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# Solusi invers problem tomografi gelombang mikro = Invers problem solution for microwave tomography

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Abstrak

[ABSTRAK<br>
Penelitian tentang pencitraan elektromagnetik terutama untuk gelombang microwave sebenarnya telah lama dilakukan tetapi terhambat dikarenakan kekurangan daya komputasi, dan tahun akhir-akhir ini mulai banyak peneliti yang melakukan penelitian sebanding berkembang teknologi dan kecepatan komputasi. Permasalahan utama dalam pencitraan microwave adalah mencari solusi invers dan mengimplementasikan dalam komputasi.
Pada penelitian telah digunakan pendekatan Born dalam mencari solusi invers dan diimplementasikan dalam bentuk komputasi mengunakan MATLAB.
Secara keseluruhan rekontruksi citra mengunakan metoda pendekatan Born telah berhasil menentukan keberadaan dan posisi objek sederhana dalam suatu bidang untuk mendapatkan pola rekonstruksi objek yang rumit diperlukan metoda pendekatan Born dari dataset COMSOL diperlukan minimal sensor 36 x 36 untuk dapat mengidentifikasi objek.
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ABSTRACT
Research on electromagnetic imaging, especially for microwave has long done but is hampered due to lack of computing power, and the late start to many researchers who conduct research developing comparable technology and computing speed. The main problem in microwave imaging is seeking and implementing solutions in computing the inverse .
In the studies have used the Born approximation in finding solutions to the inverse and implemented in the form of computing using MATLAB .
Overall reconstruction of images using the method of Born approximation has been able to determine the presence and position of a simple object in a field to get the pattern reconstruction of objects elaborate the necessary methods of Born approximation from dataset COMSOL required minimum sensor 36 x 36 to be able to identify the object .;Research on electromagnetic imaging, especially for microwave has long done but is hampered due to lack of computing power, and the late start to many researchers who conduct research developing comparable technology and computing speed. The main problem in microwave imaging is seeking and implementing solutions in computing the inverse .
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