

Robustizing Circuit Optimization Using Huber Functions

J.W. Bandler, S.H. Chen, R.M. Biernacki, K. Madsen, L. Gao and H. Yu. "Robustizing Circuit Optimization Using Huber Functions." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 1009-1012.

We introduce a novel approach to "robustizing" circuit optimization using Huber functions both two-sided and one-sided. We compare Huber optimization with l_1 , l_2 and minimax methods in the presence of faults, large and small measurement errors, bad starting points and statistical uncertainties. We demonstrate FET statistical modeling, multiplexer optimization, analog fault location and data fitting.

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