

Algoritma rekonstruksi citra pada electrical capacitance volume tomography (ECVT) untuk sistem pencitraan tubuh manusia

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=125541&lokasi=lokal>

Abstrak

Seismic inversion is used to make geological subsurface model in terms acoustic impedance. Seismic and well data is used as input on inversion process. Having both the data need to be integrated with geostatistic because they have different scale so more consistent geological model is made. The project area is Boonsville Field in Texas, US. This process is made with open-source software called Delivery which does model-based inversion with Bayesian approach. The result is acoustic impedance cross section which presented sand at Boonsville Filed.

An attempt to image human body arm using Electrical Capacitance Volume Tomography (ECVT) system has been done. We used reconstruction method as Linear Back Projection (LBP), Landweber Equation (Iterative Linear Back Projection, ILBP) and Neural Network Multi-criterion Optimization image Reconstruction technique (NN-MOIRT) algorithms. The results from image reconstruction showed a possibility of human arm imaging with different image reconstruction. NN-MOIRT algorithm method results performed better image compared to LBP and ILBP methods. Image reconstruction process was conducted using MATLAB R2007b software.