Abstracts

Integral Transforms Useful for the Accelerated Summation of Periodic, Free-Space Green's Functions (Short Papers)

R. Lampe, P. Klock and P. Mayes. "Integral Transforms Useful for the Accelerated Summation of Periodic, Free-Space Green's Functions (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.8 (Aug. 1985 [T-MTT]): 734-736.

The Poisson summation formulas for two- and three-dimensional, periodic, free-space Green's functions of the Helmholtz and Laplace equations are cataloged in this paper. It is shown how these formulas can he applied for the efficient, approximate summation of series which arise in the computation of fields due to an infinite array of charge or current sources. The technique for approximating the summation of the series is valid for all arguments of a Green's function, even those which correspond to the region near a source singularity.

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