# Abstracts

## Characterization of near- and far-field radiation from ultrafast electronic systems

*K.A. Remley, A. Weisshaar, S.M. Goodnick and V.K. Tripathi. "Characterization of near- and far-field radiation from ultrafast electronic systems." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2476-2483.*

Accurate and computationally efficient characterization of near- and far-field radiation from a class of microwave, millimeter wave, and ultrafast systems is presented. A numerical technique is utilized which combines the finite-difference time domain method with a spatial transformation, the Kirchhoff surface integral. Included in the analysis are inhomogeneous material parameters, small feature size relative to wavelengths of interest, and the wide-band nature of the radiation. Based on simulation results, a simple model of the radiation from an inhomogeneous structure is developed. Finally, the technique is applied to accurately characterize the radiation from a photoconducting structure.

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