

Abstracts

Integrated FDTD and Solid-State Device Simulation

P. Ciampolini, L. Roselli and G. Stopponi. "Integrated FDTD and Solid-State Device Simulation." 1996 Microwave and Guided Wave Letters 6.11 (Nov. 1996 [MGWL]): 419-421.

A mixed-mode circuit simulation technique is presented, based on the lumped-element finite-difference time-domain (FDTD) scheme. The algorithm is extended to incorporate numerical models of lumped devices. This makes the formulation and characterization of analytical, closed-form models for circuit devices unnecessary and allows for directly correlating device behavior and fabrication process parameters. The code is therefore especially suited for high-speed and microwave IC optimization.

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