Abstracts

Analytical Inversion of a Class of Infinitely Dimensioned Matrices Encountered in Some Microwave Problems

A.S. Omar and A. Jostingmeier. "Analytical Inversion of a Class of Infinitely Dimensioned Matrices Encountered in Some Microwave Problems." 1992 Microwave and Guided Wave Letters 2.8 (Aug. 1992 [MGWL]): 316-318.

A method is presented for analytically inverting a class of infinitely dimensioned matrices that are usually encountered in the analysis of microwave problems by applying the generalized spectral domain (GSD) method. It is shown that numerically inverting the truncated matrix and truncating the analytically inverted matrix leads to different results, which converge to each other very slowly. CPU time and storage requirements of a number of algorithms based on the GSD method can consequently be improved by making use of the analytical inversion of such matrices.

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