

A waveform inversion approach to determine velocity structure

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Seismic waveforms are inverted using a backpropagation neural network approach. The neural network is trained using 50 synthetic seismograms created from a 1-D velocity model. The three components of the synthetic seismograms are presented to the network as input units and the corresponding velocities as output units. Once trained, synthetic seismograms, which were not used for training, are presented to the network in order to retrieve the corresponding velocity model.