Abstracts

Rank Reduction of Ill-Conditioned Matrices in Waveguide Junction Problems

D.N. Zuckerman and P. Diament. "Rank Reduction of Ill-Conditioned Matrices in Waveguide Junction Problems." 1977 Transactions on Microwave Theory and Techniques 25.7 (Jul. 1977 [T-MTT]): 613-619.

A new low-rank spectral expansion technique for solving the ordinarily intractable matrix equations obtained from waveguide field equivalence theorem decompositions is described. The method facilitates the analysis of waveguide discontinuity problems that resist ordinary methods of solution. The technique is illustrated for the problem of scattering at a slant interface in a rectangular waveguide.

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