Abstracts

Nonlinear time-domain modeling by multiresolution time domain (MRTD)

A multiresolution time-domain (MRTD) scheme based on the expansion in scaling functions is applied to the modeling of nonlinear pulse propagation. Appropriate absorbers for the MRTD scheme are presented and their performance is discussed. The differences using pulse functions and nonlocalized basis functions like the Battle-Lemarie scaling functions are demonstrated by deriving time-domain schemes for both sets of orthonormal basis functions.

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