

# Abstracts

## State-variable-based transient analysis using convolution

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*C.E. Christoffersen, M. Ozkar, M.B. Steer, M.G. Case and M. Rodwell. "State-variable-based transient analysis using convolution." 1999 Transactions on Microwave Theory and Techniques 47.6 (Jun. 1999, Part II [T-MTT]): 882-889.*

A state-variable-based approach to the impulse response and convolution analysis of distributed microwave circuits is developed. The state-variable approach minimizes computation time and memory requirements. It allows the use of parameterized nonlinear device models, thus improving robustness. Soliton generation on a nonlinear transmission line is considered as an example.

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