Abstracts

Efficient circuit-level analysis of large microwave systems by Krylov-subspace harmonic balance

V. Rizzoli, A. Lipparini, D. Masotti and F. Mastri. "Efficient circuit-level analysis of large microwave systems by Krylov-subspace harmonic balance." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 25-28 vol.1.

The paper proposes a rigorous harmonic balance technique for the circuit-level simulation of complex microwave systems consisting of many interconnected functional blocks. The voltages at the interface ports between building blocks are used as auxiliary unknowns, and are determined simultaneously with the block stale variables by a Krylov-subspace inexact Newton iteration. This provides exact results and allows large savings of both memory and CPU time.

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