Abstracts

Worst Case Network Tolerance Optimization

J.W. Bandler, P.C. Liu and J.H.K. Chen. "Worst Case Network Tolerance Optimization." 1975 Transactions on Microwave Theory and Techniques 23.8 (Aug. 1975 [T-MTT]): 630-641.

The theory and its implementation in a new user oriented computer program package is described for solving continuous or discrete worst case tolerance assignment problems simultaneously with the selection of the most favorable nominal design. Basically, the tolerance problem is to ensure that a design subject to specified tolerances will meet performance or other specifications. Our approach, which is believed to be new to the microwave design area, can solve a variety of tolerance and related problems. Dakin's tree search, a new quasi-Newton minimization method, and least pth approximation are used. The program itself is organized such that future additions and deletions of performance specifications and constraints, and replacement of cost functions and optimization methods are readily realized. Options and default values are used to enhance flexibility. The full Fortran listing of the program and documentation will be made available.

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