Abstracts

Passive model-reduction of distributed networks with frequency-dependent parameters

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Accurate simulation of large interconnect networks has become a necessity to address signal integrity issues in high-speed designs. Several model-reduction techniques based on Krylov-space methods have been proposed recently for fast simulation of large linear networks. However, a major limitation of these techniques is that they cannot efficiently handle distributed transmission lines with frequency-dependent parameters. In order to overcome this difficulty, a new technique is presented in this paper to handle distributed transmission lines with frequency-dependent parameters directly in a Krylov-space based algorithm.

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