Abstracts

Time adaptive time-domain techniques for the design of microwave circuits

M.M. Tentzeris, J. Harvey and L.P.B. Katehi. "Time adaptive time-domain techniques for the design of microwave circuits." 1999 Microwave and Guided Wave Letters 9.3 (Mar. 1999 [MGWL]): 96-98.

A novel time adaptive time-domain technique based on the Haar expansion basis is proposed and validated for a specific circuit problem. The modeling of active and passive lumped and distributed elements, as well as of excitation and boundary conditions, is performed effectively. This scheme, based on a combination of absolute and relative thresholding, provides a real-time time adaptive grid with improved time resolution in comparison to conventional time-domain schemes (FDTD) while maintaining a similar accuracy.

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