Abstracts

A Frequency-Dependent Finite-Difference Time-Domain Formulation for General Dispersive Media (Comments)

A. Taflove. "A Frequency-Dependent Finite-Difference Time-Domain Formulation for General Dispersive Media (Comments)." 1994 Transactions on Microwave Theory and Techniques 42.2 (Feb. 1994 [T-MTT]): 359-360.

I wish to express my concern at potential ethical questions regarding the publication of the above paper.The major point of this paper is it's claim to originate the differential-equation-based (FD)/sub 2/TD method. This involves the use of a time-domain ordinary differential equation (ODE) relation between D and E that is time-marched in parallel with the usual finite-difference time-domain (FD-TD) algorithm. The result is a powerful and systematic means to model electromagnetic wave propagation (including pulses) in quite arbitrary linear dispersive dielectric materials.

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