Abstracts

Minimax Microstrip Filter Design Using Direct EM Field Simulation

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For the first time we present minimax filter design with electromagnetic simulations driven directly by a gradient based optimizer. Challenges of efficiency, discretization of geometrical dimensions, and continuity of optimization variables are reconciled by a three stage attack: (1) efficient response interpolation, (2) smooth gradient estimation, and (3) dynamic data base updating. Design optimization of two microstrip filters illustrates our technique.

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