

Microwave Tomography: The Analytical Treatment for Detecting Malignant Tumor Inside Human Body

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Abstract : Early detection through screening is the best tool short of a perfect treatment against the malignant tumor inside the breast of a woman. By detecting cancer in its early stages, it can be recognized and treated before it has the opportunity to spread and change into potentially dangerous. Microwave tomography is a new imaging method based on contrast in dielectric properties of materials. The mathematical theory of microwave tomography involves solving an inverse problem for Maxwell's equations. In this paper, we present designed antenna for breast cancer detection, which will use in microwave tomography configuration.

Keywords : microwave imaging, inverse scattering, breast cancer, malignant tumor detection

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