
ON THE USE OF THE ADAPTIVE LOCAL COSINE BASIS IN THE METHOD OF MOMENTS FOR EFFICIENT SOLUTION OF SCATTERING FROM SURFACE IRREGULARITIES

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ABSTRACT: *In this paper, we present a new approach to a method-of-moments matrix sparsification which facilitates an efficient solution to*

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problems involving scattering from surface irregularities. In this approach, we use local cosine basis functions. These local cosine functions are selected from a library of orthonormal bases constructed by means of a tree structure comprising folding operations and discrete cosine transforms. The selection is effected in an adaptive manner. © 2000 John Wiley & Sons, Inc. Microwave Opt Technol Lett 24: 292–295, 2000.