Abstracts

Analysis of Inhomogeneously Filled Cavities Coupled to Waveguides Using the VIE Formulation

A method based on the volume integral equation (VIE) formulation is presented which can be used to analyze inhomogeneously filled cavities of arbitrary shape to which cylindrical waveguides of arbitrary cross section are coupled. The inhomogeneity inside the cavity is described by a spatially dependent permittivity. The method is applied to the problem of scattering by dielectric bodies inside waveguides. Furthermore it will be demonstrated how the convergence of the method can be accelerated.

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