 289-300.

The main objective of this paper is to give a survey of recent automatic optimization methods which either have found or should find useful application in the area of computer-aided network design. Huang's family of algorithms for unconstrained optimization is reviewed. The Fletcher method and the Charalambous family of algorithms for unconstrained optimization, which abandon the "full linear search," are presented. Special emphasis is devoted to algorithms by Bandler and Charalambous on least pth and minimax optimization which can be readily programmed and used. Due to work by Bandler and Charalambous, it is shown how constrained minimax problems can be solved exactly as unconstrained minimax problems by using a new approach to nonlinear programming. The application of minimax optimization on the design of lumped-distributed active filters, problems for future investigation, and a select list of references are also included.

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