# Abstracts

## A general approach to edge singularity extraction near composed wedges in boundary-element method

*P. Cecchini, F. Bardati and R. Ravanelli. "A general approach to edge singularity extraction near composed wedges in boundary-element method." 2001 Transactions on Microwave Theory and Techniques 49.4 (Apr. 2001, Part I [T-MTT]): 730-733.*

A general approach, based on the two-dimensional boundary-element method (BEM), has been proposed to extract the electromagnetic-field singularities in the presence of composed wedges, i.e., those formed by adjacent dielectric and conducting bodies. The method requires the knowledge of the field singularity order and is based on solution factorization into both a regular part and a singular one. Only the regular part has to be determined after extraction. No restrictions are imposed on position and order of singularities since each edge is treated independently of the others. Moreover, the method does not require the solution of further equations or use of special basis functions. It naturally extends the conventional BEM approach, improving its accuracy and convergence performances. Examples are given for a microstrip transmission line with a strip of finite thickness. The results show practicability and advantages of the new approach.

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