Abstracts

Efficient transient simulation of embedded subnetworks characterized by S-parameters in the presence of nonlinear elements

R. Achar and M.S. Nakhla. "Efficient transient simulation of embedded subnetworks characterized by S-parameters in the presence of nonlinear elements." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2356-2363.

This paper presents an efficient technique for transient simulation of linear subnetworks characterized by S-parameters in the presence of nonlinear components. The proposed method is based on the recently developed model-reduction technique, complex frequency hopping. A new algorithm for computing the moments of S-parameter-based subnetworks is presented. The proposed method is suitable for simulating large number of S-parameter-based subnetworks in a general circuit environment consisting of lumped/distributed elements and nonlinear devices.

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