Abstracts

Green's Function Techniques for Inhomogeneous Anisotropic Media (Correspondence)

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In many problems involving the guiding and radiation of electromagnetic raves the solution for the field quantities at points in space is given in terms of integrals of the field quantities over their values on a closed surface. These integrals are often derived through the application of vector Green's theorems. The Green's function used in any particular application is usually determined by the special considerations of that problem, but it is convenient to use, as the Green's function, a solution of the vector wave equation which is singular at the point where the field is to be computed. In this article the concept is extended to iuclude media which are anisotropic and maybe inhomogeneous as well. Use is made of the generalized reciprocity relationships for anisotropic media. This involves the use of the media of a given problem termed "original media" and those characterized by transposed tensor parameters and termed "transposed media."

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