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**Bogdan G. Nita\*** ([nitab@mail.montclair.edu](mailto:nitab@mail.montclair.edu)), 1 Normal Avenue, Montclair, NJ 07043. *An algorithm for seismic imaging and amplitude correction derived from scattering theory.*

We present a method, derived from inverse scattering theory, for geophysical imaging and amplitude correction from measured data. No knowledge about the medium under investigation is assumed. Although derived from, and as a series, the algorithm is shown to converge to a closed form independent of the parameters involved in the problem. An analytic one dimensional example shows excellent results in finding both the location of interfaces and the amplitude of acoustic reflections. (Received August 29, 2008)