Abstracts

Microwave Imaging of Multiple Conducting Cylinders Using Local Shape Functions

W.C. Chew and G.P. Otto. "Microwave Imaging of Multiple Conducting Cylinders Using Local Shape Functions." 1992 Microwave and Guided Wave Letters 2.7 (Jul. 1992 [MGWL]): 284-286.

A novel technique is presented for microwave imaging of multiple conducting cylinders using local shape functions. In this method, a scattering volume is divided into small sub-scattering regions and assigned a local shape function amplitude. The reconstructed image is represented by the set of local shape functions that satisfy multiple scattering boundary conditions. Monochromatic image reconstructions have a resolution scale of 0.1 lambda for single scatterers; multiple scatterers can be resolved at a separation of 0.42 lambda.

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