



Mathematical Physics

Green's function for the wavized Maxwell fish-eye problem

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Unique transformation properties under the hyperspherical inversion of a partial differential equation describing a stationary scalar wave in an N -dimensional ($N \geq 2$) Maxwell fish-eye medium are exploited to construct a closed form of the Green's function for that equation. For those wave numbers for which the Green's function fails to exist, the generalized Green's function is derived. Prospective physical applications are mentioned.

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