

Abstracts

A novel adaptivity for EM time domain methods: scale adaptive time steps (SATS)

A. Rennings, V. Toni, P. Waldow, Y. Qian, T. Itoh and I. Wolff. "A novel adaptivity for EM time domain methods: scale adaptive time steps (SATS)." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 757-760 vol.2.

We describe a space and time adaptive modified FDTD method based on wavelet transforms. The multiresolution structure of wavelet bases provides a simple way to adapt computational refinements to the local regularity of the electromagnetic field. Additionally a novel algorithm is presented that modifies the time discretization at each resolution.

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