# Abstracts

## An efficient analysis of planar microwave circuits using a DWT-based Haar MRTD scheme

*G. Carat, R. Gillard, J. Citerne and J. Wiart. "An efficient analysis of planar microwave circuits using a DWT-based Haar MRTD scheme." 2000 Transactions on Microwave Theory and Techniques 48.12 (Dec. 2000 [T-MTT] (Special Issue on 2000 International Microwave Symposium)): 2261-2270.*

A new wavelet-based technique to generate multiresolution time-domain schemes is presented in this paper. By using symbolic calculus, a rigorous and general formulation of subgridding at every level of multiresolution is obtained. As it is rigorously equivalent to a finer finite-difference time-domain (FDTD) scheme, it does not require any particular treatments for boundary conditions. This technique has been successfully applied to the study of microstrip structures. The near- and the far-field computation can be both improved in terms of CPU time and memory storage, while maintaining the same accuracy as the classical FDTD computation.

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