Abstracts

Interpolating wavelet Galerkin model of time dependent inhomogeneous electrically-large optical waveguide problems

M. Fujii and W.J.R. Hoefer. "Interpolating wavelet Galerkin model of time dependent inhomogeneous electrically-large optical waveguide problems." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1045-1048 vol.2.

Biorthogonal interpolating wavelets have been applied to inhomogeneous electromagnetic field modeling through the wavelet-Galerkin scheme, yielding a simple and versatile algorithm for the time dependent Maxwell's equations. The resulting scheme significantly reduces the computational expenditure particularly in the modeling of electrically large optical waveguides while maintaining high accuracy.

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